Saraji East Mining Lease Project

Environmental Impact Statement
Appendix L: Social Impact Assessment

April 2024

elliott whiteing
SOCIAL PLANNING SOLUTIONS

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Abbreviations

AVO	Apprehended violence order
AVMP	Accommodation Village Management Plan
AEDC	Australian Early Development Census
BBAC	Barada Barna Aboriginal Corporation
BMA	BM Alliance Coal Operations Pty Ltd
CHPP	Coal Handling and Preparation Plant
CIR	Code Industry Report
CMWHS	Coal Mine Workers' Health Scheme
CQU	Central Queensland University
CTEC	Coalfield Training Excellence Centre
DCHDE	Department of Communities, Housing and Digital Economy
DCSSDS	Department of Child Safety, Seniors and Disability Services
DCSG	Dysart Community Support Group
DES	Department of Environment and Science
DESBT	Department of Employment Small Business and Training
DESI	Department of Environment, Science and Innovation
DHLGPPW	Department of Housing, Local Government, Planning and Public Works
DIDO	Drive in, drive out
DoR	Department of Resources
DSDSATSIP	Department of Seniors, Disability Services and Aboriginal and Torres Strait Islander Partnerships
DSDI	Department of State Development and Infrastructure
DSDILGP	Department of State Development Infrastructure Local Government and Planning
DSDMIP	Department of State Development Manufacturing Infrastructure and Planning
DTATSIPCA	Department of Treaty, Aboriginal and Torres Strait Islander Partnerships, Communities and the Arts
DTMR	Department of Transport and Main Roads
EA	Environmental Authority
EIS	Environmental Impact Statement
ELAM	Emergency and Long Term Accommodation Moranbah
EP Act	Environmental Protection Act 1994
EPBC Act	Environment Protection and Biodiversity Conservation Act 1999
ERP	Estimated resident population
FIFO	Fly in, fly out

FTE	Full time equivalent
GP	General practitioner
Ha	Hectare
HCC	Hinterland Community Care
IAHT	Isaac Affordable Housing Trust
ICN	Industry Capability Network
ILUA	Indigenous Land Use Agreement
IRC	Isaac Regional Council
IRSAD	Index of Relative Socio-Economic Advantage and Disadvantage
KPI	Key performance indicator
kV	Kilovolt
LGA	Local government area
LOTE	Language other than English
MCA	Minerals Council of Australia
MDSS	Moranbah and District Support Service
MERC	Mackay Hospital Education and Research Centre
METS	Mining equipment, technology and services
MIA	Mine Infrastructure Area
MIW	Mackay, Isaac and Whitsunday LGAs, which constitute the MIW Region
ML	Mining Lease
MLA	Mining Lease Application
MNES	Matters of National Environmental Significance
Mtpa	Million tonnes per annum
MYCC	Moranbah Youth and Community Centre
NQ PHN	North Queensland Primary Health Network
NRW	Non-resident worker
NMA	Nominated medical adviser
NNTT	National Native Title Tribunal
OCG	Office of the Coordinator General
ODP	Olive Downs Project
PDA	Priority Development Area
PLA	Priority Living Area
the Project	Saraji East Mining Lease Project
QAS	Queensland Ambulance Service
QFES	Queensland Fire and Emergency Service

QGSO	Queensland Government Statistician's Office
QPS	Queensland Police Service
QR	Queensland Rail
RIDA	Regional Interests Development Approval
RHML	Red Hill Mining Lease Project
ROM	Run of mine
RMP	Rehabilitation Management Plan
RPI Act	Regional Planning Interests Act 2014
SAL	Suburbs and Localities
SA2	Statistical Area Level 2
SA4	Statistical Area Level 4
SCA	Strategic Cropping Area
SDPWO Act	State Development Public Works Organisation Act 1971
SEIFA	Socio-Economic Indices for Areas
SES	State Emergency Service
SIA	Social Impact Assessment
SIMP	Social Impact Management Plan
SPP	State Planning Policy
SSRC Act	Strong and Sustainable Resource Communities Act 2017
STP	Sewage treatment plant
STACs	Smart Transformations Advisory Councils (Moranbah and Dysart)
TI Act	Transport Infrastructure Act 1994
ToR	Terms of Reference
TSP	total suspended particles
ULDA	Urban Land Development Authority
UDC	Utah Development Company
VET	Vocational Education and Training
WAV	Workplace accommodation village

Executive Summary

BM Alliance Coal Operations Pty Ltd (BMA) is seeking environmental approvals for the Saraji East Mining Lease Project (the Project), which is located approximately 30 kilometres (km) north of Dysart and approximately 60 km south of Moranbah in Central Queensland.

This Social Impact Assessment (SIA) forms part of the Environmental Impact Statement (EIS) for the Project. The SIA was prepared by Elliott Whiteing Pty. Ltd. during 2018-2019, and updated during 2022-2023. The SIA seeks to address:

- the Terms of Reference (ToR) for the EIS;
- the requirements of the Strong and Sustainable Resource Communities Act 2017 (SSRC Act);
- the Coordinator-General's SIA Guideline;
- stakeholder inputs during the SIA process; and
- submissions to the EIS.

The Project is within the traditional lands of the Barada Barna People and within the Isaac local government area (LGA), which is also described in this report as the 'Isaac region'. The Australian Bureau of Statistics (ABS) Census of Population and Housing 2021 indicates that the Isaac LGA had an estimated resident population of 22,046 people in 2021, up from 20,940 people in 2016.

Moranbah, Dysart and Middlemount and the Isaac LGA as a whole were considered as potentially *affected* communities. The three towns were established as purpose-built towns to accommodate mining personnel and their families, so their settlement pattern and community identity are strongly influenced by the mining industry.

Dysart and Moranbah were identified as potentially *impacted* communities, that is, these communities are mostly likely to experience social impacts and opportunities related to the Project, however other communities within the Isaac LGA are expected to benefit from employment and supply opportunities. Broader regional benefits in relation to employment and supply opportunities are also likely as a result of 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.

Key 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 existing agreements with BMA.
- Traditional Owners' access to the land within the Mining Lease (ML) would be limited while mining is undertaken.
- There is potential for an increased number of non-resident workers (NRW) to change social dynamics in local communities, particularly in the context of cumulative impacts.
- There is potential to strengthen population growth in Dysart, Moranbah and the Isaac LGA as a whole through direct and indirect employment.
- The Project would support local towns' identity as mining towns, and make a positive contribution to community cohesion through increased long-term mining employment and population increases.

Employment

- Construction would offer up to 1,000 jobs, benefitting construction industry personnel from the local, regional and broader (Queensland) areas, including employment opportunities for Indigenous people and Traditional Owners.
- At full development, up to 500 new operational jobs would be created.
- Recruitment and training strategies will ensure that local community members benefit from the employment and training opportunities associated with the Project.
- The Project will support long-term availability of mining employment in the Isaac LGA and contribute to employment diversification through additional underground mining opportunities.
- Locally targeted recruitment strategies will ensure that local residents benefit from Project employment.
- BHP's goal of 8.0 percent Indigenous employment by financial year (FY) 2025 will see an increase in employment opportunities for Indigenous people, to which the Project will contribute.
- BHP's goal for a 40% female workforce overall by FY 2025 will see an increase in employment opportunities for women in the Isaac LGA and further afield, to which the Project will contribute.
- Approximately 10 apprenticeships and training opportunities are expected to be available on a continuing basis during operation, with local young people comprising the primary recruitment pool. This opportunity has been reported by Dysart State High School as being in demand in the town.
- The Project would contribute to competition for skilled labour within the Isaac LGA and Mackay, Isaac and Whitsunday (MIW) region.

Population and housing

- Compared to the Full Time Equivalent (FTE) population (which includes the residential population plus NRW), the Project could result in an increase of approximately 1.9 percent on the estimated FTE population in Isaac LGA during construction.
- Accommodation will be required for an estimated 900 NRW during construction.
- BMA's provision of subsidised housing will encourage new residents to settle in the Isaac LGA.
- Housing for an estimated 130 households could be required during operations.
- Contractors' housing requirements and population increases as a result of indirect employment may result in increased demand for rental housing.
- During peak operations, a resident population increase in the Isaac LGA in the order of 260 people is estimated, supporting planned population growth in the LGA.
- The Project may result in an increase of 180 NRW on shift by Year 3 of operation, which would represent an increase of 1.5 percent on the projected NRW population and contribute to demand for services and infrastructure.
- Total population increases (residents plus NRW) of approximately 1.2% may occur by Year 3 of operation, increasing demands on local infrastructure.

Health and wellbeing

- During construction, an estimated 900 non-local workers (at peak) may translate to demand for approximately 0.1 of a General Practitioner (GP) and add increased demands on hospital, emergency and mental health services.
- During operations, increased demand for GPs in the order of up to 0.5 GP may occur as the result of population increases, as well as increased demand for hospital and mental health services.

- Increased demand for police, ambulance and fire and rescue services is expected as a result of population increases and increased numbers of NRW.
- New residents are likely to contribute to increased demand for childcare, in the order of five long day care places, and seven out of school hours care places. Increased family support services may also be required.
- With a population increase of 260 people, there would be a demand for approximately 44 school enrolments, with Dysart schools likely to experience the majority of demand, however private schools outside the Isaac LGA would also accommodate a portion of the increased demand
- Population increases will increase demand for settlement and community support services and recreational and cultural services.
- There is potential to increase volunteer resources by increasing the number of families living locally.
- The availability of Project employment will enhance the wellbeing of Project personnel and families through long term, well paid employment, affordable housing and well-serviced communities.

Local business and industry

- The Project's construction would contribute positively to local and regional businesses through demand for goods and services.
- The Project will offer long term opportunities for local, regional and Indigenous businesses to supply its operations.
- Construction, trades, equipment supply and consumables supply companies across Queensland (including the Isaac and Mackay LGAs) will benefit from supply to the Project.
- 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.

Cumulative impacts

- The magnitude and timing of cumulative impacts are uncertain, however construction of more than one major project in a similar timeframe as the Project may strain social infrastructure (particularly health and emergency services) and may affect perceptions of community safety or traffic safety.
- If there is insufficient capacity to accommodate NRW, cumulative impacts on housing access and affordability are likely.
- Cumulative demands on Council infrastructure, community services, health and emergency services, schools, childcare and recreational infrastructure are likely as the result of new coal mining operations commencing operation in the Isaac LGA. Significant cumulative demands on local housing stocks are possible, with potential for rent inflation and displacement of local residents and key workers.

SIMP

The SIA includes a Social Impact Management Plan (SIMP) that details how BMA will work with local and regional stakeholders to mitigate the Project's potential social impacts and maximise the opportunities identified. The SIMP describes:

The SIMP details how BMA will work with local and regional stakeholders and describes:

- responsibilities for coordination and implementation of SIMP measures;
- integration of stakeholder inputs on impact management and opportunities;
- the mitigation hierarchy applied to avoid, manage and/or offset social impacts;

- the Project's approach to adaptive management of social impacts; and
- BMA's social investments in local communities.

The SIMP includes five management plans for:

- Community and Stakeholder Engagement;
- Workforce Management;
- Housing and Accommodation;
- Health and Community Wellbeing; and
- Local Business and Industry.

A comprehensive monitoring, reporting and review framework is also provided as part of the SIMP.

1. Introduction

BM Alliance Coal Operations Pty Ltd (BMA) acts on behalf of the Central Queensland Coal Associates Joint Venture (CQCA), which is owned 50:50 by BHP and Mitsubishi Development Pty Ltd. BMA is Australia's largest coal producer and metallurgical coal exporter.

BMA is seeking environmental approvals for the Saraji East Mining Lease Project (SEMLP) (the Project), which is located within the Isaac local government area (LGA), approximately 30 km north of Dysart and approximately 167 km south-west of Mackay in Queensland.

BMA owns and operates six coal mines in the Bowen Basin as well as the Hay Point Coal Terminal near Mackay. BHP has been the major employer in the Isaac LGA since 2001, and makes significant contributions to the wellbeing of its communities.

This Social Impact Assessment (SIA) forms part of the Environmental Impact Statement (EIS) for the Project, which has been prepared in compliance with the *Environmental Protection Act 1994* (EP Act).

The Queensland Department of Environment and Science (DES) placed the EIS on display in 2021 and sought public and agency submissions to the EIS. This updated SIA responds to relevant submissions to the EIS, and has been updated for changes to social conditions since 2017 and more recent stakeholder engagement. The updated SIA was completed in 2023.

1.1 The Project

The Project involves a proposed greenfield underground coal mine and supporting infrastructure on Mining Lease Application (MLA) 70383 and MLA 70459. The Project will be adjacent to the existing Saraji Mine, which is operated by BMA on Mining Lease (ML) 1775 and ML 70142.

The land on which the Project is proposed to be developed is owned by the CQCA Joint Venture parties. The Project Site encompasses approximately 11,427 hectares (ha). Mining and the infrastructure required to support the Project are not proposed within the full extent of the Project Site, with direct impacts constrained to a smaller area of some 3,348 ha within MLA 70383, MLA 70459, ML 70142 and ML 1775.

To minimise new disturbance, the Project is designed to make use of existing approved infrastructure and previously disturbed areas on the adjacent Saraji Mine. Where necessary, existing infrastructure will be upgraded or new Project infrastructure will be located to minimise disturbance and operational efficiency of Project access, service connections, coal processing and rail loading, as described below.

The Project will be authorised by a standalone Environmental Authority (EA). The EA will impose environmental management conditions on the proposed mining activities on the relevant MLs and outline the environmental management requirements with which BMA must comply.

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).

BMA has not made an investment decision to proceed with the Project. This decision will be dependent on demand for coal, and made in the context of investment decisions about BMA's other assets. As described in Section 6.1.4, 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.

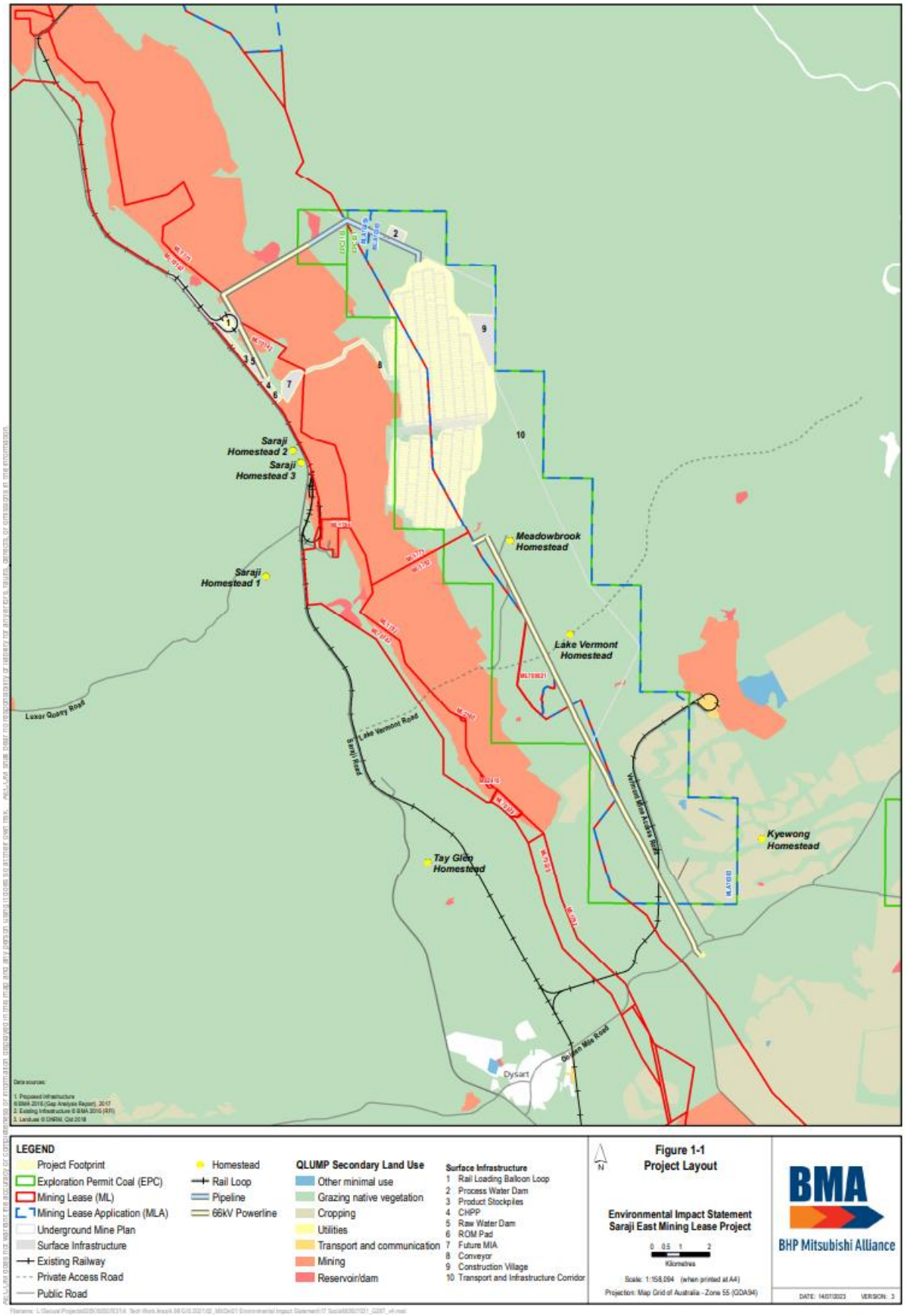
The Project is expected to have a Life of Asset (LOA) of 20 years i.e. to approximately 2045. The Project site will be progressively rehabilitated throughout the LOA in accordance with a Progressive Rehabilitation and Closure Plan (PRC Plan) as required under the provisions of the *Mineral and Energy Resources (Financial Provisioning) Act 2017* (MERPF Act) and EP Act. The final closure and rehabilitation period for the Project is nominally 10 years, i.e. 2046 to 2055.

Figure 1.1 shows the Project layout in relation to context with surrounding land uses. The Project would involve:

- a greenfield single-seam underground coal mine to be developed on MLA 70383, commencing from within Saraji Mine's ML 1775;
- a new CHPP, run-of-mine (ROM) stockpile and coal stockpile pads located on ML 70142, and a new MIA located on ML 1775;
- a conveyor system to deliver ROM coal from the underground portal to the CHPP, and product coal to the rail loading facilities, located over ML 1775 and ML 70142;
- relocation of the existing Eungella Water Pipeline Company (EWPC) Southern Extension Water Pipeline and reconnection into a new infrastructure and transport corridor to the eastern boundary of MLA 70383 and northern boundary of MLA 70459;
- dewatered tailings and reject disposal within spoil dumps on the Saraji Mine;
- a new rail spur and balloon loop and signalling system located on ML 70142;
- gas and water collection networks and access tracks across the underground mine footprint across ML 1775 and MLA 70383; and
- production of up to eight million tonnes per annum (Mtpa) of product coal for the export market over at least 20 years.

Operation of the existing Saraji Mine is anticipated to extend beyond 2040 under approved and proposed ML boundaries. Project interactions with the existing authorised Saraji Mine activities (e.g. accepting mine water or waste) will be authorised by minor amendment to the existing Saraji Mine EA Permit: EPML00862313.

Figure 1.1: Project layout



1.2 Workforce and accommodation

1.2.1 Construction

BMA will own and operate the Project and contract the construction of the CHPP, MIA and associated infrastructure to a suitable construction contractor(s).

The Project is likely to employ up to 1,000 personnel during its construction, which is assumed for the purpose of this assessment to commence in 2023. BMA estimates that an initial construction workforce of 500 people will be required in Year 1 of construction, increasing to 1,000 people by Year 2. The workforce skills required for construction will include heavy equipment operators, boilermakers, carpenters, scaffolders and electricians. The Project will also create opportunities for local employment in construction, transport and the supply of goods and services.

Construction personnel will work across two 12-hour shifts, seven days a week. Rosters will be confirmed prior to construction. For the impact assessment, the construction workforce roster is assumed to be 21 days on and seven days off, with two 12-hour shifts changing over at 6.00 AM and 6.00 PM respectively.

1.2.2 Operation

BMA estimates that the Project will require up to 500 personnel at full operational development by Year 3 of operations, which for the purpose of this assessment would be achieved in 2027. The Project is expected to continue production for 20 years.

The Project's workforce and workforce management are discussed in Section 4.2. Existing local residents will be a key target for Project recruitment. Project personnel from other regions will be encouraged to settle locally, with housing and support arrangements available to support their relocation. Recruitment strategies and incentives for new residents to settle locally are also outlined in Section 4.2.

The Project will be a new, substantial and long-term source of supply opportunities and other Project-generated activity for businesses in the Isaac LGA and the Mackay-Isaac-Whitsunday Region. This is discussed in Section 4.5.

1.2.3 Workforce accommodation

A new workforce accommodation village (WAV) may be needed to support the Project's construction stage, and would be located on the eastern edge of MLA 70383 (refer Figure 1.1).

BMA had proposed to seek approval for a WAV for the operations phase to accommodate non-local personnel who would commute from other regions, avoiding impacts on housing availability in the event that a sufficient number of workforce accommodation beds were not available when required. Following consultation with Isaac Regional Council (IRC) and the Office of Coordinator-General (OCG), BMA is no longer pursuing this option as part of the EIS process. Housing and accommodation arrangements are discussed in detail in Section 4.3.

1.3 Legislative and statutory requirements

State legislation of relevance to the SIA scope is outlined below. The Project has also been determined as a 'controlled action' under the Commonwealth *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) under controlling provisions for listed threatened species and communities, and a water resource. In considering potential impacts on matters of national

environmental significance, the Minister for the Environment is required to consider the social and economic impacts of the project, however there are no specific EPBC requirements for the SIA.

1.3.1 Environmental Protection Act

The Project will be assessed under the EP Act, which is administered by 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 include:

- '(a) ecosystems and their constituent parts, including people and communities; and
- (b) all natural and physical resources; and
- (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; and
- (d) the social, economic, aesthetic and cultural conditions that affect, or are affected by, things mentioned in paragraphs (a) to (c) (Queensland Government, 1994).

On 24 May 2013, BMA applied for a new site-specific environmental authority (EA) for coal mining (under the EP Act) with the former Department of Environment and Resource Management (DERM). On 25 June 2013, DERM issued a Notice of Information Request for the EA application, requiring an environmental impact statement (EIS).

In 2017, BMA recommenced the assessment and finalisation of environmental approvals for the Project, and the final Terms of Reference (TOR) for the EIS were issued to the proponent on 2 June 2017. The SIA has been conducted in accordance with the TOR, as shown in Table 1.1.

Table 1.1 Terms of Reference

ToR	Requirement	Report section
Objective and performance outcomes	The construction and operation of the project should aim to: • avoid or mitigate adverse social and economic impacts arising from the project • capitalise on opportunities potentially available to affected communities.	This document (SIA) Section 6 (SIMP)
Information requirements - 8.10.1	Conduct a social impact assessment (SIA) in accordance with the Coordinator-General's Social impact assessment guideline (July 2013) and the Coordinator-General's Social impact assessment guideline (draft) (October 2016) or the guideline in place at the time of delivery of the SIA. The SIA should be developed in consultation with the Coordinated Project Delivery Division in the Office of the Coordinator-General (OCG), Department of State Development, and describe the likely social impacts (positive and negative) on affected communities. The proposed mitigation measures are to be discussed. Should the Strong and Sustainable Resource Communities Bill 2016 (SSRC Bill) be passed, the proponent must meet all requirements of the legislation that apply to the project.	This document (SIA)
	Information requirements	

ToR	Requirement	Report section
Appendix 3 Matters to be addressed in the social and economic assessment	The SIA should include:	
	a) a profile of key stakeholders	Section 2.6
	b) a social baseline study of potentially impacted communities within the SIA study area	Section 3
	c) an overview of state government legislation and policies and priorities which complement the mitigation measures for the project's social impacts	Section 1.3
	d) an explanation of sources used to gather information and analysis methods used. Discuss rationale for both primary and secondary data	Section 2.3
	e) a description of how the potentially impacted communities and affected stakeholders/other interested were engaged and consulted with during the development of the SIA	Section 2.3.3, Section 2.5, Section 2.6
	f) identification of potential social impacts and their likely significance, including duration	Sections 4 and 5
	g) the proponent's proposed enhancement and mitigation/management measures	Section 6
	h) details of the proponent's proposed monitoring and reporting framework	Section 7
	Social impact assessment study area Define the project's SIA study area (including the local, district, regional and state level as relevant), taking into account the:	
	a) potential for social impacts to occur	Section 2.7
	b) location of other relevant projects (existing or proposed)	Section 3.1.6, 4.6
	c) location and types of physical and social infrastructure, settlements and land use patterns	Section 3.1
	d) social values that might be affected by the project including integrity of social conditions, liveability, social harmony and wellbeing and sense of community	Section 3.3
	e) Indigenous social and cultural characteristics, such as native title rights and interests, and cultural heritage.	Section 3.1.1, 3.3.2
	Undertake a targeted baseline study of the people residing within the project's SIA study area, based on qualitative, quantitative and participatory methods, supplemented by community engagement processes and primary data collection reference relevant data contained in local and state government publications	Section 3
	The baseline study, assessment of potential social impacts and development of appropriate mitigation measures and management plans should be informed by an inclusive and collaborative community and stakeholder engagement process commencing at an early stage of the EIS process, and including consultation with a broad range of stakeholder groups	Section 2.3.3
	The community and stakeholder engagement process should be adequately described and documented in the EIS report	EIS Chapter 19

ToR	Requirement	Report section
	Assess and describe the type, level and significance of the project's social impacts (both negative and positive) including sufficient data to enable affected local and state authorities to make informed decisions about the project's effects	Section 4 and Section 5
	Impact assessment should include an assessment of the potential scope and significance of impacts at the local and regional level	Section 5
	The impact assessment should also evaluate and discuss the potential cumulative social impacts resulting from the proposed project in combination with other existing or projects in advanced planning stages within the SIA study area. Key issues assessed should include population workforce (construction and operation), workforce accommodation, local and regional housing markets, use of and access to community infrastructure, services and facilities and any existing legacy issue(s) or cumulative impact(s) which is/are not attributed to the present project proposal or advanced planned projects	Section 4.6
	The impact assessment should include: • the impacts identified by the SIA process • impacted stakeholders • impacts, mitigation and management measures timing/timeframes • description of the mitigation and management measures • defined outcomes, and the performance indicators and targets to achieve the outcomes • monitoring and reporting framework • residual impacts (after mitigation/management) and how these will be addressed	Sections 5 and 7
	Management plans for the following are to be provided as part of the SIA:	Section 6
	• community and stakeholder engagement	Section 6.2
	• workforce management	Section 6.3
	• housing and accommodation	Section 6.4
	• local business and industry content	Section 6.6
	• health and community wellbeing	Section 6.5

1.3.2 Strong and Sustainable Resource Communities Act 2018

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

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

- prohibition of 100 percent fly in fly out (FIFO) workforce arrangements on operational large resource projects;
- prevention of discrimination against locals in the future recruitment of workers; and
- the requirement for an SIA during the assessment process.

The SSRC Act applies to 'large resource projects' that have a 'nearby regional community'. A 'large resource project' is a resource project for which an EIS is required or that holds a site-specific EA under the EP Act, and has a workforce of 100 or more workers, or a smaller workforce as decided by the Coordinator-General (Queensland Government, 2017).

The Project does not propose a 100 percent FIFO workforce.

As provided in the SSRC, Act, a 'nearby regional community' is a town any part of which is within a 125 km radius of the main access to the project, or a greater or lesser radius decided by the Coordinator-General, and has a population of more than 200 people, or a smaller population decided by the Coordinator-General. Section 13 of the SSRC Act provides that the Coordinator-General must publish the name of each nearby regional community for each large resource project, and Section 12 also provides that the Coordinator-General must (during evaluation of the EIS) decide whether to nominate a large resource project as a project for which persons employed during construction phase are workers for the Act.

The SSRC Act requires that large resource projects provide a SIA that includes the matters provided for in the SIA Guideline as published on the Coordinator-General's website (see Section 1.3.3). Sections 9, 10 and 11 of the SSRC Act provide the regulatory framework for SIA, including:

- the matters SIA must provide for, with core matters including:
    - community and stakeholder engagement;
    - workforce management;
    - housing and accommodation;
    - local business and industry procurement; and
    - health and community well-being;
- the requirement to prioritise recruitment from local and regional communities and then recruitment of workers who will live in the regional community;
- the requirement for the owner or proponent to consult with the local government for the LGA in which the resource project is situated in preparing the SIA; and
- enforcement provisions for conditions stated by the Coordinator-General to manage the social impacts of a project.

1.3.3 Social Impact Assessment Guideline

The Coordinator-General's *Social Impact Assessment Guideline* (Queensland Government, 2018) requires that the SIA:

- address the core matters outlined and consider the full life cycle of the Project;
- be commensurate with the nature and scope of the Project, the sensitivity of the social environment and the likely scope and significance of the Project's social impacts;
- provide a meaningful engagement process including;
    - a profile of key stakeholders and a description of how the potentially impacted communities and stakeholders were consulted during the development of the SIA; and

    - inclusive and transparent engagement with stakeholder and communities, including a thorough process of engagement with local governments;
- be based on comprehensive social impact analysis, including the most current information on the affected communities and the Project;
- integrate with the EIS process, and include consideration of the social consequences of technical matters assessed in other parts of the EIS;
- include management measures that address potential negative impacts and capitalise on positive opportunities; and
- provide a Social Impact Management Plan (SIMP) which documents the management measures and provides a practical basis for their implementation.

The SIA has addressed the SIA Guideline as prescribed in the TOR, including:

- consideration of the core matters;
- providing 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, community access to social facilities and services, housing and accommodation and details of other resource and infrastructure projects in the area;
- assessment of impacts and opportunities across all relevant issue categories, for each stage of the Project lifecycle, including cumulative impacts;
- identification of potential social impacts and their likely significance; and
- provision of a SIMP that details proposed enhancement and mitigation/management measures, and a monitoring and reporting framework.

1.3.4 Regional Planning Interest Act 2014

The *Regional Planning Interest Act 2014* (RPI Act) identifies and protects areas of Queensland that are of regional interest in order to 'manage the impact and support coexistence of resource activities and other regulated activities in areas of regional interest (Queensland Government, 2014).

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.

1.3.5 Planning Act 2016

The *Planning Act 2016* (Qld) commenced implementation on 3 July 2017, establishing a new planning system that 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 proportion of the Project Site, MLA 70459 within the former Belyando Shire Council LGA.

The Planning Act does not apply to development in mining tenements authorised under the Mineral Resources Act 1989, other than for administrating development assessment for the Heritage Act where relevant.

Development activities that are within local governments' authority include assessment of Development Applications for areas outside of Mining Leases and any planning scheme amendments required to facilitate the Project.

1.3.6 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'; and
- '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; and
- 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; and
- 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.

1.3.7 Social sustainability and social infrastructure strategies

IRC has a *Social Sustainability Policy* that 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'; and

- ‘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).

1.3.8 Queensland Government policies

The Queensland Government has several policy initiatives that support increased skills training, employment and supply opportunities. Table 1.2 provides a summary of State policy directions and strategies that are relevant to the scope of the SIA (particularly workforce diversity, education and training, business and industry development, community wellbeing and development, partnership and investment).

Table 1.2: Policy directions relevant to SIA

Strategy	Summary	Relevance to Project
Social Development		
Queensland Women’s Strategy 2022-2027	The Queensland Government released the *Queensland Women’s Strategy 2022–27* in March 2022. The strategy’s first overarching priority is women’s economic security, to ‘avoid recreating inequities of the past’ and enable all Queenslanders to thrive from the economic prosperity that results from increased gender equality.	BHP has a commitment to achieving 40 percent female employment by 2025. The Project will support this goal.
Queensland Disability Plan 2022-27	In November 2022, the Queensland Government released the *Queensland Disability Plan 2022-27*, which aligns with the seven outcome areas in Australia’s Disability Strategy as follows: Employment and Financial Security, Inclusive Homes and Communities, Safety, Rights and Justice, Personal and Community Support, Education and Learning, Health and Wellbeing, and Community Attitude. This plan is to be the primary mechanism to drive implementation of Australia’s Disability Strategy in Queensland.	BHP’s social investments for the Project will include partnership to support training and employment pathways for local people with disability.
Queensland Youth Strategy 2016	A strategy informed by young people, focused on: 1) supporting those most vulnerable; 2) improving access to safe, accessible and affordable homes; 3) healthy futures through good mental health and healthy lifestyles; 4) educating to employment.	BHP has a strong commitment to training young people as described in Section 6.3.3
Building our Regions	Funding for critical infrastructure in regional areas, whilst supporting jobs, fostering economic development and improving the liveability of regional communities. Projects funded in Isaac LGA include the Moranbah Resource Recovery Centre Replacement Project, to replace the existing Phase 1 landfill through the development of a new landfill, and Moranbah Reservoir and Associated Works, to build a new 15 ML ground level reservoir for water storage at the Moranbah Water Treatment Plant.	Responsible water use and re-use is a key objective for the Project. Waste from the project would be managed in accordance with agreements with IRC regarding use of the landfill. Waste will be transported outside the LGA if capacity is unavailable.
Education and Training		
Queensland Apprentice	Department of Employment Small Business and Training (DESBT) provides a range of programs to help existing workers gain trade qualifications, fund the training of	BHP has a ‘Future of Work’ partnership with the Department of Education Skills and

Strategy	Summary	Relevance to Project
and Trainee support	eligible apprentices and trainees, including school-based participants, and work in partnership with industry to develop tradespeople in priority trade occupations.	Employment (Federal Government) to assist regional residents to gain skills in short courses or advanced apprenticeships. The Project will participate in this by placing trainees and apprentices.
Jobs Queensland	Independent statutory authority advising Government on future skills requirements, workforce planning and development issues. The *Job Queensland's Positive Futures: Apprenticeships and Traineeships in Queensland* report notes that in mining, apprentices make up a high percentage of the mining industry's national workforce at almost four per cent compared with the average of all industries of 2.5 per cent. It also notes that the cyclical nature and fluctuating workforce affects the number of tradespeople available to supervise apprentices and trainees. An 'advancing skills for the future' strategy has been developed, comprising a suite of resources addressing the need for training that improves Queenslanders' prospects and supports economic growth'.	BHP offered 51 apprenticeships and traineeships in the Bowen Basin 2022. The Project would employ approximately ten apprentices per year on average.
Queensland Minerals and Energy Academy (QMEA)	An industry-schools partnership between the Queensland resources sector (represented by Queensland Resources Council (QRC)) and Queensland Government through the Gateway Industry Schools Program, which offers a range of programs to broaden students' and teachers' knowledge of the sector and provide a talent pipeline of employees into the resources sector and related science, technology, engineering and maths (STEM) industries.	BHP is a Tier 1 sponsor for QMEA. This partnership will continue to support the availability of Project personnel.
Advancing Aboriginal and Torres Strait Islander Education and Training	A strategy to drive better education outcomes for Aboriginal and Torres Strait Islander communities. Highlights with relevance to the SIA include prioritising participation of Aboriginal and Torres Strait Islander people under the Annual VET Investment Plan to engage in training that offers social and economic benefits, and funding for Aboriginal and Torres Strait Islander-specific projects under Skilling Queenslanders for Work.	By 2025, approximately 8.0 percent of BHP's workforce is expected to be Indigenous. SIA includes goals for Indigenous employment
Business and Industry		
Moving Ahead Strategy 2016-22	The Moving Ahead strategy includes the following priorities: 1) Build a more skilled and diverse workforce; 2) Focus on youth and plan for future success; 3) Build our partnership with industry; 4) Increase entrepreneurship, business growth /innovation; 5) Overcome barriers/realise opportunities to completion.	BHP participates in a range of business capacity programs which will apply to suppliers to the Project.

2. SIA scope and methodology

This section describes the scope of the SIA, including:

- SIA objectives;
- the nature of the Project as relevant to the social environment;
- the SIA methodology;
- the SIA study area, including Native Title rights and interests, the location and characteristics of nearby communities, settlements and land use patterns, and identification of potentially affected communities;
- engagement with IRC;
- stakeholders and their inputs to the assessment, including IRC inputs; and
- key matters for assessment.

2.1 Objectives

The objectives of this SIA are to:

- define the SIA study area, having regard to the Project's social context, the SSRC Act and the *SIA Guideline 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 mitigation measures 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 IRC 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 that create or enhance socioeconomic benefits; and
- provide a monitoring and reporting strategy to support adaptive management of social impacts.

The SIA was updated during 2022-2023 to address relevant submissions to the Project EIS and the results of stakeholder engagement on the updated SIA.

2.2 Nature of Project

The Project is located approximately 30 km north of Dysart, 60 km south of Moranbah, and 167 km south-west of Mackay in Queensland. As described in Section 1.1, the proposed Project is a greenfield single-seam underground mine and supporting infrastructure, to be developed on land owned by the CQCA Joint Venture parties. The Project would be adjacent to the existing Saraji Mine (ML 1775 and ML 70142), which is operated by BMA.

The area surrounding the Project Site is generally highly modified for mining, grazing and agricultural activities. Existing land uses near 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); and
- mining and coal exploration activities.

The Project Site would be accessed from Saraji Road. Workers who are not living within a safe daily driving distance will fly to Moranbah 'Bunhdhara' Airport and be bussed to the Project Site.

The key Project elements that may affect the social environment include:

- construction and operation of an underground mine, in relation to land ownership, the settlement pattern and nearby land uses;
- a construction workforce of up to 1,000 personnel and an operational workforce of up to 500 personnel, in relation to changes to population characteristics, employment opportunities, skills and labour requirements, and demands on local services;
- workforce housing and accommodation arrangements, in relation to the availability of local housing conditions;
- transport arrangements for Project personnel; and
- provision of a new, long-term source of supply opportunities and other Project-generated activity for businesses in the Isaac and Mackay-Isaac-Whitsunday (Mackay SA4) region.

A detailed description of the Project is provided in EIS Chapter 2: Project description.

2.3 Methodology

The SIA was developed during 2018-2019, and provided as part of the EIS for public display in May-July 2021. Submissions to the EIS were considered in updating the SIA during 2022-2023.

Key steps in the SIA process are described below.

2.3.1 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.

2.3.2 Scoping

The SIA scoping process considered SIA requirements, the Project's location, the settlement pattern and the characteristics of local communities and regions as detailed in Sections 2.4 and Section 3.

2.3.3 Stakeholder engagement

BMA undertakes regular engagement with residents, Traditional Owners, community organisations and other stakeholders in the Isaac LGA, and participates in a range of community events and networks. BMA Communities team members are also involved in a variety of community and industry forums and initiatives to address local community priorities. Data from BMA's consultation activities have been used to inform the SIA. BMA has also undertaken specific consultation with IRC, State agencies and a range of other stakeholders as part of the EIS process.

SIA engagement

SIA-specific engagement was undertaken to inform the SIA. The purpose of SIA engagement is to ensure that directly affected stakeholders and other community members had the opportunity to provide informed input to assessment. SIA engagement principles are shown in Table 2.1.

Table 2.1: Engagement principles

Principles	How achieved
SIA is informed by the views of directly affected stakeholders	Inputs from stakeholders who may be affected by the Project's impacts or benefit from Project opportunities are represented in the SIA. BMA undertook an engagement process with IRC (April 2022 – March 2023) on the proposed management measures and social investment approach. Directly affected stakeholders (IRC, Barada Barna Peoples and adjacent landholders) were given the opportunity to discuss and provide feedback on social impacts and mitigation measures.
SIA engagement is inclusive of all interested stakeholders	Access to SIA engagement was available and accessible through factsheets and feedback forms, SIA community workshops, on-property meetings with landowners, and BMA's communication channels (i.e. free call phone and email).
Stakeholders are enabled to provide informed inputs to the SIA	Stakeholders were provided with access to information about the Project through face to face, mail-based and telephone options, and were provided with various options for participation.

The SIA engagement commenced with stakeholder identification, which included consideration of:

- the Project's location in relation to local landowners;
- the Project's location in relation to local communities, considering which communities were likely to experience significant impacts (see Section 2.4);
- native title in the Project area, as confirmed by the National Native Title Tribunal (NNTT);
- community organisations who have experience with mining projects and knowledge of community needs in Moranbah, Dysart and Middlemount, identified through experience in the region and desktop analysis; and
- government agencies for whom service demands or planning challenges may change, or be affected by Project demands or population increases.

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

- verify and supplement the research and analysis undertaken for the social baseline;
- discuss the Project's potential impacts and benefits; and
- obtain input to the impact assessment and mitigation measures.

Stakeholder engagement as part of the SIA process is summarised in **Table 2.2**. Stakeholder engagement was promoted through letters and emails to 187 stakeholders inviting them to participate in the SIA. Approximately 500 fact sheets and 400 feedback forms were distributed through the SIA workshops, stakeholder meetings, and at IRC offices in Dysart, Middlemount and Moranbah. The SIA team also telephoned approximately 40 key stakeholders including community organisations, government agencies, and business organisations to encourage their participation in SIA workshops and/or through the feedback form process.

Workshops were held in central locations within each town. Workshop participation included 25 community members and service representatives (8 people in Moranbah, 14 people in Dysart and three people in Middlemount). Interviews were offered to interested stakeholders who could not attend the workshops, and were taken up by four organisational representatives. Four people returned feedback forms, all of which expressed support for the Project, and emphasised the importance of local employment and use of local housing.

The outcomes of stakeholder engagement are detailed in Section 4.1.1 and have informed the SIA as follows:

- the scope of the SIA was informed by the key issues raised in consultation;
- the social baseline has taken account of community views on issues such as use of land in the Project area, community values, housing availability and social infrastructure access;
- the impact assessment has taken account of stakeholder views on e.g. the desirability of new local employment, increasing local populations, and demands on government and community services; and
- the mitigation strategies have taken account of community priorities for locally based employment, investment in community development, and housing access to support increased local settlement.

A profile of Project stakeholders, issues raised in consultation and BMA responses to stakeholder issues is provided in Section 2.6.

Table 2.2: SIA engagement strategies

Stakeholders	Engagement Strategies
OCG and DES	OCG Meeting (March 2018) - SIA scope and process Provision of SIA scope for DES review (April 2018) Provision of preliminary draft SIA for OCG review (March 2019) Provision of draft SIA for DES review (July 2019)
Landholders	On-property meetings with directly affected landholders (June 2018)
IRC	Meeting 1 (June 2018) – Discussion of SIA study area, matters to be addressed and issues of importance to Council (see Section 2.5) Meeting 2 (July 2019) – presentation and discussion of draft SIA and SIMP
Barada Barna People	SIA enquiry framework provided for BMA meeting with BBAC (July 2018)
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
Social and health infrastructure providers	Community workshop participation (late 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

Stakeholders	Engagement Strategies
	• Moranbah East State School • Moranbah Police • Queensland Fire and Emergency Service (QFES), Mackay Country Command

Response to EIS submissions

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. Submissions of relevance to the SIA included those from Department of State Development, Infrastructure, Local Government and Planning (DSDILGP), IRC, Department of Seniors, Disability Services and Aboriginal and Torres Strait Islander Partnerships (DSDSATSIP), Queensland Police Service (QPS) and QFES.

Table 2.3 summarises the updated SIA's responses to issues raised in submissions and where they are addressed.

Table 2.3: SIA submission responses

Issues raised	SIA response	Section
As there was a delay between preparation and submission of the EIS, baseline data need to be updated	Social conditions and statistics have been updated to inform the assessment.	3.2, 3.4, 3.5, 3.6, 3.7
Re-engage with stakeholders, and update the SIA and proposed management measures in the SIMP to reflect any new information	Engagement that has informed the updated SIA is discussed below this table, with further detail on consultation with IRC provided in Section 2.5. Consultation outcomes are considered in the SIA as summarised in Sections 2.6, 4.1.1 and 6.1.2.	2.3.3 and 2.5 2.6, 4.1.1 and 6.1.2
Construction timeframe superceded	The SIA was updated to reflect revised timeframes for the Project. These timeframes are linked to the SIA/SIMP strategies.	Throughout as relevant
Clarify availability of BMA housing and any progress on the consultation and approach for surplus housing	The status, condition and availability of BMA housing in Dysart and Moranbah has been updated and confirmed. BMA has not had further consultation regarding disposal of housing that is currently surplus to needs.	4.3.5
Confirm Workforce Accommodation Village (WAV) availability	The Project includes a WAV for non-local construction personnel. There is sufficient capacity within existing WAVs owned or contracted by BMA (currently 241 rooms) to accommodate the anticipated number of non-local personnel on shift during operations (180 personnel). There is also existing unused capacity within BMA-owned WAVs that could be developed as required. The availability of WAV rooms to accommodate non-local operational personnel will be confirmed ahead of operations.	4.3.4, 4.3.5
The context for cumulative social impacts has changed since the SIA was prepared.	The assessment of possible cumulative impacts and the strategies to manage these impacts have been updated to reflect newly proposed projects and those that have progressed or been discontinued.	4.6
Need for community investment	The SIMP has been updated with the outcomes of further consultation with IRC regarding community investment.	6.1, 6.5

Issues raised	SIA response	Section
Need for commitment to mitigation of childcare, health and affordable housing impacts	The SIA includes an update on access to childcare, health services and emergency services based on consultation and research conducted for BMA in 2021.	3.6.1, 3.6.6, 3.6.7
	Updated mitigation measures are provided, noting BMA's support for the Childcare Leadership Alliance.	6.5.5
	BMA has committed to provision of housing for Project personnel, which will minimise direct impacts on rental housing affordability. BMA will engage with IRC, local business associations, ELAM and IAHT to identify and address any indirect impacts on housing affordability as detailed in Section 6.4.4.	6.4.4
	Mitigation of impacts on community, health, emergency and Council services is detailed in the SIA.	6.5.6, 6.5.7, 6.5.8, 6.5.9
	Other contributions to community services and programs are detailed as part of Project-specific strategies in Section 6.	6.1.3, 6.1.5, 6.5.3, 6.5.4
Identify where community development programs apply directly to the Project	BMA's contributions to amenity and liveability in Isaac LGA, and additional investments with respect to the Project, are detailed in Section 6.1.3 BMA's current investment in community development is described in Section 6.5.4, referencing how these programs and strategies are relevant to Project communities.	6.1.3, 6.5.4
Potential for population increase regarding overlap with Saraji Mine operations	The SIA includes updated population impact estimates, and assumes an overlap with Saraji Mine's operation.	4.3.3
Queensland Police Service (QPS) strongly supports the proposed engagement strategies and measures	This is noted.	6.5.6
Queensland Fire and Emergency Service support being updated on project planning and the workforce ramp-up, and engagement in emergency management planning	The SIA notes development of the Project's Emergency Management Plan will include engagement with QFES.	6.5.10
Proposed treatments should extend beyond business as usual and provide net benefits to nearby affected communities	The SIA describes mitigation of significant social impacts and BMA's social investments that support community wellbeing. The approach to additional investment in community development with respect to the Project is described in Section 6.1.5. The Project's benefits to local communities are summarised in Section 8.3.	6.1.5, 8.3
Clear and firm commitments to managing negative impacts and provide outcome that amount to a net benefit	The SIA describes BMA's clear and firm commitments to managing negative impacts, and describes predicted benefits if the Project proceeds.	4, 6.1, 6.5.2, 8
Consider employment targets for people with disability and clarify	The SIA has been updated to note that BMA will work with local providers and community and government stakeholders to facilitate employment pathways for people with disability,	6.3.4, 6.5.8

Issues raised	SIA response	Section
commitment to consult re: adequacy of services to include disability support services	and to ensure sufficient services are available to meet the needs of people with disability.	

Updated SIA engagement

Throughout 2022 and early 2023, there was a process of meetings and exchange of documents (including the updated SIA) between IRC and BMA.

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 EIS. 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 views on the updated SIA and provide any feedback received to Department of Environment Science and Innovation (DESI) 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.

The outcomes of consultation with IRC regarding the updated SIA are detailed in Section 2.5.2.

The updated SIA has also been informed by the Smart Transformation community planning process that BMA initiated in 2019. This included the establishment of Smart Transformation Advisory Councils (STACs) in Moranbah and Dysart, representing a broad range of community, agency, business and industry representatives from Moranbah and Dysart. The STACs conducted extensive consultation to identify the two communities' readiness for realising the opportunities of the Fourth Industrial Revolution (4IR) and sustaining the future of their communities, which resulted in the development of a Community Roadmap.

In 2021, the STACs (supported by BMA) commissioned research on the adequacy of health and emergency services in Moranbah and Dysart. This involved consultation with IRC, local hospital directors, ambulance officers, police and QFES representatives and Queensland Health, by the consultant responsible for this SIA. The results of this consultation and research are described as part of the social baseline and considered in the impact assessment.

Other projects led by the STACs and supported by BMA during 2021-2023 which have informed this updated SIA include:

- a Moranbah and Dysart Housing Assessment, leading to a Housing Summit and the formation of working groups to address issues raised at the Housing Summit;
- a study addressing the childcare challenges in the Bowen Basin, leading to the formation of a Childcare Leadership Alliance to find solutions to improved childcare capacity and flexibility;
- a partnership between BMA, Telstra and GW3, which is delivering a $3.5 million upgrade to digital connectivity in Dysart and Moranbah; and
- an Innovative Futures project that seeks to build an environment for diverse businesses to flourish in Moranbah and Dysart.

2.3.4 Social baseline

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

- the study area's history and settlement pattern;
- community values in the 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; and
- social infrastructure provision.

The social baseline was updated following the release of ABS Census 2021 data. Statistical analysis and description of the potentially impacted communities was supported by a wide range of data and information sources as referenced. Baseline data of relevance to impacts on population, employment, labour availability and skills shortages, childcare, health services, housing and health conditions were updated during 2022-2023.

The ABS statistical geography for potentially affected communities and the broader region is shown in Table 2.4. State Suburbs as defined by the ABS in 2016 and Suburbs and Localities (SAL) as defined in 2021 were used as the basis of the analysis. ABS Census 2021 data are provided for the SALs for Moranbah, Dysart and Middlemount, which correspond to the former State Suburb areas. Data for Statistical Area 2 (SA2s) have also been used where data were not available for State Suburbs and SALs.

The broader region, which may benefit from or be impacted by labour participation or Project supply chains includes the MIW Region that equates to the MIW or Mackay Statistical Area 4 (SA4) and the Central Queensland SA4. Select data are also provided for Mackay LGA as the nearest large population catchment and a comparator.

Table 2.4: Statistical Geography

Areas	ABS Statistical Geography
Moranbah	Moranbah State Suburb and Moranbah SA2 (equivalent areas (2016) Moranbah SAL (2021)
Dysart	Dysart State Suburb (2016) Dysart SAL (2021)
Middlemount	Middlemount State Suburb (2016) Middlemount SAL (2021)
Broadsound-Nebo SA2	Broadsound-Nebo SA2
Isaac LGA	Isaac LGA
Mackay Regional Council	Mackay LGA
Mackay-Isaac-Whitsunday Region	Mackay SA4, also known as MIW SA4
Central Queensland Region	Central Queensland SA4

Source: ABS, 2021a

2.3.5 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 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 the consequent increased demands for housing and accommodation, social infrastructure and community development. Where relevant, e.g. for employment and social infrastructure impacts, 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 demands. Inputs to the modelling include 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 considered, and professional judgement and local experience applied in relation to the likelihood of changes to social values. The SIA includes cumulative social impact assessment, with a focus on population impacts, housing, social infrastructure, community values and employment opportunities.

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

At the conclusion of the impact assessment stage, a two-stage significance assessment was undertaken. Firstly, the significance of impacts and benefits to local communities was considered, having regard to the likelihood and consequence of impacts, existing social conditions and stakeholder inputs. The effect of BMA's commitments and the management measures recommended in the SIA were then considered, and a final significance assessment was undertaken to identify residual impacts.

2.3.6 Social Impact Management Plan

The Social Impact Management Plan (SIMP) documents the measures identified in the assessment with respect to management of social impacts and enhancement of opportunities, and includes a monitoring framework that will support adaptive management of social impacts.

The SIMP details how BMA will work with local and regional stakeholders and describes:

- responsibilities for coordination and implementation of SIMP measures;
- integration of stakeholder inputs on impact management and opportunities;
- the mitigation hierarchy applied to avoid, manage and/or offset social impacts;
- the Project's approach to adaptive management of social impacts; and
- BMA's social investments in local communities.

The SIMP includes five management plans for:

- Community and Stakeholder Engagement;

- Workforce Management;
- Housing and Accommodation;
- Health and Community Wellbeing; and
- Local Business and Industry.

A monitoring program is provided including impacts addressed, outcomes sought, performance indicators, monitoring measures, and the timing and frequency of monitoring.

2.3.7 Assumptions

Key assumptions that form the basis of this assessment are shown in Table 2.5.

Table 2.5: SIA assumptions

Item	Assumptions
Population projections	• There are significant disparities between population projections prepared as Extraneous Material to the IRC's Local Government Infrastructure Plan, QGSO population projections and the 2021 population as enumerated by the ABS 2021 Census of Population and Housing. • The Isaac LGA's average annual rate of growth between 2016 and 2021 as enumerated by the ABS Census has been used to estimate population growth between 2021 and 2026. • See also detailed assumptions about population and housing in Section 4.3.1.
Project delivery timing	• BMA is seeking approval to develop the Project, which is currently in the feasibility stage of development, but has not yet made a financial decision to proceed with the Project. • SIA requires a fixed reference point against which to assess changes to social conditions. For the purpose of assessment, construction has been assumed to commence in 2023, and operation has been assumed to commence in in 2025.
Labour origin	• BMA expects to recruit a proportion of its workforce for construction and operation from within Isaac LGA communities. • BMA will also recruit personnel who want to move to the Isaac LGA, as well as commuting personnel from outside the region. • This assessment has assumed that employment availability in coal mining will remain stable at around 2022 levels during the Project's operation (see 'resource industry effects on social indicators' below).
Skills shortages	• Queensland's mining industry is currently experiencing labour and skills shortages, which are assumed to continue during the Project's operations. • Employment availability in coal mining is assumed to remain stable at around 2022 levels during the Project's operation.
Housing	• The Isaac LGA is currently experiencing a severe shortage of rental housing. This has been assumed to continue during the Project's construction. • BMA owns sufficient existing housing stock and developable residential land to house all Project personnel who want to live locally (see Section 4.3.5).
Non-resident workers (NRW) accommodation	• NRW will stay in existing accommodation villages, adopting an equal split between Moranbah and Dysart. The existing villages that may be used include Moranbah Single Persons Village (SPV), Dysart SPV and Dysart Ausco (Stayover).

2.3.8 Limitations

Timing for Project delivery

As noted above, for the purpose of assessment, construction has been assumed to commence in 2023 and operation in 2025.

Baseline values such as population size, labour force composition and social infrastructure access may change prior to Project commencement, resulting in changes to the magnitude or scope of impacts and benefits. Revision of SIA findings and the SIMP may be required prior to construction if this occurs.

Resource industry effects on social indicators

Communities in the Isaac LGA are strongly influenced by resource industry cycles, with resident and non-resident populations typically 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.

There is some uncertainty regarding levels of coal production and therefore employment in mining, in the short and medium terms. The Department of Industry, Science, Energy and Resources' (DISER) September 2022 forecast indicated that the Australian premium hard coking coal price would average almost US$400 a tonne in 2022, but this was expected to fall by almost half as supply conditions normalise, ultimately reaching around US$220 a tonne by 2024 (DISER, 2022).

Mining employment numbers increase to reflect higher coal prices - but as production and therefore employment numbers are influenced by coal prices, the same level of demand for labour may not persist in the future. At May 2023, the Australian coal price was $160.48 USD per metric tonne, down from a high of $430.81 USD in September 2022 (YCharts, 2023). DISER's September 2022 forecasts and projections indicate that metallurgical coal exports are expected to increase from 171 mt in 2021/22 to 180 mt in 2023/24 (*Ibid*.)

In the medium term (by 2030), global demand for thermal coal exports may decrease in line with achievement of climate change targets. Any change in global demand for metallurgical coal is less clear.

This assessment has assumed that employment availability in coal mining will remain stable at around 2022 levels during the Project's operation.

Technological advances

Mining technology (as with most technology) is continually evolving and may change the number and distribution of personnel required over time. For example, autonomous haulage could change the number and/or distribution of personnel responsible for open-cut coal transport within other mine sites. Trends such as digitalisation may improve the way data is collected and used, and use of virtual reality or drones is likely to improve safety training and risk management.

The pace and magnitude of technological advances that may change the Project's workforce numbers or distribution can't currently be foreseen. BMA will monitor technological advances and trends over time, and if a magnitude of change is forecast, re-calibrate its SIA and SIMP with respect to workforce numbers or other factors at the appropriate time.

Climate change

The Australian Government is committed to reducing Australia's greenhouse gas (GHG) emissions by 43% below 2005 levels by 2030, and to a reduction to net zero emissions by 2050. BHP's goals are to

reduce operational GHG emissions by at least 30 per cent from FY2020 levels by FY2030, and achieve net zero operational GHG emissions by 2050.

The extent to which these targets and their supporting strategic plans will affect coal industry production and employment activity levels, coal industry investment and Government approvals for new or expanded coal projects is unknown, but could influence cumulative demands for labour and social resources such as housing in the Isaac LGA, e.g., by decreasing the number of coal mining jobs and/or increasing jobs of jobs in other industries such as renewable energy.

The SIA is unable to accurately contemplate how medium to longer term changes in government policies or community sentiment may change the way the Project's impacts and benefits are experienced in the future.

2.4 Study area

The Project is a 'large resource project' under the SSRC Act. The Project's main access would be located approximately 28 km north of Dysart, off Dysart-Moranbah Road. In defining the SIA study area, all potentially affected communities with more than 200 people that are within a direct 125 km radius of the Project's access points have been considered.

2.4.1 Considerations

Considerations for identifying the SIA study area and assessment focus are outlined below.

Native title rights and interests

The Project is within the traditional country of the Barada Barna People, whose native title covers approximately 3,233 km^2 of land and waters south-west of Mackay and north-west of Rockhampton, including most of the Isaac LGA. Of this, approximately 2,699 km^2 is Barada Barna country and a further 530 km^2 is shared between the Barada Barna People and Widi People (Queensland Government, 2016).

All of the land titles underlying MLA70383 consist of either Estates in Fee Simple or Leasehold land that constitute "previous exclusive possession acts" pursuant to the *Native Title Act 1993* (Cth) and extinguish native title. No additional surface rights are required for the existing Saraji MLs, and no activities are proposed for areas where surface rights are not held.

BMA considers that the mining lease application area is over land tenure that is not subject to Native Title as indicated in the ML70383 application.

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. The SIA discusses Indigenous values, labour force capacity and businesses, and employment goals.

Landholdings

Land holdings within the Project Site are owned by BMA and include:

- Meadowbrook; and
- Lake Vermont.

Five privately owned homesteads (three on Saraji Station, and one each on Tay-Glen and Kyewong) are located in the vicinity of the Project Site. BMA has a coexistence agreement with the owner of the three Saraji Homesteads, and commercial agreements with the owners of Tay-Glen and Kyewong. Relocation of the existing EWPC water pipeline and powerline into a new infrastructure and transport

corridor would not affect any private properties. The extent of impacts on the amenity or other social values of private properties is discussed in Section 4.1.5.

Settlement pattern

The location and function of communities near the Project influence the likelihood that they will experience Project impacts or benefits.

During the late 1960s to the early 1980s, four towns were established in the Isaac LGA to support coal mining operations. They include:

- Moranbah, approximately 55 km north of the Project, which is the major urban centre in the Isaac LGA, and was established as a home community for the Peak Downs and Goonyella Riverside Mines, and now also accommodates personnel and families associated with other nearby mines;
- Dysart, approximately 28 km south of the Project, established as a home community for Saraji Mine and Norwich Park Mine;
- Middlemount, approximately 80 km south of the Project, which is the home community for personnel at the Middlemount Mine (owned by Middlemount Coal Pty. Ltd.) and the Grasstree Mine owned by Anglo Coal; and
- Glenden, approximately 115 km north east of the Project, which is a home community for the Byerwen Mine (owned by Qcoal) and the Newlands Mine (owned by Glencore), and is near the Burton Mine, (owned by the Lenton Joint Venture.)

These towns have very strong identities as mining communities, but also act as local centres for surrounding property owners.

Mining towns in the Central Highlands LGA at a further distance from the Project include:

- Tieri, approximately 90 km south of the Project, which was developed by Mount Isa Mines in the early 1980s and accommodates Oaky Creek mine personnel; and
- Blackwater, approximately 150 km south of the Project, which was developed by the Utah Development Company in the late 1960s to service the Blackwater Mine, and services several nearby mining operations.

Other towns that are within a 125 km direct radius of the Project include:

- Coppabella, approximately 54 km to the Project's north, whose primary role is as a home community for railway personnel and their families;
- Nebo, approximately 90 km to the north, which has a long history as a rural centre and is the closest community to Anglo American's Coppabella Mine;
- Clermont, approximately 90 km to the southwest, which has a strong rural and gold mining history, and is a home community for personnel at Glencore's Clermont Mine;
- Capella, approximately 90 km to the southwest, a long-established rural and railway town, which also houses Glencore's Oaky Creek mine personnel; and
- Emerald, approximately 122 km southwest of the Project, is the municipal centre of the Central Highlands LGA. Emerald has a strong rural history but also a long association with BMA's Blackwater Mine, the Gregory and Crinum Mines (currently in care and maintenance), and mines operated by other companies.

A description of the settlement pattern within the SIA study area is provided in Section 3.1.

Housing and social infrastructure capacity

Housing choice and social infrastructure capacity are key factors for families considering relocation to the Isaac LGA.

Isaac LGA communities have experienced significant pressures on housing stocks over decades as the result of growth and contraction in the mining industry, whilst local social infrastructure is challenged by population fluctuations, changing social trends and mining industry fluctuations.

In 2021, Moranbah had 4,112 dwellings and offered a broad range of housing choices. Moranbah also has the largest social infrastructure capacity of towns within the Isaac LGA (see Section 3.6), some of which service the surrounding region.

Dysart had 1,601 dwellings in 2021. Dysart is the second largest town in the Isaac LGA, with a commensurate provision of local-level social infrastructure (e.g. primary school, high school, pool, a small hospital, and family support services), but less housing diversity in housing types.

Middlemount (with 2021) also provides local-level infrastructure including a merged primary-secondary school, pool and community centre. Middlemount was originally planned for up to 4,000 residents, so its community centres have excellent capacity relative to the population size, however the population does not support a high level of local service provision (Rolleston, 1983).

Nebo had 414 dwellings in 2021, and a limited range of social infrastructure (e.g. a school and community centres, but a visiting doctor, and no childcare). Coppabella is a small town at 133 dwellings in 2021. Most of Coppabella's dwellings are rented from the rail network operator or owned by residents. Coppabella has a primary school and a range of recreational infrastructure oriented to families who live there.

Whilst each nearby town except Coppabella has a private rental market, mining companies own large percentages of housing stock in each of the mining towns, with implication for access by other parties.

Of the towns further from the Project:

- Tieri and Glenden are smaller than the other mining towns, and have basic local-level social infrastructure;
- Capella and Clermont have a good level of social infrastructure commensurate with their longer history and role as small rural centres; and
- Emerald as the Central Highland's LGA's largest town has a very good range of local and district social infrastructure, partly developed through its role as a longstanding rural centre.

Non-local personnel are likely to stay in WAVs nearest to the Project, which will include WAVs near Moranbah, Dysart and Coppabella, and are likely to make demands on social infrastructure in Moranbah and Dysart.

Labour force capacity

Local towns that were established to support mining operations have appropriate labour force strengths. As indicated by the 2021 Census of Population and Housing, coal mining directly employs more than 35 percent of the Isaac LGA's labour force.

Unemployment rates are traditionally very low in the Isaac LGA. The potential labour supply includes people registered as unemployed, people who work part-time but need more hours, contractors and discouraged job seekers, so there may be more labour availability than the data indicates.

BMA has owned and operated coal mines near Moranbah and Dysart for more than 20 years, and is the Isaac LGA's largest employer. This long-term relationship is likely to encourage local residents to

seek employment and supply opportunities with the Project. There is also the possibility that BMA employees could transfer from its other sites to the Project subject to operational requirements.

Regardless, recruitment of skilled mining workers is highly competitive. The Project is likely to draw personnel from across Queensland, but would be particularly attractive to residents in the MIW and Central Queensland SA4 regions. Information about labour force capacity is provided in Section 3.7.

Business capacity

Moranbah, by virtue of its size and the availability of industrial land, has a broad range of businesses, but other Isaac LGA towns also have businesses oriented to the mining industry and associated household expenditure. Mackay is the MIW Region's principal centre and has strong links to mining communities in the Bowen Basin. Mining operations in the northern Bowen Basin draw heavily on mining-oriented businesses in Mackay, and the SIA therefore includes a focus on businesses in the Isaac LGA and the MIW region.

Cumulative impacts

The interaction of impacts from multiple projects has potential to affect access to local housing and accommodation, social infrastructure, and local values such as the family-friendly nature of local communities. Local towns and regions have some 50 years' experience with the cyclical nature of the coal industry and its effects on local towns, however experience shows vulnerabilities to cumulative impacts. The key drivers for cumulative social impacts in the Isaac LGA are the number and distribution of additional residents and NRW induced by multiple projects. Cumulative impacts on local and regional labour force capacity are also likely.

Projects with a footprint within the Isaac LGA that may be constructed and operate within the same timeframe as the Project are summarised in Section 4.6. Proposed projects, if they proceed, are likely to see significant demands for skilled mining and construction labour, and for housing and accommodation in Moranbah and Dysart.

Fatigue Management

BHP's Fatigue Management Policy requires that the maximum working time per 24 hours will not exceed 14 hours, inclusive of travel time (BHP, 2017). As shifts will be of 12 hours' duration, this requires a driving time to and from work of less than one hour. This is aligned with the Department of Natural Resources and Mine's (DNRM) Guidance Note for Fatigue Risk Management, which notes that commute times of one hour, with a 12-hour shift length, can influence the opportunity for sleep and fitting in other daily activities (Queensland Department of Natural Resources and Mines, 1999).

The requirement for daily commuting to not exceed two hours in total would not preclude people from other towns in the Isaac LGA or other LGAs seeking and obtaining Project employment. However, it would make it more likely that towns within a one-hour commute will accommodate Project personnel. Table 2.6 shows the approximate distance, driving distance and driving times between the Project's main access and communities within a direct 125 km radius. Driving distances were estimated using Google maps, using the shortest routes. The towns of Dysart, Moranbah, Middlemount and Coppabella are within a one hour driving radius of the Project.

Table 2.6: Driving distances to the Project

Communities	Approximate direct radius (km)	Driving distance (km)	Driving time
Dysart	28	30	20 min
Moranbah	55	58	40 min
Middlemount	70	91	1 hr
Coppabella	54	79	50 min
Tieri	80	105	1 hr 7 min
Capella	90	103	1 hr 13 min
Clermont	85	113	1 hr 16 min
Nebo	90	131	1 hr 21 min
Glenden	115	172	1 hr 59 min
Carmila	120	244	2 hrs 46 min
St Lawrence	120	301	3 hrs 25 min
Emerald	122	155	1 hr 51 min

Source: Google Maps. 2018.

2.4.2 SIA study area

The SIA study area has been defined following the considerations outlined in Section 2.4.1.

Potentially affected communities

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 is the primary LGA for consideration in the SIA. Dysart and Moranbah are most likely to experience Project impacts and benefits, 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;
- Project employment is likely to be attractive to personnel in towns within a shorter travel time;
- non-local personnel staying in WAVs are likely to access services and businesses in Moranbah and Dysart; and
- the Project's proponent has established relationships with the towns of Moranbah and Dysart, which maximise community benefits and minimise social impacts.

Middlemount has also been considered in the social baseline and assessment as a potentially affected community, given it is within a one hour drive to the Project site.

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)

would 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 and Dysart.

The IRC describes Coppabella as a 'closed town' that exists only for the railway and there is little to no vacant housing available (Isaac Regional Council, 2015). It is unlikely that Project personnel will seek to move to or access services or businesses in Coppabella. Prospective employees from Coppabella could commute to the Project daily so there may be some benefit to individuals, but the Project is unlikely to have social impacts in Coppabella, which is not considered further in the SIA.

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

On the basis of these considerations, the local communities on which the SIA has focused are shown in Table 2.7.

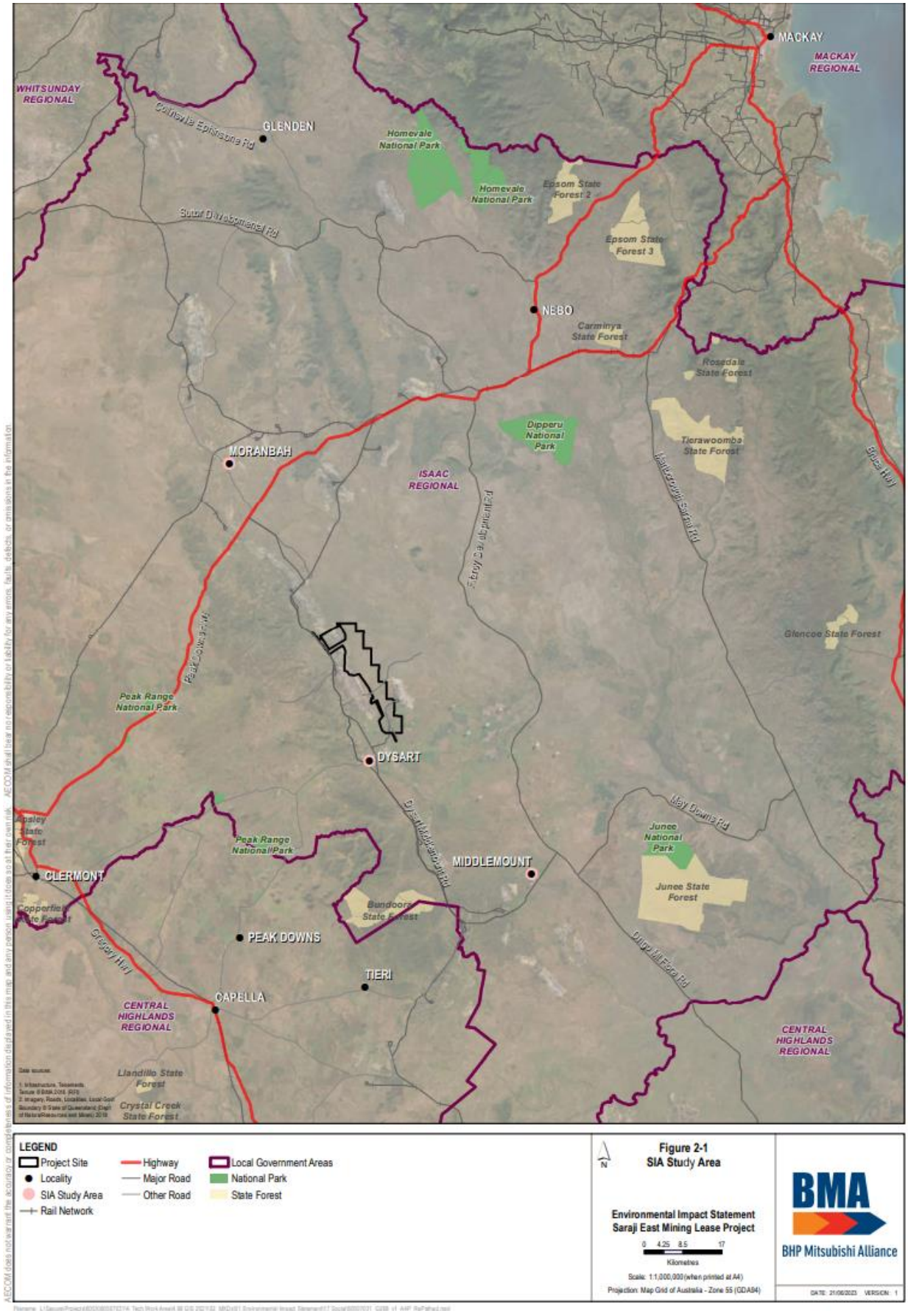
Figure 2.1 shows the local communities in context with the Project and the broader region.

Table 2.7: SIA study area – proposed nearby regional communities

Community	2016 Population (SSC)	2021 Population (SAL)
Dysart	2,991	2,918
Moranbah	8,735	9,425
Middlemount	1,841	1,899
Isaac Regional Council LGA	20,940	22,046

Source: ABS, 2016 and 2021b

Figure 2.1: SIA study area



Broader Region

Project labour will be sourced from other Queensland regions, but it will not be possible to identify potential impacts in other regions with any reliability before recruitment is completed. The Mackay Statistical Area 4 (which equates to the MIW Region) and the Central Queensland SA4 (which includes the Rockhampton, Banana, Central Highlands, Woorabinda, Gladstone and Livingstone LGAs) have considerable strengths in the mining and construction industries and are likely to be a source of Project labour. The SIA therefore includes a focus on labour force capacity in the MIW region and the Central Queensland region. 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 Mackay LGA's labour force and business characteristics are discussed in the SIA.

The Project is likely to provide benefits to the State of Queensland in respect to royalties, taxes and employment opportunities over its 20-year life, as assessed in the Project's Economic Impact Assessment. Queensland has been used as the comparative area for analysis of social indicators and labour supply in the Project's local and regional communities.

Projects that may contribute to cumulative impacts

The Project is proposed within an area where there are extensive existing and proposed mining operations. Existing operations form part of the social baseline as they contribute to population, employment, housing, social infrastructure and business opportunity factors.

Stanmore Coal's Isaac Downs project commenced construction in 2020 (with an estimated construction workforce of 250 personnel) and became operational in 2022, An additional 300 operational personnel were expected to be required to operate this project within Stanmore Coal's Isaac Plains complex, which is located to Moranbah's east. This will contribute, along with the following projects, to increased employment opportunities in the Isaac LGA.

New projects located within the Isaac LGA whose construction and early operations may coincide with that of the Project and may contribute to cumulative impacts include:

- Lake Vermont Meadowbrook Project, which would extend the existing Lake Vermont Mine located to the east of the Project;
- Olive Downs Project (ODP) which is being constructed to the east of Lake Vermont Mine;
- Winchester South Project (WSP) which is proposed for development to the northeast of the Project; and
- the approved extension of Vale's Carborough Downs Mine, which is located approximately 20 km east of Moranbah.

The time frame for construction of approved projects including Ironbark No.1 Mine, Red Hill Mining Lease Project (RHMLP), Eagle Downs Project and New Lenton Project is uncertain, so consideration of their cumulative impacts was not possible.

2.5 Engagement with Isaac Regional Council

As the Isaac LGA's elected representatives and municipal managers, IRC is a key stakeholder for BMA. BMA meets with IRC's Councillors and management staff at least every six months, to discuss issues of importance to local communities, Council and BMA. The meetings address:

- long-term partnership arrangements and overview of social investment within the LGA;

- cooperative responses to current community issues, e.g. disaster recovery after cyclones and emergency communications capacity;
- mitigation of BMA's operational impacts on Council infrastructure e.g. alternative arrangements for waste disposal whilst Council's facilities have limited capacity;
- updates on BMA projects;
- employment opportunities including apprenticeships and traineeships;
- key information from operating sites e.g.: innovation and safety; and
- new mining projects.

SIA-specific consultation with IRC as part of the SIA process is discussed below.

2.5.1 SIA consultation

Meetings to discuss the SIA with IRC were held in June 2018 and July 2019.The first meeting discussed the draft scope of the SIA, current community issues and Council's priorities for the SIA. Key issues raised by IRC are shown in Table 2.8 and centred on:

- ensuring that the SIA contains workforce management principles that ensure long term employment options are available to local residents, including young people wishing to enter the mining industry (addressed in Section 4.2.3 and 4.2.8);
- ensuring that people have choices about commuting to work from local towns or from further afield (addressed in Sections 4.2.5 and 4.3);
- recognition of the need to maintain service capacity commensurate with the needs of both residents and NRW (addressed in Section 4.4.3);
- housing is available to support the settlement of new residents attracted by Project employment (addressed in Section 4.3.5);
- any requirement for a new WAV is justified (addressed in Section 4.3.4); and
- the SIMP review process incorporates Council's inputs (addressed in Section 7).

A second meeting was held in July 2019 to review the draft SIA findings and key SIMP strategies with Council. The discussion included:

- interest in the intentions for vacant land owned by BHP in Moranbah and Dysart (addressed in Section 4.3.5);
- interest in the potential for use of BHP housing that is surplus to requirements to house key workers in Dysart and Moranbah, where rents are rising (addressed in Section 4.3.5 and 6.4.4);
- the need for joint advocacy to Queensland Health for increased services commensurate with the combined residential and non-residential population (addressed in Section 4.4.3 and 6.5);
- the expectation of increased contributions to existing community development initiatives, services and facilities (addressed in Sections 6.1.4, 6.1.5 and 6.5.10);
- the need for upskilling local workers in the context of coal industry mechanisation/automation (addressed in Section 4.2.8); and
- appreciation that Council's views regarding e.g. workforce accommodation and local employment had been addressed in the development of the SIA.

2.5.2 Updated SIA consultation

IRC provided an interim response on the EIS, in which it raised issues relating to the SIA, including:

- the need for updated demographic data (provided in Section 3) and cumulative impact assessments (Section 4.6), given time had elapsed between the preparation and submission of the EIS;
- a request for further information regarding BMA's current social programs, which is provided in Section 6.5.4;
- the need for additional mitigation measures (beyond business as usual) to mitigate additional impacts, which are described in Section 6.1.3 and Section 6.5.4; and
- the expectation of a net benefit for local communities if the Project proceeds, with positive social outcomes summarised in Section 6.5.2, and local community benefits discussed in Section 8.3.

Subsequent advice from Council included a request to include a social impact management mitigation hierarchy, which has been provided in Section 6.1.3, and also includes identification of Project-specific mitigation measures and their financial value, where known.

During engagement with IRC during April and November 2022, BMA explored the concept of 'additionality', 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.

IRC provided benchmark data and further explanation of expectations relating to contributions, given the benchmark data. While IRC had previously indicated that BMA's contributions may represent 'best in class', it sought further information from BMA to validate this, including details on BMA's current and proposed community contributions and support.

In response, BMA provided additional Commercial in Confidence details that demonstrated that contributions in the current 'Business as Usual' (BaU) scenario well exceed the provided expenditure benchmarks.

The SIA articulates the expectation that BMA's social investment and contributions will continue, with recognition of the concept of 'additionality', as discussed in Section 6.1.5. BMA's community contributions would be reviewed prior to construction, in accordance with the review practice outlined in Section 6.1.5.

BMA and IRC representatives met in February 2023 to discuss the updated SIA findings and proposed mitigation measures. The outcomes of IRC consultation to date are shown in Table 2.8. Further detail on Council's inputs to the SIMP, following review of the draft updated SIA in 2022-2023, is provided in Table 6.2.

As noted in Section 2.3.3, BMA provide the updated SIA to IRC in November 2022 and sought Council's formal response during February-June 2023. BMA will continue to seek Council's review of the updated SIA, and 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 2.8: IRC inputs on updated SIA and outcomes

SIMP sub-plan	IRC inputs	Outcomes
Community and Stakeholder Engagement	As part of its submission, Council encouraged BMA to undertake further consultation with Council and communities in revising the EIS, and stressed the benefits of	BMA has continued engagement with IRC through regular bi-annual meetings and special purpose meetings. Engagement with Council and community members during preparation of the SIA is described in Section 2.5.

SIMP sub-plan	IRC inputs	Outcomes
	working with Council in a collaborative manner.	The outcomes of engagement during preparation of the EIS are summarised in Section 2.6 and described in further detail in Section 4.1.1. The SIA includes a detailed Community and Stakeholder Engagement action plan (see Section 6.2.7)
Workforce Management	Council encourages the Project to maximise local employment in favour of FIFO arrangements	BMA's workforce management principles for the Project include a focus on recruiting existing local residents, attracting new residents to the key centres of Dysart and Moranbah, and supporting personnel who intend to move to the Isaac LGA to do so, including provision of subsidised housing. A recruitment hierarchy that prioritises the employment of existing local residents and people who would move to Isaac LGA communities is provided in Section 4.2.3.
Housing and Accommodation	Rental housing availability decreased during 2020-2022. Council expects that BMA will provide housing commensurate with needs induced by the Project.	BMA's provision of housing for local employees is detailed in Section 4.3.5. BMA will consult with personnel to identify their specific housing needs, assess capacity and quality of vacant BMA dwellings and privately-owned rental dwellings to meet Project demand, and initiate housing maintenance and upgrades to prepare vacant housing for Project personnel and families. If a shortfall between the quantum of BMA housing and personnel's expected housing needs is identified, and in consultation with IRC, BMA will identify the need for additional housing development on BMA's vacant residential land to mitigate the Project's direct impacts.
	Council expects BMA to mitigate indirect demands on housing.	BMA's measures to address the potential or indirect housing demands include: • making BMA housing available to the Project's contracted personnel if needed • engagement with Dysart businesses and Moranbah Traders Association regarding their expectations of increased business employment (and housing requirements) as a result of Project operations, and if needed, potential arrangement for use of BMA housing • engagement with IAHT and ELAM to identify any unanticipated impacts on affordable housing access, to enable corrective action e.g. use of BMA's housing portfolio by contractors or local businesses, or prioritisation of affordable housing in community investment. This is further described in Section 4.3.5.
Health and Community Wellbeing	The Project should provide a net positive benefit to affected communities.	The Project's impacts and benefits are assessed in Section 4 and summarised in Section 5. The Project's positive social outcomes are summarised in Section 6.5.2. Potential residual impacts (i.e. impacts remaining after mitigation measures are implemented) and Project benefits are summarised in Section 8.

SIMP sub-plan	IRC inputs	Outcomes
	IRC expects increased contributions to community wellbeing, proportionate to social impacts induced by the Project.	Through engagement with IRC during 2022, BMA demonstrated that contributions in the current business as usual scenario well exceed the community investment expenditure benchmarks provided by IRC. BMA's approach to increased contributions is described in Sections 6.1.3 and 6.1.5.
	Recognition that 'additionality' (social investment as related to production/employment numbers) needs to be considered in context with social and economic change in the Isaac region	The SIA provides an adaptive management approach, which includes: • updating the social baseline before the Project proceeds, so that Project impacts are considered in a current context; • engagement with IRC to jointly consider any changes to social conditions and social impacts prior to Project construction; • refining management measures to respond to social change; and • consideration of social and economic transition in framing social investments.
	Council expects contributions to the community water supply through provision of water subsidy	BMA has already committed an allocation of subsidised water to IRC taking into account the full BMA portfolio. To the extent that the Project would result in additional personnel living locally, and therefore increased demand for town water supply, and if town water supplies were insufficient to the increased quantum of additional demand, BMA would renegotiate its water supply agreement with IRC to enable provision of adequate town water to meet the increased demand.
Local Business and Industry Content	No specific inputs received, beyond expressed wish for continued involvement of local businesses in the Project's supply chain.	The SIA described how local and regional businesses will be involved in the Project's supply chain (Section 6.6.2).

2.6 Stakeholder profile and inputs to assessment

Stakeholders in the potentially affected communities have significant experience with the social impacts and benefits of mining projects, and also 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 SIA's key stakeholders, key issues of relevance to the SIA, mitigation responses and relevant SIA sections are shown in Table 2.9.

Table 2.9: SIA Stakeholders, key issues and mitigation responses

Stakeholder Group	Key Issues	Responses	Section
IRC (see also Table 2.8)	• Strong preference for maximising local employment opportunities through recruitment, housing and accommodation management, and relocation incentives • Concern regarding the transience of contract workers and consequent social impacts	• Targeting recruitment towards Isaac LGA residents and those in the MIW region • Providing subsidised housing to encourage local settlement of personnel	4.2 and 6.4 4.3.5
	• Approach to social investment as relevant to the Project's impacts • Timing for delivery of management measures beyond the third year of operations	• Engagement with IRC to develop an agreed approach • Timing for delivery beyond Year 3 considered and updated	6.1.3, 6.1.5 6.1.3
	• Requirement to demonstrate need for new WAV • Very limited rental housing availability • Increasing pressure on services and businesses due to a lack of housing • Availability of residential lots, however new housing investment is as yet limited	• Demonstration of need for WAV for construction personnel • Deletion of proposed WAV for operational personnel from Project • Commitment to provide housing for residential personnel	4.3
	• Council's waste management facilities have limited capacity • Residential and non-residential workforces' impact on Council services including waste, water, roads and community facilities including childcare	• Respect for constraints on Project, use of alternative waste management facilities until capacity is available • Implementation of SIMP measures to prevent or manage impacts on services	4.4.2, 4.4.3
	• Local business opportunities to benefit from Project	• Local Buying Program	6.6.2
	• Emergency management communications capacity inadequate	• Consideration of shared value project for emergency management communications • BMA investment in STAC-led project to increase telecommunications capacity in Dysart and Moranbah	4.4.2
	• Expectation of net benefit for local communities	• Positive social outcomes have been further articulated • Residual social impacts and local benefits have been described	6.5.2, 8.3

Stakeholder Group	Key Issues	Responses	Section
	• Expectation that BMA will prioritise local employment over commuting arrangements	• BMA will implement a recruitment hierarchy for the Project that prioritises recruitment of existing local and new local personnel	6.3.2
	• Expectation that BMA will mitigate indirect housing impacts	• BMA will provide subsidised housing for Project employees who request it, and for contractors if contractors' access to housing is not sufficient	6.4.4
	• Expectation that BMA will provide additional community investment, commensurate with Project demand	• BMA has demonstrated that its community investment expenditure is in excess of IRC benchmarks • BMA has committed to increasing its community investment expenditure if the Project results in additional employment beyond current BMA personnel numbers and therefore increased demands on social resource	6.1.3, 6.1.5
Landholders	• Difficulty recruiting suitably skilled employees • Noise (trucks and blasting) from Saraji Mine under adverse weather conditions • Maintenance of co-operative relationship with BMA to maintain agricultural land uses	• Training initiatives that will reduce labour draw from other businesses • Noise management strategies as outlined in the Project EIS Chapter 12. • Ongoing coexistence and commercial arrangements between BMA and landholders	4.2.8, 6.3.3 4.1.5 4.1.3
Barada Barna People/Barada Barna Aboriginal Corporation (BBAC)	• Cultural heritage protection • Availability of employment and training pathways for Indigenous people • Availability of business opportunities for Barada Barna businesses and other Indigenous businesses	• Cultural heritage management strategies as outlined in the Project's EIS, Chapter 16. • Employment and training strategies targeted to Indigenous people • Indigenous business involvement target provided	4.1.2 4.2.4, 6.3.4 6.6.4
Community members and groups – Moranbah, Dysart, Middlemount	• Increase in local apprenticeship and training opportunities employment opportunities required to retain local young people • Transient workforce does not contribute to community in the	• Employment and training strategies targeted to local young people • Permanent employment opportunities	4.2.8 4.2 4.3.5

Stakeholder Group	Key Issues	Responses	Section
	same way as permanent residents/families • Very limited rental housing availability in each potentially affected community • Housing impacts as the result of non-local contractor demands • Ageing population and need for support services to retain local seniors	• Provision of housing that encourages new residents to settle locally • Investments in community facilities and partnerships	6.5
Local businesses	• Value BHP Local Buying Program and look forward to Project opportunities • Increase population leads to increased expenditure and business vitality • Competition with mining operations for labour and skilled personnel is expensive and sometimes fruitless	• Local Buying Program • Training initiatives that will reduce labour draw from other businesses	6.6.2 4.2.8
Social infrastructure providers and community organisations: Dysart Community Support Group (DCSG) Emergency and Long Term accommodation Moranbah (ELAM) C&K Middlemount Dysart C&K Kindergarten MDSS Hinterland Community Care (HCC)	• 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 • Increasing numbers of transient families have seen increased social and health issues • NRW are inadequately considered in Government planning	• Measures to minimise impacts on emergency and health services • Investments in community facilities and partnerships • Provision of services within the construction WAV to reduce demands on local services • Community investment	6.1.3, 6.5.3, 6.5.4 6.5.3 4.3.4 6.1.3, 6.5.4. 6.5.10
Government service providers: Queensland Health QPS QAS QFES	• With student turnover high, there are larger numbers of students with more complex needs than previously • NRW numbers not captured in catchment population counts for service planning	• Advice to Government agencies on Project schedule and workforce ramp-up • Community investments addressing community priorities	4.4.3, 6.5.10 6.1.3, 6.5.4 6.3.3

Stakeholder Group	Key Issues	Responses	Section
Department of Education Dysart State High School Dysart State School Middlemount Community School Moranbah East State School Moranbah State School Moranbah State High School	• Fluctuating demands relating to mining activity mining affect service capacity • Lack of service capacity for acute and ongoing mental health care • Skill gaps are emerging with the increase in mining employment • Health services workers experience violence in the workplace from some NRW 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 if they are required at mine sites. • Increasing demands on Hospital, GP and mental health services, as a result of both population increases and FIFO workers' demand	• Training initiatives that will reduce labour draw from other businesses • BHP Workforce Conduct Policy • Indigenous training, employment and business opportunities • Support for local business capacity building through leveraging of Local Buying Foundation	6.3.5 6.6.4 6.6.2

2.7 Key matters

Having regard to existing social conditions and stakeholder inputs, key matters for assessment and their corresponding SIA sections are shown in Table 2.10.

Table 2.10: Key matters

Key Matters	SIA Section
Community and stakeholder engagement	
Stakeholder profile and stakeholder views on the Project	2.5, 2.6, 4.1.1
Capacity of affected people to participate in community and stakeholder engagement	2.3.3, 3.3.5
Consultation and agreements with Local and State agencies	2.3.3, 2.5, 2.6
Native Title rights and other interests held by Aboriginal and Torres Strait Islander people	3.1.1
Profile of potentially impacted communities	3.1 - 3.7
Community culture, values and functions and access to cultural resources	3.3
Changes to existing land use pattern, settlement pattern or infrastructure provision/demand	4.1.4, 4.4.2, 4.4.3
Alignment with community and regional planning objectives	8.1
Community and Stakeholder Engagement Plan	6.2

Key Matters	SIA Section
Workforce management	
Projected workforce demand and composition (local, regional and other) by occupation, project stage and duration	4.2.1
Workforce health and wellbeing	4.2.9
Assessment of the likely availability of personnel with relevant skills	3.7.5, 3.7.7, 4.2.6
Employment, training and development opportunities	4.2
Workforce management practices that prioritise recruitment of local and regional people and people who will live in regional communities	4.2.2, 4.2.3, 6.3.2
Potential for social/cultural disruption due to NRW influx	4.4.1
Provision of training, and employment for women, Indigenous people and people with a disability	4.2.4, 4.2.8
Workforce Management Plan	6.3
Population and Housing	
Impacts on population size or composition	4.3.3
Details of proposed workforce accommodation facilities, including statement of need	4.3.4
Status of approvals regarding infrastructure, utilities and services	4.4.2
Analysis of the impact of the demand for housing from Project workers and households, and potential for direct or indirect housing impacts	4.3.5 4.3.5
Impacts on local and regional housing availability, capacity, affordability and consequences of change to housing access	4.3.6
Housing and Accommodation Plan	6.4
Health and community wellbeing	
Impacts on access to/quality of infrastructure, services and facilities including healthcare, emergency response, transport and utilities, education and childcare, and community support services	4.4.3
Potential for impacts on community health (mental health or physical health, including changes to air quality, noise or water	4.4.4
Potential for impacts on community safety, including exposure to hazards or risks	4.4.4
Changes to livelihoods and potential for advantage/disadvantage	4.4.1
Utilisation, access and control of natural resources (land and water)	4.1.4, 4.1.9
Amenity, cultural practices, lifestyles, social character and community cohesion	4.1.5, 4.1.7, 4.1.8
Level of on-site health services to be provided for workers, and effects on emergency services	4.2.9, 6.3.6, 4.4.3 4.6
Cumulative impacts on resources supporting community well-being	6.1.3, 6.1.5, 6.5.3, 6.5.4
Contributions to community wellbeing through partnerships and social investment	
Health and Community Wellbeing Plan	6.5

Key Matters	SIA Section
Local business and industry procurement	
Key industries in the region	3.7
Profile of skills and services and materials required by the project	4.2.1, 4.5.1
Analysis of local and regional supplier capability and capacity	3.7.8, 4.5.1
Analysis of opportunities to enhance the capacity of local business and supply chains	4.5.2
Risks associated with monopolisation of services or labour	4.2.7
Effects on local business and economic vitality	4.5.4
Established industry guidelines or codes of practice	6.6
Local buying policy application to contractors and sub-contractors	6.6.2
Possible labour shortages within local communities	4.2.7, 4.5.4
Opportunities for workers to commute to and from work where safe and practical	4.2.5
Local Business and Industry Plan	6.6

3. Social Baseline

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

3.1 Land use and Settlement

3.1.1 Indigenous lands

The Project is within the traditional lands of the Barada Barna People, who were largely displaced from the Isaac region as cattle grazing properties were established during the late 19th and early 20th centuries, but have maintained connections with and care for their traditional lands.

In June 2016, three Native Title determinations were made for claims by the Barada Barna People and Widi People (Queensland Government, 2016). The determinations cover an area of approximately 3,233 km^2 of land and waters south-west of Mackay and north-west of Rockhampton, including approximately 2,699 km^2 that is Barada Barna country, approximately four km^2 that is Widi country and 530 km^2 that is shared between the Barada Barna People and Widi People.

Where Native Title has not been extinguished, Barada Barna's native title area includes land near the study area towns and coal mines. BMA considers that the mining lease application area is over land tenure that is not subject to Native Title as indicated in the ML70383 application. Whilst Native Title has been extinguished within the Project Site, co-operation with Barada Barna People with respect to management of their cultural heritage and opportunities for Indigenous community members to participate in employment and supply opportunities are a key focus for BMA.

3.1.2 Land use in the Project area

The topography of the Project Site is generally flat to undulating plains with several defined creeks and Brigalow Scrub soils. Saraji Mine is adjacent to the Project's MDL to the west, and Lake Vermont Mine is adjacent to the Project's MLAs to the east. Peak Downs Mine is located to the northwest, and land associated with the Lake Vermont Mine is located to the northeast.

The land on which the Project is proposed to be developed is owned by the CQCA Joint Venture parties. BMA has purchased two private properties - Meadowbrook and Lake Vermont - to enable the Project's development. The Meadowbrook and Lake Vermont homesteads will be vacated while subjected to mining impacts. BMA offers licenses for use of the land it owns to local landholders for grazing purposes, as appropriate.

To the south of the Project Site are two large grazing properties, Tay-Glen and Kyewong. Saraji Station, a grazing property, is located to the west of Saraji Mine. Each of these properties have homestead (one each on Tay-Glen and Kyewong, and three on Saraji Station).

3.1.3 Land use in the Isaac LGA

The Isaac LGA covers a total of 58,862 km^2 including a diverse mix of coastal, agricultural and mining communities, and a substantial portion of the Bowen Basin coal reserves. The region stretches from the coastal villages of Carmila, Clairview and St. Lawrence, west to the mining centres of Moranbah, Dysart, Middlemount and Glenden, the railway town of Coppabella, and the historic rural towns of Nebo and Clermont.

IRC was formed in 2008 with the amalgamation of Belyando, Broadsound and Nebo Shire Councils. Belyando Shire (which included Moranbah and Clermont) and Broadsound Shire (which included Dysart) began as local government districts in 1879.

Coal was recorded in the Bowen Basin by Ludwig Leichhardt during the late 1840s and there were several short-lived coal mining ventures in the subsequent decades, with open cut coal mining established in the Isaac region from the late 1960s (Murray, 1996). Broadsound Shire was predominantly based on cattle grazing until the 1970s (Centre for the Government of Queensland, 2015).

A significant proportion of land in private ownership across the Isaac region has been cleared, as a result of either pastoral and agricultural activity, mining or settlement. In 2015, approximately 97.91 percent of the Isaac LGA's land area was classified as rural/green/open space, of which 0.04 percent was protected area, and 97.4 percent was rural (agricultural) land and open space. Just 0.06 percent was land either used or planned for residential purposes (Centre for the Government of Queensland, 2015). The total protected area within Isaac LGA (National Parks, State Forest and reserves) as at 2022 was 2,728.4 km^2, the majority of which (1,558 km^2) was state forest land (QGSO, 2022a).

The Project is located within zones mapped as a Regional Landscape and Rural Production Area under the MIW Regional Plan. Cattle grazing is the primary land use in the Project Site, with accompanying production of leucaena and silage, equipment and facilities for feeding and managing stock, water storage and large cell grazing areas. The MIW Regional Plan aims to avoid fragmentation of agricultural land in this zone to maintain economically viable farm lot sizes.

3.1.4 Potentially affected communities

Moranbah, Dysart and Middlemount were established as purpose-built towns to accommodate mining personnel and their families, so the settlement pattern in and near these towns has been directly determined by the mining industry, as discussed below.

Dysart

Dysart is accessed via Saraji Road off the Peak Downs Highway and is 250 km (by road) south-west of Mackay and about 340 km (by road) north-west of Rockhampton. Dysart was established in 1973 by the Utah Development Company (UDC) as a purpose-built mining community to support operation of the Saraji and Norwich Park Mines. Dysart supports grazing properties in the district as well as nearby mines including Lake Vermont, Saraji and Peak Downs.

Dysart was part of the former Broadsound Shire LGA that existed between 1879 and 2008. The town was named after a local pastoral property, reflecting the strength of cattle grazing as the former industry in the area (Centre for the Government of Queensland, 2015). At the 2021 Census, Dysart had a population of 2,918 residents, down from 2,991 in 2016. Land uses in Dysart include:

- urban residential land with primarily low density detached dwellings;
- the town centre offering a small range of local shops and services;
- the Dysart Recreational Centre, Library and Art Space and Civic Centre
- the Dysart State School, High School and Hospital;
- a range of sporting fields and facilities, and the Dysart Pool;
- WAVS on the edge of the township;
- light industrial land; and

- park reserve land at Centenary Park, Lions Park, Fox Park, Leichardt Oval and Recreation Park (Centre for the Government of Queensland, 2015).

Surrounding land use according to the 2005 Broadsound Planning Scheme includes good quality agricultural land, mining lease areas, rail and road easements (Isaac Regional Council, 2005). The Peak Range National Park, located approximately 40 km west of Dysart, offers additional recreational opportunities from bush walking to photography (Isaac Regional Council, 2016).

Council's analysis of Dysart's urban form notes that a move to non-residential workforces saw higher density focused on the town's fringes in WAVs with very low density in the town centre, and a lack of affordable commercial properties had led to growth in home businesses in Dysart, and as a consequence, the town centre's vitality has declined (Isaac Regional Council, 2015). Implementation of an Urban Design Framework for Dysart commenced in 2014.

Dysart is intersected by Queen Elizabeth Drive, which connects to Dysart Middlemount Road, Saraji Road and Dysart Clermont Road to the west and Golden Mile Road (linking to Fitzroy Development Road) to the east. Dysart Airport located approximately 3.5 km south of the township was owned and operated by BMA until 2013, when it was closed to all but Royal Flying Doctor and Medivac Service.

There is no public transport in Dysart and no passenger train or bus services, forcing reliance on private vehicle usage. Dysart's airport closed in 2013 (with the exception of use by the Royal Flying Doctor Services). BHP retains a lease over the Dysart airport land, and periodically reviews use of the facility. BMA does not plan to utilise this facility for the Project.

Moranbah

Moranbah is accessed via the Moranbah Access Road off the Peak Downs Highway, and is approximately 200 km (by road) south-west of Mackay. The Moranbah area was settled by pastoralists in the mid 1800s. From the late 1960s, Utah Development Company (UDC) developed the Goonyella Mine and Peak Downs Mine, leading to the establishment of Moranbah, equidistant between the two mines. Moranbah is the major urban centre for the Isaac region, supporting a resident population of 9,425 people at the 2021 ABS Census, up from 8,735 at the 2016 ABS Census. The MIW Regional Plan identifies Moranbah as the main service centre for the Isaac sub-region due to the availability of employment opportunities and levels of urban services and infrastructure.

Moranbah's land uses include:

- primarily low density detached dwellings, with recent small increases in medium density housing;
- a vibrant town centre comprising main street shopping, a library and gallery, Council offices, parklands, the Civic Centre, Aquatic Centre and Black Nugget Hotel;
- several sporting facilities (golf, basketball, netball, football, cricket and soccer) and parks;
- an adjacent commercial precinct including motels, short stay units, and the Moranbah Workers Club, and an indoor retail centre west of the town centre;
- a large range of sporting and recreational facilities;
- three schools, a hospital and a mining industry training centre at the High School;
- Moranbah 'Bunhdhara' Airport, nine km south of town;
- a variety of accommodation villages, of smaller scale in town, larger scale on the fringes of town and very large scale outside of town; and
- light industrial areas on the western town fringe.

In addition to the urban footprint in which development assessment, which is largely controlled by IRC, Moranbah includes Priority Development Areas (PDAs) for which the Department of State

Development and Infrastructure (DSDI) is the Development Authority. PDAs enable further urban development to accommodate growth. The Regional Plan notes that Moranbah is expected to have substantial capacity to support continued growth of the mining industry, but this capacity is heavily reliant on the availability and affordability of residential land.

Moranbah is connected to the Peak Downs Highway by the Moranbah Access Road. There is no public transport in or to Moranbah, however a daily bus service operates between Mackay and Moranbah, and there is a twice-weekly bus service to Rockhampton.

School bus routes currently use the Peak Downs Highway and Moranbah Access Road to service schools in Moranbah and Dysart Road to service schools in Dysart. School bus routes typically operate outside of shift start and end times for mine workers and are therefore not anticipated to be affected.

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

Middlemount

Middlemount was developed during the 1980s, initially to service the Foxleigh and German Creek open cut coal mines located south and south-west of Middlemount. From 2006, Middlemount also provided support services for the Lake Lindsay open cut mine (Centre for the Government of Queensland, 2015). Middlemount's population in 2021 was 1,899 people, up from 1,841 people in 2016.

Urban residential land and associated town facilities are the key land use in Middlemount, which is surrounded by grazing properties, a substantial mining lease area to the south and southwest, Junee State Forest to the east and good quality agricultural land to the north (Isaac Regional Council, 2015). Within town, residential development comprises predominantly detached housing with supporting infrastructure including:

- the town centre, with a small range of shops and cafes;
- Middlemount Community Hall, a large multipurpose Leisure Centre, Middlemount Library and the Pool;
- Middlemount Community School and the Middlemount Community Health Centre; and
- a range of local parks and sporting fields.

Natural assets in and around Middlemount include the Blue Mountain Park and Bundoora Dam that support a range of recreational activities from birdwatching to camping, fishing and water skiing.

Regional Centre

The Project is located approximately 167 km southwest of Mackay, which is the principal service and activity centre for the MIW region. Other major regional centres designated in the MIW Regional Plan include Bowen, Moranbah, Proserpine, Sarina, Airlie Beach and Cannonvale (Department of Local Government and Planning, 2012).

Mackay's economy is largely driven by agriculture (primarily sugarcane production and milling), mining in the Bowen Basin and supporting sectors including ports, retail, professional and commercial activities. Over the past 50 years, Mackay has been an important regional centre for residents in the potentially affected communities who have sourced specialist health services, training and further education, professional services, retail services and entertainment there. Mackay has developed a wide range of industry strengths to service the mining industry, ranging from ports to construction,

equipment supply, labour hire and professional services. FIFO employment options have also seen Mackay become an attractive residential centre for mining families.

3.1.5 Connectivity

The two major state roads that service the Isaac region are:

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

The major road transport route in the vicinity of the Project is the Peak Downs Highway, which runs from the Gregory Highway north of Clermont to Mackay. The Peak Downs Highway has a poor safety record and has been the focus of community and government action to improve road conditions over several years.

3.1.6 Mining in the Isaac LGA

Coal was recorded in the Bowen Basin by Ludwig Leichhardt during the late 1840s and there were several short-lived coal mining ventures in the subsequent decades (Murray, 1996). By the 1890s, Belyando Shire was a host to gold and copper mining and smelting activities, however Broadsound Shire was predominantly based on cattle grazing until the 1970s (Centre for the Government of Queensland, 2015).

The history of coal mining in the Isaac region now spans more than 50 years. Open cut coal mining began in the late 1960s with the Utah Development Company (UDC) establishing Goonyella Mine and Peak Downs Mine, and in the early 1970s the Saraji and Norwich Park mines. Middlemount was established during the 1980s, initially to service the Foxleigh and German Creek mines. Mines have also been established in the Nebo region, and all four towns have been heavily influenced by the mining and construction industries (Isaac Regional Council, 2016).

The Isaac LGA currently hosts approximately 30 operating coal mines. Proposed projects that may contribute to cumulative social impacts are outlined in Section 2.4.2 and discussed in detail in Section 4.6.1.

As mining companies were responsible for establishing Moranbah, Dysart and Middlemount, the settlement pattern in this part of the study area has been directly determined by the mining industry. Other key features of the social baseline that are influenced by the operation of the mining industry include:

- In 2021, coal mining directly employed more than 3,000 residents in Isaac LGA;
- the availability of housing, employment and some services (e.g. GPs) fluctuates in response to mining industry cycles;
- the LGA has high levels of trade-qualified residents, and significant human and physical capital in mining-related businesses;
- unemployment is very low compared to the Queensland average; and
- the LGA has larger than average numbers of family with children households and a younger age profile than the Queensland average.

3.2 Community profile

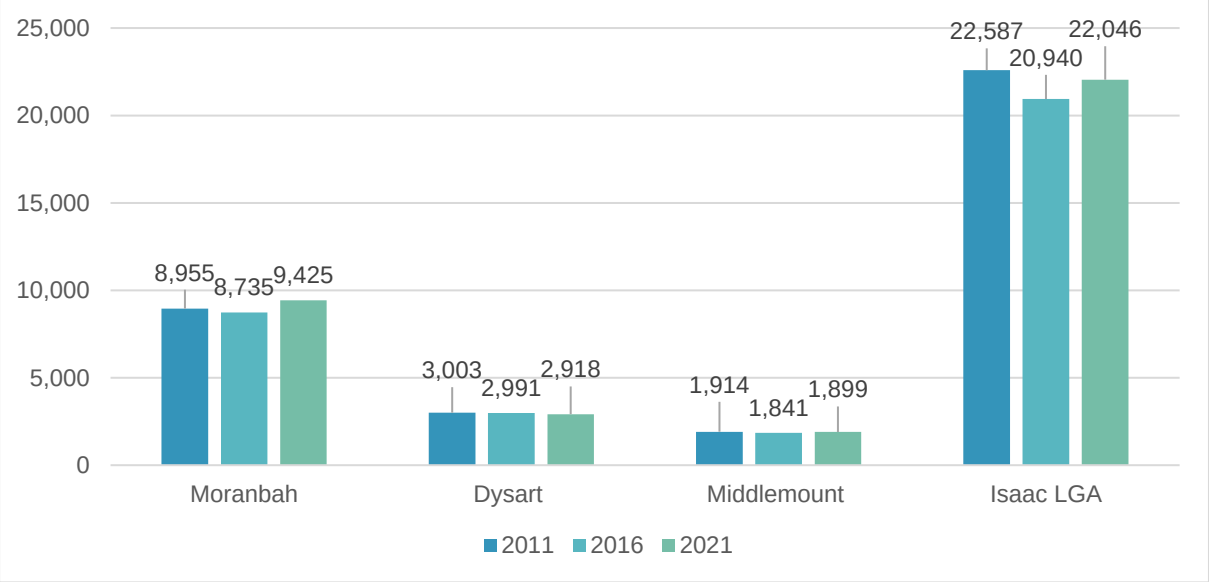
3.2.1 Residential Population

The ABS Census 2021 showed that the Isaac LGA had population of 22,046 people in 2021 (see Figure 3.1). This was a decrease of 541 people (2.4 percent) since the 2011 Census, however the population had increased by 1,106 people or 5.3 percent since 2016.

Moranbah's population grew by 470 people between 2011 and 2021, including a five-year increase of 690 people since 2016. This was equivalent to an annual average increase of 1.6 percent between 2016 and 2021.

Dysart saw a small population decrease of 85 people over the ten-year period. During 2016-2021, Dysart's population decreased by 73 people (an annual average increase of 0.5 percent). Middlemount's population decreased by 15 people between 2011 and 2021, but had increased by 58 people during 2016-2021, equivalent to an average annual increase of 0.6 percent.

Figure 3.1: Isaac, Moranbah, Dysart and Middlemount Population, 2011-2021



Source: ABS Census of Population and Housing Community Profiles, 2011 and 2016 - State Suburbs (ABS, 2016) and 2021 – SAL (ABS, 2021b)

Within the broader region, the MIW region's population increased by 6.6 percent between 2016 and 2021, reflecting increases of 5.3 percent in the Isaac LGA, 5.8 percent in the Mackay LGA, and 10.0 percent in the Whitsunday LGA (see Table 3.1).

Table 3.1: Population change 2016-2021

Area	2016	2021	Five-year change No.)	Five-year change	Av. Ann. Change
Moranbah	8,735	9,425	690	7.9%	1.6%
Dysart	2,991	2,918	-73	-2.4%	-0.5%
Middlemount	1,841	1,899	58	3.2%	0.6%
Broadsound-Nebo SA2	8,505	8,730	225	2.6%	0.5%
Isaac LGA	20,940	22,046	1,106	5.3%	1.1%

Area	2016	2021	Five-year change No.)	Five-year change	Av. Ann. Change
Mackay LGA	114969	121691	6,722	5.8%	1.2%
Whitsunday LGA	33,778	37,152	3,374	10.0%	2.0%
MIW SA4	169,688	180,894	11,206	6.6%	1.3%

Source: ABS Census of Population and Housing Community Profiles, 2011 and 2016 - State Suburbs (ABS, 2016) and 2021 – SAL (ABS, 2021b)

3.2.2 Future Population

Table 3.2 shows the QGSO's projected populations for the Isaac LGA, Moranbah SA2 and Broadsound-Nebo SA2. Between 2021 and 2041, the Isaac LGA's population is projected to increase by 4,024 people, with an annual average increase of 0.6 percent between 2016 and 2041 (see Table 3.2).

There is a variance of 1,284 between the Isaac LGA 2021 Census count (22,046 people) and the QGSO projection for 2021 (20,762). The QGSO regularly rebases the projections with consideration to Census data and other factors.

IRC adopted population projections for urban localities and the LGA for its Local Government Infrastructure Plan (Integran, 2020). These included a resident population of 25,764 people for Isaac LGA in 2021, however this is 3,718 more people than the 2021 Census count. It is possible that the Census underestimates the LGA's population, but as the most generally accepted demographic data, Census data have been relied upon to estimate population growth resulting from the Project.

This assessment has applied the 2021 population enumerated in the ABS Census and annual average population increase of 1.1 percent (equivalent to the average annual change in the Isaac LGA between 2016 and 2021), as the baseline for estimating changes to the Isaac LGA's population as a result of the Project's construction and operation.

Table 3.2: Population projections 2016-2041

Location	Number							Av. ann. growth (%)
	2016[(a)]	2021	2026	2031	2036	2041	Change 2021-2041	2016–2041
Isaac LGA	21,563	20,762	21,556	22,709	23,852	24,786	4,024	0.6
Broadsound - Nebo SA2	8,724	7,835	7,644	7,720	7,737	7,529	-306	-0.6
Moranbah SA2	9,029	9,288	9,919	10,590	11,270	11,939	2,651	1.1
MIW SA4	173,892	180,219	190,445	202,986	215,905	229,260	49,041	1.1

Source: QGSO, 2022b. Medium Series Queensland Regional Profiles: Resident

3.2.3 Population characteristics

Age and gender

Each community experienced an increase in the median age of one to two years between 2016 and 2021, in line with general population ageing across Queensland (see Table 3.3). The median age in Dysart, Moranbah and Middlemount remains lower than the Queensland median by 6-7 years.

Table 3.3: Median age 2016 - 2021

Community	2016	2021	Change (no.)
Dysart	31	32	+1
Moranbah	30	31	+1
Middlemount	30	32	+2
Isaac LGA	32	34	+2
Queensland	37	38	+1

Source: ABS Census of Population and Housing 2021 – QuickStats for Suburbs and Localities of Moranbah, Dysart and Middlemount, and Isaac LGA (ABS, 2021c)

The Isaac LGA's gender balance changed from 54.5 percent males in 2016 to 56.2 percent males in 2021 (ABS, 2021b). This is likely to be a consequence of an increase in mining industry activity during this period.

Indigenous population

There were 1,164 Indigenous residents in the Isaac LGA on the 2021 Census night, representing 5.3 percent of the Isaac LGA population (up from 3.6 percent in 2016), compared to 4.6 percent of the Queensland population (up from 4.0 percent in 2016). Indigenous Australians represented a larger proportion of the resident population in Dysart (8.2 percent) compared to the State average (see Table 3.4). An increase in people who identify as Indigenous was observed as a national trend between 2016 and 2021.

Table 3.4: Indigenous population, 2021

Area	Number	% Indigenous
Dysart	238	8.2%
Moranbah	536	5.7%
Middlemount	112	5.9%
Isaac LGA	1,164	5.3%
Queensland	237,303	4.6%

Source: ABS Census of Population and Housing 2021 – QuickStats for Suburbs and Localities of Moranbah, Dysart and Middlemount, and Isaac LGA (ABS, 2021c)

Cultural diversity

Cultural diversity in the SIA study area is represented by the proportions of residents who were born overseas and households where a primary language other than English (LOTE) was spoken at home, as shown in Table 3.5. The proportions of residents who were born overseas was lower than the Queensland average in the three communities and in the Isaac LGA, ranging from 8.5 percent in Middlemount to 11.9 percent in Moranbah, compared with the Queensland average (22.7 percent). The majority had migrated from English speaking countries including England, South Arica, New Zealand, Ireland and Scotland. There were large percentages of people who did not state their country of birth, ranging from 17.9 percent in Moranbah to 33.8 percent in Middlemount, so these percentages may be higher.

Approximately 4.4 percent of residents in the Isaac LGA spoke a primary language other than English at home in 2016, which had doubled to 8.1 percent in 2021, but is considerably lower than the

Queensland average of 15.6 percent. Moranbah had the highest percentage of people using a language other than English at home, at 11.0 percent. The next most used languages to English in Moranbah were Tagalog (1.2 percent) and Filipino (0.6 percent). In Dysart, the most common languages other than English spoken at home included Filipino (0.7 percent) and Tagalog (0.4 percent). In Middlemount, the most common language spoken at home was Afrikaans at 1.2 percent, followed by Mandarin at 0.5 percent and Māori at 0.4 percent.

Table 3.5: Cultural diversity, select characteristics 2021

Area	% Born overseas	% Speak LOTE at home
Dysart	9.2%	7.5%
Moranbah	11.9%	11.0%
Middlemount	8.5%	8.3%
Isaac LGA	9.7%	8.1%
Queensland	22.7%	15.6%

Source: ABS 2021b - General Community Profiles

Disability

The number and percentage of people with a disability can be estimated using the ABS's 'core assistance' measure, which refers to a person's need for help or assistance in self-care, mobility and and/or communication. At the 2021 Census there were 489 people in the Isaac LGA with a need for core assistance (2.2 percent) which was an increase since the 2016 Census when there were 374 people with a need for core assistance, representing 1.8 percent of the population. The equivalent rate in Queensland at the 2021 Census was 5.9 percent, with the highest rates of core assistance requirements seen in the older age groups.

At the December 2021 quarter, there were 227 people in the Isaac LGA in receipt of a disability support pension, which was a rate of 0.8 per 100 people, down from 1.3 per 100 people in 2017, and low compared to Queensland's rate of 4.1 per 100 people (QGSO, 2022a). The overall low percentage is attributable to the LGA's younger age profile and limitations on services to support the wellbeing and participation of people with disability.

Family characteristics

The 2021 Census data (see **Table 3.6**) indicate:

- the proportion of family households in the Isaac LGA was 71.3 percent in 2021;
- Moranbah (55.8 percent) and Middlemount (54.0 percent) continue to have larger proportions of family households with children than the LGA (49.8 percent) or Queensland (41.2 percent) averages;
- Dysart (at 15.8 percent) and Moranbah (at 13.1 percent) had higher proportions of sole parent homes than Isaac LGA (12.4 percent) but lower proportions than Queensland as a whole (16.8 percent); and
- percentages of group homes are similar across each locality ranging from 3.0-3.4 percent, which was lower than the state percentage (4.3 percent).

Table 3.6: Family and household characteristics – percentages 2021

Area	Family households				Household type		
	Couple	Couple with children	Sole parent	Other family	Family households	Sole person households	Group and other
Dysart	36.9	46.1	15.8	1.2	70.2	26.6	3.2
Moranbah	30.0	55.8	13.1	1,1	75.4	21.5	3.1
Middlemount	34.6	54.0	9.8	1.6	70.2	26.4	3.4
Isaac LGA	36.8	49.8	12.4	1.0	71.3	25.7	3.0
Queensland	40.3	41.2	16.8	1.7	71.0	24.7	4.3

Source: ABS 2021c

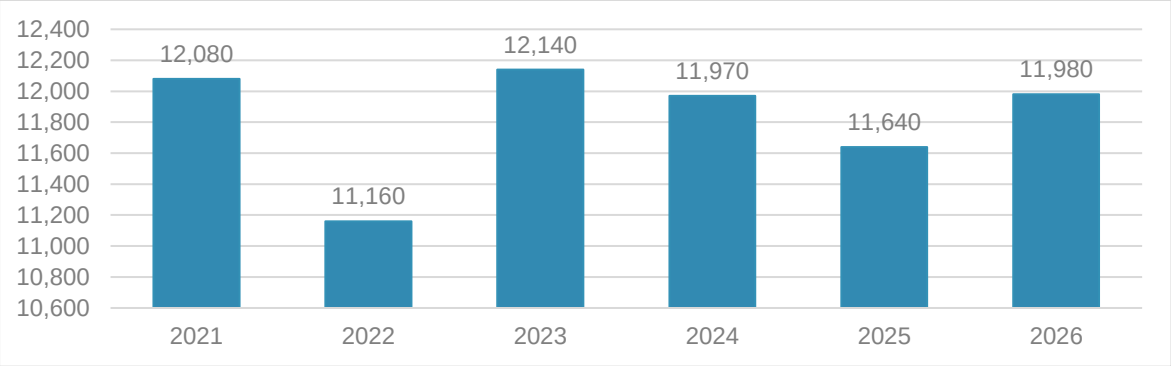
3.2.4 Non-resident population

QGSO's Bowen Basin Population Report (2021) provides provisional Full Time Equivalent (FTE) population estimates, which include residents and on-shift non-resident workers (NRW). The importance of FTE population in the Isaac LGA is that it provides a truer estimate of the number and location of people that Councils and Government agencies are required to service.

QGSO's Series B projections include the Series A projections (current projects) plus projects that are approved but have yet to reach financial close, and provide the most certainty with respect to projects in the pipeline.[1] Using this series, the number of NRW in the Isaac LGA 2022 was estimated at 11,160 people, down from 12,080 in 2021. The number of NRW is expected to increase by almost 1,000 workers in 2023, then decrease slightly and remain around 12,000 NRW between 2023 and 2026.

Table 3.7 provides the estimated resident population (ERP) and non-resident FTE populations) in the potentially affected communities and the Isaac LGA in 2020 and 2021). The expected current capacity of WAVs is discussed further in Section 3.4.8.

Figure 3.2: Non-resident workers on shift Isaac LGA 2006-2020



Source: QGSO, 2022c

The Isaac LGA's FTE population was estimated at 32,990 people at June 2021, of whom 20,910 people (63.3 percent) were residents and 12,080 (36.6 percent FTE) were NRW. This included 2,270

[1] Series C projections include Series A and B projections plus the projected growth arising from projects that have lodged an EIS but have yet to proceed to final approval, and Series D includes Series A, B and C projections plus projected growth from projects that have not concluded the EIS approvals process.

NRW in Moranbah (down by 240 people over the 12 months), 1,650 NRW in Dysart (down by 25 people over the 12 months), 1,555 NRW in Middlemount (down by 2456 NRW over the 12 months). Overall, the number of NRW in the Isaac LGA decreased by an estimated 690 people during 2020-2021 which was a decrease of 5.4 percent.

Table 3.7: FTE Population Estimates, Isaac LGA and local communities, June 2021

Location	2021		
	ERP	NRW	FTE
Clermont	2,065	55	2,120
Dysart	2,325	1,650	3,975
Glenden	540	460	1,000
Middlemount	1,685	1,555	3,240
Moranbah	8,790	2,270	11,060
Nebo	500	290	790
Rural areas	5,005	5,800	10,805
Isaac LGA	20,910	12,080	32,990

Source: QGSO 2022c

3.2.5 Education

At the 2021 Census, 41.2 percent 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 57.0 percent (ABS, 2021b). This reflects the large percentage of people employed in mining, for whom post-school qualifications are more relevant than senior school qualifications. Of note, 25.2 percent of Isaac LGA residents did not answer this question in the 2021 Census.

With respect to Indigenous people, 48.9 percent of Indigenous residents in the Isaac LGA had completed Year 12, reflecting a younger population who have had more access to higher education than previous generations.

Data on post-school qualifications are shown in Table 3.8. The total 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.

Table 3.8: Qualifications, 2021

Area	Level of education						Persons with a qualification(a)		Total persons
	Bachelor degree or higher		Advanced diploma or diploma		Certificate				
	number	%	number	%	number	%	number	%	number
Isaac LGA	1,661	9.6	899	5.2	4,338	25.0	11,391	65.6	17,356
Queensland	918,468	21.9	395,615	9.4	927,894	22.1	2.6 M	62.5	4.2 M

Source: QGSO, 2022a. M = Million. (a) Includes inadequately described and not stated level of education responses

In 2016, approximately 85.1% of all households in the Isaac LGA had an internet connection, up from 83.8% in 2011. The highest connection rate in 2016 was in Middlemount (92.2 percent), followed by Moranbah (90.2 percent up from 88.8 percent in 2011) and Dysart (86.4 percent). This measure captured any one person at a dwelling that accesses the internet through any type of device including a mobile phone, but was not part of the ABS Census 2021 topics.

3.2.6 Income, disadvantage and cost of living

Incomes and housing payments

Table 3.9 outlines the change in median household incomes in the SIA study area between 2016 and 2021, and shows that household weekly incomes increased in potentially affected communities over the five years.

Moranbah had the highest rate of change, where household incomes increased by 27.2 percent over the five years. Median income increases in Dysart, Middlemount and the Isaac LGA all lagged behind the average State increase (19.4 percent), with increases of between 13.1 percent and 13.6 percent. The median weekly household income continues to be significantly higher than the Queensland median across all localities. Isaac LGA had the lowest median ($2,420) which was still 44.0 percent higher than the Queensland median ($1,675).

Table 3.9: Median Weekly Household Incomes, 2016-2021

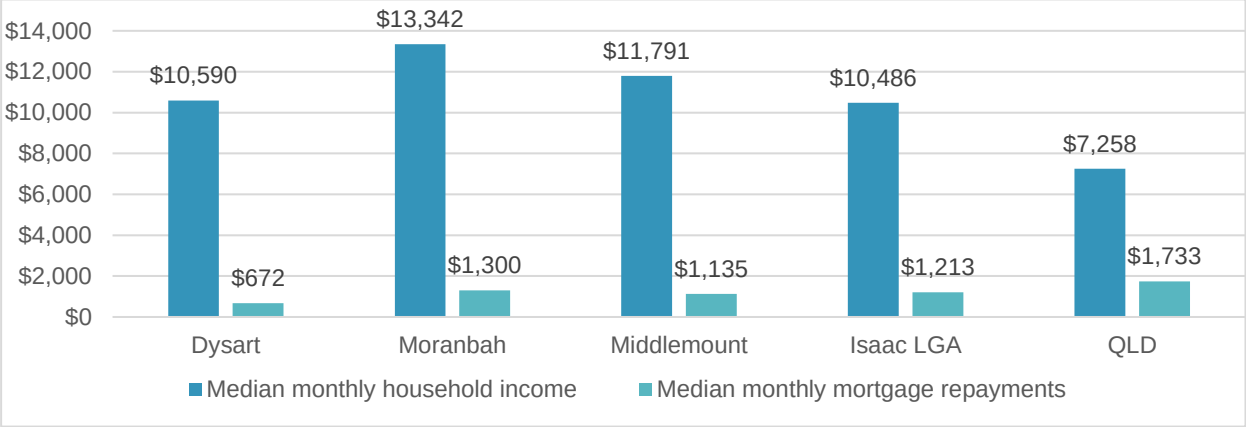
Area	2016 Weekly Household Income	2021 Weekly household Income	% Weekly Income Change
Dysart	$2,152.00	$2,444.00	13.6%
Moranbah	$2,421.00	$3,079.00	27.2%
Middlemount	$2,405.00	$2,721.00	13.1%
Isaac LGA	$2,138.00	$2,420.00	13.2%
QLD	$1,402.00	$1,675.00	19.4%

Source: ABS, 2016 and 2021b

Moranbah's median monthly mortgage payment ($1,300/month) was the closest to the State average ($1,733). This reflects the greater development of new housing estates in Moranbah as well as the release of that housing to the market during 2010 - 2012 whilst sale prices were reaching record highs. Middlemount, Dysart and Isaac LGA median mortgage payments were considerably lower than the Queensland average. Dysart had the lowest median monthly mortgage repayment of $672.

Figure 3.3 compares the median weekly household incomes (aggregated to a monthly sum for the purpose of this graph) to median monthly mortgage payments in 2021. Moranbah's median monthly mortgage payment ($1,300) was closest to the state average ($1,733). This reflects the greater development of new housing estates in Moranbah as well as the release of that housing to the market during 2010-2012 whilst sale prices were reaching record highs. Middlemount, Dysart and Isaac LGA median mortgage payments were considerably lower than the Queensland average. Dysart had the lowest median monthly mortgage payment of $672.

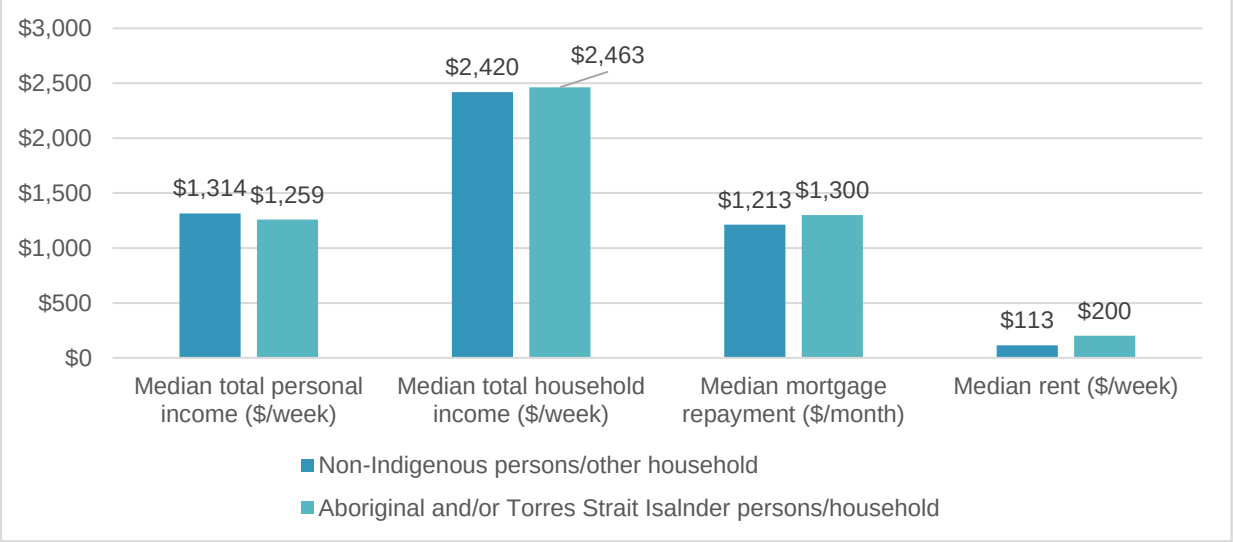
Figure 3.3: Median household income and mortgage payments, Moranbah, Dysart, Middlemount and Isaac LGA 2021



Source: ABS, 2021b

Social inequality is demonstrated in selected medians for the LGA's Indigenous community compared to the non-Indigenous community. Figure 3.4 shows that whilst Indigenous people had lower personal incomes than non-Indigenous people, median household incomes were slightly higher. Median mortgage payments and median rents were also higher.

Figure 3.4: Indigenous and non-Indigenous household income and housing cost ($) Isaac LGA



Source: ABS, 2021b

Relative Socio-Economic Advantage and Disadvantage

The Socio-Economic Indices for Areas (SEIFA) Index of Relative Socio-economic Advantage and Disadvantage (IRSAD) summarise information about the economic and social conditions within an area. The indices are derived from Census variables including income, percentage in skilled occupations, car ownership, over-crowding, housing expenditure and assets, and educational attainment. An area with a high score on this index has a relatively high incidence of advantage and a relatively low incidence of disadvantage. Scores are compared to the standardised baseline (State) score of 1,000.

The SEIFA IRSAD scores for 2011 and 2016 in the Project's nearby local communities are shown in Table 3.10.

The 2011 scores indicate that Dysart, Moranbah and Middlemount (and by consequence Isaac LGA) had higher scores (less potential for disadvantage) than Queensland. However, results for 2016 showed that all areas experienced a decrease in IRSAD scores, with Dysart experiencing the most substantial decrease of 76 points, followed by Middlemount with a decrease of 55 points and Moranbah with a decrease of 43 points. 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 those years.

Moranbah was the only town to retain a score above the Queensland average, which is likely to be a reflection of strong ongoing employment in the mining industry, higher incomes, some subsidised rental housing and large percentages of people with qualifications.

Table 3.10: Index of Relative Socio-economic Advantage and Disadvantage

Town	Score 2011	Score 2016	Change
Dysart	1032	956	-76
Moranbah	1054	1011	-43
Middlemount	1043	988	-55
Isaac LGA	1028	987	-41

Source: ABS Socio-economic Indexes for Areas (SEIFA), Data Cube only, State Suburb and LGA - Index of Relative Socio-economic Advantage and Disadvantage, published for 2011 and 2016 (ABS, 2017)

Cost of living

The Index of Retail Prices in Queensland regional centres was last published in 2015 and compared the prices of a basket of household goods and services between the Brisbane region and regional centres. The Brisbane region (comprising the five LGAs of Brisbane, Ipswich, Logan, Moreton Bay and Redland) has been given an index of 100, and all other centres have an index relative to the Brisbane region. Centres surveyed included Moranbah and Mackay, whose index measures are shown in Table 3.11 showing that they recorded an 'All Items Index' similar to the Brisbane region.

Findings relevant to the SIA study area include:

- higher index scores in Moranbah and Mackay for 'all items less housing', attributable to the higher costs of food and non-alcoholic beverages, food, furnishings and household equipment, recreation and culture, and alcohol and tobacco; and
- comparable scores for Moranbah, Mackay and Brisbane region for health and transportation.

Whilst these data are dated, similar findings would be expected in 2023. The index score for health would not capture the cost of Moranbah residents accessing specialist and birthing services in Mackay as is the norm.

Table 3.11: Index of Retail Prices in Moranbah and Mackay Regional Centres, 2015

Index	Moranbah	Mackay
All items	99.4	99.4
All items less housing	108.0	105.7
Alcohol and tobacco	105.6	99.6
Clothing and footwear	87.0	109.4
Food and non-alcoholic beverages	117.2	107.9

Index	Moranbah	Mackay
Furnishings, household equipment and services	121.6	141.0
Health	100.4	100.0
Housing	69.4	77.1
Insurance and financial services	89.7	95.2
Recreation and culture	116.2	95.0
Transportation	100.9	100.9

Source: QGSO, 2016b. Index of retail prices in Queensland regional centres

3.3 Community values

3.3.1 Regional Planning Goals

The Isaac LGA is part of the MIW Region, which has a total area of approximately 90,000 km^2. The MIW Regional Plan 2012 notes that the pastoral and sugarcane industries, agricultural processing and mining have shaped the development of the region. The Regional Plan's goals for MIW communities include:

- the development of resilient and cohesive communities with distinct character;
- recognising and fostering existing community values, including character, cultural heritage, diversity, amenity, safety, access, and social capital;
- retain regionally unique built and natural assets;
- manage and sustain regional population growth and significant demographic changes;
- enhance the economic diversity of the region and support local business sustainability;
- improve diversity of employment opportunities in the region;
- improve housing availability and affordability to support growth and healthy communities;
- manage cumulative social impacts that result from development, particularly mining projects; and
- increase the capacity and variety of social infrastructure and service (including community, cultural, educational, health and recreational facilities).

With respect to future development in the MIW region, the QGSO estimated in 2015 that the total area of broadhectare land (larger land parcels that represent unconstrained residential land supply) was 5,806 ha which if fully developed, was likely to yield approximately 34,300 dwellings. This would accommodate population growth of approximately 91,700 persons using current average household sizes, and indicates approximately 19 years of supply (QGSO, 2015). As such, the future growth of residential communities in the region is supported by available land stocks.

3.3.2 Indigenous community values

The Barada Barna People are the registered native title holders of land near the Project Site. Barada Barna Traditional Owners noted that the 2016 native title determination would enable them to have active involvement in protecting cultural heritage, and would strengthen Barada Barna People's pride and knowledge about their long-term connection to country (Queensland Government, 2016). Barada Barna People's community values as expressed by BBAC include (Barada Barna People, 2022):

- recognition of Barada Barna as the Traditional Owners of their area;
- sustaining cultural connections by displaying the history of the Barada Barna and enabling Elders' trips to Country;
- better employment and training opportunities through establishment of a training centre, partnerships with recruitment companies and establishment of scholarship programs; and
- economic security through ownership of land, sustainability of compensation payments and contracts with Council and mining companies to undertake works requiring machinery.

Cultural heritage assessment undertaken by Northern Archaeology Consultancies Pty Ltd and Woora Consulting for BMA's nearby Caval Ridge Project found 'a wealth of cultural heritage sites, items and significant natural features of indigenous origin', including artefacts, scarred trees, Aboriginal fireplaces, and natural features with cultural significance' (BMA, 2011). The assessment noted that 'traditionally, most plant species found in the region had 'some practical or ritual use for food, medicine, implements or weapons to Aboriginal people', and that some species also had symbolic or ritual significance.

A detailed Cultural Heritage Assessment has been provided as part of the Project's EIS, and describes cultural heritage values in the vicinity of the Project Site. The assessment found that there were artefacts and places of cultural significance to the Barada Barna People on the Project Site.

BBAC's nominated Cultural Heritage Body, Winnaa Pty Ltd employs Barada Barna descendants to undertake cultural heritage management work. BMA has contractual agreements with BBAC and Winnaa to undertake these works.

3.3.3 Isaac LGA Values

In April 2015, IRC adopted Isaac 2035, a Community Strategic Plan that aims to strengthen the region across four key areas: improving essential infrastructure; diversifying the economy; supporting communities; and protecting the natural environment (Isaac Regional Council, 2015).

Isaac 2035's key themes include:

- 'Communities: Isaac will have strong and diverse communities that support all to live, work and raise families;
- Economy: Isaac will continue to be Queensland's number one performing regional economy based upon a thriving, resilient and diverse mix of industry sectors;
- Infrastructure: Isaac will have effective and sustainable infrastructure that supports the needs of the region's communities and its economic sectors; and
- Environment: Isaac will have an appropriate and sustainable balance between environment, economy and community to ensure our natural resources are sustainably managed and protected'.

Isaac 2035's key goal for its communities 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 our communities;
- partnering with a range of stakeholders to build self-sustainable community groups;
- delivering programs and services that promote community safety and wellbeing; and
- celebrating communities and their uniqueness.

Corporate planning is a key statutory responsibility for local governments. With planned review of IRC's Corporate Plan in 2020 postponed due to COVID-19, IRC developed a draft Interim Corporate Plan in 2021 2022 to update the plan's relevance and consulted with Isaac communities about the Interim Corporate Plan. Key strategies in the Corporate Plan include:

- facilitating a focused range of social, cultural, sporting, recreational, health and education services;
- undertaking programs to promote liveability, health and wellbeing and community safety across the region; and
- facilitating urgent and visible support during times of stress to the community.

Council's Community Plan (Isaac 2035) identifies weaknesses in the LGA's social infrastructure as including limited health services and professionals, and ageing health infrastructure.

IRC has a Social Sustainability Policy that 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; and
- 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).

3.3.4 Culture and identity

As evidenced by consultation and community planning goals, towns in the Isaac region share many cultural values including:

- appreciation for a relaxed lifestyle in a rural setting;
- a strong sporting culture, supported by access to well-planned sporting facilities and fields;
- a commitment to working hard to provide for the future;
- reliance on leisure time with family and friends; and
- appreciation and protection of environmental qualities, in both natural environments (such as reserves and national parks) and modified environments such as towns and farms.

Dysart, Moranbah and Middlemount have strong identities as mining towns, given they were directly established by mining companies and their economies are still heavily dominated by the mining industry. They are workers' towns, but also family towns, with high percentages of children and young people, and a high priority on providing a safe and enriching environment for children.

The towns are also observed to be highly egalitarian, partly due to the commonality of employment in mining and supporting services. Traditionally there was a differentiation between mining 'workers' and 'management' and some of this remains. Workers' unions are strong in the mining towns and embody local values such as 'sticking together', mateship, mutual responsibility and support for workers and families.

Stakeholder inputs during the SIA workshops and interviews indicate 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;
- 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; and
- communities wish to be less dependent on mining companies for social infrastructure and employment.

3.3.5 Community cohesion and resilience

Community cohesion in the potentially affected communities is strong, supported by their small size, self-help culture, commonality of employment in the mining industry, shared history and intergenerational bonds.

Isaac LGA towns have experienced the cyclic impacts of the coal industry, with corresponding fluctuations in economic prosperity and population size. Periods of economic decline affect employment rates as well as business and community confidence whilst growth periods lead to increased cost of living, accommodation shortages, labour draw and demand for services. Both ends of the spectrum have been seen in the LGA. The most recent example is the period of mining expansion between 2008 and 2012, which led to a severe housing shortage and population turnover, as key workers and lower income families were forced to leave.

The ‘core’ of local communities remains highly connected, however consultation indicated that mining companies’ use of larger FIFO workforces has also led to fracturing of networks, as long term residents left to be replaced by FIFO workers, and the town incorporated increasing numbers of NRW who are less active in the community. This has led to some divisions within communities, and to a smaller pool of people to support social resources such as junior sporting clubs.

Community resilience exists when communities have the resources (human, social and physical) to adapt to change and maintain their residents’ quality of life. In the potentially affected communities, resources that support resilience include affordable housing options, services and facilities that support people in need, financial resources and social networks to respond to the cyclical nature of mining communities. The Isaac region is also high in human capital, which refers to the stock of knowledge or worker characteristics that contribute to their productivity and increases profits.

Community inputs during SIA workshops included:

- local, permanent employment as the key to community stability and resilience;
- employment pathways for young people are a key priority;
- a strong value placed on community events and sporting activities that bring community members together; and
- willingness on the part of community, health and emergency services providers to work with mining companies to address cumulative impacts.

Weaknesses identified in the Isaac 2035 Plan that challenge social resilience include:

- significant economic, political and social challenges related to FIFO workers;
- limited regional funding priorities directed to the region;
- limited health services or professionals in the region;

- cyclical oversupply, and possible structural decline, in demand for coal, and lack of economic diversification; and
- limited small to medium enterprise culture or support networks.

The affordability of housing in Isaac LGA has been positive for community resilience, seeing new families come to town, attracted by affordable country living with excellent amenities. This has included FIFO workers converting to local jobs. Affordable housing also attracted people from other regions, including people with higher support needs (financial, emotional and health) and brought a new challenge for social integration.

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 WAVs in favour of local housing options, unless a clear need can be demonstrated;
- ensuring that both residents and NRWs are treated equitably in relation to service provision (e.g. emergency and health services);
- advocacy for Government recognition of the demands of NRWs 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; and
- supporting local business participation to Project opportunities.

3.3.6 Amenity and lifestyle

The Isaac 2035 Plan identifies the region's community strengths as including (Isaac Regional Council, 2015):

- "a good place to bring up a young family, some great, family-friendly facilities;
- long standing heritage towns such as Clermont, Nebo and St Lawrence with supportive cultures;
- safe communities with low crime;
- younger than state average population the region; and
- an existing arts and culture community the region".

As purpose-built towns, Dysart, Moranbah and Middlemount were designed with central town squares, cull de sacs separated by pedestrian buffer zones with neighbourhoods radiating from the town square (aiming for walkability to schools and shops), and with generous sporting facilities. People have access to a high level of amenity for families, excellent pedestrian connectivity, and sufficient services to support people throughout most of their lifecycle (the exceptions are births and end of life care). The Isaac Community Plan consultation process found almost all (98 percent) of participants had chosen to live in the Isaac Region for community, lifestyle and liveability reasons. Specific amenity and lifestyle values for each town are described below.

Dysart

Dysart is described as a friendly community with modern facilities including the multi-purpose Dysart Recreational Centre, offering indoor sports, a gym, a coffee house and youth centre. Dysart also features a civic centre and town library, a shopping centre, a community centre with crisis accommodation services, bowls club, nine-hole golf course and an Olympic-sized swimming pool

(Isaac Regional Council, 2017a). While predominantly a 'mining town', the community in Dysart enjoys the benefits of a rural lifestyle with wide open spaces surrounding the town.

Dysart residents who participated in a survey for the IRC's Urban Design Framework described Dysart's key values as 'community spirit, caring and friendliness', and 'lifestyle with family and friends' (Isaac Regional Council, 2017a). 'Easy living' was also a value, whilst 'security and opportunities' received much lower ratings, reflecting the challenges of high housing costs (at the time) and maintaining secure local employment.

Moranbah

Moranbah is a compact town characterised by low-rise housing well distributed around the town centre. It offers a relaxed and casual lifestyle, rich in social and sporting options. Whilst primarily a mining town, Moranbah's lifestyle is supported by typically rural values of friendliness, hard work and mutual support. Shared connections through similar life experiences add to the sense of community. Key aspects valued by residents in Moranbah include:

- a casual, relaxed lifestyle centred around family, health, and sporting associations;
- a wide range of sporting facilities, and access to community centres;
- a higher than average level of social advantage (as evidenced by the SEIFA indexes);
- the 16-bed hospital, police, ambulance and fire stations; and
- a range of local retail services.

Dust has been identified as a problem in Moranbah, with implications for household and outdoor amenity.

Middlemount

Middlemount is also a compact town centres around the town centre, which accommodates shops, the pool, the school and a large multipurpose Community Hall. Middlemount was initially planned to support a population upwards of 4,000 and as a result features an excellent range of community facilities (Centre for the Government of Queensland, 2015).

3.4 Housing and accommodation

This section outlines the provision of housing and accommodation in potentially impacted communities and the Isaac LGA.

3.4.1 Dwelling type

Table 3.12 shows the total number of private dwellings, occupied dwellings and the type of occupied private dwellings for each of the local towns and the Isaac LGA, with Queensland averages for comparison.

Moranbah had the largest number of private dwellings at 3,746, of which 29.5 percent were unoccupied on the Census night. Of occupied dwellings in Moranbah, 81.8 percent were separate houses and 17.9 percent were attached dwellings, the highest percentage of attached dwellings in the SIA study area. The second highest number of private dwellings was in Dysart at 1,406, of which 38.3 percent were unoccupied on Census night. Middlemount had 771 dwellings, and the highest rate (44.0 percent) of unoccupied dwellings.

Collectively between the three towns, there were more than 1,984 unoccupied dwellings on Census night. Housing may be unoccupied because it is awaiting maintenance, or is on the market for

purchase or rental, or is off the market due to low demand, or if the owners are away. These factors are all relevant in the local towns, along with large numbers of homes owned by mining companies that may not be in use.

Information about BMA's housing stocks is provided in Section 4.3.5.

Table 3.12: Private dwelling types, 2021

Dwelling types	Dysart	Moranbah	Middlemount	Isaac LGA	Qld
Separate house	793	2,156	380	5,429	1,397,920
Separate house % occ dwellings	91.7%	81.8%	87.2%	84.1%	74.8%
Semi-detached, row, terrace or townhouse	46	437	27	664	218,546
Flat or apartment	18	37	28	100	233,531
Attached dwellings % occ dwellings	7.4%	18.0%	12.6%	12.1%	24.2%
Another dwelling	3	3	0	69	13,519
Dwelling structure not stated	5	5	0	41	5,947
Total occupied private dwellings	864	2,634	436	6,298	1,869,462
Unoccupied private dwellings	539	1,106	339	3,001	192,393
Unoccupied private dwellings %	38.3%	29.5%	44.0%	32.3%	10.3%
Total private dwellings	1,406	3,746	771	9,302	2,061,855

Source: ABS, 2021b

3.4.2 Housing tenure

Housing tenure of occupied dwellings in the SIA study area is shown in Table 3.13. The most striking feature is the large percentage of rented dwellings in the study area. Rental rates range from 85.8 percent in Middlemount, to 67.9 percent in Moranbah and 60.3 percent in Dysart, compared with the Queensland average of 33.0 percent. These numbers reflect a high percentage of rented, mine-owned housing.

The other key feature is the very high percentages of 'other landlord type' - ranging from 61.7 percent in Middlemount to 35.8 percent in Moranbah and 29.5 percent in Dysart, which largely equates to dwellings owned by mining companies. These percentages are much higher than the State average of 1.9 percent. In total, 28.8 percent of Isaac LGA's stock was rented from 'other landlords'. The high percentage of dwellings owned by companies constrains normalisation of ownership, and leaves communities vulnerable to industry trends and policy changes.

Table 3.13: Housing tenure, 2021

Tenure	Dysart	Moranbah	Middlemount	Isaac	Queensland
Owned outright	151	221	11	1,161	543,285
Owned with a mortgage	137	497	14	1134	643,459
Rented	501	1,704	359	3,314	554,165
Rented - other landlord type	255	944	269	1,815	36,412

Tenure	Dysart	Moranbah	Middlemount	Isaac	Queensland
Rented - real estate agent	208	662	79	1,215	409,207
Rented - person not in same household	35	98	5	271	107,813
Rented - State or territory housing authority	23	70	10	133	50,230
Rented - housing co-op/community/ church	5	14	5	31	11,047
Landlord type not stated	3	0	0	13	3,729
Other tenure type/not stated	58	125	31	529	64,277
% Rented	60.3%	67.9%	85.8%	55.2%	33.0%
% Rented - other landlord type	48.9%	52.7%	71.9%	52.2%	5.9%
% Other landlord (of total dwellings)	29.5%	35.8%	61.7%	28.8%	1.9%
% Social housing (of total dwellings)	3.24%	3.18%	3.44%	2.6%	3.20%
Total	864	2,634	436	6,298	1,869,462

Source: ABS, 2021b

3.4.3 Residential land

In September quarter 2021, the closing stock of approved residential lots (those associated with current approvals and awaiting development) in the Isaac LGA was 363 lots, which was 19 more than the five-year September quarter average of 344 (QGSO, 2022d). This represents a small increase in the availability of residential land.

As at December 2021, there were 889 hectares of broadhectare land suitable for residential development, representing 16 per cent of broadhectare land stock in MIW Regional Planning Area (RPA). This was unchanged since March 2018. On a 'high yield' scenario (smaller lots and more medium density dwellings) this would yield 4,893 dwellings, and on a 'medium yield' scenario, 4,414 dwellings (Ibid.)

QGSO estimates that over the next 2 years, broadhectare land that is likely to be developed is expected to yield approximately 690 dwellings (QGSO, 2022d). As such, in the short to medium term, there is capacity for significant residential development in the Isaac LGA.

BMA currently owns a total of 123 vacant residential lots in Moranbah and 21 vacant residential lots in Dysart, some of which would support multi-unit developments. BMA has no current plans to develop its vacant residential land, but periodically reviews the quality of its housing stock and its suitability to workforce needs. BMA's vacant residential lots may be developed if a shortfall between workforce requirements and available stock is identified.

3.4.4 Housing cost trends

The Isaac region has experienced significant fluctuations in housing affordability during the past ten years. During 2011-2013, there were very high cumulative demands for housing, and housing prices in each of the potentially affected communities soared, with rental costs reaching record highs and outstripping rental costs for equivalent housing on the coast. Rental cost inflation caused significant

financial stress for households who didn't have access to mining wages or subsidised housing, and resulted in the loss of key workers (including health and retail workers) from each town. It also resulted in significant overcrowding, with an increase in temporary dwellings such as caravans and shipping containers, multiple workers sharing single dwellings, and local people sharing over-crowded houses.

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. The development of large WAVs near Dysart and Moranbah also contributed to a decrease in housing demand for NRW. As a result, housing pressures eased and the cost of housing plunged.

Since then, steady demand for housing has seen housing costs increase, but remain below the peak levels seen in 2012.

Data on housing affordability presented below have been sourced by postcode using SQM Research data (SQM Research, 2023) for Dysart, Moranbah, and Middlemount, however limited data was available for Middlemount due to small turnover rates.

Housing purchase

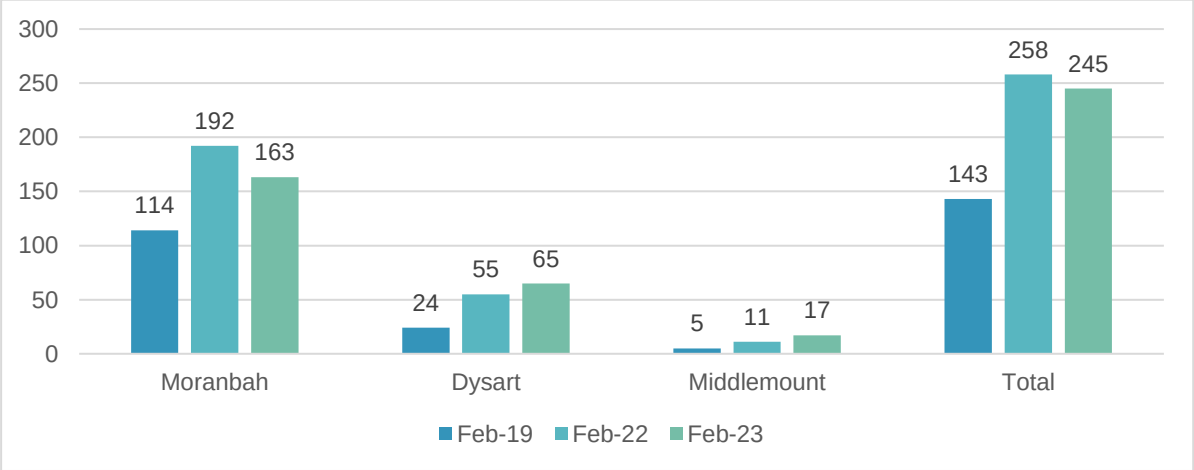
Figure 3.5 is based on analysis of SQM Research data for local towns in February 2019, February 2022 and February 2023, and shows the number of dwellings available for purchase in potentially affected communities.

Between Dysart, Moranbah, and Middlemount, there were 245 dwellings available for purchase in February 2023, ranging from older style, chamfer board and timber homes of three bedrooms and one bathroom constructed during the 1970s, through to newer four and five bedroom homes of timber and block construction (in Moranbah).

At the local level in February 2023:

- Moranbah had the largest supply of housing for sale, with 163 dwellings available, down from 192 dwellings one year prior;
- Dysart had 65 dwellings for sale, up from 55 dwellings in 2022; and
- Middlemount had seventeen dwellings for sale. In this very small housing market, year-on-year changes are not a reliable indicator, but this was an increase of 12 dwellings over a four year period.

Figure 3.5: Dwellings for purchase February 2019, 2022 and 2023



Source: SQM Research, 2019, 2022, 2023

As shown in Table 3.14, the average asking price for houses in Moranbah in late March 2023 was $338,702, which had decreased by 2.7 percent over a twelve month period, and increased by just 4.1 percent over a three year period.

Dysart did not experience the same surge in residential building as Moranbah during 2010-2013, and the housing stock is generally older and with less diversity of housing types. In Dysart, the average asking price for houses in March 2023 was $234,670, which represented increases of 5.2 percent over the year and 14.1 percent over the three years.

Middlemount's average asking price for houses in March 2023 was $252,500, with a decrease of 11.4 percent over one year.

Across the three towns, there has been slightly negative growth in asking prices for houses over the ten years to March 2023.

Moranbah saw a one year increase in the average asking price for units of 15.7 percent between March 2022 and March 2023. There are low numbers of units in local towns, so price trends are subject to volatility, but data for units are provided in Table 3.14 for comparison.

Table 3.14: Median dwelling asking prices, March 2023

Housing cost indicator	Moranbah	Dysart	Middlemount
Average asking price - houses	$ 338,702	$234,670	$252,500
Houses - 12 month change (%)	- 2.7	5.2	- 11.4
Houses - 3 year change (%)	4.1	14.1	46.7
Houses - 10 yr change (%)	- 4.9	-6.6	- 8.2
Average asking price units	$ 293,975	$187,652	$160,700
Units - 12 month change (%)	15.7	- 0.7	-3.6
Units - 3 year change (%)	- 0.1	16.1	- 17.7
Units - 10 year change (%)	- 6.1	- 7.5	-5.9

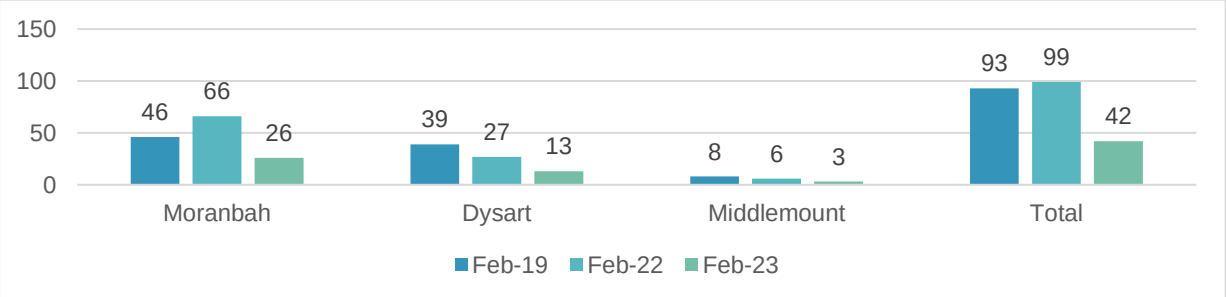
Source: SQM Research, 2023

3.4.5 Rental housing

Available rental dwellings

The number of rental dwellings available in the three communities is shown in Figure 3.6, contrasting the changes since February 2019 and February 2022.

Figure 3.6: Rental housing availability February 2019, 2022 and 2023



Source: SQMResearch, 2023

In February 2023, there were 42 rental dwellings available between the three communities, less than half the number available (99 dwellings) in February 2022. This included:

- Moranbah had a total of 26 vacant rental dwellings, which was a decrease of 40 dwellings over the twelve month period;
- Dysart had 13 vacant rental dwellings, which was a decrease of 14 dwellings since February 2022; and
- Middlemount had three rental dwellings, which was a decrease of three dwellings since February 2022.

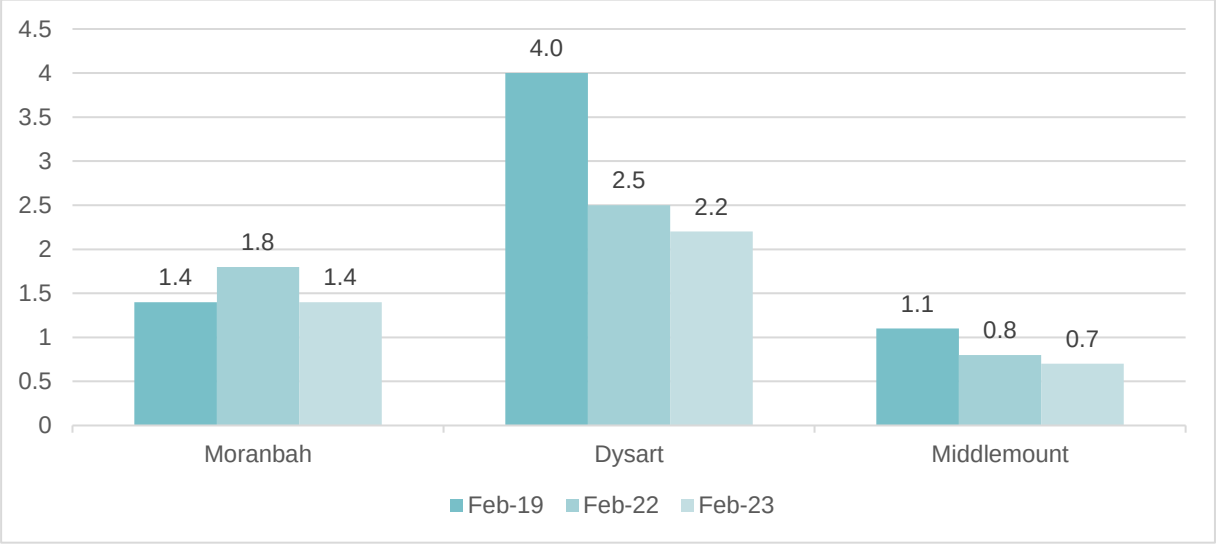
The three communities have a tight rental market. As shown in Figure 3.7, in February 2023, the rental vacancy rate in Moranbah was 1.4 percent, similar to the vacancy rate in 2019. Dysart's rental vacancy rate has decreased from 4.0 percent in 2019 to 2.2 percent in February 2023, indicating it now has a tight rental market in Dysart (as has been experienced in Moranbah and Middlemount over the past four years). The availability of rental dwellings in Middlemount is very low, at 0.7 percent in February 2023.

The Real Estate Institute of Queensland (REIQ) classes rental markets as 'tight' if the vacancy rate is below 2.5 percent (REIQ, 2018). On this basis Dysart's rental market would be considered tight and Moranbah and Middlemount's markets very tight.

These data indicate that demand for rental housing in the three towns has increased strongly during the past four years. Demand has been driven largely by the local population and people attracted to the towns for their affordable housing and lifestyle.

It is possible that the number of vacancy rental dwellings is higher than the vacancy rates indicate because most houses that are owned by mining companies are privately managed by the companies and not registered by the market. This was an observation made during consultation for the SIA.

Figure 3.7: Rental vacancy rate – February 2019, 2022 and 2023 (%)



Source: SQMResearch, 2023

At March 2023, average weekly rents for houses were lowest in Dysart at $374.20/week, and highest in Moranbah at $556.85/week (see Table 3.15). Average rents have increased by 12.2 percent in Moranbah, 15.5 percent in Dysart and 21.9 percent in Middlemount over the past twelve months. This reflects the increased demand for rental housing. Average rental costs are currently very similar to local rental costs seen in March 2013.

Table 3.15: Average weekly rental costs March 2023 – cost and 1,3 and 10 year trends

Location	$/week	%		
	March 2023	1 yr change (%)	3 yr change	10 yr change
Dysart	374.20	15.4	15.2	-0.4
Moranbah	556.85	12.2	7.4	0.5
Middlemount	442.15	21.9	12.0	-5.2

Source: SQM research accessed March 2023

3.4.6 Social housing and homelessness

Between 2016 and 2021, the amount of social housing (owned by either the State or a community or church organisation) in each of the communities of interest has increased (see Table 3.16.) In 2016, there were 68 dwellings in Moranbah that were identified as social housing, and in 2021 there were 84 dwellings.

Dysart's provision of social housing increased from 20 dwellings to 28 dwellings in 2021, and Middlemount's social housing increased from 13 dwellings in 2016 to 15 dwellings in 2021.

As a percentage of occupied private dwellings, social housing equates to 3.2 percent in Moranbah and Dysart, and 3.4 percent in Middlemount. These percentages are on par with the Queensland average of 3.2 percent. However each of the three towns had high percentages of unoccupied housing (see Table 3.12) ranging from 29.5 percent in Moranbah to 38.3 percent in Dysart and 44.0 percent in Middlemount. Data on their landlord types is not available but the majority of unoccupied dwellings are either privately owned or owned by mining companies. When comparing the number of social housing dwellings to the total number of private dwellings (occupied plus unoccupied), the proportions of social housing were 2.2 percent in Moranbah, 2.0 percent in Dysart, 1.9 percent in Middlemount, and 2.6 percent in the Isaac LGA, compared to 3.3 percent for Queensland.

Table 3.16: Social Housing, 2021

Social housing type	Moranbah		Dysart		Middlemount		Isaac LGA	QLD	
	No.	% occ. dw.	No.	% occ. dw.	No.	% occ. dw.	No.	% occ. dw.	% occ. dw.
State authority	70	2.7	23	2.6	10	2.2	133	2.1	2.7
Community/church	14	53.0	5	0.6	5	1.14	31	0.4	0.6
Total Social Housing	84	3.2	28	3.2	15	3.4	164	2.6	3.2

Source: ABS, 2021b. dw = dwellings

The key social housing providers in the Isaac LGA are ELAM which manages a portfolio of public and community-owned housing in Moranbah and Dysart, and the Isaac Affordable Housing Trust (IAHT), a not for profit organisation that manages affordable housing in Moranbah, Dysart and Clermont. Consultation indicates that both ELAM and IAHT housing is generally at full occupancy.

Consultation with service providers indicated that increasing demand had seen rental housing choices restricted. They also noted DCHDE policy that allocates public housing to tenants from across Queensland has seen increases in demand for support services.

As at June 2021, DCHDE's social housing register identified 11 households in the Isaac LGA who had a very high need for social housing, of whom three were single people in Dysart, five were single people in Moranbah and one was a couple in Moranbah (DHCDE, 2022). This was an increase on the two single person households identified as Category A (in very high need) in the LGA in 2017.

Estimates of the prevalence of homelessness in the SA2 Study area, based on the 2021 Census are presented in Table 3.17 and indicate approximately 11 people within Moranbah SA2 were homeless in 2021 and a further 41 people were homeless across the Broadsound-Nebo SA2, with a total of 61 homeless people across the Isaac LGA. Local homelessness rates were lower than the Queensland rate (43.2 people per 10,000) but highest in the Broadsound-Nebo SA2 at 18.6 percent.

Table 3.17: Homelessness estimates, 2021

Homelessness estimates	Number	Rate per 10,000 persons
Moranbah SA2	11	8.3
Broadsound – Nebo SA2	41	28.6
Isaac LGA	61	18.6
Queensland	22,444	43.2

Source: QGSO, 2022a

3.4.7 Short-term accommodation

Short-term, temporary accommodation facilities in the local area are listed in Table 3.18 and include:

- four hotels/motels and one caravan park in Dysart;
- seven hotels and serviced unit complexes and two caravan parks in Moranbah; and
- four hotels/motels in Middlemount.

Short-term accommodation is primarily used for accommodation of mine and railway workers, sales businesses, public service, and social services staff.

Table 3.18: Short-term accommodation, SIA Local Study area

Facility	Moranbah	Dysart	Middlemount
Moranbah Motor Inn	✓		
Moranbah Drovers Rest Motel	✓		
Black Nugget Hotel/Motel	✓		
Moranbah Outback Motel	✓		
Western Heritage Motel	✓		
Moranbah Isaac Motel	✓		
Coal Country Caravan Park	✓		
Oaks Moranbah	✓		
Monterey Moranbah	✓		
Jolly Collier Motel		✓	
Country Roads Motor Inn		✓	

Facility	Moranbah	Dysart	Middlemount
Middlemount Hotel / Motel			✓
Swag Motel			✓
Oaks Middlemount			✓
Capricorn Villas			✓

Source: Google Maps and Business Listings, 20233

3.4.8 Workforce accommodation

QGSO's estimates of the number of WAV beds in the Isaac LGA during 2011-2021 is shown in

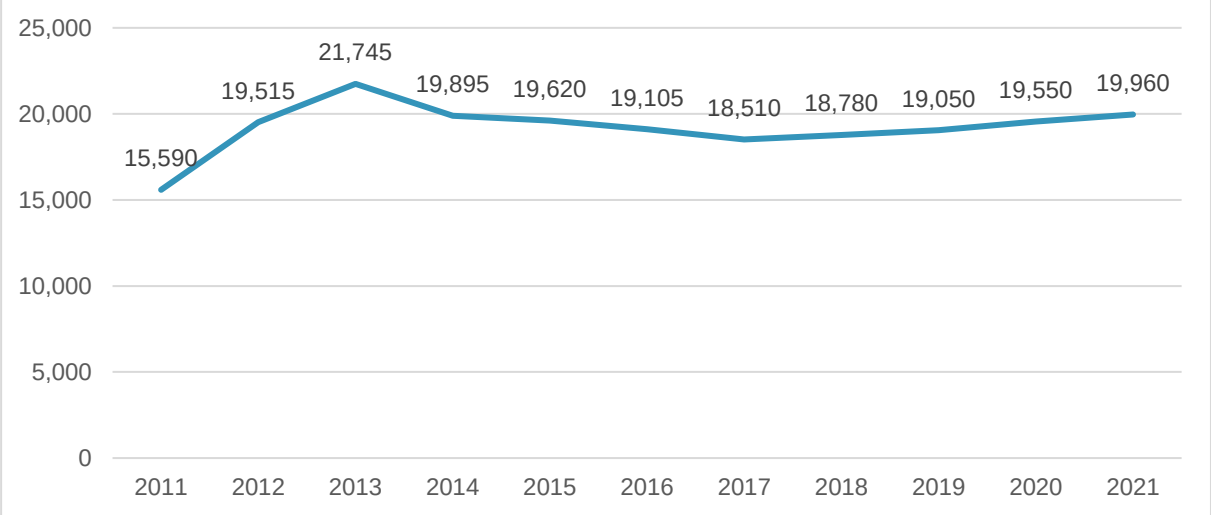
Figure 3.8. The number of beds increased sharply during 2011-2013 to reach a peak of 21,745 beds. During the following contraction in the mining industry, the number of beds fell (as WAV sections were mothballed or decommissioned) and in June 2018, there were an estimated 18,780 beds. This was estimated to have increased to 19,960 beds in 2021.

WAVs housed the majority of non-resident workers on-shift in the region in June 2021 (17,075 persons or 90 percent of the total). The balance (1,880 persons or 10 percent) stayed in other accommodation such as hotels/motels and caravan parks (Queensland Government Statistician's Office, 2021).

QGSO reports that responses from operators of WAVs indicated that occupancy levels in 2021 were normal or similar to those recorded in 2020 (QGSO, 2022c).

Data provided by IRC indicate that at June 2018, there was a total of 18,752 existing WAV beds in the Isaac LGA, with a total approved capacity of 31,288 beds. A Council update in 2021 indicated that this had increased to a total of 19,052 existing WAV beds in the Isaac LGA, with a total approved capacity of 31,698 beds (including existing beds).

Figure 3.8: WAV Beds Isaac LGA 2011-2021



Source: QGSO, 2022c.

BMA owns:

- one WAV in Dysart (BMA Dysart SPV Village) with a capacity of 430 existing rooms and a total approved capacity of 443 rooms, including a potential additional capacity of 13 rooms; and
- three villages in or near Moranbah:

- BMA Moranbah SPV Village with 579 rooms
- Buffel Park Village with 1,439 rooms and approved capacity for a further 506 rooms
- Curtin House, which is currently closed but has an approved capacity of 172 rooms.

The Eureka Village (1,603 rooms) is privately owned but provides accommodation exclusively for BMA's Goonyella Riverside and Broadmeadow mine personnel so has been considered as part of the total number of rooms available to BMA. Including Moranbah SPV, Dysart SPV, Eureka and Buffel Park, BMA's total existing NRW accommodation capacity is 4,051 rooms.

3.4.9 Housing study

As part of their readiness assessment and preparation of the Smart Transformation roadmap, the Moranbah and Dysart STACs identified the constrained housing market and limited affordable housing options as impediments to attracting new businesses and new employees to diversify the towns' economies.

The STACs commissioned an affordable housing study for Moranbah and Dysart (with BMA support). The housing study notes that:

- market constraints and housing affordability are strongly related to the resource cycle's impacts on housing market dynamics;
- the housing market causes difficulties in attracting non-mining related businesses and labour required to support population-serving businesses to achieve long-term sustainability of these towns; and
- due to the impact of the resources cycle on the housing market in these towns and their heavy reliance on the mining industry, intervention is required to enact meaningful change (AEC Group, 2021).

Key barriers to the creation of a housing market were identified as:

- lack of supply of new residential housing;
- development constraints caused by disruptions to global supply chain, impacts on labour and materials availability and cost, and difficulty encouraging tradespeople to travel due to the lack of accommodation;
- housing affordability, with housing and rental prices following the resources sector cycle, reaching extraordinary prices during peak activity, and with lending institutions requiring deposits in the order of 30 percent to be approved for a mortgage;
- liveability, with limited services which can result in higher costs of living; and
- availability of funding to ensure the feasibility of social and affordable housing.

The study identified a series of recommendations that will require a collaborative approach across community, industry, Council and the State government to achieve sustainable outcomes. The report was provided to IRC for its review in December 2021.

As mining companies own approximately 30 percent of housing in both Moranbah and Dysart, the housing study recommends that IRC, IAHT and mining companies:

- monitor the availability of housing owned by mining companies in the townships to understand the impacts of resource projects on the availability of housing, and identify opportunities for surplus housing owned by the mining companies; and

- maintain a register of housing owned by mining companies to monitor the availability of these houses, and assist in identifying opportunities such as the potential for lease of surplus housing by key workers or other private tenants, and/or identification of surplus housing stock that could be sold or transferred to Council or IAHT.

Recommendations involving other stakeholders including IRC, IAHT, GW3 and the State Government include:

- establish public transport links between major towns in the Isaac region and Mackay to improve the accessibility of services thereby delivering higher amenity and liveability;
- partnering with a developer/home manufacturer to provide affordable design/development opportunities;
- investigate the creation of a Community Land Trust to reduce the cost of land as a barrier to development and facilitate affordable housing development, and identify vacant Government owned land and transfer to the Community Land Trust;
- Council to revisit the release of Stage 1 of the Belyando Estate in Moranbah to facilitate supply of new residential development and affordable housing;
- investigate and provide temporary accommodation uses on vacant, government owned land for transitional housing; and
- advocate for State and Federal Governments to provide regional grant programs for housing, to provide access to funding for housing delivery.

During 2022, the first collaborative step is information sharing with IRC and facilitation of a Summit by Smart Transformations in November 2022, to bring stakeholders together to initiative conversation and agree on accuracy of report and recommendations. The expectation is that recommendations from the study will be addressed from 2023.

3.5 Health and community wellbeing

According to the World Health Organization (1948), health is ‘a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity’. An extensive range of factors (health determinants) influence and indicate the level of health and wellbeing in a community. Indicators of community health and wellbeing are discussed below.

3.5.1 Socio-economic factors

Findings from a review of relevant demographic, socio-economic and population health statistics for Isaac region indicate high individual and household incomes (see Section 3.2.3) that support access to health services, however travel distances to major health services are an impediment to optimum health.

Ageing is a key determinant, as the risk of poor health increases with age. As shown in Section 3.2 the Isaac LGA has a young population compared to Queensland, and a lower rate of people with disability who tend to need more frequent medical care.

Representation of Aboriginal and Torres Strait Islander residents in the Isaac LGA (who generally experience poorer health outcomes than non-Indigenous people) was above the State average at 5.3 percent compared to 4.6 percent for Queensland in 2021.

Housing stress is a cause of individual and family stress, and often of poor health as it reduces disposable income for resources to support health. As discussed in Section 3.4, residents of Dysart, Moranbah and Middlemount generally have access to good quality affordable housing, and levels of

housing stress are likely to be low in the Isaac LGA, due in part to the currently affordable private rents and in part to subsidised rents.

3.5.2 Health conditions

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. The percentage of people who did not state whether they had a health condition was 23.2 percent (compared to 8.9 percent for Queensland).

Conditions that had the highest percentages in the Isaac LGA include asthma at 6.9 percent (below the Queensland average of 8.8 percent), and mental health conditions at 5.5 percent (below the Queensland average of 9.6 percent).

Table 3.19: Long term health conditions, Isaac LGA population

Type of long-term health condition	Isaac LGA No.	Isaac LGA %	Queensland No.	Queensland %
Arthritis	882	4.0	456,139	8.8
Asthma	1,532	6.9	438,183	8.5
Cancer (including remission)	317	1.4	159,887	3.1
Dementia (including Alzheimer's)	31	0.1	37,680	0.7
Diabetes (excluding gestational diabetes)	557	2.5	231,642	4.5
Heart disease (including heart attack or angina)	394	1.8	215,678	4.2
Kidney disease	109	0.5	47,737	0.9
Lung condition (including COPD or emphysema)	257	1.2	106,989	2.1
Mental health condition (including depression or anxiety)	1,203	5.5	496,662	9.6
Stroke	101	0.5	49,769	1
Any other long-term health condition(s)	896	4.1	434,963	8.4
No long-term health condition(s)	12,503	56.7	3,001,387	58.2
Not stated	5,120	23.2	459,562	8.9

Source: ABS, 2021b

Indigenous health

ABS Census 2021 data indicate that the Isaac LGA's Indigenous residents had lower rates of long term health conditions than the State average (Indigenous people) for all conditions.

However, compared with the general Isaac LGA population, Indigenous residents had higher percentages of people with long term health conditions than the Queensland average for every condition described. The percentage of people who did not state whether they had a health condition

was 5.6 percent (compared to 7.5 percent for Queensland). Conditions that had the highest percentages in the Isaac LGA include:

- asthma at 13.1 percent compared with 6.9 percent for the general population;
- diabetes at 4.8 percent compared with 2.5 percent for the general population; and
- mental health conditions at 8.4 percent compared with 5.5 percent for the general population.

Table 3.20: Long term health conditions, Isaac LGA Indigenous population

Type of long-term health condition	Isaac LGA No.	Isaac LGA %	Queensland No.	Queensland %
Arthritis	47	4	13,964	5.9
Asthma	153	13.1	30,328	12.8
Cancer (including remission)	10	0.9	3,684	1.6
Dementia (including Alzheimer's)	3	0.3	1,084	0.5
Diabetes (excluding gestational diabetes)	56	4.8	14,227	6
Heart disease (including heart attack or angina)	19	1.6	8,644	3.6
Kidney disease	8	0.7	2,678	1.1
Lung condition (including COPD or emphysema)	16	1.4	4,813	2
Mental health condition (including depression or anxiety)	98	8.4	29,713	12.5
Stroke	0	0	2,004	0.8
Any other long-term health condition(s)	68	5.8	20,408	8.6
No long-term health condition(s)	770	66.2	138,929	58.5

Source: ABS, 2021b

Queensland Health data on the burden of disease in Queensland's health and hospital service (HHS) regions was released in 2017 based on 2011 data. For the Mackay HHS region, the data indicates that Aboriginal and Torres Strait Islander residents experienced 2.1 times the expected burden of disease and injury compared to Queensland non-Indigenous rates. The leading causes were mental disorders (21 percent), cardiovascular disease (14 percent), cancers (10 percent), diabetes (9 percent), chronic respiratory disease (8 percent) and unintentional injuries (5 percent). As a result, there was an 11.8-year gap in health adjusted life expectancy between Aboriginal and Torres Strait Islander residents in the HHS region and the total Queensland population (Queensland Health, 2017).

Consultation in 2017 with Queensland Health's Aboriginal and Torres Strait Islander Health Unit (Central Queensland Division) indicated that the key health issues being experienced by Indigenous people remained generally consistent with these findings. It was affirmed that social health determinants (including over-crowding, educational attainment and employment participation) were key issues. This is not expected to have changed significantly since 2017.

It was also noted that Indigenous people in the Isaac and Mackay LGAs were displaced from housing and their communities during the last mining boom period, with consequences for individual and family health, and that this remains a key risk if cumulative impacts are experienced.

Key priorities for Aboriginal and Torres Strait Islander Health in the Central Queensland region include mental health and improved participation of Indigenous people in sustainable employment. It was noted that Indigenous people often require emotional and social support (including budgeting and planning for long term goals) to ensure their jobs are sustainable and make a difference to their families. Traineeships and apprenticeships in mining, stock handling (on mining owned properties) and care of land acquired for offsets were mentioned as employment opportunities.

3.5.3 Identified health needs

Key health needs identified through evaluation of relevant research, consultation undertaken as part of previous planning exercises and consultation with local services as part of the health services study undertaken for the STACs in 2021 are summarised below.

Health service access

Needs for better access to health services include:

- access to after-hours GP services and bulk-billed GP visits;
- access to affordable transport options to access regional services;
- better access to imaging, scopes (e.g. endoscopy and colonoscopy), minor surgery, and obstetrics and gynaecology;
- mental health services;
- better access to specialists and telehealth services;
- AOD services (prevention and treatment);
- services focussed on maternal, child and young people's health;
- the need for flexible and innovative solutions to local health needs; and
- health promotion activities, information about the availability of services and better integration between services, particularly in mental health and between local doctors and remote specialists.

The STACs' health and emergency services study also identified the attraction and retention of a skilled local workforce as a key challenge for local health services. Issues include:

- the cost of housing and other costs such as transport challenge services' ability to recruit staff;
- lack of access to rural-experienced locum doctors and nurses;
- difficulty recruiting and retaining qualified specialist mental health staff;
- Moranbah's classification of Level 4 under the Modified Monash Model for geographical remoteness that provides a lower level of financial incentives for health professionals to relocate and work in the region than in other rural communities, with Dysart classified as Level 5;
- the need for more incentives and community integration programs to attract and retain health professionals; and
- better access to facilities and staff to support telehealth services.

Mental health needs

Wesley Medical Research (in collaboration with key stakeholders and supported by Mitsubishi Development Pty. Ltd and BMA) is undertaking research on mental health needs and service provision in the Bowen Basin. Phase 1 of the research identified key barriers to service delivery including:

- the service environment includes economic insecurity, FIFO impacts, a lack of services and workforce limitations;
- public-facing information about mental health services is incomplete, outdated and inaccurate;
- funding factors including under-allocation, multiple agendas, and short-term funding that affects staff retention;
- travel times, difficulty attracting skilled providers to regional areas and, and poor internet connectivity; and
- the need for more agile, collaborative and receptive services, and team-based leadership.

The research identified service gaps for mental health care delivery including:

- lack of psychology and other services for children and youth;
- lack of awareness of services and access pathways;
- limited and inconsistent outreach services to Dysart and other more remote locations;
- lack of services that are face-to-face, affordable, and available out of hours; and
- lack of general education around mental health awareness, stigma, and health literacy.

Wesley Medical Research has established Isaac Navicare, which is a free service that helps connect people with mental health support across the Isaac region. The service employs a Care Navigator to link help-seekers with the supports they need to improve their mental wellbeing, including service referrals, making appointments and access to online mental health support The National Mental Health and Suicide Prevention Plan (Department of Prime Minister and Cabinet, 2021) describes a $2.3 billion investment in mental health and suicide prevention, focused on five pillars that include prevention and early intervention, suicide prevention, treatment, supporting the vulnerable and workforce and governance. Whilst program details are yet to be released, with increased mental health support a key local priority, there is an opportunity for Moranbah and Dysart communities to advocate for access to funds through these programs as they develop.

Mental health in the mining industry

The Minerals Council of Australia (MCA) Blueprint for Mental Health and Wellbeing describes mental health as “the ability to cope with life stresses and the fulfilment of goals and potential’, which is critical to overall health and wellbeing (Minerals Council of Australia, 2015). A mental health problem is defined as symptoms such as changes in emotion or behaviour not of sufficient severity to be diagnosed as a mental disorder, whilst a mental health disorder is defined as ‘a clinically recognisable set of symptoms or behaviours associated with distress and with interference with personal functions’.

Whilst there is limited evidence on the extent of mental illness in the mining industry, 2012 research by the University of Newcastle and Hunter Institute of Mental Health indicated that, based on an average of 41,264 mining employees in NSW in 2011, between 8,000 and 10,000 people would experience mental illnesses in any 12-month period (Hunter Institute of Mental Health, 2012). This included approximately 5,777 employees likely to have experienced an anxiety disorder, 2,500 who would have experienced depression and 2,000 who would have experienced a substance use disorder (Minerals Council of Australia, 2015). The report cites research findings that risks are compounded by living alone, lack of local networks and high physical demands, whist long working hours and associated fatigue have been demonstrated to be associated with increased risks of depression and anxiety. The report notes that the lack of awareness of mental health issues and a ‘macho culture” can be barriers to obtaining care and advice, and a supportive environment in the workplace can help address this problem.

Mental illness affects the industry through absenteeism, presenteeism (coming to work while unwell), injuries and lower productivity. The MCA’s Blueprint notes that workplace mental health programs

delivering significant returns including improvements in staff engagement and morale, improved productivity, improved organisational adaptability, better health and safety, and reduced staff turnover.

3.5.4 Safety and security

Table 3.21 shows the number and rate of offences (per 100,000 people) in the Isaac LGA in the year to June 2021, compared to Queensland as a whole. There were 151 offences against the person in the year to June 2021, which was a lower rate (716 people per 100,000) than the Queensland rate (867 per 100,000). The rate of offences against property (2,091 per 100,000) was also significantly lower than the Queensland rate (4,120 per 100,000 people). The rate of other offences (which includes offences such as fraud, drink driving and drug offences) in the Isaac LGA (4,548 per 100,000) was slightly higher than the Queensland rate (4,167 per 100,000).

Overall, the rate of offences in the Isaac LGA was substantially lower at 7,356 offences per 100,00 people than the Queensland average (9,154 offences per 100,000 people). Lower crime rates are partly due the local police officers' longevity of service and their relationships with their communities, but also to the closeness of local community members and observance of behavioural norms.

Table 3.21: Offence types, Isaac LGA to June 2021

LGA / State	Type of offence							
	Offences against the person		Offences against property		Other offences		Total	
	number	rate(a)	number	rate(a)	number	rate(a)	number	rate(a)
Isaac (R)	151	716	441	2,091	959	4,548	1,551	7,356
Queensland	45,585	867	216,667	4,120	219,095	4,167	481,347	9,154

Source: QGSO, 2022a

Some community members have historically expressed concern that the concentration of NRW in local towns could accelerate crime rates Local police advise that, whilst the presence of non-resident workers and sudden increases in their numbers are noticeable, the large majority of services are provided as callouts involving local residents and proactive community policing. They advise that callouts to WAVs are rare, as the facilities' rules and on-site procedures are used to manage workforce behaviour, and bad behaviour results in withdrawal of accommodation. Calls for service relating to non-resident workers are usually to incidents in town such as drunken bad behaviour and drink driving. The key reason is that local police, Council and the communities have worked together to establish and support community norms and values, of which non-residents may be disrespectful or unaware. However, it was also noted that early advice regarding mine workforce and accommodation arrangements assists police and other emergency services to plan effectively for the region.

Growing demands identified by Moranbah and Dysart police result from domestic violence and mental health issues, both of which involve complex social and legal factors, and from traffic offences and behaviour in public (e.g. good order offences and fights). Unsupervised young people (e.g. when both parents are working) also require police attention.

Neither local hospital has a secure unit for people experiencing mental health crises, which poses challenges in managing the safety of people with mental health issues but also the community, and the need to transport people needing a secure hospital ward to Mackay.

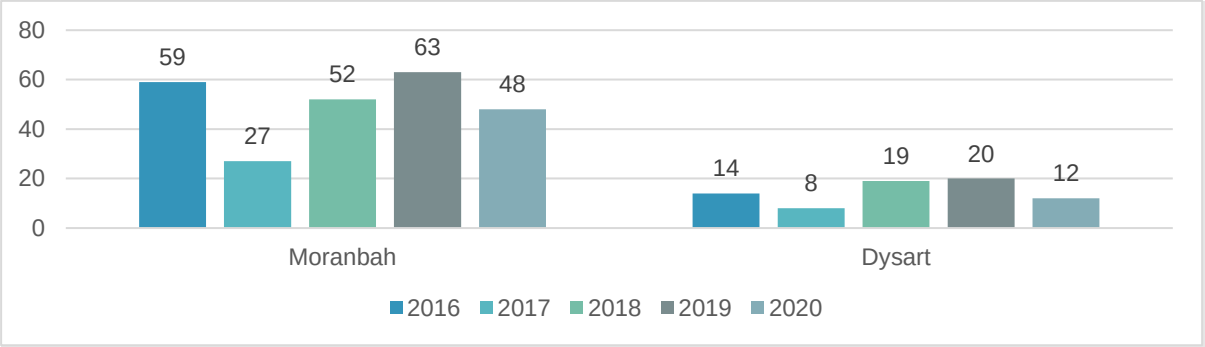
3.5.5 Domestic and family violence

Consultation participants (including community service providers and police) provided anecdotal evidence of an increase in domestic and family violence (DFV), influenced by the economic downturn, and drug and alcohol use.

In 2017, as part of the Queensland Government's response to domestic and family violence (DFV), the Department of the Premier and Cabinet (DPC) commissioned QGSO to conduct the Queensland Social Survey 2017. Findings of note included an average 16.2 percent of Queensland residents reported being aware of DFV involving a family member or close friend in the last 12 months and 10.7 percent were aware of DFV involving a neighbour over the same period (Queensland Government Statistician's Office, 2017). Prevention of domestic violence is a key priority for QPS and its community partners.

Figure 3.9 shows local data on breaches of domestic violence protection (DVO) orders during January 2016 - December 2020. Numbers were highest in 2019 with 63 breaches in Moranbah and 20 in Dysart, but there was otherwise no clear trend. 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. Moranbah and Dysart police advise that domestic and family violence responses represent a significant part of their workload.

Figure 3.9: Breach of DVO Moranbah and Dysart, 2016-2020



Source: Queensland Government, 2021

3.5.6 Road safety

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.

A 2016 report by Central Queensland University (CQU) researchers aimed to assess the mining impacts of road travel conditions in the Bowen Basin (Akbar, 2016). The research used a case study approach including a travel survey with 70 households Moranbah and Emerald. Social impacts identified by Moranbah and Emerald households as part of the research included:

- increased traffic leading to congestion, which impacts on travel time;
- deterioration of road pavements due to truck weights;
- increased demands on emergency services to respond to accidents and over-sized vehicle escorts;
- safety issues associated with fatigued or inattentive commuters;
- dust from vehicle movements on unsealed roads;
- impacts on the movement of farming harvests and stock; and

- disruption of school buses and other public transportation.

Queensland Police in the Isaac LGA confirmed that escorting wide loads was an ongoing demand on resources, however it is managed by enabling police to escort loads on a private basis when they are off shift.

A review of the latest available crash data in the SIA study area showed a total of 39 crashes were recorded in the five years between June 2012 and June 2017, of which 1 was fatal (see Table 3.22) (AECOM, 2018). the largest proportion of the accidents occurred on Dysart Road (44 percent), followed by Goonyella Road (38 percent). Dysart Road between Peak Downs Highway and Lake Vermont Road is approximately 51.4 km. As there were 17 accidents in the past five years, that is equivalent to an average accident rate of 0.33 accidents per kilometre.

Table 3.22: Crash Data, 2012-2017

Severity	Number of crashes	Percentage of total crashes
Minor injury	2	5%
Medical treatment	13	33%
Hospitalisation	23	59%
Fatal	1	3%
Location	**Number of crashes**	**Percentage of total crashes**
Peak Downs Highway	4	10%
Dysart Road	17	44%
Goonyella Road	15	38%

Source: AECOM. 2018. SEMLP. Transport and Traffic Impact Assessment

3.5.7 Natural resources

Access to water resources

The SIA study area is serviced by town water supply, however mining companies hold water allocations for Moranbah, Dysart and Middlemount, and IRC relies on agreements with industry for town water allocations.

Under the Queensland Government's Building our Regions program, Queensland Government with Isaac Regional Council are investing in critical water infrastructure upgrades in the region. These works include an upgrade of Dysart's Water Treatment Plant. The Dysart's water treatment plant upgrade program in recent years has been supported by a BMA financial contribution.

Building our Regions has also contributed $10.59 million to the Moranbah Reservoir and Associated Works, which is expected to increase the existing plant's one-day water storage capacity to up to three days, involving upgrades to the reticulation network, supply main and feeder mains to ensure supply meets the catchment's needs and firefighting requirements (Isaac Regional Council, 2017b).

Groundwater remains a critical resource for surrounding grazing and grain production operations.

Air quality

DESI monitors PM10 in Moranbah and publishes the data hourly on its website. Monitoring data are not available for other communities in the Isaac region.

The data for Moranbah indicate that in the twelve months to June 2023, the level of PM10 was below the recommended air quality guideline for the one-hour average (100 ug/m3) during seven months and higher than the guideline during five months (DES, 2023). This is an indication that dust may be problematic in Moranbah.

The findings of the Project's air quality assessment are summarised in Section 4.4.4.

3.6 Social infrastructure and services

Potentially affected communities were planned and developed with a comprehensive range of community, health and emergency services, also cultural and recreational facilities. Social infrastructure has been maintained and enhanced over time by Councils, Government agencies and mining companies' community investments.

BMA has made significant contributions to developing and enhancing Moranbah and Dysart through investment in housing, community programs and facilities, Moranbah's water supply network, and road infrastructure. BMA also developed and operates the Moranbah 'Bunhdhara' Airport and owns the Dysart Airport (3.5 km south of the township) that provides access to the Royal Flying Doctor and Medivac Services.

Issues described by SIA stakeholders include:

- cumulative impacts of mining industry growth are straining health and emergency services, particularly as NRW are inadequately considered in Government planning;
- there is capacity within local schools to grow, but school resources are being stretched as the result of student turnover and new or transient families with complex needs;
- service deficits including:
    - residential and support services for ageing population;
    - increased sporting opportunities and community resources to support them in Dysart;
    - disability support and employment pathways, mental health and allied health;
    - childcare which responds to shift workers' needs;
- limited entertainment/recreation for young people in Dysart, with resulting unsafe behaviours;
- recruitment and retention of community services and government staff is challenging; and
- increasing numbers of transient families have seen increased social and health issues (e.g., drug use and family violence).

3.6.1 Early childhood services

Table 3.23 shows the childcare services, facilities and networks in the three towns. Moranbah has two childcare centres and one kindergarten, one family day care service, one out of school hours service, one after school service, and a playgroup. Dysart has one childcare centre and one kindergarten, two family daycare providers and two playgroups. Middlemount has one facility and one playgroup network. Middlemount has no formal services, but one playgroup.

SIA consultation indicated that:

- available childcare places were limited in each town, with Middlemount experiencing particularly high demand;
- more flexible childcare options are required for shift workers; and
- additional out of school hours childcare places are required for parents doing 12 hour shifts.

Table 3.23: Early Childhood Facilities, Services and Networks

Location	Early Childhood Facilities, Services, Networks	Facility	Service	Network
Dysart	Lady Gowrie Dysart Child Centre and Community Space	1		
	Dysart Kindergarten Inc	1		
	C&K Dysart Kindergarten	1		
	Playgroup Queensland – Kiddy Koalas, Mulligrubs			2
	Family daycare providers		2	
Moranbah	Simply Sunshine Childcare	2		
	Moranbah Early Learning Centre (MELC)			
	Family Day Care		1	
	MELC Out of School Hours care		1	
	Bright Kids After School Care		1	
	C&K Moranbah Community Kindergarten and Preschool	1		
	Playgroup Queensland			1
Middlemount	C&K Middlemount Community Childcare Centre Playgroup Queensland – Mulligrubs			1

Source: MyCommunityDirectory. 2022

Childcare study

In 2021, the Smart Transformations Advisory Councils (supported by BMA) commissioned a study to examine the availability of childcare in Moranbah and Dysart, and the number of childcare places needed in the future, based on current demographics projected out for eight years.

The two long day care centres in Moranbah (Simply Sunshine and the Moranbah Early Learning Centre [MELC]) have recently expanded their capacity and are approved to offer a total of 182 long day care places. However, staff shortages mean that centres are not operating at full capacity. Factors affecting the ability to recruit childcare educators include the low wages, access to affordable housing, cost of living and difficulties in accessing professional learning and development. Daycare places are also under-provided compared with the population profile. Both centres have long waiting lists, particularly in the 0-2 year age category. Also, many of the buildings from which childcare services operate are aged and in need of upgrades.

Childcare providers advised that the demand for long day care and Out of School Hours (OSHC) childcare far exceeds their capacity, and the hours on offer did not suit shift workers. There are two centres approved to offer a total of 110 OSHC places but again staff shortages have limited their capacity e.g. MELC's OSHC program is approved for 60 OSHC places, but can only offer 30 places due to staff shortages.

A Creche and Kindergarten (C&K) centre also operates in Moranbah and is approved to offer 73 places for long day care and kindergarten, but only takes children over three years in the year prior to their Prep year at school, and does not operate full long daycare hours.

Analysis of population required places and shortfalls revealed that in Moranbah there is an estimated shortfall of 77 day care places and 41 OSHC places. These shortfalls are in addition to the approved places that are currently not being offered, because the services are not operating at full capacity.

In Dysart, there is one long day care centre (Lady Gowrie Dysart Child Care Centre and Community Space) which is approved to offer 39 places. There were two family daycare educators approved to offer eight daycare places, taking the number of available day care places to 47, and also a C&K kindergarten with a total capacity of 50 that has a short waiting list.

At the time of the consultation, the only OSHC that was offered was through the family day care educators with six OSHC places in total, with the Lady Gowrie Centre planning to provide 15 OSHC places commencing in term 2, 2021. Analysis of population, required places and shortfalls revealed that in Dysart there is an estimated shortfall of 11 day care places and 38 OSHC places.

Family day care was recognised as an option that would better accommodate mining employees' shift and roster requirements. There is only one registered family day care educator in Moranbah, and a long waiting list for family day care. The study found that there are low numbers of family day care educators due to the lack of suitable housing for family day care, professional isolation for educators, and regulatory and business management loads. Au pairs and nannies are also used in these communities, but homes are not designed to accommodate an additional adult, and unregulated care is not subsidised so the cost can be a barrier.

The report notes the lack of childcare affects parents' ability to engage in work that a whole of community, multi-stakeholder, multi-faceted approach is needed to address the issues.

In summary:

- waiting lists for long day care centre places, family daycare and OSHC are long, and there are short waiting lists for kindergarten places;
- the type of child care available doesn't match 12 hours shifts, and there is limited to no access to overnight care;
- staff shortages mean the approved capacity is not currently offered; and
- there is insufficient approved capacity to meet current and future projected needs.

Key recommendations that are being considered by BMA and other stakeholders include:

- support for the establishment of a Childcare Leadership Alliance to develop a strategic plan for childcare and oversee the implementation of the accepted recommendations;
- fund executive officers to support the work of the CLA;
- offer incentives to improve recruitment and retention of workers across the childcare sector;
- financial support for school-based childcare traineeships and for those who wish to upgrade their qualifications to a bachelor's degree;
- explore opportunities for collaboration between childcare providers and businesses to recruit couples with a focus on attracting a childcare worker and providing a job for their partner;
- work with the Family Day Care Association (Queensland) to develop a campaign to recruit family day care educators;
- work with childcare providers to better align services offered with long, overnight and weekend rosters;
- explore the possibility of piloting a shared family day care service where multiple educators work out of a single residence set up as a family home to provide a 24/7 childcare service; and
- work with landlords to allow family day care to operate from rental properties.

3.6.2 Schools

As shown in Table 3.24 the Project's nearby communities are serviced by:

- three public primary schools, including one in Dysart and two in Moranbah;
- two secondary schools, in Dysart and Moranbah; and
- the P-12 Middlemount Community School Middlemount (established from the amalgamation of the primary school (est. 1980) and high school (est. 1988) in 2000).

In SIA consultation, all local schools indicated that new enrolments are welcome, and schools have capacity for increased enrolments, with adequate notice of workforce ramp-up and population increases.

Table 3.24: Primary and secondary education facilities

Location	School	Primary	Secondary
Dysart	Dysart State School	1	1
	Dysart State High School		
Moranbah	Moranbah East State School	2	1
	Moranbah State School		
	Moranbah State High School		
Middlemount	Middlemount Community School	1 (merged)	

Source: Desktop research, updated 5 March 2022

Day 8 enrolment figures for the five-year period from 2016-2021 (see Table 3.25) indicate that Moranbah state schools' enrolments remained stable over the five years at approximately 1,250 students, while Moranbah State High School enrolments increased by 113 students or 19.0 percent. Dysart State School had a decrease of 48 enrolments (13.0 percent) and Dysart State High School had a small increase in enrolments equating to 3.0 percent. Enrolments in Middlemount's Community School had decreased by more than 100 students or 28.0 percent.

Community members including school principals have noted that in 2022, local schools were experiencing significant staffing shortages due to difficulties recruiting to the schools, COVID-19 related leave, and housing and living costs.

Table 3.25: School enrolments, Day 8 2016-2021

School Name	2016	2021	5 yr change (no.)	5-year annual average change
Moranbah East State School	687	670	-17	-0.02
Moranbah State School	563	581	18	0.03
Moranbah State Schools Total	1250	1251	1	0.00
Moranbah State High School	607	720	113	0.19
Moranbah Schools - All	1,857	1,971	114	0.06
Dysart State School	356	308	-48	-0.13
Dysart State High School	167	172	5	0.03
Dysart Schools - All	523	480	-43	-0.08

School Name	2016	2021	5 yr change (no.)	5-year annual average change
Middlemount Community School	363	260	-103	-0.28

Source: Queensland Department of Education. 2021

3.6.3 Further education and training

The Coalfield Training Excellence Centre (CTEC, or Big Blue Shed) facility is a highly valued community asset, established through a BMA-community-Department of Education and Training partnership, which facilitates and delivers local training and employment outcomes. It is also a valued support for career pathways, setting requirements for applicants to demonstrate clean disciplinary records and strict criteria for behaviour. CTEC is currently only available to Moranbah High School students.

In January 2018, BMA welcomed 40 new apprenticeships 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, of whom 31 (60.7 percent) were women.

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

The Isaac LGA has no local access to university courses (except via online resources), however there are several local training services and facilities with a focus on training for employment in the mining industry. Additional training services available at Mackay also service the localities within the SIA study area. James Cook University has a small campus based at the Mackay Hospital's Education and Research Centre (MERC), enabling medical, social work and dental clinical placements.

The MIW Regional Plan identified that a lack of tertiary education facilities in the region can result in young people relying on obtaining employment in the mining industry or leaving the region (Queensland Department of Local Government and Planning, 2012).

3.6.4 Primary health services

Primary health services in the SIA study area are presented in Table 3.26. Additional primary and allied health services are provided by the Mackay Hospital and Health Service, with hospitals in the SIA study area based at Moranbah and Dysart, and a nurse-led Community Health Centre provided at Middlemount.

SIA consultation participants noted:

- increased demands on hospital, GP and mental health services as a result of population increases and FIFO workers' demands;
- most specialist services have to be accessed in Mackay (two hours away) or other regional centres, and none of hospitals in Isaac LGA operate birthing facilities, which is expensive and stressful for young families;
- skilled health worker recruitment and retention is one of the biggest challenges;
- hospital service capacity in Dysart was described as adequate, with room to meet growing population needs;

- allied health services in Dysart and Middlemount has increased in recent years, and there is increasing availability of visiting women's health services through the Hospital and the Dysart Medical Centre;
- in Moranbah, the primary concern was addressing the competition between the health and service needs of local residents in addition to the needs of nearby communities, while also responding to the demand generated by NRW and project sites in the district;
- in Middlemount, service demand was slower in recent years but remained stable. Middlemount patients requiring access to additional health services are supported by the Dysart Hospital and a shared allied health service model between Middlemount and Dysart; and
- population stimulus in Middlemount and Dysart would be welcomed to increase service provision, support the growth of the allied health model, and potentially improve recruitment options.

Recent research on health and emergency service provision that was commissioned by the STACs is described below. There are two privately-owned medical centres offering GP and nursing services in Moranbah:

- Oaktree Medical Centre which has seven GPs and two nursing staff, a practice nurse, a chronic health nurse and an audiologist; and
- Sonic Health Care which has three GPS and a practice nurse.

The number of GPs in Moranbah has increased to approximately 10 GPs from five GPs in 2014, due partly to a partnership between local services, Council and mining companies to attract and retain doctors, and partly to new ownership and management of the practices. However, not all GPs are full time.

The Moranbah medical centres also accommodate visiting specialists including orthopaedic and general surgical specialists visiting every 6 to 8-weeks, and gynaecological specialists visiting monthly. Sullivan Nicolaides provides pathology services in Moranbah.

Dysart Medical Centre currently has one GP and one practice nurse. On-site pathology and visiting specialists are also available at the Medical Centre.

Table 3.26: Primary health services, SIA study area

Town	Facility / Service	GPs*
Dysart	Dysart Medical Centre	1
Moranbah	Oaktree Medical Centre	7
	Sonic HealthPlus Moranbah	3
Middlemount	Middlemount Medical Centre	2 part time

Source: General Practitioners in Isaac LGA, sourced from North Queensland PHN. Not all GPS are full time.

Queensland Health's Mackay Hospital and Health Service (MHHS) Rural Services advised the SIA team that a benchmark of one GP to 600 people is appropriate in the local context. In Dysart, there were previously two local doctors serving general practice and hospital service needs, however this has been reduced to one, which – on local evidence of waiting times and an estimated GP rate 1: 3,000 people - is clearly insufficient (by up to four GPs based on the Rural Services benchmark). This is an insufficient level of provision resulting in long waiting times for appointments, despite the doctor working very long hours. MHHS has committed funding to provide a second doctor through the Dysart Medical Centres, but recruitment has been challenging.

Dysart residents have noted the loss of specialist services over the past few years. However, women's health services have recently been re-contracted, and visiting antenatal and gynaecology services are again available through the Dysart Hospital and Medical Centre.

A research report on access to health and emergency services in Moranbah was commissioned by the STACs (Elliott Whiteing, 2021). Under the ABS's Remoteness Area (RA) classification, Moranbah, Dysart, and Middlemount are classified as within Outer Regional Australia. Moranbah's ratio of GP provision was slightly above the Outer Regional average (at an estimated 98.2 GPs per 100,000 people compared with the average of 88.6) (Royal Australian College of General Practitioners, 2018) but well below the Outer Regional average when considering the FTE population (at 63.9 GPs per 100,000 people). The ratio of GPs to the FTE population in Dysart is significantly below the Outer Regional average at 43.1 GPs for 100,000 residents and 25 GPs per 100,000 for the FTE population.

Whilst local doctors are available on call in Moranbah and Dysart, there is no regular access to local after-hours GP services, so that patients need to wait to see a doctor or attend the local hospital. Bulk-billed GP visits are not regularly available in any of the three towns, which also increases demand for the hospitals' (free) medical services and inhibits access to services for people on low incomes.

3.6.5 Allied and mental health services

Moranbah has a good range of allied health care services including locally based and visiting personnel based at the Moranbah Community Health Centre and Moranbah Youth and Community Centre, with HCC providing personal support and assistance to seniors and people with disability, and access to privately provided physiotherapy, chiropractic and medical imaging services. Whilst several of Moranbah Community Health Centre's staff are full-time, they are required to provide outreach services to Dysart and Glenden, so are not always available in Moranbah.

Dysart has a limited range of allied health services, based at Queensland Health's Community Health Centre.

Mackay Hospital and Health Service's (MHHS) Rural Hinterland Mental Health Service is based in Moranbah, providing full-time access to specialist mental health practitioners, and part-time access to Alcohol and Other Drugs (AOD) practitioners and psychiatrists to residents of Moranbah, Dysart and other Isaac LGA communities. The part-time, visiting and outreach nature of allied health and mental health services in Dysart means that access to services can be patchy, not available when the need presents, or have significant waiting times. Participants in consultation for the STAC's health and emergency services study (Elliott Whiteing, 2021) noted that cumulative numbers of NRW can represent a substantial load on mental health services and clinical nursing staff. A recent decline in resourcing for outreach services was also identified by consultation participants, with needs for increased mental health, domestic violence, and youth health services noted.

Attraction and retention of mental health staff was a key challenge identified by MHHS and the hospital Directors of Nursing, with frequent staff vacancies for these positions in the face of increasing mental health care needs, affecting local access and continuity of care.

Wesley Medical Research is implementing a three-phased research program to enhance access to mental health services and improve mental health outcomes in the Bowen Basin. Phase 1 developed a new model of mental healthcare, and Phase 2 introduced Isaac Navicare, a mental health navigation service located in Moranbah, Queensland. Navicare will connect Isaac residents to existing mental health services and support them in navigating the health system. A Mental Health Care Navigator has been appointed to provide help-seeker support and promote education and awareness of mental health services.

3.6.6 Hospital and health services

As shown in Table 3.27, Moranbah Hospital has 12 beds and 21 nurses, and provides general medical services including accident and emergency services, admissions, diabetic education, aged care and outpatient services. Allied health services are provided by Rural Health (Queensland Health) through the Moranbah Community Health Centre, and include speech pathology, physiotherapy and social work. Visiting health services include a psychiatrist, a paediatrician, and the Royal Flying Doctor Service's Women's Health Clinic.

Dysart Hospital has nine beds and one emergency room. Visiting health services include speech pathology, palliative care, alcohol tobacco and other drugs, mental health, and women's health services. Dysart also has funding for a school-based youth health nurse. Middlemount Community Health service is a nurse-led operation Monday to Friday, with a strong focus on preventative health and women's health.

Patients who require treatment beyond basic services are sent to regional hospitals, the nearest being in Mackay. The recently redeveloped Mackay Base hospital offers specialist services that are not provided in the SIA study area such as obstetrics and gynaecology, paediatrics, emergency medicine, orthopaedic surgery, anaesthetics, intensive care, coronary care, psychiatry, aged care; renal medicine, ophthalmology, palliative care, and day surgery.

Key findings from a comparative assessment of hospital and health services (Elliott Whiteing, 2021 for the STACs) include:

- 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;
- 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 governances 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; and
- the need for better access to specialists, mental health professionals and telehealth services was identified as part of a NQPHN consultation process.

During 2020, IRC and the Greater Whitsunday Alliance (GW3) identified the need for a business case for upgrading the Moranbah Hospital (GW3, 2020).

In September 2020, the Deputy Premier and Minister for Health and Minister for Ambulance Services announced that planning for the redevelopment of the Moranbah hospital had commenced, with the aim described as 'to deliver greater flexibility in services provided and better equip the hospital to respond to emergency situations, such as the May 2020 coal mining incident.''

In June 2022, the State Government committed $54 million to the development of a new hospital in Moranbah, including expanded emergency department treatment spaces and enhanced outpatient, allied health, community health and community mental health spaces.

Table 3.27: Hospital and Health Service Profile, SIA Study area

Characteristic	Moranbah Hospital	Dysart Hospital	Middlemount Community Health
Number of beds (2017)	Approximately 12 beds	Approximately 9 beds	NA

Characteristic	Moranbah Hospital	Dysart Hospital	Middlemount Community Health
Hospital services	24-hour acute and emergency care. Clinics include general practice, outpatients and a diabetic education group.	9-bed acute ward and one high dependency / emergency room	NA
Allied health	Speech pathology, physiotherapy and social work.	NA	NA
Visiting services	Psychiatrist, a paediatrician, and the Royal Flying Doctor Service's Women's Health Clinic	Visiting speech pathology, palliative care, alcohol tobacco and other drugs, mental health, and the Royal Flying Doctor Service's Women's Health Clinic	Visiting women's health nurse
Community health / Outreach		Home and Community Care, and meals on wheels	Nurse-led community health screening and support service with a focus on preventative health

Source: Queensland Health. 2021. Hospital and Health Facility Profiles.

Non-resident demands on health services

IRC's submission to the Productivity Commission's 2014 study into Geographic Labour Mobility (IRC, 2013) notes that local health services, police, fire and ambulance services are utilised extensively by the non-resident population, however services are not resourced in accordance with the full population served.

Non-resident workers make significant demands on the Moranbah and Dysart hospitals, with people from outside the Isaac LGA representing 33 percent of Moranbah Hospital's separations in 2020/21. High volume services for residents from outside the region include chest pain, abdominal pain, injuries, gastrointestinal issues (MHHS, 2021). Data were not available for the percentage of outpatients from outside the region, however the Moranbah DON estimated that non-residents represent more than one third of emergency department (ED) presentations, and the Dysart DON estimated that non-residents represent up to half of ED presentations.

As an example of the level of demand, Moranbah Hospital had 65 overnight patients, 47 same-day patients and 1,128 outpatient occasions of service in the December 2020 quarter (Queensland Health, 2021). Assuming non-resident workers represent one third of these outpatients, this would equate to 372 outpatient occasions of service. As one person may present more than once, this may equate to 10-15 percent of the non-residents based in Moranbah (2,510 people) requiring outpatient services in this period.

Using the same assumptions for the Dysart Hospital, in the December 2020 quarter there were 1,017 outpatient occasions of service, and if one third of these were non-resident workers this would represent 336 occasions of service, which may equate to up to 20 percent of non-resident workers based in Dysart in 2020.

Analysis undertaken by the two medical clinics in Moranbah in late 2011 as part of a submission to the House of Representatives Standing Committee on Regional Australia indicated that 23 percent of their June 2011 patients were non-residents, and that this proportion had remained stable over the preceding three years (Moranbah Medical, 2011). At that time, non-resident workers represented approximately 30 percent of Moranbah's population.

The submission also noted that non-resident patients can offer more challenges for medical staff due to emergency presentations, the lack of relationship between doctor and patient, a lack of medical history or other information in an emergency, and patients from outside Moranbah who are more likely to be dissatisfied with services due to a lack of understanding of how small rural health care systems work. Moranbah Hospital staff consulted as part of the SIA confirmed that these issues also affect their services.

Key considerations for health services relating to non-resident workers as advised by MHHS include:

- emergency requirements (e.g. in the case of workplace accidents);
- primary care provision and lack of continuing relationships between non-resident patients and doctors;
- potential for risky behaviours (e.g. driving and driving behaviour) from young non-resident workers; and
- communal living arrangements of non-resident populations providing ideal conditions to spread disease.

3.6.7 Police and emergency services

Table 3.28 shows the distribution of police and emergency services in local communities. The following sections describe the results of recent consultation with QPS, QAS and QFES. 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 Moranbah Magistrates Court House and a Queensland Government Agents Service servicing the LGA are located in Moranbah.

Table 3.28: Police, emergency service and justice services

Town	Police	Ambulance	Fire	Other	Justice
Dysart	Dysart Police Station (2 Officers)	QAS (5 Officers)	QFRS		
Moranbah	Moranbah Police Station (11 permanent general duties officers, two Road Policing officers and three Criminal Investigation Branch	QAS (24 Hr – 1 Officer in Charge, 5 Paramedics)	QFRS	SES Moranbah	Moranbah Court House
Middlemount	Middlemount Police Station (2 Officers)	QAS Station (1 officer)	QFRS		

Source: Consultation, 2021

Police

The Moranbah and Dysart police divisions are within the Mackay police district, which also includes:

- Clermont, Collinsville, Glenden and Middlemount within the Isaac LGA; and
- Bowen, Whitsunday, Mackay, Sarina and the coastal and hinterland communities to the north, south and west of Mackay.

Moranbah Police Station is open Monday-Friday 8.00 a.m. - 4.00 p.m. The station has one senior sergeant, one sergeant, five senior constables and four constables, with a current allocation of two 1st year constables and an administration officer. In total there are 11 permanent general duties officers,

with two Road Policing (Traffic) officers and three Criminal Investigation Branch (CIB) officers also based in Moranbah. Police staffing numbers saw a significant increase in 2010-2012 in response to the mining boom. Many of the officers have lived and worked in the community for several years, with the most recent vacancies about three years ago (and quickly filled.)

Dysart Police Station is open Monday - Thursday 8.00 a.m. - 4.00 p.m. and is staffed by one senior sergeant and one senior constable and an administration officer. Traffic and CIB officers from Moranbah service Dysart, and scene of crime services are accessed from Emerald by both towns. Police officers based in Moranbah and Dysart are available 24 hours/day.

Middlemount Police Station is open Monday - Friday 8.00 am- 12.00 pm, and 1.00-3.45 pm and has two officers.

Police also provide services such as licencing, driving tests, and community information and referral.

Local police advised that they are comfortable with their current staffing levels, notwithstanding that more staff would be welcome to enable more time for community policing and partnerships, and in Moranbah could potentially enable 24/7 operation of the station. Dysart police noted that capacity is sometimes stretched when offences come in waves, and by leave and fatigue management requirements. Moranbah police report that their station is of sufficient size and quality. The Dysart Police Station is a demountable building more than 40 years old, with limitations for service provision and the comfort of police and community members.

Ambulance

Moranbah Ambulance Station provides a base for five paramedics including an Officer-in-Charge (OIC), with a fleet of three well-equipped vehicles. Two of the paramedics are on rotation at any one time, working a 7 day on/7 day off roster. Local officers were unable to comment on the level of staffing relative to demand but noted that response times are being achieved and have not increased in the past few years.

Dysart currently has four regular paramedics including an Officer-in-Charge, with two well-equipped vehicles. Two of the paramedics are on rotation at any one time. There have been incidents recently when Moranbah Ambulance staff have been required to attend Dysart residents in the absence of Dysart ambulance officers from town.

Middlemount has two regular paramedics and achieves 24-hour coverage for its residents with the help of Dysart paramedics when necessary.

Both Dysart and Moranbah Ambulance Stations deliver dual paramedic responses and provide 24-hour coverage, seven days a week. Of note:

- Moranbah's QAS crew has increased by 40 percent since 1977, whilst the population has doubled in that time; and
- Moranbah's ambulance station is 45 years old, and Dysart's is 42 years old, however the OICs were comfortable that they provide an adequate level of support for QAS functions.

QAS's Strategic Operations Division advised in 2021 that 'current resourcing for Dysart and Moranbah Ambulance Stations based on demand data is appropriate' and that since 2017-2018, the service demand for both communities remained stable.

The percentages of callouts to non-residents were not known to local officers (as QAS reporting reflects the primary criteria that the patient is a Queensland resident) but the majority of calls for service are for local residents, with occasional calls to WAVs. Minor injuries at mine sites are managed by on-site paramedics, with patients who require treatment of injuries or sudden symptoms transported to local health services. Patients who require transport from mine sites to Mackay or other hospitals

are generally transferred to the QAS at the gate, and then transferred either to the local hospital or to Mackay.

Aerial transport to larger hospitals is required when patients' needs exceed the local hospitals' service levels. This is a frequent occurrence, described by the Moranbah DON as a constant resource requirement for local health and ambulance workers, and estimated by one Dysart stakeholder as occurring three or four times per week.

QAS officers advised that the most recent increase in demand for services relates to mental health, with callouts to assist people in crisis, and the need to transport people with mental health issues by road, requiring a collaborative service response between the QAS, QPS and hospital staff. IRC have advised that Council encountered significant difficulties during Cyclone Debbie as a result of the failure of a number of communication channels. The prohibitive cost of remediation works for existing hardware required to bring the emergency management networks to a reliable standard has led IRC to investigate the installation of a new 160 MHz VHF Digital Network, for which it is seeking partnership arrangements with major mining companies operating in the region.

Fire and rescue

The Moranbah Fire Station is managed by a Captain, supported by three lieutenants and 16 auxiliary fire fighters (generally, a total brigade of 20 personnel, but with occasional vacancies as noted below). All are volunteers, on call 24/hrs 7 week, with payment made for training and call outs. For major incidents such as multi-car or truck accidents, vehicles and crew also attend from the Mackay Command Centre.

Moranbah volunteers are drawn primarily from local residents but sometimes include workers from other regions who are staying locally (who may train and attend in both their home communities and Moranbah). Access to volunteer staff varies over time. Volunteer numbers were down in 2016 with approximately 10 active volunteers plus lieutenants and the Captain, but there was a resurgence in interest around 2019. Whilst interest was dampened during the COVID-19 restrictions, residents are actively seeking QFES positions in Moranbah, that are capped at 20 in total.

Moranbah Fire Station was built in 1972 and is reported as in adequate condition, with recent minor upgrades made, and with two well-equipped fire tenders (trucks). The Moranbah fire brigade feels well supported by the Mackay Country Command, with their requests for assistance considered, and a reasonable level of resources flowing to the local area. The majority of callouts in Moranbah (estimated at 95 percent) are for local residents, including fire-related and road accident responses. In the absence of QAS staff (i.e. if they are all out on jobs) QFES volunteers may also step in as first responders for emergencies e.g. providing CPR. Call outs to mine sites (who have their own fire-fighting crews) are rare, but QFES attends mine sites on request. QFES volunteers are actively involved in community events and community education.

Dysart's auxiliary fire station is entitled to a brigade of approximately 14 volunteers. The Captain's position was recently vacated, and community members identified other recent losses of volunteers from the brigade. Moranbah is currently backing up Dysart fire services due to a decreased capacity there, and the need for the Dysart QFES to also service the Middlemount area. A contact for the Dysart QFES was sought but not found.

Middlemount's auxiliary fire station has an entitlement of up to ten volunteers, and currently has six brigade members.

The Isaac SES operates across depots in Moranbah, Nebo, Clermont, Dysart, Middlemount, Glenden, St Lawrence, Carmila and Greenhill. SES volunteers support the Police, Fire and Ambulance services where needed and undertake tasks such as tarping roofs and cleaning up fallen trees, assisting with

searching for missing persons, and traffic control with accident rescue. SES also assists other community groups with their events where possible.

The IRC Local Disaster Management Group (LDMG) plans to reduce community impacts from disaster events such as cyclones, storm surges, floods, and bushfires. The LDMG is chaired by the Mayor and includes representation from the Council, SES, QAS, QPS, QFES and Queensland Health. In the event of a disaster, the LDMG activates the Local Disaster Coordination Centre (LDCC) to assist in operational activities, coordinate requests for assistance, and acquire and distribute resources and information. The LDCC is staffed by trained Council employees and agency liaison officers from member agencies (IRC, 2021).

Mine service provision and cooperation

Under the *Coal Mining Safety and Health Act 1999*, Queensland coal mines are required to undertake a site-specific risk assessment to determine the need for provision of paramedic services on site. If the risk assessment determines the need for paramedics, this becomes a legislative requirement under the Act. The availability of paramedics may also be a requirement under Enterprise Agreements, which are also site dependent.

Several coal mines in the Moranbah and Dysart areas have on-site paramedic staff who support personnel to manage minor health issues, and can transport workers to local health services when needed. Mine workers at some sites also have access to on-site nurses, on-call doctors and visiting physiotherapists. Patients who require ambulance transport are generally transported to the mine gate to meet a QAS vehicle and crew. Mine sites also have helipad sites to facilitate emergency transport to regional or Brisbane hospitals.

With the exception of emergencies (severe illness and injuries), on-site health services at mines are designed to prevent and treat work-related health issues and minor injuries. Workers are accountable for managing their own non-work-related issues and injuries through local and regional services, and for insuring they are fit for work.

Employee Assistance Programs (EAP) funded by employers are also generally available for mining personnel requiring counselling services or other mental health support, however EAPs are designed as short-term intervention and support services, with other requirements for mental health services accessed through services based in communities or through telehealth services. Anecdotally, workers have reported long waiting times for face-to-face counselling appointments through EAPs, in line with limited access to mental health professionals in these communities.

All mines have on-site resources including personnel and equipment to manage fires and emergencies, however QFES can and do access mine sites and WAVs where called or alerted to incidents. Mining companies cooperate with QFES services through the local Disaster Recovery Group, and there are established protocols and procedures to facilitate emergency services' access to sites and villages when required. Police services are rarely called to mine sites but are entitled to access sites when required. Workers staying in WAVs results in occasional requirements for police services for routine police matters such as welfare checks.

Several mining companies that operate locally are members of the Queensland Mines Rescue Service (QMRS) which provides expertise in assisting the mining industry to manage risk and ensure safety in underground and surface mining, including specialist training in emergency response (QMRS, 2021).

3.6.8 Community and civic services

Moranbah offers the widest range of community and civic services and community and family support services in the SIA study area, as summarised in Table 3.29.

The Moranbah and District Support Service (MDSS) runs a range of targeted programs including a rural family support program and a Neighbourhood Centre program. Moranbah Youth and Community Centre provides a base for MDSS and a range of community and government programs, and is an important meeting place, especially for young people. The centre was developed through a partnership between the IRC, BMA, local community groups and the Department of Communities, Housing and Digital Economy.

ELAM provides assistance for individuals or families in Moranbah and district who are homeless, or in crisis and at imminent risk of homelessness. Centacare also offers community services in Moranbah, employment support services are provided through Community Solutions, and financial counselling is available through the Financial Counselling Service and Salvation Army Moneycare Program.

DCSG provides resources and referrals that promote a supported, informed community, including facilitating access to services and programs, and supporting a large range of events and activities to enhance community cohesion.

HCC, based in Dysart, offers in-home care and community linking services for the frail, aged and people living with a disability and provides services in Dysart, Moranbah, Nebo, Middlemount and their surrounding districts.

Access to aged care is available in Clermont (100 km south of Moranbah), where there are two facilities, and in Mackay. There are no aged care residential services in the potentially affected communities.

Table 3.29: Community and Civic Services

Town	Community and Civic Facilities & Services	Community and Family Support
Dysart	Dysart Civic and Recreation Centre Dysart Community Centre Disability Services Local Area Coordinator Rural Support Worker (Dept. Communities)	Hinterland Community Care Inc (Aged and Disability Support Services) Dysart Community Support Group
Moranbah	Moranbah Community Centre Moranbah Youth and Community Centre	Moranbah and District Support Services Emergency and Long Term Accommodation in Moranbah Community Solutions Centrecare Salvation Army Moneycare Program Hinterland Community Care Inc. Selectability
Middlemount	Middlemount Community Hall	Capella Tieri Middlemount Community Support Network

Source: MyCommunity Directory, 2022

3.6.9 Recreation and cultural facilities

The potentially affected communities offer a wide range of sport and recreation and arts, culture and amenity facilities, with Moranbah having the highest level of provision, commensurate with its larger population.

Moranbah offers a wide range of sport and recreational facilities, and several local associations and hobby groups.

The Moranbah Miners' League Club provides a centre for the strong local focus on rugby league, whilst basketball, netball and other sports are played on the fields at the western end of town. The town pool was redeveloped as the Greg Cruickshank Aquatic Centre through a BMA and IRC partnership in 2012, and is a highly valued facility during the warmer months.

Dysart also benefits from the Dysart Indoor Multipurpose Sports and Recreation Centre, including a new Olympic size swimming pool and offers a range of weekly classes to cater to all ages. Social sports including volleyball, netball and basketball fixtures are also held at the centre.

Middlemount's town centre features the Middlemount Leisure Centre with a gymnasium, and the Middlemount Pool. Middlemount also features a number of modern public exercise equipment sites, sporting ovals and sportsgrounds.

Table 3.30 summarises the facilities available.

Table 3.30: Recreation and Cultural Facilities

Location	Sport and Recreation	Arts, Culture, Amenity
Dysart	Dysart Recreation Centre and Swimming Pool Dysart Golf Club Dysart Bowling Club Centenary Park, Lions Park and Fox Park Leichardt Oval and Recreation Park Lucy Daly (Soccer) Oval, Warren Oval. Hickey Oval Netball / Basketball Courts Tennis Courts	Dysart Library and Art Space Dysart Civic Centre
Moranbah	Greg Cruikshank Aquatic Centre Darryl Bourke Oval, Will Kiehle Oval, Ted Rolfe Oval and Eastern Sporting Field Moranbah Speedway and Association BMX Track and Club Moranbah Pony Club and Rodeo Grounds Moranbah Golf Club Moranbah Miners' League Club Moranbah Tennis Courts Moranbah Bowls Club Moranbah Rifle Range and Pistol Club Clubs and organisations including football, hockey, netball, basketball, volleyball, cricket, gymnastics, boxing club, karate, fishing, darts, motorcycle riders, race club	Moranbah Library Coalface Art Gallery Moranbah Arts Council Moranbah Civic Centre
Middlemount	Netball / Basketball Courts Walking Tracks Ovals (3) and sportsgrounds	Middlemount Leisure Centre Middlemount Library

Source: My Community Directory, 2022; DCSG 2011, ULDA 2011

Arts, culture, and amenity

The Dysart Civic Centre is recognised as one of three major venues in the Isaac region for holding performances and functions, in addition to Moranbah's Community Centre (with multiple rooms offering a collective theatre capacity of 900+ seats) and Middlemount's Community Hall (with a 700-seat theatre capacity).

Moranbah has a cultural and civic centre including the art gallery, library and civic centre, providing a home for a range of cultural programs and events. There is also a community radio station. Both the Moranbah Library and Gallery and the Dysart Library and Art Space are modern facilities that provide an exhibition space for local and regional art, craft and creative practitioners.

3.7 Employment and businesses

This section describes the labour force and key industries of employment for the Isaac LGA and the broader MIW and Central Queensland regions.

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

- increased apprenticeship opportunities and employment pathways of young people;
- improving the limited employment opportunities for people with disability;
- provision of permanent employment and long term contracts to encourage the stability of the workforce and the community;
- increasing and retaining skilled workers 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; and
- minimising draw of labour from local businesses to mining operations.

3.7.1 Isaac LGA labour force

QGSO estimates indicate that the Isaac LGA's labour force in the December quarter of 2022 was 15,026 people, including just 142 unemployed people, for an unemployment rate of 0.9 percent (QGSO, 2023). This was much lower than the Mackay - Isaac - Whitsunday SA4's unemployment rate of 2.2 percent and the Queensland rate of 3.9 percent for that quarter (*Ibid*.).

Data prepared for IRC (REMPLAN, 2023) indicate that in 2022, the Isaac LGA was home to 22,426 people, however the LGA supported 24,888 jobs indicating that the LGA is a net importer of labour. Of the 24,888 jobs in the Isaac LGA, an estimated 14,361 (57.7 percent) were in the mining industry. The construction industry represented another 1,907 jobs located in the LGA, or 7.7 percent of jobs (*Ibid*.).

The ABS Census identified 23,305 workers in the LGA based on place of work, of whom:

- males represented 71.2 percent of the workforce (16,352 workers) and women represented 28.7 percent (6,673 workers); and
- Aboriginal and/or Torres Strait Islander workers numbered 1,291 and represented 5.6 percent of the LGA's labour force (ABS 2021d).

Based on place of residence, there were 17,356 people in the Isaac LGA in 2021 who were 15 years or older, of whom a total of 10,884 people (62.7 percent) stated that they were in the labour force, and 2,318 (13.4 percent) stated they weren't in the labour force, however 4,148 people (24.0 percent) did not state their labour force status (ABS 2021b).

The number of workers living in the Isaac LGA decreased from 12,066 people in 2011 to 10,624 people in 2021, a decrease of almost 12.0 percent, which reflects the abundance of jobs available during the previous mining/construction boom, and potentially a change in the number of people who are working in the Isaac LGA but living in other regions.

The number of Isaac LGA residents employed in mining decreased from 4,764 people in 2011 to 3,759 people in 2016, and increased very slightly to 3,780 people in 2021. By percentage, mining employed 39.5 percent of residents in 2011, which decreased to 35.6 percent in 2021.

The construction labour force also experienced a contraction, from 761 people in 2011 (a peak year for mining construction) to 576 people in 2021. Other notable changes over the five year period included a reduction of 195 workers in the retail trade industry, and 148 workers in the accommodation and food services industry, whilst the only substantial increase in employment numbers was in administrative and support services, which increased by 183 workers.

Table 3.31: Industry of employment, 2011- 2021, Isaac LGA

Industry	2011		2016		2021		2011-2021 change
	No.	%	No.	%	No.	%	(no.)
Agriculture, Forestry and Fishing	1,026	8.5%	1,042	10.5%	1,066	10.0%	40
Mining	4,764	39.5%	3,759	37.7%	3,780	35.6%	-984
Manufacturing	341	2.8%	292	2.9%	259	2.4%	-82
Electricity, Gas, Water and Waste Services	103	0.9%	104	1.0%	108	1.0%	5
Construction	761	6.3%	347	3.5%	576	5.4%	-185
Wholesale Trade	221	1.8%	133	1.3%	120	1.1%	-101
Retail Trade	699	5.8%	515	5.2%	504	4.7%	-195
Accommodation and Food Services	769	6.4%	649	6.5%	621	5.8%	-148
Transport, Postal and Warehousing	440	3.6%	404	4.1%	409	3.8%	-31
Information Media and Telecommunications	39	0.3%	21	0.2%	21	0.2%	-18
Financial and Insurance Services	72	0.6%	24	0.2%	23	0.2%	-49
Rental, Hiring and Real Estate Services	171	1.4%	99	1.0%	200	1.9%	29
Professional, Scientific and Technical Services	195	1.6%	142	1.4%	167	1.6%	-28
Administrative and Support Services	362	3.0%	359	3.6%	545	5.1%	183
Public Administration and Safety	384	3.2%	407	4.1%	422	4.0%	38
Education and Training	634	5.3%	657	6.6%	668	6.3%	34
Health Care and Social Assistance	431	3.6%	386	3.9%	435	4.1%	4
Arts and Recreation Services	41	0.3%	55	0.6%	59	0.6%	18

Industry	2011		2016		2021		2011-2021 change
	No.	%	No.	%	No.	%	(no.)
Other Services	347	2.9%	309	3.1%	331	3.1%	-16
Inadequately described/Not stated	271	2.2%	263	2.6%	304	2.9%	33
Total	**12,066**		**9,971**		**10,624**		-1,442

Source: ABS 2021e Time Series Profiles - Count of persons aged 15 years and over (excludes overseas visitors), based on usual residents

Analysis of occupations as recorded by the ABS 2021 Census (refer to Table 3.32) indicates that Isaac LGA's strengths reflect mining industry employment and include:

- technicians and trades workers represent 18.7 percent of workers, compared with 13.7 percent for Queensland; and
- machinery operators and drivers represent 23.8 percent of workers compared with 6.8 percent for Queensland.

Isaac LGA's percentage of community and personal service workers (6.1 percent) was less than half that of Queensland (12,3 percent), while the percentage of workers recorded as professionals (10.4 percent) was also less than half the state average (21.4 percent).

Table 3.32: Occupation of employment, 2021, Isaac LGA

Occupation	Isaac LGA		Queensland
	number	%	%
Managers	1,346	12.7	12.5
Professionals	1,109	10.4	21.4
Technicians and trades workers	1,982	18.7	13.7
Community and personal service workers	646	6.1	12.3
Clerical and administrative workers	972	9.1	12.7
Sales workers	506	4.8	8.7
Machinery operators and drivers	2,530	23.8	6.8
Labourers	1,278	12.0	10.1
Total	10,624	100.0	100.0

Source: QGSO, 2022a based on ABS Census of Population and Housing, 2021, General Community Profile

3.7.2 Regional labour force

This section considers key characteristics that indicate the capacity of the labour force in the Mackay SA4 and Central Queensland SA4, which represent a significant labour pool for mining projects in the Bowen Basin, based on ABS data as analysed by QGSO, as presented in Table 3.33, and considering people 15 years and over.

In 2021, the Mackay SA4 (MIW Region) had a total labour force of approximately 91,063 people, which was an increase of 3,030 or 3.4 percent since 2011. This equated to a labour force participation rate of 62.7 percent and was higher than the participation rate in Central Queensland SA4 (61.2 percent).

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 percent) since 2011, exceeding the increase in the labour force, and likely reflecting population ageing. The number of unemployed people was 3,523 people, or 2.4 percent of workers.

The Central Queensland SA4 had a slightly larger labour force at 110,652 people in 2021, which was an increase of 4,852 workers or 4.6 percent since 2011. The number of people who were not in the labour force increased by 8,030 people during 2011-2021. There were 6,055 unemployed workers in the Central Queensland SA4, for an unemployment rate of 3.3 percent (as determined by Census data, noting that the National Skills Commission uses a different methodology to provide more regular updates on unemployment, as shown in Section 3.7.4 below).

In 2021, the Mackay SA4 workforce included 12,242 people employed in the mining industry, which was just 4 people less than in 2011 (QGSO, 2022a). In the Central Queensland SA4, the workforce included 8,812 people employed in the mining industry, which was just 33 less than in 2011 (*ibid*.) The combined mining industry workforce between the two SA4s in 2021 was approximately 21,054 people.

Table 3.33 : Labour force characteristics Mackay and Central Queensland SA4s 2011-2021

Labour force status	Census year						Total change	
	2011		2016		2021		2011–2021	
	number	%	number	%	number	%	number	%
Mackay - Isaac - Whitsunday SA4								
Total employed	84,879	64.7	78,387	58.3	87,547	60.2	2,668	3.1
Total unemployed	3,159	2.4	6,598	4.9	3,523	2.4	364	11.5
Labour force	88,033	67.1	84,984	63.2	91,063	62.7	3,030	3.4
Not in labour force	32,182	24.5	35,627	26.5	36,735	25.3	4,553	14.1
Total[(a)]	*131,255*	*100.0*	*134,499*	*100.0*	*145,327*	*100.0*	*14,072*	*10.7*
Unemployment rate (%)	3.6	. .	7.8	. .	3.9	. .	0.3	. .
Central Queensland SA4								
Total employed	101,128	61.5	97,657	56.4	104,599	57.8	3,471	3.4
Total unemployed	4,669	2.8	9,282	5.4	6,055	3.3	1,386	29.7
Labour force	105,800	64.3	106,942	61.8	110,652	61.2	4,852	4.6
Not in labour force	46,121	28.0	51,077	29.5	54,151	29.9	8,030	17.4
Total[(a)]	*164,465*	*100.0*	*173,127*	*100.0*	*180,921*	*100.0*	*16,456*	*10.0*
Unemployment rate (%)	4.4	. .	8.7	. .	5.5	. .	1.1 ppt	

Source: QGSO, 2022a – Regional Profiles for MIW SA4 and CQ SA4 – Time series (a) Includes labour force status not stated. Please note that there are small random adjustments made to all cell values to protect the confidentiality of data. These adjustments may cause the sum of rows or columns to differ by small amounts from table totals

As shown in Table 3.34, the MIW SA4 and Central Queensland SA4 had a combined construction workforce of 14,983 people, and a combined mining workforce of 26,505 people. Mining was the predominant industry, followed by health care and social assistance with a combined total of 22,631 workers and retail trade with a combined total of 16,774 workers.

Table 3.34 : Industry of employment, MIW SA4 and Central Queensland SA4 2021

Industry	Mackay - Isaac - Whitsunday SA4		Central Queensland SA4		Total MIW and CQ SA4s
	Number	%	Number	%	Number
Agriculture, forestry and fishing	4,126	4.5	4,700	4.6	8,826
Mining	17,240	18.7	9,265	9	26,505
Manufacturing	4,523	4.9	7,503	7.3	12,026
Electricity, gas, water and waste services	850	0.9	2,708	2.6	3,558
Construction	6,880	7.5	8,103	7.9	14,983
Wholesale trade	2,721	2.9	2,293	2.2	5,014
Retail trade	7,336	7.9	9,438	9.2	16,774
Accommodation and food services	7,457	8.1	7,306	7.1	14,763
Transport, postal and warehousing	5,064	5.5	5,453	5.3	10,517
Information media and telecommunications	271	0.3	340	0.3	611
Financial and insurance services	764	0.8	953	0.9	1,717
Rental, hiring and real estate services	1,440	1.6	1,251	1.2	2,691
Professional, scientific and technical services	3,064	3.3	3,139	3.1	6,203
Administrative and support services	3,332	3.6	2,782	2.7	6,114
Public administration and safety	3,406	3.7	5,815	5.7	9,221
Education and training	5,921	6.4	9,536	9.3	15,457
Health care and social assistance	9,623	10.4	13,008	12.7	22,631
Arts and recreation services	639	0.7	752	0.7	1,391
Other services	3,934	4.3	4,160	4.1	8,094
Total(a)	92,309	100	102,519	100	194,828

Source: QGSO, 2023, based on ABS, *Census of Population and Housing, 2021, Working Population Profile*. (a) Includes inadequately described and not stated responses

3.7.3 Indigenous labour force

In 2021, there were 4,400 Indigenous people in the MIW SA4 and 6,466 Indigenous people in the Central Queensland SA4 who were aged between 25 to 64 years, a total of 10,866 people. Of these, 7,581 people (3,358 people in the MIW SA4 and 4,223 people in the Central Queensland SA4) were in the labour force.

Unemployment rates were higher for Indigenous people than for non-Indigenous people. As shown in Table 3.35, the unemployment rate for people aged 25-64 years in the MIW SA4 was 6.8 percent for Indigenous people compared with 3.0 percent for non-Indigenous people. In the Central Queensland SA4, the unemployment rate for Indigenous people aged 25 to 64 years was more than three times the rate for non-Indigenous people (13.1 percent, compared with 4.1 percent).

Table 3.35 Indigenous labour force 25 to 64 years, MIW SA4 and Central Queensland SA4, 2021

Labour force status	Mackay - Isaac - Whitsunday SA4				Central Queensland SA4			
	Indigenous		Non-Indigenous		Indigenous		Non-Indigenous	
	number	%	number	%	number	%	number	%
Employed	3,128	71.1	66,443	82.3	3,671	56.8	78,995	78.5
Unemployed	230	5.2	2,056	2.5	552	8.5	3,372	3.3
Total labour force	3,358	76.3	68,499	84.9	4,223	65.3	82,367	81.8
Not in labour force	1,041	23.7	12,226	15.1	2,244	34.7	18,301	18.2
Total[(b)]	4,400	100	80,719	100	6,466	100	100,670	100
Unemployment rate	n.a.	6.8	n.a.	3	n.a.	13.1	n.a.	4.1
Participation rate	n.a.	76.3	n.a.	84.9	n.a.	65.3	n.a.	81.8

Source: QGSO, 2022e. Excludes labour force status not stated. N.a = not available

There were also 1,852 Indigenous people in the MIW SA4 and 2,948 people aged 15-24 years. Of these, a total of 2,935 (1,229 in the Mackay SA4 and 1,706 in the Central Queensland SA4) were in the labour force.

The unemployment rate amongst Indigenous young people in the MIW SA4 was 15.3 percent at the 2021 Census, compared with 6.7 percent for non-Indigenous young people. In the Central Queensland, SA4, the disparity was similar at 20.5 percent unemployment for Indigenous young people and 9.6 percent for non-Indigenous young people (QGSO, 2022f).

Indigenous people across the two regions represent a strong potential labour pool for both construction and operation of the Project.

QRC's Indigenous Participation Survey with member companies indicates that Indigenous employment opportunities in mining remained strong between 2017 and 2020, increasing from 1,007 in 2017 to 1,447 people in 2020 (QRC, 2021). The percentage of personnel who are Indigenous that were employed by survey respondents increased from 3.6 percent in 2017 to 4.8 percent in 2020. Women represented 30 percent of Indigenous personnel in 2020, up from 23 percent in 2017.

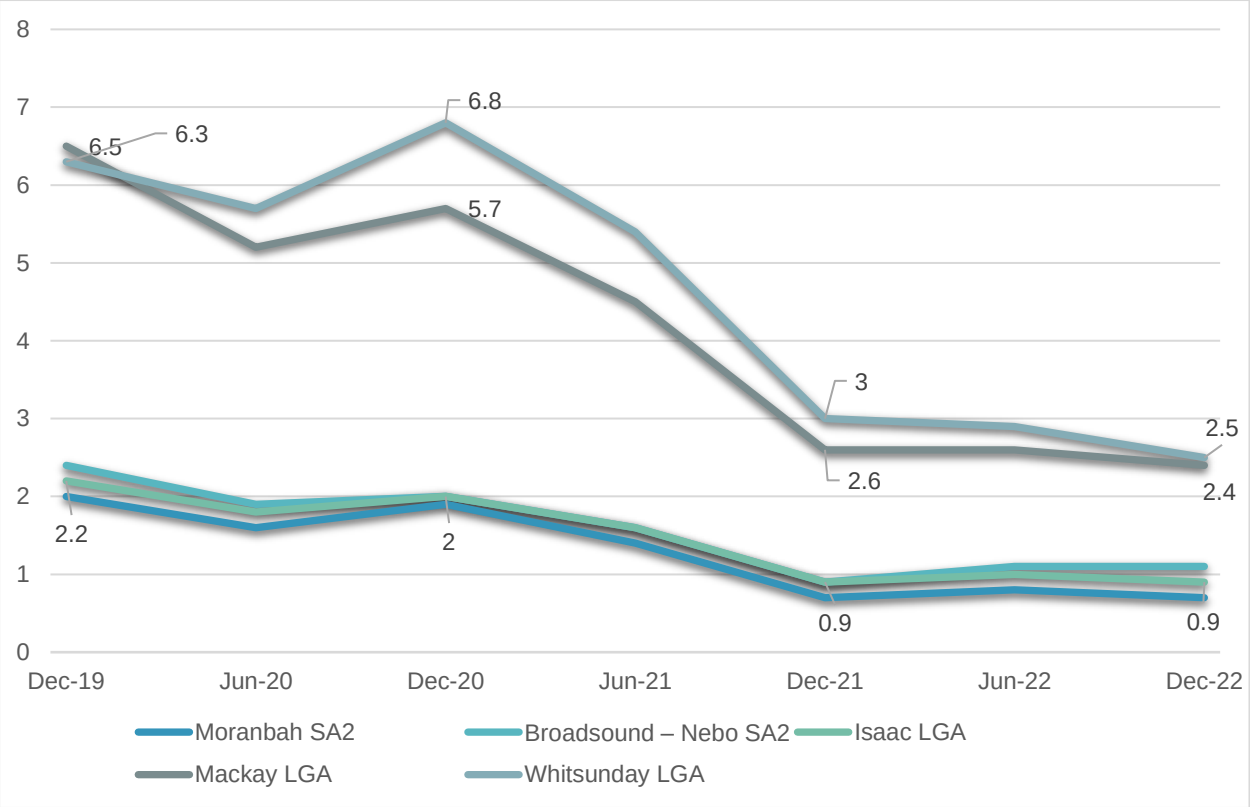
3.7.4 Unemployment trends

Figure 3.10 presents the three-year unemployment trends for the Moranbah and Broadsound-Nebo SA2s and the LGAs in the MIW region, from December 2019 to December 2022. Isaac LGA has a traditionally low unemployment rate. In December 2019, the rate of unemployment was 2.2 percent, and this has declined fairly steadily to reach the extremely low rate of 0.9 percent in December 2022. Moranbah SA2 and the Broadsound-Nebo SA2 track very closely with the Isaac LGA rate (as they include the majority of the Isaac LGA's population). In December 2022, the Moranbah SA2 had an unemployment rate of 0.7 percent and the Broadsound-Nebo SA2 had a rate of 1.1 percent.

Whilst the trend remained similar in each LGA, unemployment started at a higher 6.5 percent in the Mackay LGA and 6.3 percent in the Whitsunday LGA in December 2019. Unemployment rates fluctuated during 2020, but reached a high in the Whitsunday LGA in December 2020, due to pandemic-related restrictions on tourism and travel affecting the tourism industry. Unemployment rates dropped sharply during 2021 and 2022, in line with national trends, to reach 2.4 percent in the Mackay

LGA and 2.5 percent in the Whitsunday LGA, indicating economic resilience to the pandemic's challenges in both regions.

Figure 3.10: Unemployment – Isaac, Mackay and Whitsunday LGAs, Moranbah and Broadsound-Nebo SA2s



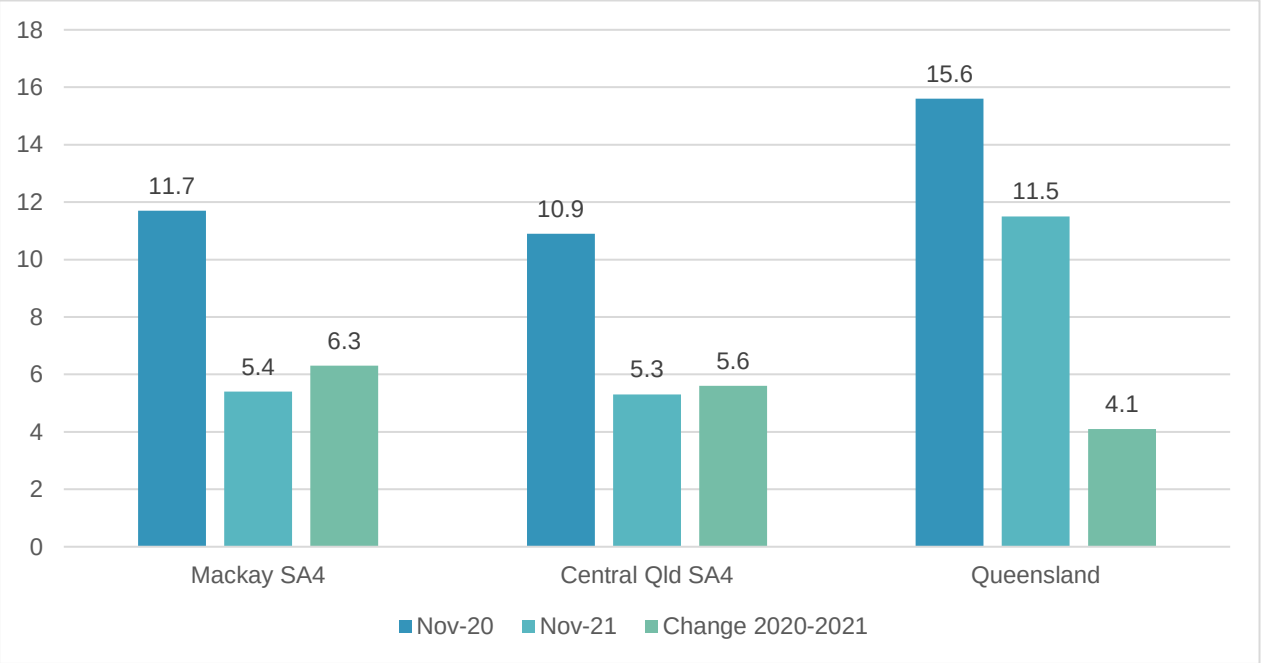
Source: National Skills Commission. 2023 - Small Area Labour Market data for SA2s and LGAs, December 2019 – Dec 2022

The very low rates of unemployment also indicate a current lack of capacity within the local and regional labour market to provide staff for new positions within the region. This may improve as the level of overseas migration increases during the post-COVID-19 pandemic recovery period.

Data on youth unemployment are available at S A4 level (Queensland Government Statisticians Office 2022) and indicate that the youth employment rate for the Mackay SA4 had decreased from 12.0 percent in February 2021 to 3.8 percent in February 2022 and was significantly lower than the Queensland average of 10.4 percent (see Figure 3.11).

The Central Queensland SA4's youth unemployment rate had improved from 10.2 percent to 7.6 percent over the twelve months to February 2022, and was also lower than the Queensland average rate. These improvements reflect economic resilience and retention of young people in the regions during the COVID-19 pandemic, and the steady availability of employment in the coal industry.

Figure 3.11: Youth unemployment, Mackay and Central Qld SA4s, 2020-2021



Source: QGSO, 2022f

3.7.5 Skills shortages

Construction

At the State level, recent employment data for the construction industry in Queensland show that:

- total construction industry employment to August 2021 (239,900 workers) had increased by 6.9 percent over the year, and by 6.9 percent over the five-year period, based mainly on increases in residential building construction (National Skills Commission, 2021a);
- of these, 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*.); and
- 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 percent over the previous five years (.idCommunity, 2021).

This suggests some latent availability of heavy and civil engineering construction skills in Queensland, but the regional distribution is unknown. The twelve-month figures are influenced by COVID-19 restrictions that saw lower employment across multiple sectors during 2020-21, but indicate that the availability of labourers in Queensland had increased over the twelve months.

However, the Australian Industry Group (AIGroup) national Skill Needs Survey (October 2020) indicated that businesses were having difficulty finding skilled workers and particularly trades such as electricians, fitters and turners, boilermakers, fabricators, welders, machinists, sheet metal workers, toolmakers and diesel mechanics (AIGroup, 2021).

The National Skills Commission's National Skills Needs List of occupations that were experiencing shortages as well as strong or moderate future demand in Queensland in 2022 includes engineers, with sheet metal trades workers, metal fabricators, engineering technicians, construction project

managers, fitters and welders, earthworks machine operators and landscapers (National Skills Commission, 2021b).

Nationally, there are widespread reports of current shortages in a range of trades affecting construction in the mining, industrial, commercial and residential construction sectors.

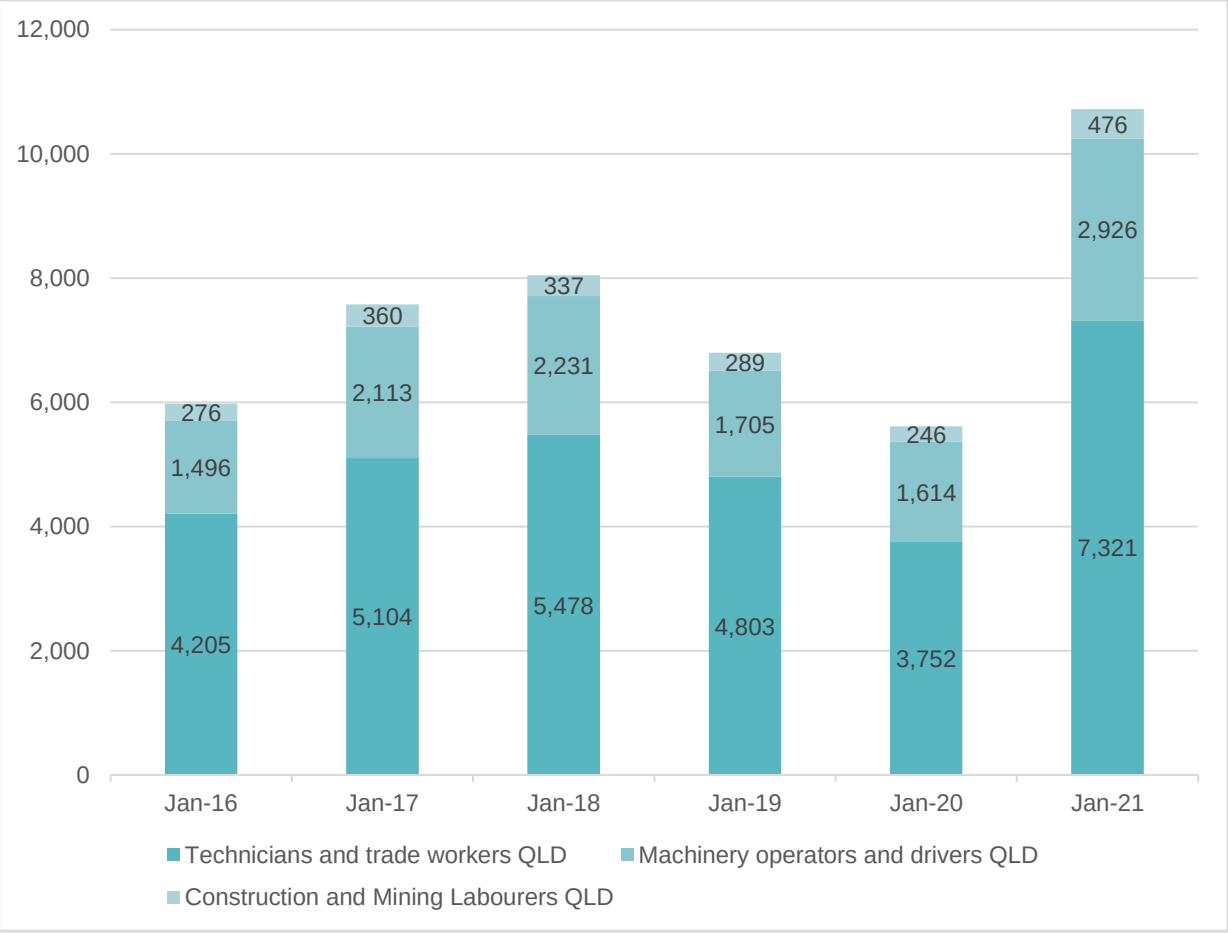
Operations

QRC research involving mining company CEOs in identifying key challenges found that 'retaining enough skilled employees to support industry growth' had become the most common issue of concern during 2021, jumping to number one on the list (Queensland Resources Council, 2021). This was in the context of mining industry growth over the past twelve months as well as predicted industry growth to 2030.

Trends in job vacancies provide a proxy measure of skill shortages by providing an indication of the number of jobs on offer and the level of competition for mining-specific skills and labour.

Figure 3.12 shows the five-year trend in job vacancies in Queensland to January 2021 for key occupational groups required by the mining industry (NSC, 2022c). 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 technical and trades roles with more than 7,300 vacancies in January 2021, followed by machinery operators and drivers at almost 3,000 vacancies.

Figure 3.12: Qld job vacancies, key occupational groups January 2016-January 2021



Source: National Skills Commission, 2021c

Inputs from a range of stakeholders indicate that the construction, mining and mining service industries are experiencing skills and labor 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.

3.7.6 Business and supply chain

The Isaac LGA's economic strengths include (REMPLAN, 2021):

- 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; and
- areas of significance to the tourism industry.

IRC's economic profile acknowledges that the region's production of high-grade metallurgical coal provides a greater certainty in its future industry and economic base, but notes that regional leaders continue to explore ways to strengthen and diversify its economy to offer socio-economic sustainability for generations to come. The profile notes Isaac is strategically placed to capitalise on the economic opportunities associated with the rise of Asia and northern Australia Development initiatives, with consistently high solar radiation and proximity to existing transmission infrastructure and markets, and opportunities for biofuel production (REMPLAN, 2018). The Isaac coast is also identified as an emerging tourism precinct for development in the Mackay Destination Tourism Plan 2014 (Tourism and Events Queensland, 2014).

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 had been growth in the number of unregistered businesses that operate through the internet, affecting the number of registered businesses; and
- 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 (see Table 3.36). 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 percent 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; and
- the number of mining businesses increased from 23 to 27, or 17.4 percent 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.

The increase in business numbers (during a global pandemic) appears to indicate resilience to the social and economic conditions experienced.

QGSO data also indicate that of the 1,861 registered businesses operating in the Isaac LGA, 1,150 (61.7 percent were non-employing businesses (e.g. sole traders, owner operators and small family farms). A further 493 businesses (26.5 percent) were small businesses with 1-4 employees and 173 businesses (9.3 percent employed 5-19 people. Just 42 businesses (2.3 percent) in the Isaac LGA employed 20-199 people and there was no business with more than 200 employees. In all, small businesses employing less than five people represented more than 88.3 percent of Isaac's businesses.

Findings of research conducted for the for the MIW Mining Equipment, Technology and Services (METS) Export Hub included (Lytton Advisory, 2020):

- the MIW METS sector is very well positioned to respond to the current and emerging requirements of the Queensland and international resources sector, with a highly skilled and productive workforce and world-class education and training facilities, including the new 'Resources Centre of Excellence' in Mackay;
- the region's METS sector is comprised of highly specialised businesses that cover the full range of services needed by the mining sector; and
- almost half (47 percent) of the businesses who participated in the research project's consultation view skills training as the most significant issue facing METS SMEs in the region, driven by a lack of skilled workers that want to move into regional centres and the inconsistent nature of mining work.

Table 3.36: Isaac LGA businesses counts June 2019 – June 2021

Industry	Businesses				Total change	
	30 June 2019		30 June 2021		30 June 2019 to 30 June 2021	
	number	%	number	%	number	%
Agriculture, forestry and fishing	759	43.5	779	41.9	20	2.6
Mining	23	1.3	27	1.5	4	17.4
Manufacturing	31	1.8	41	2.2	10	32.3
Electricity, gas, water and waste services	3	0.2	0	0	-3	-100
Construction	187	10.7	195	10.5	8	4.3
Wholesale trade	28	1.6	24	1.3	-4	-14.3
Retail trade	81	4.6	85	4.6	4	4.9
Accommodation and food services	54	3.1	47	2.5	-7	-13
Transport, postal and warehousing	78	4.5	77	4.1	-1	-1.3
Information media and telecommunications	0	0	0	0	0	. .
Financial and insurance services	24	1.4	35	1.9	11	45.8
Rental, hiring and real estate services	153	8.8	154	8.3	1	0.7

Industry	Businesses				Total change	
	30 June 2019		30 June 2021		30 June 2019 to 30 June 2021	
	number	%	number	%	number	%
Professional, scientific and technical services	53	3	68	3.7	15	28.3
Administrative and support services	54	3.1	56	3	2	3.7
Public administration and safety	0	0	0	0	0	. .
Education and training	28	1.6	29	1.6	1	3.6
Health care and social assistance	47	2.7	55	3	8	17
Arts and recreation services	9	0.5	15	0.8	6	66.7
Other services	127	7.3	156	8.4	29	22.8
Not classified	3	0.2	3	0.2	0	0
Total(a)	1,743	100	1,861	100	118	6.8

Source: QGSO, 2022a

Indigenous businesses

Supply Nation identifies two Indigenous businesses (one in Moranbah and one in Clermont) who are dedicated to Indigenous training and development, with one also offering labour hire and recruitment (Supply Nation, 2022). Supply Nation identifies a further 25 Indigenous businesses in Mackay, ranging from engineering consulting services to safety management, land care, mining services, recruitment and business solutions. Another 37 businesses were listed in the Rockhampton LGA including employment and training services, contract and workforce services, environmental management, construction, mining services, security and cultural services.

CSRM's 'Benchmarking Leading Practice in Aboriginal Business Procurement in the Extractive Resource Sector' Report focuses on Aboriginal business engagement in the mining and gas industries, based on the experience of Aboriginal business and skilled industry practitioners. The report recommends that four components are addressed to achieve Aboriginal business participation:

- promoting and enabling a positive internal environment;
- innovative and targeted sourcing strategies;
- ·management system for Aboriginal procurement; and
- competent external engagement.

It includes practical guidance on addressing the four components, which has been considered in the Project's Local Content Strategy. BMA's strategy for engagement with Indigenous businesses is described in Section 6.6.4.

4. Impact assessment

This section describes the Project's potential social impacts and benefits, and outlines mitigation measures to address each significant impact.

Where relevant, e.g. for employment, housing and social infrastructure impacts, the assessment considers impacts in the context of industry production. This includes differentiation in impacts according to whether the Project would support maintaining existing coal production and employment levels, or increase production and employment levels.

4.1 Community values, land use and settlement

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

4.1.1 Stakeholder views on the Project's impacts and mitigation measures

A profile of key stakeholders and issues of relevance to the SIA is presented in Section 2.6.

As described in Section 2.4, potentially affected communities include Dysart, Moranbah and Middlemount. The SIA determined that any social impacts that occurred in Middlemount would be negligible, due to its distance to the Project and the fact that Middlemount is not proposed as a base for Project personnel. As such, Moranbah and Dysart, and the Isaac LGA as a whole, have been identified as potentially impacted communities.

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.

Consultation undertaken by the University of Western Australian for BHP in 2016 indicates that stakeholders identified the top five impact areas of BHP operations in Queensland, in order, as:

- security of employment in the community;
- population instability with any rapid shift from influx to deflux;
- mental health;
- the viability of local businesses; and
- school viability and quality.

This is generally consistent with the key issues identified in Project consultation as shown in Table 4.1. Potential social impacts and benefits are discussed in following sections.

Consultation that informed the SIA update included an engagement process with IRC (described in Section 2.5.2) and consultation undertaken as part of housing, government services and childcare studies which were led by the STACs and supported by BMA (see Section 2.3.3). The outcomes of SIA engagement in relation to social impact mitigation measures are further detailed in Section 6.1.2.

Table 4.1: Stakeholder inputs on impacts, benefits and mitigation measures identified by stakeholders

Impact area	Impacts and benefits	Section	Mitigation	Section
Communities and stakeholders	• Potential for noise exceedances to affect amenity at homesteads in the Project vicinity	4.1.5	• Continue regular engagement to a schedule agreed with individual landholders • Respond to complaints quickly and effectively	6.2.7
	• Potential to strengthen population growth and increase community resources that support wellbeing	4.3.3	• Encourage local employment over DIDO/FIFO employment • Continue to invest in projects and partnerships that strengthen amenity and improve quality of life	6.3.2 6.5.3
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 WAVs	4.3	• No additional workforce accommodation facilities for operational workforce • Facilitate provision of accommodation and housing for employees who would move to local communities, such that impacts on rental housing stocks are minimised	4.3.5
Health and wellbeing	• Potential to strain Council waste management facilities' capacity • Residential and non-residential workforces' demand on water supply and roads • Increasing demands on hospital, GP and mental health services, as a result of both population increases and FIFO workers' demand • Exacerbation of current demands on Council and health services from NRW • 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	4.4.2, 4.4.3	• Manage waste in accordance with agreements with IRC. Waste to be transported outside the LGA if capacity is unavailable. • Maintain BMA contributions to IRC for road and water use • Continue to invest in projects and partnerships that strengthen service capacity and enhance facilities	4.4.2 6.5.9 6.5.3, 6.5.4

Impact area	Impacts and benefits	Section	Mitigation	Section
	they are required at mine sites.			
Local business	• Potential to stimulate business activity in Dysart, Moranbah and /or Middlemount through increased population • Potential for personnel's partners to contribute to the pool of skilled workers for local services and businesses • 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	4.5	• Encourage relocation of workers and their partners and families to Dysart, Moranbah and Middlemount • Continue BMA's Local Buying program	4.2.3, 4.3.5 4.5.1, 4.5.5
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	4.6	• Continue to invest in projects and partnerships that strengthen service capacity and enhance facilities • Facilitate provision of accommodation and housing for employees who would move to local communities	6.5.3, 6.5.4 6.4.3
Workforce and employment	• Local apprenticeship and training opportunities • Employment opportunities that would retain young people in local communities • Availability of employment and training pathways for Indigenous people	4.2.8	• Provision of apprenticeship and training opportunities for local people and Indigenous people	6.3.3

4.1.2 Indigenous community values

The Project Site falls within native title determination area of the Barada Barna people. Barada Barna People identify key values as recognition of their native title, protection and management of cultural heritage values, sustaining cultural connections between People and Country, economic security, business development, and employment and training pathways for Indigenous people.

Impacts on native title and cultural heritage

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.

BMA has commenced negotiations with the Barada Barna people for a portfolio-wide comprehensive Indigenous Land Use Agreement (ILUA). The Project Site falls within the proposed agreement area. 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.

Employment and business

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, and have also expressed interested in the opportunity to work on Country in in land management and rehabilitation work.

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, as further discussed in Section 4.2.4

Reconciliation

BHP's Reconciliation Action Plan 2017-2021 (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. BHP's next RAP is in development and is due to be launched in 2023. The new RAP will focus on enabling BHP to enhance relationships and support the company's aspiration to be a partner of choice to Indigenous peoples. The commitments and targets contained within the new RAP will apply to the Project.

Prior to commencement of construction, BMA will consult with the BBAC and local Indigenous community organisations to, if necessary, amend baseline data of specific relevance to Indigenous people, and ensure that these strategies for Indigenous engagement are still appropriate.

4.1.3 Land ownership

As noted in Section 3.1.2, the land on which the Project is proposed to be developed is owned by the CQCA Joint Venture parties, including the Meadowbrook and Lake Vermont properties, on which homesteads are located within the Project site. One of the two homesteads is currently vacant and is

proposed to remain vacant. The second homestead will be vacated when required for mining or subject to mining impacts. BMA offers licenses for use of the land it owns to local landholders for grazing purposes, as appropriate. There would be no additional impacts on land ownership.

Saraji Station, a grazing property, is located to the west of Saraji Mine and the Project site. To the south of the Project Site are two large grazing properties, Tay-Glen and Kyewong. BMA has coexistence arrangements in place, and under ongoing discussion, with the owners of these properties.

Relocation of the existing Lake Vermont water pipeline and powerline into a new infrastructure and transport corridor is required as part of the Project, but would not affect any private properties.

4.1.4 Changes to land use or settlement pattern

The Project, located some 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.

BMA acquired Lake Vermont (a grazing property) and Meadowbrook (a cattle breeding property) to facilitate the Project's construction and operation. Commercial arrangements with the properties' owners will enable them to continue their cattle breeding operations in the region, which include additional properties in the Isaac LGA.

BMA also has an existing agreement with the property owners for use of land within Tay Glen, including a partnership agreement involving a land swap enabling the owners to use other land owned by BMA for their grazing operations.

The Project would result in an incremental increase in the area of land within the Isaac LGA that is used for mining purposes, however stakeholders did not express any concern about this increase, which is in keeping with the continuation of coal mining as one of the region's most important industries.

As an underground mine, the Project has a smaller surface footprint than an open-cut mine, and the potential for land disturbance is reduced. An area of approximately 33.5 ha will be disturbed for surface infrastructure and approximately 119.7 ha will be disturbed for power and transport corridors.

As noted in the Project's Project Subsidence Management Plan (SMP), 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.

The SMP summarises subsidence impact modelling that identified potential impacts as maximum predicted subsidence of 3.2 m above the northern panels and 3.5 m over the southern panels. The proposed approach to managing subsidence is to use proactive measures to predict and potentially improve the overall condition of the potentially affected area.

Due to the gradual nature of the subsidence, it is expected that grazing activities will continue during mining operations but outside of direct operational areas while any related subsidence occurs. The existing and proposed topography as represented in the Rehabilitation Management Plan (RMP) indicates that the post mining proposed topography will be suitable for the post-mining land use of grazing.

Following the mine's closure, which would commence approximately 20 years after operations commence, land that was disturbed by mining infrastructure or subsidence will be progressively rehabilitated in line with BMA's completion criteria, the Mined Land Rehabilitation Policy considerations (DES, 2018) and requirements under the MERPF Act and EP Act for progressive rehabilitation and closure.

4.1.5 Amenity

Dust, noise, traffic or changes to scenic views have potential to impact on the amenity of nearby homesteads.

The Project's Noise and Vibration Assessment identified the nearest sensitive receptors to the Project Site as summarised in Table 4.2. Meadowbrook and Lake Vermont Homesteads are located within MLA 70383 and are owned by BMA. All other sensitive locations are outside current ML or MLA areas.

Table 4.2: Identified sensitive receptors nearest to the Project

Receptor	Potential noise exceedance	Ownership
Kyewong Homestead	No	Private landholder
Saraji Homestead 1, Homestead 2 and Homestead 3	Yes	Private landholder
Tay Glen Homestead	No	Private landholder
Lake Vermont Homestead	Yes	BMA
Meadowbrook Homestead	Yes	BMA

Prior to consideration of noise mitigation measures being applied, noise emissions from the Project during construction and operation phases are modelled to sometimes exceed the nominated Acoustic Quality Objectives at the three homesteads on Saraji Homestead 1, Saraji Homestead 2, Saraji Homestead 3, the Meadowbrook homestead and the Lake Vermont Homestead.

The Project is not expected to result in exceedances of air quality criteria. There is potential for dust and other windblown particulate contaminants to impact on the amenity of the three privately owned homesteads on Saraji Station (refer to EIS Chapter 11 Air Quality and Greenhouse Gas).

The potential for impacts on the amenity of Saraji Station homesteads has been addressed through coexistence agreements between BMA and the property owners. Any changes to amenity are expected be minimal and well tolerated by these stakeholders.

Interviews were held in June 2018 with the owners of Kyewong and Tay-Glen to seek their views on potential impacts on their properties or the broader community, and any mitigation strategies required. The landholders did not identify any negative impacts as a result of to the Project proceeding, with the exception that one noted 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. As an underground mine, the potential for dust impacts is reduced compared to the potential for dust from open-cut operations.

Both of the above-mentioned landholders indicated they were comfortable with the terms of their agreements with BMA.

The findings of the groundwater assessment indicate that there would be no groundwater drawdowns that would affect the use of bore water by local property owners.

Strategies to minimise the potential for noise exceedances to affect quality of life or amenity include:

- noise control measures to be implemented for the Project;
- regular consultation with the landholders, to a schedule agreed with them (e.g. six-monthly) to ensure they are comfortable with any noise or other impacts experienced,
- provide notice of any activities that would be particularly noisy; and
- BMA's complaints management procedure.

4.1.6 Visual amenity impacts

The regional and local landscape surrounding the Project Site is considered to be generally representative of the Bowen Basin region. Mining is the predominant activity within the region and as such, facilities and activities associated with this use are visible. The eastern part of the Project (within MLA 70383) comprises flat grazing lands associated with the Isaac River and its tributaries, the central part of the Project Site is considerably fragmented by open cut mining activities and to the west, the landscape is influenced by the presence of the Norwich Park Rail Line and the adjoining Dysart-Moranbah Road. 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 (Bundoora 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; and
- 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.

The assessment notes that much of the Project is underground, but associated above-ground mine infrastructure will result in localised changes to views during both operation and construction, primarily experienced by travelers on the Dysart-Moranbah Road and by two private homesteads on Saraji Station. 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.

4.1.7 Community identity and functions

Barada Barna People have a unique understanding of the local area that is strongly connected to their community and cultural identity.

Following pastoral development (primarily cattle grazing) from the late 1880s, commercial scale mining commenced near the future locations of Moranbah and Dysart in the 1960's.

Dysart, Moranbah and Middlemount were founded as communities for personnel and families associated with the mining industry, including business and services employees, and this remains their key function today. The three towns proudly identify as mining communities, but also strongly value their rural way of life, with a culture of active community participation, willingness to help other community members, and self-reliance. There is also recognition of longstanding agricultural uses that continue today near the Project area, and would likely resume after rehabilitation of land used by the Project.

The development of the Project would 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 alongside 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.

IRC's Community Strategic Plan, Isaac 2035 aims to strengthen the region across four key areas: improving essential infrastructure; diversifying the economy; supporting communities; and protecting the natural environment (Isaac Regional Council, 2015). 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 to supporting communities by increasing the long-term availability of mining employment in the Isaac LGA and the MIW more generally.

IRC and the Moranbah and Dysart Smart Transformation Advisory Councils (STACs) are actively considering the impacts and opportunities of the 4th Industrial Revolution (4IR). There is also active local consideration of post-mining futures, including an emerging understanding of post-mining land uses and economic diversification opportunities. Over time, other key drivers (such as renewable energy) may contribute to changes in community identity, with mining a smaller part of the economy. BMA will remain an active participant in these considerations through its engagement with IRC and support for the Smart Transformation project.

4.1.8 Community cohesion

The potentially impacted communities' longevity (with Moranbah and Dysart spanning some 50 years of mining community settlement) and the relative constancy of mining employment over decades have supported strong social capital and a sense of permanency in the towns. Close bonds engendered by shared employment experiences, participation in sports and community events are defining features.

If the Project represents an increase in production and employment numbers (as opposed to just maintaining BMA's current workforce numbers), the availability of additional local employment is likely to strengthen bonds between personnel and families, and support retention of local young people who would otherwise be lost to training and employment opportunities in other regions.

The potential for an increase in local populations (see Section 4.3) is likely to strengthen community resources that 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 NRW 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 that affect the town's social character as close and self-contained communities. QGSO projects that the Isaac LGA will accommodate approximately 12,520 NRW in 2023, which is substantially less than the 17,520 NRW at the peak in 2012, so community tolerance of additional NRW is likely to be higher than in past years. The extent of population change related to the Project's non-residential workers is detailed in Section 4.3.3.

At the peak of construction, up to 1,000 NRW would be staying at the WAV on the ML, with approximately 750 of these on site at any one time. There is potential for workers to access shops and

hotels in Dysart or Moranbah. This is likely to be welcome trade for businesses, but could cause some discomfort about the number of ‘non-local’ workers in town.

During operations, this assessment has estimated approximately 180 additional NRW would be staying in WAVs near Dysart of Moranbah at any in time. In the context of existing and projected numbers of NRW, this is not expected to cause any change to local dynamics or feelings of safety.

The Dysart and Moranbah communities, along with QPS and IRC, are very experienced in managing increases in NRW and NRW behaviour, as are construction and mining companies. This includes expectations of compliance with Workforce Codes of Conduct, with breaches of workforce codes risking termination of employment and/or withdrawal of accommodation.

BMA will continue to mitigate potential impacts on community identity and cohesion related to increased numbers of non-local personnel, through:

- encouraging Project employees to move to Dysart or Moranbah;
- ongoing support for local schools and training facilities to support local young people’s skills development and pathways to mining employment;
- provision of subsidised housing for local employees;
- engagement of local businesses through the Local Buy program; and
- an ongoing multi-faceted relationship with IRC including:
    - aspects related to joint funding of mutually beneficial projects;
    - BMA’s substantial rate-related contributions and water supply arrangements; and
    - regular joint planning and update sessions.

4.1.9 Summary

Table 4.3 summarises the impacts and benefits identified in previous subsections.

Table 4.3: Community values, land use and settlement - summary of impacts and benefits

Area	Stakeholders	Baseline values	Impact/Benefit	Management measures
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 percent 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 33.5 ha will be disturbed for surface infrastructure and approximately 119.7 ha will be disturbed for power and transport corridors. 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 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.	• Land disturbed by mining infrastructure or subsidence will be progressively rehabilitated in line with BHP's completion criteria, the Mined Land Rehabilitation Policy and MERPF Act 2017
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 a coexistence agreement with the owners of this property.
	Residents of homesteads within 2-3 km	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	• BMA has coexistence/commercial agreements with the owners of relevant neighbouring properties

Area	Stakeholders	Baseline values	Impact/Benefit	Management measures
	Moranbah and Dysart community members		the Dysart-Moranbah Road and two private homesteads.	
Community identity and functions	Moranbah and Dysart community members	Moranbah, Dysart and Middlemount have strong identifies 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 (see Section 4.3.3) which is likely to strengthen community resources that contribute to cohesion.	• Social investment including a focus on community initiatives that support well-being

4.2 Employment

This section details the project's workforce requirements, recruitment strategy, training and development strategies and workforce wellbeing strategies.

Key issues identified by stakeholders that are considered in this section include:

- a strong preference for maximising local employment opportunities;
- increases in local apprenticeship, training and employment opportunities required to retain local young people;
- sustaining the populations of local towns; and
- protection of workforce health and safety, including a focus on mental health.

4.2.1 Workforce profile

Pre-construction and mine development activities include collection of information required for the detailed design phase of the Project, including geotechnical and soil investigations and geological exploration activities. These activities would be undertaken by BMA's existing personnel and contractors, and would not result in a change to employment opportunities.

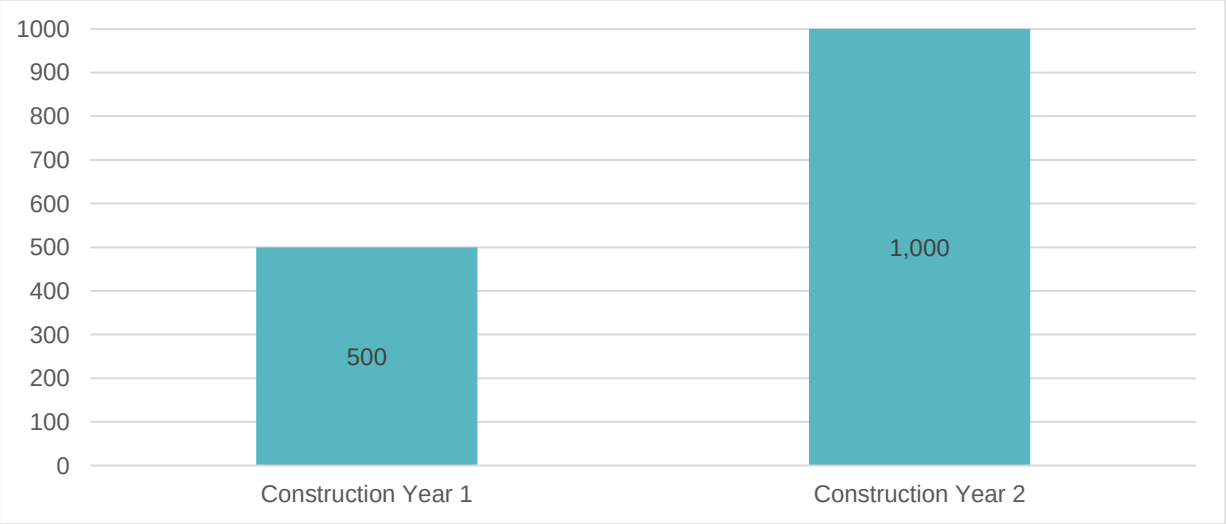
Construction

BMA will own and operate the Project, and contract the construction of the CHPP, MIA and associated infrastructure to a construction contractor(s).

The timing of the Project is yet to be determined. For SIA-related impact modelling 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 CHPP, MIA, associated infrastructure conveyor, rail spur and balloon loop. Construction would take approximately two years.

As shown in Figure 4.1, a construction workforce of 500 people is expected to be required in Year 1, increasing to 1,000 people during Year 2. These estimates have been used to predict the Project's potential impacts on the Isaac LGA's employment opportunities (this section) and on the LGA's population, housing capacity and social infrastructure (following sections).

Figure 4.1: Construction workforce estimates



Source: BMA advice.

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 7 days off, with two 12-hour shifts changing over at 6 am and 6 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 are also required. The Project represents a substantial employment benefit to people in these occupational groups.

Operations

Assuming commencement of construction in 2023, the Project's first coal is anticipated to be produced in 2025, with 260 personnel required during the first two years of operation. At full operation (anticipated by Year 3 of operations), approximately 500 operational personnel are expected to 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, special mechanics and diesel fitters) and professionals (i.e. engineers, geologists, scientists, mine managers and administration staff). Figure 4.2 provides an indicative breakdown of the operational workforce by operators, skilled trades and professionals.

Figure 4.2: Operations workforce estimates

Source: BMA advice.

The Project would operate 24 hours a day, seven days a week, 365 days a year. 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 that is conducive to work/lifestyle balance.

This will allow Isaac LGA residents to travel home at the end of their rosters, as long as combined on-site hours and travel time do not exceed 14 hours (applicable to the workforce's daily commute, and at the beginning and end of a series of shifts), as required by BMA's workforce fatigue management policy.

Given BMA's locally targeted recruitment strategies for this Project, it is considered that up to 100 existing residents and 100 new in-migrating residents could be employed for operations. With an estimated total workforce of 500, this level of local employment would see a commuting workforce (FIFO and DIDO) of to 300 personnel, or approximately 60 percent of personnel.

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

At June 2022, BMA had a workforce of approximately 8,600 people at its existing mines in the Isaac LGA (Saraji Mine, Broadmeadows Mine, Goonyella Riverside Mine, Caval Ridge Mine, Daunia Mine and Peak Downs Mine).

At full production, the Project would require a workforce of 500 people. Based on BMA's current (2022) production levels and corresponding employment, this would increase BMA's workforce in the Isaac LGA to 9,100 people. Assuming no change in BMA's total production driving an increase in total job numbers of BMA employment in the intervening years, the Project would represent an increase in job numbers (additionality) of approximately 3.0 percent during Years 1 and 2 of operations, and approximately 5.8 percent during ensuing years.

It is also possible that BMA's total coal production and therefore employment numbers could decrease before the Project commences, so that the Project represents a negligible increase or a decrease in total overall employment numbers.

Assumptions regarding percentages of local and other employees are discussed in Sections 4.3.1 and 4.3.3.

Decommissioning

The operations 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 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.

It is possible that other mines, particularly underground mines, will provide a ready place of employment when the Project closes, however Federal and State energy policies may see some constriction in mining activity, so this is uncertain. It is also possible that other industries including renewable energy or technology-based industries will provide replacement jobs as mining decreases replaced, but this can't be conclusively foreseen.

Indirect employment

Economic impact assessment undertaken as part of the EIS indicates that the Project is likely to lead to indirect employment (CDM Smith, 2019).

During the construction phase, the average yearly contribution to employment made by expenditures pertaining to construction related activities at the regional, state and national level are estimated at:

- an average employment contribution of 445 FTEs, comprising 226 direct FTEs and 219 indirect FTEs in the MIW Region (Mackay SA4);
- an average employment contribution of 719 FTEs, comprising 236 direct FTEs and 483 indirect FTEs in the rest of Queensland; and

- an average employment contribution of 143 FTEs, comprising 46 direct FTEs and 97 indirect FTEs in the rest of Australia.

Contribution to employment during the operational phase of the Project are estimated at:

- an average employment contribution of 683 FTEs, comprising 385 direct FTEs and 299 indirect FTEs, in the MIW SA4;
- an average employment contribution of 407 FTEs, comprising 253 direct FTEs and 153 indirect FTEs in the rest of Queensland; and
- an average employment contribution of 508 FTEs, comprising 307 direct FTEs and 201 indirect FTEs in the rest of Australia.

This is likely to make a contribution to the wellbeing of personnel and their families who obtain employment indirectly created by the Project.

4.2.2 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;
- no discrimination against job applicants on the basis of where they live;
- supporting BHP's goal for 40 percent female employment;
- working towards a target of 8.0 percent Indigenous personnel;
- 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 arrangements (i.e. residential or commuting);
- a commitment to workforce training and skills development for all personnel employed by the Project; and
- all Australian citizens and permanent residents will be eligible to apply for Project jobs.

4.2.3 Recruitment

BMA's drivers for increasing the number of locally based personnel include:

- maintaining Project access to a strong local skills base;
- support for permanent population growth that will increase local towns' vitality and sustainability;
- a commitment to an inclusive and diverse workforce, with a focus on increasing the number of women and Indigenous people employed;
- development of a strong workplace health and safety culture supported by a cohesive workforce; and
- a commitment to actively support personnel's choice of living arrangements.

As part of planning for the construction phase, BMA will:

- include the Project's commitments to maximising the involvement of Isaac LGA residents and those from the Central Queensland and MIW regions in construction management and major works package contracts;
- identify businesses with relevant capacities in consultation with BMA's Local Buying Program;
- 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 who may have capacity to supply the construction phase are identified and contacted as part of the construction tendering and sub-contracting process; and
- monitor the success of local employment and local business participation and require principal contractors to report on local employment statistics.

The Project's recruitment hierarchy is shown in Section 6.3.2 and includes a focus on recruitment from within the Isaac LGA. The Project's recruitment strategy for operations will ensure equitable and non-discriminatory access to employment opportunities. Isaac LGA residents will be encouraged to apply for Project employment (construction and operations) and will be given full and fair consideration in recruitment processes. BMA will also target people from the Central Queensland and MIW Regions, including women and Indigenous people.

As part of its recruitment strategy for operations BMA will:

- advertise project employment opportunities within the Isaac LGA at an early stage of the recruitment process;
- include in its job advertisements a statement that Isaac LGA residents, women and Indigenous people are strongly encouraged to apply;
- contact 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) to advise them about the Project schedule and employment opportunities;
- promote employment opportunities through:
    - community and stakeholder engagement networks;
    - the Project's recruitment contact network;
    - BMA websites;
    - BBAC, QRC and RIN;
    - employment agencies operating in the Isaac, Central Queensland and MIW Regions;
- provide job applicants with access to online information pack including a profile of local communities to support 'new local' employees to understand the amenity, services and housing options on offer; and
- identify new personnel's housing needs and facilitate provision of housing for personnel who wish to move to Moranbah or Dysart.

As part of its commitment to workplace diversity and inclusion, BMA will also collaborate with HCC in Dysart to identify and support programs and partnerships that develop employment pathways for local people with disability (see below).

4.2.4 Workforce Diversity

Women

In 2016 BHP announced its aspiration to achieve gender balance within the employee workforce globally by the end of FY2025. In FY2021, women represented 29.8 per cent of BHP's employee workforce. BHP is confident of achieving 40 per cent female representation by the end of FY2025, meeting the definition of gender balance used by the International Labour Organization, which considers balance to be a minimum of 40 per cent women and 40 per cent men.

Measures that BMA will undertake to achieve a gender balance in the Project's workforce are provided in Section 6.3.4.

Indigenous employment

BHP's *Reconciliation Action Plan 2017-2021* details its commitments to Indigenous employment. The key objective is to 'contribute to the economic empowerment of Aboriginal and Torres Strait Islander peoples through investment which provides opportunities for employment, training, procurement and Indigenous enterprise support'.

BHP's target is to achieve Aboriginal and Torres Strait Islander employment of 8.0 percent of its total managed workforce including direct, contracting and labour hire employees by Year 3 of operations.

In 2021, there were 4,400 Indigenous people in the MIW SA4 and 6,466 Indigenous people in the Central Queensland SA4 who were aged between 25 to 64 years, a total of 10,866 people. Of these, 7,581 people (3,358 people in the MIW SA4 and 4,223 people in the Central Queensland SA4) were in the labour force (QGSO, 2022e).

The Isaac and broader MIW and Central Queensland regions should therefore be considered as a primary recruitment area for Indigenous workers. Barada Barna People living in other regions could also be attracted to work in the Project through engagement of the BBAC during the recruitment phases for construction and operations.

The Project will support maintenance of BHP's goal of 8.0 percent Indigenous personnel, and is expected to achieve this goal within the first three years of operation. Measures to support this are provided in Section 6.3.4.

BMA's portfolio-wide social investments also support Indigenous education, training and employment pathways, as described in Section 6.5.4

People with disability

In 2018, BHP outlined its commercial case for workplace neurodiversity. BHP has strengthened its partnerships with leading Autism Spectrum Disorder (ASD) organisations and institutions and extended their successful internship program to create ongoing roles within BHP with neurodiversity in mind. The Project will consider the learnings from this Project in designing its mental health programs for Project workers.

During the Project's construction phase, the Project will initiate engagement with HCC and/or MDSS and/or other relevant organisations to identify the employment aspirations of their clients, and provide matched funding for any new State Government funding to support employment skills development and pathways to employment for people with disability who live in Moranbah or Dysart.

4.2.5 Choice and flexibility

Accommodation choices

A Queensland Resources Council (QRC) survey in 2012 to determine resource sector employees' views on their accommodation arrangements and choices indicated that the ability to choose accommodation arrangements is important for employees, with 83 percent of residential respondents and 65 percent of NRW indicating that it was 'very important' they were given the option of deciding between long-distance commuting or living locally (QRC 2015).

Project employees will be given a choice of:

- living in towns within the Isaac LGA that are within a safe daily driving distance;
- drive-in drive out arrangements, which will be available to residents in other parts of the Isaac LGA and adjacent LGAs, subject to fatigue management requirements; and
- FIFO arrangements from a designated FIFO hub in one or more regional centres within Queensland.

The Project's support for local settlement is discussed in Sections 4.3.5 and 4.4.5.

Commuting arrangements

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 WAVs while they are on roster. Population and housing considerations are outlined in Section 4.3.

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 the Dysart-Moranbah Road, (an IRC road) that runs along the western edge of the proposed MIA. Access to the MIA and the CHPP will require a new intersection with Dysart-Moranbah Road, which will require approval from the Department of Transport and Main Roads (DTMR), Queensland Rail and IRC. An internal access road would be required to link the proposed WAV to Lake Vermont Road, with a new intersection at the juncture.

People who live more than 1 hour's drive from the project will be required to stay in a WAV 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.

Moranbah 'Bunhdhara' Airport facilitates approximately 130 flights movements per week on a variety of aircraft including but limited to Dash 8's, Fokker 70's and ATR 72's. Flights include a mixture of private charters, commercial operations and emergency service missions. In FY22, approximately 217,000 passengers arrived/departed from the airport.

During operations, the Project could result in up to 15 additional trips per week. This increase can be accommodated within the existing capacity of the Moranbah 'Bunhdhara' Airport.

The Project may require one or more FIFO hub(s) to support workers travel, the location of which will be selected with consideration to the availability of appropriately skilled and experienced personnel during the year prior to the Project's anticipated operational commencement.

Permanent and contracting jobs

BMA anticipates that approximately 70 percent of operational personnel would be permanent BMA employees and 30 percent would be contractors. Contracting opportunities offer flexibility for BMA and personnel, however unions are concerned that contract employment does not offer the benefits of permanent employment (such as job security and support for stable local populations).

Contracting is an established part of the business model for many companies (in mining and across other industry sectors). Companies based in the Isaac and Mackay LGA are key suppliers for BMA's existing mining operations and will be a key source for contracted personnel, supporting local businesses' sustainability and job options for locally based personnel.

Flexible work practices

Engagement with the local Women in Mining forum identified the potential to employ local people to replace relief drivers who would otherwise have come from other regions. As a result, BMA has instituted the 'local crib relief' program at the Saraji Coal Mine, which offers shorter shifts aligning with school hours, allowing personnel to maintain skilled local employment and balance family responsibilities.

BMA advises that to date the program has created 50 local roles, directed $4 million in wages into the local community, and brought 20 families back into the area into housing previously left vacant. Workplace benefits have included greater productivity and an improvement in workforce culture and morale.

BHP established Operations Services (OS) as an internal company that currently has approximately 4,000 employees. OS was established to stabilise the workforce and improve the workplace safety culture, by reducing the use of contracting arrangements and offering employment security. OS offers permanent roles and flexible working arrangements, including nightshift only, dayshift only, part time, job share, staggered shifts and casual work, and a choice of 2 on/1 off, 1 on/2 off rosters. BHP anticipates that some of OS's employment practices (such as flexible working arrangements) will also be highly attractive to Project personnel.

The learnings from the Saraji Coal Mine and OS will be applied to the Project, and other flexible working arrangements will be offered as part of the Project's employment options.

Benefits of Project Employment

It is likely that Project construction employment opportunities will be highly attractive to construction workers based in the Mackay-Isaac Whitsunday and Central Queensland regions. 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.

Prior to the Project's construction, 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 regarding personnel's demands on local resources in the LGA, and will also inform BMA's briefings to business in the Isaac LGA and the Mackay-Isaac Whitsunday region to ensure they are aware of the range and timing for opportunities to supply the Project.

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 500 operational jobs will increase the number of direct BMA jobs in the Isaac and Central Highlands LGAs by more than 5 percent, 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.

4.2.6 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.

Section 3.7 details the economic and employment profile in the Isaac LGA, with supplementary information on the wider labour force regions of Mackay and Central Queensland SA4 regions. Key factors supporting labour availability in the Isaac LGA and the broader MIW and Central Queensland SA4 regions include:

- a young population and higher than average labour force participation;
- increasing participation of Indigenous people and women in mining;
- considerable strengths in occupational groups that support mining e.g. machinery operators and drivers, and technicians and trades workers; and
- a construction industry labour force of 576 people and a coal mining workforce of than 3,780 people in in the Isaac LGA in 2021;
- a combined construction workforce of 14,983 people, and a combined mining workforce of 26,505 people in the MIW SA4 and Central Queensland SA4 regions;
- the likelihood of latent unemployment i.e. people who are unemployed or underemployed but not registered as jobseekers.

However, key factors constraining local and regional labour availability include:

- Isaac LGA is a significant importer of labour;
- the number of job opportunities in mining has increased over the past five years, leading to competition for skills and labour;
- unemployment in the Isaac LGA is currently very low and in the MIW SA4 is also low;
- there are skills shortages in the region with difficulties recruiting machinery operators, maintenance staff, project managers, industrial cleaners and a range of trades;
- BMA is currently having difficulty recruiting for trades and technicians; and
- the number of job vacancies in Queensland in key occupations in demand by the mining industry totalled approximately 10,700 in February 2022.

Other factors that influence labour and skills availability include:

- a number of new projects may be ramping up their operational workforce requirements in a similar timeframe to the Project;
- at least two non-BMA mines in the Bowen Basin may close within the next five years with potential for up to 1,200 redundancies;
- it is possible that coal mines in the Bowen Basin will reduce their production and therefore employment numbers as older assets reach their operating lives;
- DISER's September 2022 forecast indicated that the Australian premium hard coking coal price would average almost US$400 a tonne in 2022, but this was expected to fall by almost half as supply conditions normalise, ultimately reaching around US$220 a tonne by 2024 (DISER, 2022), which could lead to a reduction in mining employment numbers; and
- in the medium term (by 2030), global demand for thermal coal exports may decrease in line with achievement of climate change targets, resulting in an increase in the availability of skilled workers for metallurgical coal mining.

The above factors make the availability of labour and skills difficult to predict. 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, as further discussed in

Section 4.3.3. However, skills shortages in key occupations such as technicians, operators and trades are likely to persist.

Labour availability is likely to change in response to industry trends and mine openings and closures. Monitoring strategies that address this variability are outlined in Section 7. BMA's key strategies addressing skills shortages are outlined in Section 4.2.8.

4.2.7 Effects on local and regional labour markets

As described in previous sections, the Isaac LGA and nearby LGAs have significant strengths in the construction and mining services industries that will enable them to respond to Project opportunities.

The peak requirement for 1,000 construction personnel would exceed the Isaac LGA's 2021 construction workforce capacity, requiring a large proportion of workers to be sourced from other regions. In the context of the combined construction industry workforces in the MIW and Central Queensland SA4s, 1,000 personnel would represent approximately 6.7 percent of the 2021 construction workforce (14,983 people). However, the heavy and civil engineering construction sector is most likely to supply personnel. This sector had a workforce of 3,915 personnel across the two SA4s in 2021 (ABS, 2021f), so the Project's requirement would require approximately 25.5 percent of these personnel. As such the Project has potential to draw labour away from other businesses and industries in the region that rely on specialist heavy construction skills. However, construction personnel are highly mobile and are likely to be drawn from across Queensland regions, with minimal long-term effects on labour availability.

With 500 operational personnel required, this would represent 13.2 percent of the Isaac LGA's 2021 resident mining workforce and 1.9 percent of the residents employed in mining workforce in the Mackay and Central Queensland SA4s combined. People who are new to the mining industry are also being targeted through recruitment and workforce development strategies, so the demand on existing local and regional industries would be reduced, and long-term negative effects on labour availability are not anticipated.

There is 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, and see a drain of labour from local businesses and services to the Project, which would cause inconvenience and costs to business owners and service managers. Project personnel who move to the Isaac LGA for Project employment will bring partners and young people with them, which could offset labour drain.

Local initiatives and partnerships that would assist local businesses and services to improve their capacity to recruit and retain staff would be considered under the C-Res Local Buying Foundation Program (see Section 6.6.2 and 6.6.3).

4.2.8 Training and development

The Project's operation depends on the availability of adequately trained and experienced staff.

IRC has identified the need to upskill the local workforce as a response to forecast changes relating to mechanisation /automation of coal mines.

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 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 is also facilitating 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, of whom 22 were Moranbah or Dysart residents. In 2022, this had increased to 51 new apprenticeships. The Project will participate in BMA's apprenticeship program by providing ten apprenticeships by Year 3 of operations and maintaining this commitment throughout the Project life.

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

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 workers will also support workforce development.

BMA will assess skills availability for the construction phase, six months prior to construction, to enable evaluation of prospective principal contractors' training and recruitment strategies to address any labour and skills shortages.

BMA will also assess the availability of skilled and experienced underground mining staff, twelve months prior to operation, 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. Strategies for increased training supply will include a focus on the existing skills gaps and capacities within the Isaac and MIW regions, to increase opportunities for local people to access training opportunities.

BHP investments in skills and innovation

In October 2020, BHP announced $780 million in funding through the Apprenticeship Pledge and METS Business Support Package, to support Australia's economic recovery from COVID-19, and the future of work, through training and funding for 3,500 new Australian apprenticeship and training positions over the next five years. BHP invested an additional $450 million in support for Australian mining equipment, technology and services (METS) companies.

Since December 2018, BHP has been a key partner of Greater Whitsunday Alliance (GW3) which is an independent regional economic development body for the MIW region. The partnership has supported GW3 to deliver a number of projects and studies to ensure the region is well prepared to address emerging trends in employment, industry and technology, including:

- the release of a Future Employment Study that projected the impact of technology on workforces in the region over the next 10 years and encourages a focus on development of digital skills, ICT skills and training as a way of preparing the region for these changes;
- the launch of the Transformation Region platform that showcases how the region is embracing new technology and leading innovation; and

  a digital infrastructure study, which assessed the current infrastructure gaps and identified future investment opportunities for digital infrastructure.

As part of implementing their Roadmaps, the Moranbah and Dysart STACs have had a focus on improving digital connectivity, which is integral to enabling the growth of local businesses. In 2021, BMA committed to an investment to boost digital connectivity in the Moranbah and Dysart areas. BMA developed a partnership with Telstra, which resulted in the commissioning of a study to identify potential sites for mobile phone booster stations. Development applications have been made for the preferred sites and are being assessed by IRC.

In partnership with the Queensland Government and Mackay Regional Council, BMA is also a contributor to the Resources Centre of Excellence (RCoE), a world-class facility that is driving innovation in the mining and METS industry. A key component of the RCoE will be to develop models for innovation, skills and training for regional communities. The RCoE and CQ University are working together to focus on advanced technologies in the mining and METS industries.

4.2.9 Workforce health and wellbeing

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

Workers' health and safety 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, Coal Mining Safety and Health Act 1999* and their associated Regulations as amended in 2017, as well as all Recognised Standards as published by Business Queensland.

Personnel living in local towns will have access primary, specialist, dental and allied health professionals, and a wide range of physical and cultural facilities that support individual and community wellbeing (see Section 3.6). Personnel accommodated in WAVs have access to purpose-built accommodation and associated services such as healthy eating, communications technology and fitness programs (see Section 6.3.6).

As a result of coal workers' pneumoconiosis cases, there may be concerns about mine dust contributing to lung diseases. The Coal Mine Workers' Health Scheme (CMWHS) is used to determine fitness for work and provide early diagnosis and intervention for respiratory diseases such as coal mine workers' pneumoconiosis and silicosis. This includes screening coal mine workers to detect early signs of disease, referring workers for follow-up, diagnosis and management if required, reducing dust exposure for workers with respiratory abnormalities, and collecting, analysing and reporting data to support reviews of dust exposure levels and occupational exposure limits for coal mines (Business Queensland, 2018).

BMA will comply with CMWHS requirements for employers, which include:

- arranging and pay for workers' health assessments, using providers registered with Department of Resources to undertake respiratory health assessments;
- appointing nominated medical advisers (NMAs) in writing and notify Department of Resources on appointment and ending of engagement;
- using health surveillance information provided by Department of Resources to inform preventative measures;
- providing current and emerging respiratory health information to workers; and
- participating as a member of relevant committees or other groups.

Mental health

Australian Institute of Health and Welfare research indicates that 45 percent of Australians aged 16 to 85 will experience a common mental health disorder (such as depression, anxiety or a substance use

disorder) in their lifetime. On the basis that mental illness is common, all employers including mining companies have a responsibility to ensure that workplaces support good mental health issues (Australian Institute of Health and Welfare, 2018).

Research on the mental health of male mining workers published in 2014 analysed indices of relationship quality, work-family balance, and mental and emotional health for males employed in the Australian mining industry. The report noted qualitative research had found relationship and mental health difficulties amongst mining workers, primarily relating to long rosters, shift work, and (for NRW) long absences from home However, the researchers noted that speculation that miners may be at elevated risk of poor mental health outcomes was not well supported by empirical evidence (at the time). The findings, based on analysis of data from the Household, Income, and Labour Dynamics in Australia (HILDA) survey did not support the hypothesis that resources sector employment is associated with greater relationship/work-family stress, or with poorer mental and emotional health, relative to employment in other occupations. However, longer working hours were associated with measures of work-family stress (McPhedran, 2014).

Research by working on remote Australian mining and construction sites in South Australia and Western Australia during 2013-2015 found elevated levels of psychological distress in the remote mining and construction workforce in Australia, with workers aged 44 years or less, workers who had separated from their partner, and workers employed on compressed roster swings (2 weeks on/1 week off or 1 week on/1 week off) showing higher levels of distress, and potential for FIFO workers to experience mental health issues as the result of isolation from their families, roster patterns and a workplace culture that may fail to acknowledge mental health issues (Bowers, 2018).

MCA's Blueprint for Mental Health and Wellbeing notes that employers and industry can play a role in addressing mental health and describes a mentally healthy workplace as one that "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" (Minerals Council of Australia, 2015).

The Project will initiate a suite of strategies to enhance awareness of mental health issues and access to support services in the workplace.

As part of the tendering process for construction, Principal and major contractors 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.

For the operations phase, BMA will adhere to the Our Requirements documents for Health, Safety, Environment and Community.

BMA also contracts an Employee Assistance Program (EAP) provider to provide proactive support for mental health and family issues. To promote workforce health and minimise impacts on local services, BMA will also:

- employ staff with paramedical or nursing qualifications to manage minor health issues on site and deliver health and wellbeing programs focused on physical and mental health;
- initiate a contract with a local GP clinic to provide workplace health services e.g. Coal Board medicals, immunisation, health promotion programs and access to a GP for employees living in the construction WAV;
- develop personnel's skills to identify and respond to mental ill-health in the workplace, including staff awareness, referral pathways between the workplace and health care providers, and engendering a culture that supports mental wellbeing;

- promote use of the Queensland Government's 13 HEALTH (13 43 25 84) confidential phone service that provides health advice;
- ensure awareness of domestic and family violence, and how to seek help at the worksite, through the EAP or through community services; and
- promote recovery through return to work after illness or injury.

Fatigue management

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

- a training approach that educates managers, supervisors and workers in fatigue management, including:
    - how to recognise the effects of fatigue;
    - the influences of a healthy lifestyle and non-work activities;
    - the effects of medical conditions, sleep disorders and drugs and alcohol;
    - personal measures to manage fatigue; and
    - how to access the EAP;
- standard rosters that 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; and
- separation of crews on night and day shift within the WAVs utilised to accommodate operational personnel.

Additional journey management strategies include:

- bus transport to and from the village and work sites, as well as to and from the airport;
- providing guidelines to workers that outline acceptable safe journey management practices; and
- discouraging the use of private transport by workers.

Operations workers are also required to provide individual journey management plans that detail how they will safely travel between their homes and the airport (and back), in line with BMA guidelines. Compliance will be monitored, including through regular consultation with the Queensland Police, and policies and practices modified if required.

4.2.10 Summary

Social impacts and benefits that are likely to result from the Project's construction and operation are summarised in Table 4.4. Management measures are also summarised, noting that they are described in detail in Section 6. Stakeholder inputs of particular relevance to employment impacts and associated management measures include:

- a strong preference for employment of local residents and attraction of new local residents, and interest in the availability of employment for Indigenous people;
- addressing and removing barriers that affect people's choice to love locally; and
- keen interest in the availability of training opportunities for local young people

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Table 4.4: Employment impacts and benefits summary

Area	Stakeholders	Baseline values	Impact/Benefit	Management measures
Construction employment	Local and regional construction workers	The construction industry employed 576 Isaac LGA residents in 2021, and the LGA's construction sector comprised 195 businesses in June 2021, an increase of 4.3 percent since June 2019. Construction workers are mobile, and the majority are likely to be drawn from outside the Isaac LGA.	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. The peak construction workforce requirement (1,000 personnel) would significantly exceed the number of construction workers in the Isaac LGA (576 in 2021).	• 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 Central Queensland SA4 and MIW SA4 had a combined construction workforce of 14,983 people in 2021. The heavy and civil engineering construction sector is most likely to supply personnel and had a workforce of 3,915 personnel across the two SA4s in 2021, so the Project's requirement would require approximately 25.5 percent of these personnel.	If mining construction activity is high when Project construction commences, there is potential to draw construction labour from businesses and industries in the MIW and Central Queensland regions. If mining construction activity is low, the Project would have less impact on other businesses' access to labour and skills, and would be experienced as a significant benefit to construction employees and businesses.	• Recruitment using established supply chain of recruitment and labour hire companies in the Mackay and Brisbane, and established relationships with mining construction companies • 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	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	• 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

Area	Stakeholders	Baseline values	Impact/Benefit	Management measures
	Moranbah and Dysart community members IRC		increase in job numbers (additionality) of approximately 3.0 percent during Years 1 and 2 of operations, and approximately 5.8 percent during Years 3-18.	• 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 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. There is a large pool of mining personnel from which to draw in the Isaac LGA and in the MIW and Central Queensland regions, 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 (see Section 4.2.8). • 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 have been 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 • Consideration of businesses' request for use of surplus BMA housing
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 percent 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 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

Area	Stakeholders	Baseline values	Impact/Benefit	Management measures
				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	Whist 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 • 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

4.3 Population, housing and accommodation

This section describes the Project's potential impacts on the Isaac LGA's population and housing availability, and outlines proposed workforce housing and accommodation arrangements.

4.3.1 Assumptions

This assessment of impacts on population and housing assumed that Project construction may commence in FY 2023 (i.e., by June 2023), concluding in FY25, with operations commencing in FY 2025. Assessment of changes to population numbers has used these reference years. As described in Section 6.1.4, 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.

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. In a mining industry downturn, population outflows are experienced, along with commensurate decreases in housing and service demand, and higher availability of skilled labour.

The Isaac LGA is the only region where any Project-related changes to population and related impacts such as housing demand would be noticeable. Negligible population changes may occur in other population centres such as Mackay if Project workers move there to be close to Project employment opportunities, or if they move from other centres to the Isaac LGA, but this would not be significant in context with the centres' larger populations and other social and economic drivers.

BMA expects that the Project's residential workers will live in Dysart and/or Moranbah. Non-resident workers will stay at existing accommodation villages, adopting an equal split between Moranbah and Dysart. The existing villages that may be used include Moranbah Single Persons Village (SPV), Dysart SPV and Dysart Ausco (Stayover). A requirement for housing or sourcing a significant number of workers in Middlemount is not anticipated. This part of the assessment therefore focuses part on Dysart, Moranbah and the Isaac LGA as a whole.

A proportion of Project personnel including employees and contractors is expected to move to the Isaac LGA during the first two years of operations. For a conservative assessment, it has been assumed that contractors will seek to move to local towns at the same rate as employed personnel.

Moranbah's rental market is currently be considered tight and Dysart's market very tight (see Section 3.4.5). A proportion of existing and new local personnel would likely buy rather than rent housing. For the purpose of a conservative assessment of housing need, it has been assumed that all Project personnel will seek BMA-owned rental housing rather than purchase housing.

Estimates of population change and housing demand resulting from the Project as shown in Table 4.7 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 (assumed as 2027). Of these:
    - 60 percent would maintain their existing housing arrangements (as owner occupiers, tenants or family members) and 40 percent would require housing;
    - existing local residents who require housing would all require family housing rather than shared housing (i.e. one worker per dwelling);
- up to 100 operational personnel would originate from other regions and settle locally in Moranbah or Dysart by Year 3:

    - the average new household size would be equivalent to the Isaac LGA 2016 average of 2.7 people per household;
    - 80 percent of new residential personnel would require family housing (i.e. one dwelling per worker)
    - 20 percent of new residential personnel would share dwellings at an average rate of 2 people per dwelling;
- operational personnel from outside a one hour daily driving distance would be accommodated in existing WAVs in the LGA to support fatigue management, which could represent approximately 300 personnel by Year 2; and
- with a roster pattern of eight days on, six days off, seven nights on and seven nights off, and including staff on 5 day on/2 day off rosters, approximately 60 percent of the operational workforce (including NRW) would be on site at any one time. QGSO estimates, based on 7 day on/7 day off and 5 day on/2 day off rosters and 5 day on/2 day off rosters, that approximately 52 percent of Bowen Basin mining workers are on-roster at any one time (Pers. comm. 15 March 2021).

4.3.2 Population baseline

This assessment has applied the 2021 population enumerated in the Census and annual average population increase of 1.1 percent (equivalent to the average annual change between 2016 and 2021), as the baseline for estimating changes to the Isaac LGA's population as a result of the Project's construction and operation. The 2021 baseline and the average annual population increases for Moranbah and Dysart (see Sections 3.2.1 and 3.2.2) have also been used to estimate increases in the population baseline.

The Isaac LGA is estimated to have a population of 22,534 people in 2023 (when construction is assumed to commence) and 23,032 people in 2025 when operations are assumed to commence.

The majority of this growth would be in Moranbah (an additional 779 people by 2026). Dysart's population is expected to decrease by approximately 72 people during 2021-2026.

The estimated number of NRW in the Isaac LGA during 2021 to 2027 is also provided in Table 4.6 based on QGSO projections for 2021-2025, with the number of NRW assumed to remain stable between 2026 and 2027. During 2023 (the year construction is assumed to commence), the number of NRW numbers is forecast at 12,140 people with a small reduction to 11,970 people in 2024.

During 2025 - 2027 when the number of Project operation roles are assumed to build, up to 11,980 NRW are assumed to be based in the Isaac LGA.

Based on the above, the estimated residential, non-residential and FTE populations for the Isaac LGA, Moranbah and Dysart during Project construction and operation are shown in Table.

Should BMA's other operations reduce their production targets and therefore their employment numbers, populations may reduce commensurately, however this can't be confidently predicted.

Table 4.5: Estimated Populations, Moranbah, Dysart and Isaac LGA 2021-2027

Population groups	2021	2022	2023	2024	2025	2026	2027	Change 2021-26	Av. ann. Change 2021-2026
Residential population									
Isaac LGA	22,046	22,289	22,534	22,782	23,032	23,286	23,542	1,240	248
Moranbah	9,425	9,576	9,729	9,885	10,043	10,204	10,367	779	156
Dysart	2,918	2,903	2,889	2,874	2,860	2,846	2,832	-72	-14
Non-Residential population									
Isaac LGA	12,080	11,160	12,140	11,970	11,640	11,980	11,980	-100	-72
Moranbah	2,270	2,270	2,270	2,270	2,270	2,270	2,270	0	0
Dysart	1,650	1,650	1,650	1,650	1,650	1,650	1,650	0	0
Est. Total population									
Isaac LGA	34,126	33,449	34,674	34,752	34,672	35,266	35,522	1,140	228
Moranbah	11,695	11,846	11,999	12,155	12,313	12,474	12,637	779	195
Dysart	4,568	4,553	4,539	4,524	4,510	4,496	4,482	-72	-14

Source: ABS 2021b, populations projected using annual average population increase rates 2016-2021 for Isaac LGA (ABS, 2021e); QGSO Estimates of NRW in Isaac LGA; QGSO estimates of NRW by town, Bowen Basin Population Report, 2021.
Note: assumes no change in Isaac LGA NRW numbers between 2026 and 2027, in line with a fairly static trend between 2021 and 2025.

4.3.3 Population changes as a result of the Project

Construction

Project construction is expected to require a workforce of up to 500 people during Year 1 of construction (assumed to be during 2023-2024) and 1,000 people during Year 2. The construction phase is likely to draw some personnel from within the Isaac LGA, as existing indicators of capacity include:

- 346 LGA residents were employed in the construction industry in 2016; and
- between 2019 and 2021, the number of construction industry businesses registered in the Isaac LGA increased to 195, or 10.5 percent of the LGA's businesses.

Given the specialised nature of the work and labour mobility within the construction industry, the majority of construction workers are likely to be drawn from other regions. The Central Queensland and MIW SA4 regions have significant workforce capacity within mining and construction-oriented businesses, and in the regions' workforce, As noted in Section 3.7.8, recent industry research found that the MIW METS sector is very well positioned to respond to the current and emerging requirements of the resources sector, comprising highly specialised businesses that cover the full range of services needed, and with a highly skilled and productive workforce (Lytton Advisory, 2020).

This assessment has assumed that 10 percent of construction personnel may be drawn from within the Isaac LGA. This would see 50 local workers and 450 NRW during 2023-2024 and up to 100 local workers and 900 NRW in 2024-2025.

The construction roster is likely to approximate 21 days on and 7 days off. On this basis, estimates of population impacts during construction are based on 75 percent of the construction workforce (including NRW) being rostered on at any one time.

This would see:

- 338 NRW on shift in the LGA in 2023-2024, equivalent to an increase of 2.8 percent on the projected number of NRW in the Isaac LGA in 2023; and
- 675 NRW on shift in the LGA in 2024-2025, equivalent to an increase of 5.6 percent on the estimated number of NRW in the Isaac LGA in 2024 (see Table 4.6).

These estimates reflect potential changes to demand for housing, accommodation and services. IRC notes that the total number of people circulating through a community in any one month may be double the number that are on-shift.

Table 4.6: Estimated increase in NRW in Isaac LGA during construction

Population factors	2023-2024	2024-2025
QGSO estimate of NRW	12,140	11,970
Estimated construction workforce peak	500	1,000
Estimated NRW (at 90% of peak workforce)	450	900
Est. NRW on shift (at 75%)	338	675
Project NRW % increase on projected NRW	2.8%	5.6%
Project NRW % increase on FTE population	0.9%	1.9%

Source: QGSO, 2022c. Note: Estimates of NRW projected at 2025 number for 2026 and 2027

The construction phase represents the largest potential to result in an imbalance in the number of NRWs compared with the residential population (and any changes during operations would be negligible). Without the Project, NRW numbers during construction (at peak) would be equivalent to 45.6 percent of the residential population in the Isaac LGA in 2024. With the Project, NRW numbers would be equivalent to 48.1 percent of the residential population.

The Isaac LGA's services and businesses are accustomed to servicing temporary population influxes, however construction would lead to a requirement for accommodation (as discussed in Section 4.3.4) and to small and temporary increases in demands for health services, emergency services and infrastructure as discussed in Section 4.4.3.

The construction phase would also see an increase in the number of males in the Isaac LGA. In 2021, 56.2 percent of residents were male, so the number of male residents in the LGA at 2023 is likely to be in the order of 12,660 people. The majority of NRW are also male. Assuming 90 percent of non-resident construction workers are male, and 75 percent of those are on shift at any one time, this would see an additional 607 males in the Isaac LGA in 2023-2024, resulting in a temporary increase in the imbalance between males and females.

Construction personnel are proposed to be accommodated in a WAV on MLA 70383 (refer Figure 1-1), minimising interactions with residents, except in settings such as service or business transactions. Whilst local towns are resilient to population influxes of this nature, all personnel will be required to comply with BMA's Workforce Code of Conduct and be made aware of their obligations to behave in a respectful manner to local residents, business staff and service providers, as discussed in Section 4.4.1.

Indirect employment would also be created in the MIW Region as a result of Project and workforce expenditure in the construction phase. To the extent that this indirect employment is generated within the Isaac LGA, and requires the importation of additional workers, a small additional population increase may result, however this is not quantifiable.

Operations

Assuming operations commence in mid-2025, BMA anticipates that approximately 260 personnel would be required in Year 1 and 2 (2025/2026 and 2026/27), and up to 500 personnel would be required from 2027. The number of operational personnel would remain stable during the ensuing years. As production would ramp down prior to decommissioning the Project, the workforce would decrease to approximately 260 personnel during Years 19 and 20 before closure, which would see the majority of operational jobs cease.

Both existing local residents and personnel who could be attracted to live in the Isaac LGA will be targeted through the Project's recruitment strategy. With more than 3,700 mining industry workers in the LGA in 2016, and with a Project focus on local employment and inexperienced workers, Project employment is likely to attract local residents, both experienced workers and those who are new to the industry.

Mining recruitment is currently very competitive and unemployment in the Isaac LGA is very low. Currently approved or proposed mining projects may compete for labour, restricting availability, however other existing mines in the Isaac LGA are expected to close within the next five years, which would increase the availability of labour.

BMA's strategies to achieve local employment include:

- prioritising local recruitment including people who are new to mining (see Section 4.2.3);
- providing traineeships, apprenticeships and scholarships to attract young people to the industry; and
- maximising employment opportunities for women and Indigenous people.

The SIA has therefore assumed as a 'base case' that approximately 100 Project personnel would be existing Isaac LGA residents, including those who are new to the industry or attracted from other local mining operations.

BMA will also target recruitment towards personnel who could be attracted to live in the Isaac LGA. 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 communities of Dysart and Moranbah;
- offering subsidised housing to Project personnel who choose to move to Dysart or Moranbah; and
- investing in community development to enhance the amenity and quality of community services and facilities in local towns to increase their attractiveness to new personnel and families.

Given the proposed recruitment strategy plus the attractiveness of long-term employment, subsidised housing, ongoing training and development, and the amenity and lifestyle offered by local towns, this assessment has assumed as a 'base case' that 100 personnel from other regions could be attracted to live in the Isaac LGA by Year 3 of operations.

As shown in Table 4.7, attracting 100 personnel and their families to the region would result in a population increase of approximately 270 people by Year 3 (assumed as from mid 2027), equivalent to 1.1 percent of the Isaac LGA's estimated residential population. As IRC and local communities are very supportive of population growth, and are planning accordingly, this is not expected to result in any negative impacts on e.g. community cohesion or sustainability. On the contrary, an increased population supports community vitality, the sustainability of social resources (such as volunteers), and local business confidence.

As the majority of available BMA housing is in Dysart, and Dysart is closer to the Project, this would lead to a significant increase in the Dysart population, potentially in the order of 200 people. Based on the Dysart's estimated population of 2,832 people in 2027, this would represent an increase of 8.3 percent. As Dysart's population is otherwise assumed to decline in line with the recent trend, this would be positive for the community's vitality and confidence.

Assuming Moranbah attracted 70 new residents, against the projected 2027 population of 10,367 people, this would represent an increase of 0.007 percent.

Project personnel will be given the option of locally based employment (enabled by provision of BMA-subsidised housing) or commuting arrangements. Based on historically low unemployment levels in the Isaac LGA, and assuming current skills and labour shortages continue, the Project is likely to draw a large proportion of its operational workforce from outside the Isaac LGA.

On the assumption that 100 existing residents and 100 new local personnel could be recruited, up to 300 NRW would be employed in Project operations. This would result in an increase of 180 NRW on shift by Year 3 of operations, which would represent an increase of 1.5 percent on the projected NRW population. Commuting arrangements would be predominantly FIFO but may include DIDO arrangements.

IRC has noted that it considers both full-time residents and NRW as important in planning for services and infrastructure, to ensure that all have access to an appropriate level of services while they are living or staying in the LGA. Together, estimated numbers of new residents and NRW on shift at 2027 would represent an increase of approximately 440 people or 1.2 percent on the estimated FTE population in 2027.

As with the construction phase, the Project is likely to generate additional indirect employment in the Isaac LGA, resulting in a small but unquantifiable additional population increase, and supporting the sustainability of local communities.

As noted in Section 2.3.7, the baseline population estimates for 2022 – 2027 are based on the ABS 2021 Census count of residents plus an average annual increase of 1.1 percent, based on the population growth rate during 2016-2021.

Table 4.7: Estimated population and housing demand change in the Isaac LGA attributable to Project

Isaac LGA population and housing impacts	2021	2022	2023	2024	2025	2026	2027
Est. Resident Population	22,046	22,289	22,534	22,782	23,032	23,286	23,542
Est. NRW population	12,080	11,160	12,140	11,970	11,640	11,980	11,980
Est. FTE Population	34,126	33,449	34,674	34,752	34,672	35,266	35,522
Construction population change							
Construction workforce			500	1,000			
Construction NRW at 90%			450	900			
At 75% on shift (equivalent to the number of WAV beds required)			338	675			
Increase on Est. NRW			2.8%	5.6%			
Increase on Est. FTE population			1.0%	1.9%			
Operations population change							
Est. Total Workforce					260	260	500
Est. Existing local personnel					50	50	100
Est. new local workers					50	50	100
New local residents @ 2.6 per household					130	130	260
Increase on Est. residential population					0.6%	0.6%	1.1%
Est. Commuting – total (60%)					156	156	300
Est. commuting personnel on shift at 60%					93.6	93.6	180
Increase on Est. NRW					0.8%	0.8%	1.5%
Increase on Est. FTE % (NRW and new local residents)					0.7%	0.7%	1.2%
Operations housing requirement							
Est. 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
Est. total housing requirement operations					65	65	130
Est. Number of WAV beds required					100	100	200

4.3.4 Accommodation of Project construction personnel

The Project would require all non-local construction personnel to utilise NRW accommodation provided or contracted by BMA, to avoid the potential to limit permanent residents' housing choices.

Data provided by IRC (in June 2018, amended in 2021 for recent approvals) indicate that there is a total of 19,052 existing WAV beds in the Isaac LGA, with a total approved capacity of 31,698 beds (including existing beds).

As noted in Section 3.4.9, BMA owns or has exclusive use of:

- in Dysart, BMA Dysart SPV Village with a capacity of 430 existing rooms and a total approved capacity of 443 rooms;
- in or near Moranbah, BMA Moranbah SPV Village with 579 rooms, Buffel Park Village with 1,439 rooms and approved capacity for a further 506 rooms, and Curtin House, which is currently closed but has an approved capacity of 172 rooms.
- near Goonyella/ Riverside Eureka Village (1,603 rooms) which is privately owned but provides accommodation exclusively for BMA's Goonyella Riverside and Broadmeadow mine personnel

Including Moranbah SPV, Dysart SPV, Eureka and Buffel Park, BMA's total existing NRW accommodation capacity is 4,051 rooms. WAVs utilised by BMA are shown in 2022 based on data provided by BMA. The four WAVs owned or exclusively used 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 percent).

BMA personnel also utilise a total of approximately 1,180 rooms in WAVs owned by third parties. Other WAVs in the Isaac LGA (such as the Civeo Village Coppabella) have considerable additional capacity (see Table 4.8).

Table 4.8: WAVs owned or used by BMA, 2022

WAV	Ownership	Total Rooms	Utilised rooms	Available rooms
Moranbah SPV	BMA	579	530	49
Dysart SPV	BMA	430	430	0
Buffel Park	BMA	1,439	1,300	139
Eureka	Third party, BMA exclusive	1,603	1,550	53
Total BMA		4,051	3,810	241
Leichhardt Village	Third party	580	580	Fluid
Dysart Ausco	Third party	400	375	Fluid
Dysart Civeo	Third party	280	700	Fluid
Total Third Party		1,180	1,655	Fluid

Source: BMA Workforce Accommodation data on BMA rooms and utilisation

Current approvals for increased capacity of BMA facilities include 3,000 beds for the approved but not developed Red Hill Mining Lease (RHML) Project, and 503 beds for the Buffel Park Village. The RHML WAV, if constructed, would accommodate RHML personnel, and be approximately 90 kms by road to the Project's north-northwest, which would be a two hour round trip for Project personnel and therefore not suitable for the Project.

As per Table 4.8, approximately 139 rooms are available in the Buffel Park WAV. There are no current plans to expand the Buffel Park WAV, and at approximately 58 km by road to the Project, Buffel Park is not a preferred option for construction personnel. The Dysart SPV has an additional approved capacity of 13 rooms, however BMA has no plans to build additional rooms in this SPV.

The Project's timing is uncertain, as is the availability of WAV 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 WAV stocks are likely.

The Project therefore includes a proposed WAV for the construction phase to accommodate up to 1,000 people. This would:

- ensure personnel can be located in quality accommodation close to the Project Site;
- limit personnel's travel time between the Project Site and their accommodation;
- reduce personnel's use of local roads;
- enable access to health, recreation and support services within the WAV, which will reduce demands on local services; and
- minimise the Project's demands on housing and avoid inflation of rental costs.

The construction WAV will be located along the eastern boundary of MLA 70383 and will cover an area of approximately 80 ha. Buildings will be prefabricated and transportable to minimise site construction impacts.

The construction WAV will consist of:

- village reception, offices and gatehouse;
- accommodation modules;
- wet and dry messes, recreation centre, gymnasium, sports field, walking tracks, bus and recreation shelters, and muster shelters.
- training room;
- laundry facilities and linen store;
- communications, IT rooms, transformer and substation;
- kitchen facilities;
- first aid facilities; and
- water treatment plant and sewage treatment plant (STP).

All buildings will be in accordance with the requirements of relevant statutory regulations and codes.

A dedicated first aid room will be provided within the village reception building and will have access directly from the reception area and access via the ambulance bay that will be located adjoining the building. The first aid room and equipment will comply with the requirements of the First Aid Advisory Standard 2004 as well as the *Coal Mining Safety and Health Act 1999*.

An EAP for counselling and emotional health issues, and regular health promotion programs will also be provided.

Following the completion of construction, the construction WAV would be dismantled and removed from site.

As sufficient accommodation beds for all non-local personnel will be available in the construction WAV, impacts on short term accommodation are not expected.

4.3.5 Housing local operational personnel

All BMA employees are eligible for company-provided accommodation options that include units, houses and WAV accommodation. The allocation of accommodation options is determined taking into account an employee's preferences, needs, the number of dependent children and other relevant family circumstances. BMA provides significant subsidies for housing costs, and also provides an ongoing housing maintenance and upgrades program. Employees choosing to relocate from outside the region to live in Dysart or Moranbah may be also entitled to relocation assistance.

At May 2023, BMA owned:

- 522 dwellings in Dysart, of which 36 dwellings were vacant and ready for allocation, and 108 dwellings were under care and maintenance until required, sold or redeveloped (see Table 4.9); and
- 880 dwellings in Moranbah, of which 34 were vacant and ready for allocation, and two were in care and maintenance.

Table 4.9: BMA Dwellings at 2023

Area	BMA Dwellings	Occupied Properties	Properties in Care and Maintenance	Vacant and ready for allocation
Dysart	522	378 (72%)	108 (21%)	36 (7%)
Moranbah	880	844 (96%)	2 (0%)	34 (4%)
Total Isaac LGA	1,402	1,222 (87%)	110 (8%)	70 (5%)

BMA does not expect any significant change in the number of dwellings it owns or in employee demand for housing by 2025/2026. This would see a total of 70 dwellings that are immediately available (36 in Dysart and 34 in Moranbah), and 110 dwellings that could be upgraded and made available (108 in Dysart and 2 in Moranbah), for a total of 180 dwellings.

BMA periodically reviews its housing stock and implements an ongoing maintenance and upgrade program to ensure quality housing stock is available to its workforce.

BMA invests in the refurbishment of properties (as necessary) to return them to its employee rental pool, and will ensure that housing will be available for all BMA personnel who wish to relocate to Dysart. This would substantially mitigate demands on local housing stocks, minimise any rental price increases that would otherwise be induced, and support Dysart's sustainability. Some personnel may choose to move to Moranbah rather than Dysart, and would be provided with BMA housing there, subject to the availability of company-owned housing in Moranbah at that time.

Based on the assumptions and calculations in Table 4.7, up to 65 dwellings could be required to house Project personnel (employees and contractors) during the first two years of operation, and 130 dwellings could be required to house Project personnel in the third year of operation. BMA will consult with its contractors to ascertain the requirement for housing of non-local personnel. If this consultation indicates that there is a shortfall between housing currently used by the contractors or their employees, BMA will arrange for contractors' access to BMA housing, equivalent to this requirement.

With 70 BMA dwellings currently ready for occupancy, this would exceed the estimated requirements for employee housing (65 dwellings) in the first two years of operations. Assuming further demand eventuated during the third year of operations, up to an additional 110 dwellings could be made available, exceeding the total housing demand estimated in Table 4.7.

The expected need for housing will be assessed prior to operations, based on new personnel's intentions regarding their living arrangements, i.e., how many will move to the Isaac LGA. Further monitoring of personnel's intentions would be undertaken on a quarterly basis during Year 1-3 to identify the need for additional dwellings to be made available.

This will enable planning and implementation of maintenance and upgrades to properties that are currently in Care and Maintenance to make a sufficient number of dwellings ready for new tenants as they move to the LGA. For example, if a further 50 personnel intend to move to the LGA in Year 3, this would be equivalent to the need for another 45 dwellings (based on the assumptions outlined in Section 4.3.1 and 4.3.3).

With up to 144 BMA dwellings currently available in Dysart, and a further 36 dwellings available in Moranbah, BMA has a sufficient number of dwellings in Dysart and Moranbah to accommodate the number of Project personnel who choose to move to the LGA.

If this housing supply is inadequate due to any unforeseen factors, BMA will develop new housing on its vacant and build-ready lots (which include a total of 123 vacant residential lots in Moranbah and 21 residential lots in Dysart). The number of dwellings to be developed would equal the shortfall between the number of BMA-owned dwellings available to Project personnel and the number of Project personnel who wish to move to the Isaac LGA. On this basis, BMA expects to be able to accommodate all locally based personnel using its existing housing stocks.

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

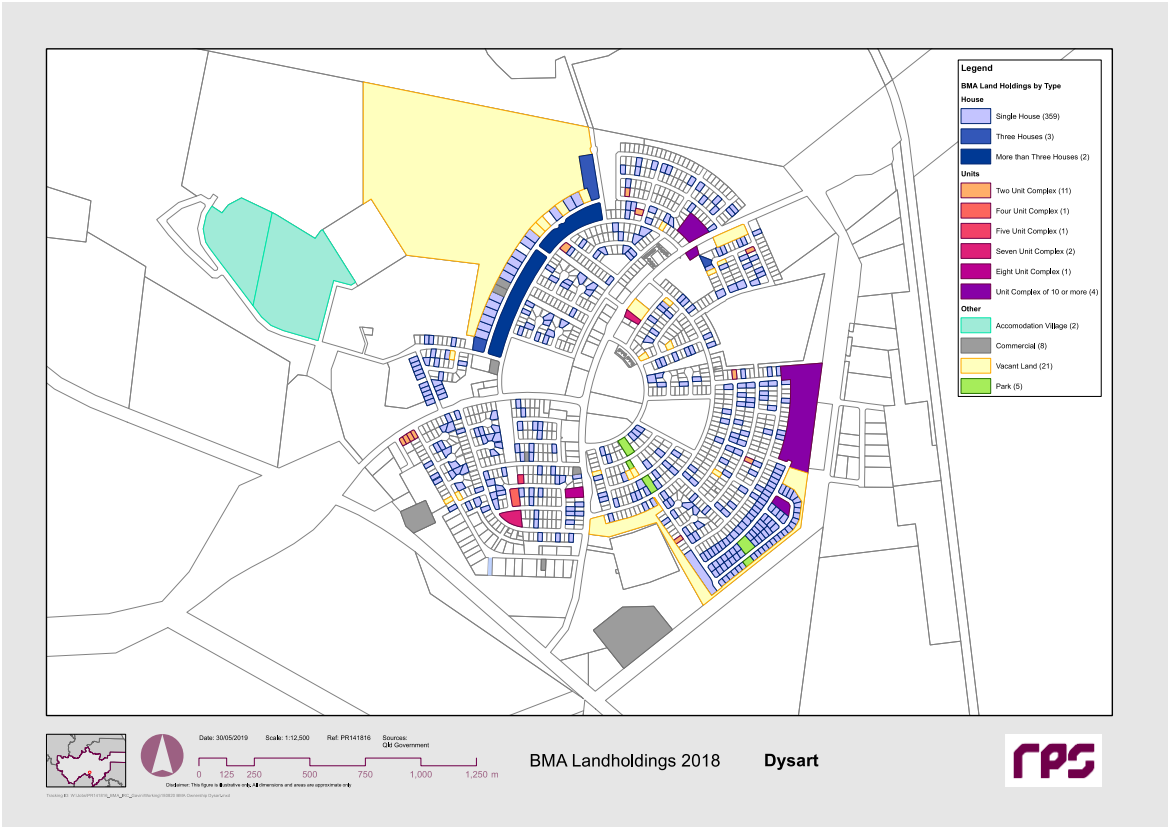
Indirectly, an increase in business employment and service demand may lead to increased demand for housing in Moranbah and Dysart. Businesses in Moranbah and Dysart are already experiencing difficulties accommodating their workers, due to low rental vacancy rates. BMA remains open to interest from other parties, including local services and businesses, regarding the use of surplus BMA housing. During construction, BMA will consult with the Dysart Business Group and Moranbah Traders Group regarding their expectations of increased business employment and employee housing demand as a result of Project operations, any shortages of housing to address this need, and potential arrangement for use of BMA housing, such as leasing of surplus housing to businesses or provision of accommodation through the IAHT.

Short term adjustments in the market may see an increase in rental costs as a result of the combined effects of indirect employment and contractors' housing demands, however with residential land available, collaborative community action underway to address local housing challenges, and based on the expectation of long-term contracting opportunities for businesses, housing development is likely to be stimulated.

It is possible that some of the 100 operational personnel who are assumed to move to the LGA would choose to buy their own dwellings rather than live in BMA housing, depending on the housing market at the time. The number of house purchases is likely to be small and incremental over time, and would be influenced by the availability and cost of housing, as well as the availability of finance. Any increased demand for housing from Project personnel is unlikely to have a discernible effect on housing prices

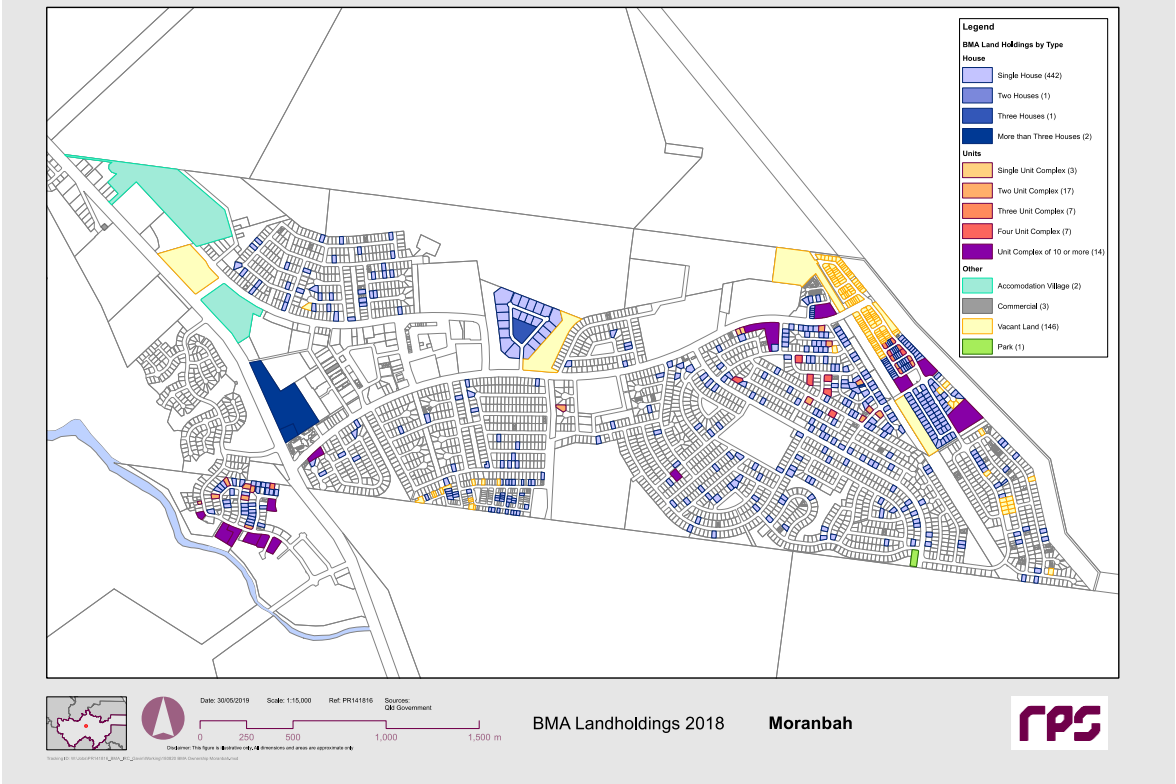
There is potential for housing demand induced by the Project to cause a small increase in property values, however as the majority of personnel housing requirements would effectively be met by existing BMA dwellings, this is likely to be a very small and incremental effect and is unlikely to impact housing affordability. Figure 4.3 and Figure 4.4 show the location of BMA's residential properties and landholdings in Dysart and Moranbah respectively, demonstrating that BMA's properties are well distributed across the two towns.

Figure 4.3: BMA landholdings in Dysart



Source: RPS for BMA, 2017

Figure 4.4: BMA landholdings in Moranbah



Source: RPS for BMA, 2017

Operations – non-local workers

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

BMA will accommodate its NRW operational personnel in existing WAVs in the Isaac LGA, which collectively have sufficient spare capacity (and substantial approved capacity for expansion). As the operational commencement date is not certain, identification of WAVs that 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.

Anticipating that rental vacancy rates may remain low, BMA will require all non-residential personnel to stay in WAVs. BMA would monitor demand for WAV beds as part of its recruitment process, and plan to ensure that all NRW have access to WAV beds when required by negotiating arrangements with BMA or other WAV operators ahead of the commencement of operations. As all non-local personnel will be accommodated in local WAVs, impacts on short term accommodation or rental accommodation from NRW are not expected during operations.

4.3.6 Summary of population and housing impacts

Table 4.10 provides a summary of the project's impacts on housing, based on the assumptions outlined in previous subsections.

Table 4.10: Population and housing impacts and benefits summary

Area	Stakeholders	Baseline values	Impact/Benefit	Management measures
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 percent 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 percent 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 percent. Such short-term increases are common in the Isaac LGA and would not make a significant difference to the NRW/resident population balance (a change of approximately 3.5 percent). Implications for demands on services are discussed in Section 4.4.	• 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
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	In 2027 (when permanent Project-related population increases are assumed to peak and stabilise), the Isaac LGA is projected to have a	Attracting 100 personnel and their families to the region would result in a population increase of approximately 260 people by Year 3,	• Promotion of opportunities to live in the communities of Dysart and Moranbah

Area	Stakeholders	Baseline values	Impact/Benefit	Management measures
	Moranbah and Dysart businesses Community and health services	residential population of 23,542 people and a NRW population of 11,980, people, for a FTE population of 35,522 people.	equivalent to 1.1 percent 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 percent. This would support community vitality, the sustainability of social resources (such as volunteers), and local business confidence.	• 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, 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 percent on the projected NRW population and contribute to demand for services and infrastructure.	• Use of existing WAVS which have spare capacity • Measures addressing potential impacts on social infrastructure as detailed in Section 4.4.3
Local housing availability	IRC Moranbah and Dysart community members ELAM 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	As BMA would provide subsided 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	• Provision of subsided housing in Dysart for all personnel who would move to the LGA, including employees and contractors • Provision of subsided 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

Area	Stakeholders	Baseline values	Impact/Benefit	Management measures
		could be made available for occupancy available in Moranbah.	housing may also be available in Moranbah subject to needs of other BMA workers at mines in the Moranbah area.	
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 is current spare capacity of 241 rooms. Other WAVS within the Isaac LGA have considerable additional capacity.	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. 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.	• Contractual agreements with existing BMA-owned WAVs or other WAVs to accommodate non-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

4.4 Health and community wellbeing

This section discussed potential impacts and benefits for social resources that 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 was expected to see substantial demands on health and emergency services, whether new locals and family members, or NRW;
- childcare services are currently limited;
- insight regarding workforce build-up is desirable two to three years in advance to enable a response (i.e. increased resources) in time to increase health, school and community services; and
- concern for increased cumulative impacts on the safety of the local roads.

4.4.1 Potential for social disruption or exacerbation of disadvantage

Non-local workers have long been part of mining operations in the Isaac LGA, with accommodation provided on mining leases for ‘single status’ local and non-local personnel from the late 1960s. Use of non–resident production workforces in the Bowen Basin commenced in the 1990s but increased substantially during the 2000s, reaching a peak of 25,035 people in June 2012 (QGSO, 2016a).

As noted in Section 3.2.4, there were approximately 2,270 NRW in Moranbah, 1,650 in Dysart, and 1,555 in Middlemount in 2021 (QGSO, 2022c). Stakeholders describe large numbers of non-local workers as diminishing the sense of close connections and familiarity.

Communities within the Isaac LGA have extensive experience in accommodating non-local workers, and Project-related increases are not expected to impact on local community or cultural values. However, during periods when there are high cumulative numbers of NRW in the LGA, residents experience the NRW influx as a strain on roads, public venues and health services, and there are occasional concerns about safety in relation to NRW behaviour. Crime statistics (presented in Section 3.5.5) indicate that Isaac LGA communities are very safe communities, with the rate of offences in the Isaac LGA substantially lower at 7,356 offences per 100,000 people than the Queensland average (9,154 offences per 100,00 people), notwithstanding the numbers of NRW currently accommodated in and around the towns.

Non-local construction workers may not observe local values such as family-friendly public places, and may offend through anti-social behaviour or poor driving behaviour. Large increases in the number of non-local males in town centres and venues may also make women uncomfortable, and there is potential for inappropriate or illegal behaviour to reduce feelings of safety for women, or to impact on women’s safety.

Recruitment of workers will occur across a range of age, gender and other groups to promote balance and positive behaviour amongst Project personnel.

BMA’s Workplace Conduct Policy provides clear guidelines to follow concerning conduct, and requires all workers to treat others with courtesy, dignity and respect, both at work and outside of work. Expectations of behaviour in town, and respect for local values, will be made explicit in on-boarding and induction programs for the Project. This will include behaving respectfully and courteously to

service providers such as hospital, GP clinic and ambulance staff. Compliance with the Principal Contractor's 'Work Rules' (for construction, outlining expectations of behaviour) and BMA's Workplace Conduct Policy (for operations) will be required. Workers demonstrating behaviour that does not comply with the company requirements will face disciplinary action in line with the terms of their employment. Workers staying in WAVs will also be bound by the facilities' Codes of Conduct, with withdrawal of accommodation as the result of non-compliance.

BMA will also provide information to the local community about BMA's expected standards of behaviour, and access to its complaints mechanism.

Venues such as hotels and clubs are well-versed in managing patrons' behaviour, and BMA has established relationships with key venues and local Police to ensure open communication about workforce behaviour. This will include:

- participation in the Moranbah Liquor Industry Action Group;
- liaison with the Dysart and Middlemount Liquor Industry Action Groups;
- sharing information about BMA's Workplace Conduct Policy; and
- establishing contacts between local stakeholders and BMA with regard to workforce behaviour.

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, whilst Moranbah's SEIFA score was above the Queensland benchmark (see Section 3.2.6). Housing is affordable in Dysart (at a median weekly rental of $310.00/week in June 20212) but less so in Moranbah at a median weekly rent of $450.80.

BMA has committed to providing housing in Dysart for all personnel who wish to love locally and do not have their own housing. BMA housing may also be available in Moranbah. On this basis, the Project is not expected to have any impacts that would increase the potential for social disadvantage in potentially affected communities. Conversely, access to BMA training pathways, the availability of skilled employment in underground mining and the incomes that come with mining employment are likely to increase workers' personal development and increase their access to resources that support wellbeing (e.g. housing security and the financial resources to access services).

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

In the cumulative context there is potential for competition for tradespeople to increase the costs of trades to local residents. BMA has committed to trades training programs, including 10 apprenticeships to be offered by the Project, to offset this impact. On the assumption that BMA's provision of housing and accommodation for its workers would mitigate increases in rental housing increases, other potential effects on costs of living in local communities are not anticipated.

4.4.2 Impacts on infrastructure services

Project-related population increases are likely to result in incremental increases in demand for physical infrastructure supporting telecommunications, water supply, sewage treatment facilities, road traffic, air travel and waste management in the Isaac LGA, as discussed below. In-migration of Project personnel coupled with projected increases in non-residential personnel would equate to an increase of 1.2 percent on the LGA's projected FTE population in 2027, which is not expected to require an increase in physical infrastructure capacity.

Water and waste management

BMA operates a water pipeline network in Central Queensland, servicing its mines, landholders and towns. Water supply for the Project will be provided via the existing water network supplying Saraji Mine.

BMA makes significant contributions to water supply in Moranbah and Dysart. BMA has already committed an allocation of subsidised water to IRC taking into account the full BMA portfolio of sites and potential projects. To the extent that the Project would result in additional personnel living locally, and therefore increase demand for town water supply, and if current Dysart town water supplies were unexpectedly 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.

An important aspect of the operational strategy for the Saraji Mine complex is to re-use mine water wherever possible as a priority over external pipeline raw water supply. Some of the water requirements for the operations require high quality water sourced from an external pipeline raw water supply. BMA holds allocations of water from the Fitzroy and Burdekin water catchments and numerous licenses to interfere with and take water across BMA's mine sites. BMA will prepare, update and maintain a Water Management Plan.

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 Project's underground mining operations. It is proposed that the pipeline be relocated to the transport and infrastructure corridor on the eastern edge of the Project Site.

A STP will be installed to service the MIA and the construction WAV. Effluent from the STP will be managed as part of the overall existing Saraji Mine water management system. The STP will be designed for a capacity of 1,200 equivalent persons. Effluent from the STP and the WTP will be discharged to the tailings dam at the existing Saraji Mine.

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. BMA will prepare and implement detailed Waste Management Plans 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. This will include transportation of regulated waste to waste management sites outside the Isaac LGA, until discussions with IRC indicate that local waste management facilities' capacity is sufficient to manage Project waste without impacting on other users or Council's resource capacity for waste management.

Energy and communications

Electrical power will be supplied via the existing power network supplying the Saraji Mine and the construction of a new 66 kilovolt (kV) power line to Dysart Power Station and northern connection. Preliminary assessment indicates that the proposed increase in fleet and CHPP would not exceed existing network capacity following the construction of the supporting power infrastructure. The existing 132 kV powerline, which is owned and operated by Powerlink, will be relocated to the eastern transport and infrastructure corridor.

The telecommunications network will be managed by extending the services from the Saraji Mine through to the Project site via the existing service corridor. This system will allow for easy connection through to existing BMA systems. Telecommunications will be controlled and monitored through the Project control room located on site or from a centrally located facility in Brisbane. The potential for

partnership between BMA and IRC to develop an additional radio transponder is noted, which could make a positive contribution to local infrastructure. BMA is investigating the shared value of this proposal and will liaise with IRC in this regard.

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 natural disasters and emergencies. As part of implementing their Community Roadmap, the STACs have had a focus on improving digital connectivity, which is integral to enabling the growth of local businesses as well as enhanced skills and training opportunities. With the support of BMA, a partnership was developed between BMA, Telstra and GW3, which is now delivering a $3.5 million upgrade to digital connectivity in Dysart and Moranbah. The project is progressing, having identified sites for new mobile phone booster stations, and the lodgment of development applications for assessment by Isaac Regional Council.

Since December 2018, BHP has been a key partner of Greater Whitsunday Alliance (GW3) which is an independent regional economic development body for the MIW region. The partnership has supported GW3 to deliver a number of projects and studies to ensure the region is well prepared to address emerging trends in employment, industry and technology, including a digital infrastructure study, which assessed the current infrastructure gaps and identified future investment opportunities for digital infrastructure.

Agreements with Isaac Regional Council

BMA's agreements with IRC address the impacts of its operations on local infrastructure, including:

- contributions to road maintenance, as outlined in the Transport and Traffic Assessment;
- contributions to the LGA's water supply, as per BMA's agreements with IRC;
- the agreed waste management strategy;
- investments in social infrastructure (see Section 6.1.5 and 6.5.4); and
- support for the ongoing operations of the BMA-owned Moranbah 'Bunhdhara' Airport.

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

4.4.3 Impacts on social infrastructure

Health, police and emergency services

Construction

The Moranbah and Dysart Hospitals have both noted in consultation that non-local workers represent a significant cumulative impact on their services, as workers 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 workers in towns. Occasional short stays are also required by NRW, however the hospital's bed occupancy rates are low (see Section 3.6.6) so this is within the hospitals' capacity.

BMA will require its construction contractor and WAV 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 in the WAV 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 EAP 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; and
- nutrition and education programs delivered through the WAV's dining facilities.

These strategies would reduce impacts on local health services, however some construction personnel will require GP and hospital services while they are on shift. To minimise non-local employees' demands on local services, the workforce on-boarding process will also ensure that all non-local employees and contractors understand:

- routine matters and existing health issues should be addressed before they commence their rosters;
- where relevant, prescription drugs, prescriptions and records of health issues should be brought to site for every roster;
- on site health staff's assistance can be sought in relation to health concerns; and
- their supervisor or manager should be made aware of any health issues that are hampering their ability to undertake usual duties.

As noted in Section S, there is a shortage of GPs in Dysart. This would be the closest town to the WAV, and would likely experience most of the demand. NRW are likely to attend to routine and specialist health issues in their hometowns or regional centres, so they do not represent a full-time load on local services. There are no data to identify how many non-local personnel attend a doctor while they are rostered on, so analysis of NRW worker's demand for GP services has made the conservative assumption that 10 percent of workers in any one rostered-on period would visit a GP, which would see an equivalent demand for services for 45 people.

At an estimated 450 NRW on shift at peak during construction, using Queensland Health's Rural Health benchmark of one GP to 600 people, this would be equivalent to a temporary demand for approximately 0.1 of a GP. This may be an appreciable increase in demand for the one GP currently servicing Dysart and may cause increased waiting times for other patients. The Project will need to monitor the level of GP provision and potentially facilitate an increase in the supply of local GPs if Project demands are affecting other residents' access.

The potential for some non-local personnel to behave aggressively towards health service staff was noted in SIA consultation. As discussed in Section 4.4.1, all Project personnel will be required to behave in a courteous and respectful manner in interactions with health and emergency staff.

NRW are also likely to make regular low-level demands on police (e.g. for vehicle licensing issues) and occasional demands on police, QAS and QFRS services for responses to traffic accidents and emergencies including injuries and sudden acute illnesses. Increased demands on police for the escort of oversize loads is also likely, however this is managed by Queensland Police by enabling police to provide escorts on a commercial basis while they are off shift.

The Isaac region's emergency services noted in consultation in 2021 that their capacity is generally adequate to service their geographic region and the FTE population. 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. BMA will also ensure local QPS, QAS and QFRS officers are oriented to the Project Site during construction, and provided with on-site contacts to manage site access and coordinated emergency responses.

The Project's proposed WAV is located more than 30 km from Dysart, the closest town. The WAV will incorporate dining facilities, a licensed bar (with stringent controls on alcohol service) and sport and recreation facilities. As such it appears unlikely that construction personnel will make any other significant demands on local social infrastructure, with the exception of occasional visits to shops or hotels in Dysart. This is likely to be experienced as positive for local business trade.

Operations

This section considers the potential for impacts on health, police and emergency services from a combination of residential population increases and NRW during operations. As outlined in Section 4.3.3, the Isaac LGA's FTE population could see a total population increase (inclusive of new residents and NRW on shift) of approximately 440 people by 2027, which is equivalent to an increase on the estimated FTE population of approximately 1.2 percent.

A resident population increase of 260 people, based on Rural Services' benchmark, would see the need for an additional 0.5 GP by 2027 (with demand likely shared between Moranbah and Dysart doctors). A large proportion of new households are likely to be young families who typically have more frequent needs for health services, so the demand increase may be higher than the population increase.

With an assumed 180 NRW on shift in 2027, and assuming 10 percent of them would require a doctor's appointment during their rostered-on periods, this would represent a minimal increase in demand for GP services, in the order of 18 people. Personnel would be encouraged to attend to health issues in their home communities and/or via telehealth services, however occasional demands on hospital services are likely.

As businesses, GP clinics can increase their staff resources to meet 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. This is particularly so in Dysart where a lone GP has been meeting the needs of the community for more than 17 years, and is now moving on. MHHS is working to replace the doctor.

BMA will monitor GP numbers and the ratio of GPs to local populations prior to commencement of construction, including consideration of non-local workers based in and around Dysart and Moranbah. If the GP: population ratio indicates that there are current or imminent shortages in the availability of GPs, BMA will work with stakeholders including community organisations, NQ PHN, Queensland Health and IRC to identify and implement strategies that will attract and retain additional GPs to service local communities. In the past this has included provision of housing for health service workers, and participation in community-Council initiatives aimed at recruitment and retention of local doctors.

Locals have identified difficulty in accessing visiting specialist services, however the provision of allied health services has improved during the past five years, with both local GPs and Mackay District HHS increasing the availability of visiting specialists, and access to new allied health business such as Outback Medical Imaging and Construct Physiotherapy. A small increase in demand for specialist services is likely as the result of population influx related to the Project, and could impact on appointment times until demand thresholds are reached for more frequent or longer specialist visits to local towns. All BMA operational sites employ health advisors, exercise physiologists, and qualified

rehabilitation and return-to-work coordinators, and provide free on-site physiotherapy and occupational therapy services for work and non-work-related injuries, which is likely to minimise demand on allied health services such as physiotherapists and occupational therapists.

Community service organisations consulted for the SIA identified increasing demands for non-local workers 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 NRW adding to the service load for the Moranbah District Mental Health Service and community support services.

The Project is not expected to have adverse impacts on community mental health, and conversely, access to secure employment and a choice of living arrangements may support the positive mental health of workers. Specific measures regarding promotion of mental health for the Project's workers are provide in Section 6.3.6.

BMA will provide access to an EAP, and ensure access to the internet and mobile phone services to maintain daily connection with family members and friends is provided for personnel staying in the WAV. However, some personnel may choose to access services in Moranbah and Dysart. BMA will monitor demands on local health and community health services in co-operation with the Mackay Hospital and Health Service Rural Services, and if a need for additional services in identified, work with local community partners in Moranbah, Dysart and Middlemount to identify appropriate service and program responses to address mental health issues.

Moranbah has two dental surgeries and approximately three FTE dentists, with their promotions indicating that new patients are welcome and same-day appointments are available. Dysart has one dentist who also services Middlemount, whilst Coppabella and Nebo residents rely on Mackay or Moranbah dental surgeries. Dentists would also see an increase in demand from both new residents and non-local residents with dental emergencies, but are likely to be able to adjust their service capacity to meet demand given adequate notice.

Increased demands on QPS, QAS and Rural Fire Brigades in response to WAV call outs, traffic incidents, and general community policing duties are also likely. As all ambulance stations apart from Moranbah operate with single officers on duty, the increase in demand will need to be closely monitored in co-operation with the services. Either or both of the Moranbah and Dysart QAS teams could be called to the project site, dependent on service personnel's availability, and both ambulance stations will need to be involved in site orientation and liaison with on-site Project staff.

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 service provision arrangements. The capacity of health services capacity will also require monitoring by the Queensland Government as part of its assessment of cumulative impacts, and as part of planning for regional population growth.

Childcare

Moranbah, Dysart and Middlemount each have childcare centres with waiting lists. Analysis of childcare shortfalls undertaken for the Moranbah and Dysart STACs in 2021 indicated that in Moranbah there was an estimated shortfall of 77 day care places and 41 OSHC places. In Dysart there is an estimated shortfall of 11 day care places and 38 OSHC places. These shortfalls were in addition to the approved places that are currently not being offered, because the services are not operating at full capacity.

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 percent), some of whom would require childcare.

The June 2021 National Childcare Usage survey undertaken by the Department of Education (Commonwealth) showed that nationally, in the June quarter 2021, 46.4 per cent of children aged 0-5 years and 32.0 per cent of children aged 0-12 years used approved childcare. The average weekly hours of childcare use per child (excluding In Home Care) was 25.2 hours, which at an assumed average of 10 hours/day, equates to between two and three days per week per child. The analysis shown in Table 4.11 has therefore assumed the early learning (0-5 years) childcare 'load' at 27.8 percent of children aged 0-5 years, being three fifths of the 46.4 percent of children in this age group that use childcare. Using the same assumptions, the out of school hours care 'load' is estimated to be 19.2 percent, noting that this is a 'high end' estimate as the 0 - 12 year group includes the 0-5 years group, which has a higher usage rate of childcare.

This would see demand for five early learning childcare places and seven out of school hours care places 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.

Given the deficit in capacity identified by the childcare study undertaken for the STACs in 2021, BMA is investing in additional childcare service capacity through partnerships with local stakeholders. BMA has provided $1.2 million to support the establishment of a Childcare Leadership Alliance and the implementation of innovative approaches to address the childcare shortage. The Childcare Leadership Alliance has been established for a period of two years, with delivery to be handed over to a community management committee at that point. BMA has also invited BMA housing tenants to submit expressions of interest in providing family daycare, as this model is more flexible for mining industry workers who may need to work night shifts, and offers families a real choice of childcare options.

The development of a family daycare program is currently in the feasibility stage, but is expected to realise an increase in early learning childcare places at least commensurate with the need that could be induced by the Project, i.e. if two providers offered four places each, eight children could access long daycare. The Childcare Leadership Alliance will also investigate and where possible deliver initiatives including incentives to improve recruitment and retention of childcare workers, support for school-based childcare traineeships and for those who wish to upgrade their qualifications to a bachelor's degree and recruitment of family day care educators.

Prior to Project construction, BMA would liaise with local childcare providers, the Department of Education and IRC to understand the alliance's achievements in increasing childcare availability. If suitable increased capacity has not been achieved to meet the estimated Project needs shown in as shown in Table 4.11 below, BMA will work with the Alliance (or its successor) to achieve the required additional capacity.

As the key constraint on local childcare capacity is a lack of suitably skilled and qualified childcare workers, and this is a persistent issue in regional Queensland, 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.

Key issues that constrain workforce participation, especially for women, include the lack of overnight childcare, and current long day care hours are not adequate to meet the needs of workers on 12 hour shifts. The Project will consult with all employees as they are on-boarded to identify their current and anticipated childcare needs, and if necessary, 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.

As the number of new local families grows, it will be necessary to monitor the capacity of childcare services to ensure that both the Project and childcare planners are aware of issues that would constrain local or female workforce participation. Childcare availability should also be monitored by the Queensland Government as part of its assessment of cumulative impacts, and as part of planning for regional population growth.

Table 4.11: Project induced increase in no. of childcare places required

Age group	Isaac LGA 2021	Age group as % of ERP	Project increase @ 260 new residents	% of group in care (equivalent)	Places required
0-4 years - long day care	1,585	7.20%	18.72	27.8%	5.2
5-14 years - OSHC	3,110	14.10%	36.66	19.2%	7.0
Total childcare places needed					12.2

Source: ABS Census 2021b (population by age group). Department of Education (Commonwealth), 2021 (National Childcare Usage Survey)

Education and training

The profile of new local households is likely to be similar to the existing community profile, so the number of children who may join local communities as a result of Project-induced population increases has been estimated using the Isaac LGA's proportions of children and young people.

This indicates, as shown in Table 4.12, that a population increase of 260 people could include approximately 50 people under 20 years, of whom 37 would be aged 5 – 14 years, and 13 would be aged 15 – 19 years.

The number of school enrolments required was estimated using the proportions of each age group who were attending an education institution. The results are shown in Table 4.12, and indicate that 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 (noting that some 17-19-year-old students are enrolled in further education institutions).

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.

Table 4.12: Project-induced increase in no. of school enrolments

Age group	Isaac LGA ERP 2021	Age group % of ERP	Project increase @ 260 new residents	% of group in education	School enrolments required
5-14 years	3,110	14.1%	36.7	87.0%	32
15-19 years	1,074	4.9%	12.74	56.7%	7
Total	4,184	19.0%	49.4		44

Day 8 enrolment figures for the five-year period from 2016-2021 (see Section 3.6.2) indicate that there was no change in the number of State school enrolments in Moranbah, while the high school experienced an increase of 19 percent. Dysart State School saw a decrease of 13 percent in enrolments over this period, and Dysart High school had a very small increase of 3 percent. Dysart schools are likely to receive the majority of demand for school enrolments (as the majority of the BMA housing on offer is in Dysart) and are likely to have capacity to absorb Project-generated demand.

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.

Increased demand on public and private training providers is likely to be spread across Queensland regions. Many are private organisations and will appreciate the opportunity for extra supply.

Council and community services

Council infrastructure and services that support community wellbeing and development include civic centres and community halls, pools (and in Moranbah, the Aquatic Centre), libraries in each town, the Moranbah Art Gallery, regular community events, and a wide range of sporting and recreation facilities.

Population growth as a result of the Project will increase demand for these services and facilities. As noted in Section 4.3.3, in-migration of approximately 260 Project-related personnel and family members would be an increase of approximately 1.1 percent on the forecast LGA population in Year 3 of operations, assumed to be 2027, and result in increased demand for Council services and facilities in this order. There is also likely to be demand on some Council services (e.g., recreational facilities and community services supported by Council) from NRW, but of a lesser order of magnitude given they will access most services from their home communities and/or in the WAVs.

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 service an increased population. BMA's community investment 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.

BHP contributed more than $3 billion in royalties to the Queensland Government in FY22 alone. In addition in FY2022, BMA voluntarily invested $13.72 million on health, education and environmental projects in the Bowen Basin.

BMA also makes contributions to industry partnerships that support regional communities, including investing in the Resource Community Infrastructure Fund (RCIF). During 2020-2022, projects funded by the RCIF include: with funded projects including:

- $8 million for the redevelopment of the Moranbah Community Centre; and

- $8 million for affordable housing in the Isaac LGA.

This investment will increase the capacity and amenity of the Moranbah Community Centre facilities, and build 16 affordable housing units, including five that are suitable for tenants supported by the National Disability Insurance Scheme.

Prior to commencement of construction, BMA will consult with IRC regarding the existing capacity of community and civic service, and any opportunities for BMA to invest in enhancement strategies, through its community investment strategy or through the Royalties for Regions program, in respect to identified impacts.

In 2021, 2.2 percent of Isaac LGA residents had a core need for assistance (disability), which was an increase since the 2016 Census, but less than half the equivalent rate in Queensland 5.9 percent). The Project may make a small contribution to disability support and participation requirements. If 2.2 percent of new residents related to the Project had a disability, this could include six people with disability, which may contribute to increased needs for services. BMA will work with HCC, MDSS and DTATSIPCA to monitor service availability, and if a deficit is identified prior to Project operations commencing, BMA will prioritise its community investment to include investment in additional service disability service capacity through HCC or other agencies.

The need for community and individual support services will need to be closely monitored during the first three years of operations, in cooperation with MDSS, DTATSIPCA, Dysart Community Support Group (DCSG) and HCC. BMA will participate in initiatives led by community, Council or Queensland Government agencies to address identified needs for community and individual support services in Moranbah and Dysart, both to mitigate impacts of Project-induced population increases, and to optimise residents' access to services and programs that enhance their wellbeing. Consultation with DTATSIPCA and/or the Department of Child Safety, Seniors and Disability Services (DCSSDS) may need to occur if there is an impact on community and individual support services used by seniors, people with disability or Aboriginal or Torres Strait Islander peoples.

Recreation and Cultural Facilities

Moranbah, Dysart and Middlemount have good access to recreational and cultural facilities, with numerous sporting fields, and club houses, libraries, the Moranbah Art Gallery, and a wide range of recreation and cultural associations. 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 workers (who don't participate in community activities at the same levels) and increased numbers of FIFO workers.

In this context, facilities and services are adequate to absorb Project-induced population increases, but an increase in human resources that support facilities and the community organisations that support them is required. 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 that will increases human resources and skills available to support recreational and cultural facilities, including sporting clubs.

BMA regularly funds community organisations and groups to enhance local services and programs (see Sections 6.5.3 and 6.5.4).

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 that 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 DESBT through regular community forums and partnerships that address issues of community concern.

When the timing for the Project is known, 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 annually 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 Plans and service protocols for the Project.

4.4.4 Community health and safety

Air quality

As detailed in the air quality assessment (EIS Appendix H1) estimates of background dust levels were developed using data from the Caval Ridge Mine Site 2 ambient air monitoring station located approximately 4 km north-west of the Moranbah 'Bunhdhara' Airport and 38 km north-northwest of the Project. Percentages of the Project air quality goals that are represented by the estimated background level ranged from 36 percent for dust deposition to 4 percent for total suspended particles (TSP) to 91 percent for the annual average concentration of PM_{10} (Ambient Air NEPM standard).

Assessment of Project impacts on air quality found:

- the potential for adverse impacts of dust from the Project (in isolation) at the location of the Saraji 2 Homestead and Saraji 3 Homestead during peak operations;
- adverse risks of impacts on air quality at the Saraji 2 Homestead and the Saraji 3 Homestead are predicted in association with Project goals for the 24 hour average concentration of PM10, so the implementation of additional dust mitigation measures may be required when excess ROM coal is transported from the Project CHPP to the Saraji Mine CHPP during adverse meteorological conditions at any time during the life of the Project; and
- results of the dust assessment did not highlight any significant air quality issues attributable to the Project at any of the other assessment locations.

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 and as having minimal impact on the future air quality environment.

The assessment recommends the application of water as/when required to minimise dust emissions during construction, and recommends a number of key dust reduction features, including the transport of ROM coal by conveyor from the mine portal to the Project CHPP to minimise overall dust emissions during operations.

Road Safety

The traffic and transport assessment documents the assessment of traffic safety issues that may be introduced or exaggerated by the Project. They include:

- Lake Vermont Road is currently an unsealed road from Dysart Road eastward. As it would be used as the main access road to the proposed WAVs, upgrading is considered necessary;
- The geometric layout of the Dysart Road / Lake Vermont Road intersection is believed to be adequate for the Project traffic, however the assessment proposes lighting be installed at the intersection to improve visibility;
- One new intersection on Dysart Road will be required to gain access to the Project, the design and configuration of which are required to meet the traffic demand and safety for heavy vehicles during the construction and operation stage; and
- The geometric layout of the Dysart Road / Peak Downs Mine intersection is believed to be adequate, however installation of lighting was recommended to reduce any safety risk due to increased traffic resulting from the Project.

The Traffic and Transport Assessment provides mitigation measures for identified risks.

Exposure to hazards or risks

EIS Chapter 20 provides a comprehensive assessment of potential hazards and risks that may result from the Project. Residual high risks identified include traffic accidents, underground mine collapse, underground mine fire, high voltage electricity and natural hazards. Other potential risks to people and the environment, such as dangerous goods, noise and vibration and coal dust associated with construction and operation of the Project have been assessed with medium or low residual risks.

The implementation of BHP Safety Our Requirements is anticipated to effectively manage most of the risks associated with the Project, and existing BMA operations have successfully demonstrated management of these risks. Further hazard analysis and ongoing communication and improvement strategies will also be carried out to enhance environmental values and workplace safety.

Risk assessment is an ongoing process and, as the project design evolves, the impact on risk will be regularly reviewed to ensure risks are as low as reasonably possible.

4.4.5 Summary of impacts on health and wellbeing

Table 4.13 provides a summary of the Project's potential impacts on community health and wellbeing.

Table 4.13: Health and wellbeing impacts and benefits summary

Area	Stakeholders	Baseline values	Impact/Benefit	Management measures
Social disruption	IRC Moranbah and Dysart residents and community organisations DHCDE, 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 percent on the projected number of NRW. During operations, the expected increase in NRW is 1.5 percent. Communities within the Isaac LGA have extensive experience in accommodating non-local workers. A temporary increase of 5.6 percent and a permanent increase of 1.5 percent is not expected to impact on local community or cultural values	Workforce Code of Conduct Access to non-resident accommodation sufficient to meet the needs of all NRW
Disadvantage	IRC Moranbah and Dysart residents and community organisations DHCDE, 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 avid displacement of low-income households BMA social investment as described in Section 6.5.4.
			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 Project's underground mining operations.	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 increase demand for town water supply, and if current town water supplies were insufficient to the increased quantum of

Area	Stakeholders	Baseline values	Impact/Benefit	Management measures
				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 STACS 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 Northern Queensland PHN	The Moranbah and Dysart Hospitals experience large cumulative numbers of NRW as a strain on services. MDHHS and Northern Queensland PHN have responsibility for planning for health services including GP access.	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 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

Area	Stakeholders	Baseline values	Impact/Benefit	Management measures
			A population increase of 1.2 percent 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.	Advice 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 capacity is generally adequate to service their geographic region including the FTE population.	NRW are likely to make regular low-level demands on police (e.g. for vehicle licensing issues) 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,	Liaise with the QPS, QFES, SES, QAS to advise of the timing of Project 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 to manage 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 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 Project, BMA will facilitate recruitment of childcare workers to Dysart and Moranbah, by paying the costs for recruitment of childcare workers, including

Area	Stakeholders	Baseline values	Impact/Benefit	Management measures
				international recruitment if this is necessary, commensurate with the additional demands induced by SEMLP 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 inf 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 expected to strain school capacity.	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
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 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 percent 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.	As an underground mine, the Project has minimal potential to contribute to an increase in dust. Impacts on local air quality that are attributable to the Project were assessed as immaterial when compared to the existing air quality environment.	Nil required

Area	Stakeholders	Baseline values	Impact/Benefit	Management measures
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 improved visibility at two key intersections.	Upgrading the intersection of Dysart Road and Lake Vermont Road, as indicated by traffic impact assessment 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, Qs, 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) 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.

4.5 Local business and industry

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; and
- identifying local and Indigenous businesses who can be part of supply arrangements during construction and operation.

4.5.1 Local and regional business participation

As described in Section 3.7.6, the Isaac LGA, Central Highlands and Mackay LGAs have well-established construction and mining services industries. The indicative types of construction materials and services required for the Project are:

- earthmoving and site preparation;
- componentry for CHPPs, conveyors, MIA facilities and longwall construction;
- provision of steel and concrete;
- prefabricated buildings;
- conveyor building;
- construction management services; and
- trades services.

Earthmoving services may be sourced from the Isaac LGA, and raw materials for concrete and road base will be sourced from the Project Site or appropriate licensed local quarries. Concrete will be batched off-site, with the potential for an on-site batching plant if required. The remaining material and services will be accessed from outside the Isaac LGA, from across Australia and potentially from international sources.

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

- electrical, welding and plumbing services;
- tyres and vehicle servicing;
- crane and equipment hire
- earth moving, drilling and construction companies;
- fabrication and engineering services;
- mining services;
- hardware and glazing services;
- cleaning companies;
- training services and health service providers
- pharmaceuticals, groceries, stationary and newspapers
- mining equipment hire companies;
- accommodation facilities;

- labour hire, recruitment and human resource management providers; and
- cafes and clubs, providing venues and catering.

Project supply opportunities will be promoted through C-Res (further discussed below) and the Industry Capability Network (ICN) to ensure businesses in the Isaac LGA and broader Bowen Basin can participate in the Project's supply chain.

'Full, fair and reasonable' opportunity

BMA complies with the Queensland Resources and Energy Sector Code of Practice for Local Content 2013 (the Code).

The Code is an industry-led self-regulated initiative, administered and monitored by Queensland Resources Council, under which resources and energy companies are encouraged to:

- adopt the principle of 'full, fair and reasonable' opportunity for capable local businesses to participate and implement an associated delivery framework
- complete a Code Industry Report (CIR) annually to assist the QRC in completing the annual Code Effectiveness Report; and
- participate in annual forums and/or the QRC's Local Content Working Group that aim to monitor and make improvement so the Code.

The Project will comply with the Queensland Resources and Energy Sector Code of Practice for Local Content 2013 (the Code) as outlined in the local business and industry procurement plan (Section 6.6).

Enhancing local supply opportunities

With more than twenty years' operation in the Bowen Basin, BMA has built an extensive supply network of local and regional businesses, from SMEs to Queensland and national companies. This network will be a key source of suppliers to the Project.

BHP's 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 full-time equivalent employees to competitively supply goods and services to BHP, through registration, support and training. The 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; and
- accommodation and catering.

As at December 2021, there were 209 businesses from the Isaac LGA registered for BHP's Local Buying Program. More than two thirds were businesses based in Moranbah (70 percent). A further 17 percent were businesses from Dysart, 7 percent were based in Nebo and 4 percent were based in Middlemount, with the balance from Glenden, Clermont and Coppabella.

The Saraji Mine's supplier base through the Local Buying Program includes 142 businesses from across Isaac (43 percent), Central Highlands (10 percent) and Mackay LGAs (46 percent).

BMA's underground Broadmeadow Mine has a similar local supplier base of 128 businesses from across Isaac (39 percent), Central Highlands (12 percent) and Mackay LGA (49 percent).

The Project will ensure local and regional suppliers have full and fair opportunities to contribute to its supply chain, and will take full advantage of the Local Buying Program to ensure suppliers are supported to do so.

4.5.2 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 that includes an allocation to the Foundation, which focusses on:

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

- business and industry innovation;
- developing the workforce of the future;
- micro-business and SME capacity-building;
- sponsorship of business awards, conferences and events;
- indigenous economic development; and
- industry promotion and economic development.

Local Buying Foundation 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.

Recent examples of business capacity building projects supported by the Local Buying Foundation are provided in Section 6.6.3.

A similar range of business capacity building projects is likely to be available to local businesses to support their participation in Project supply opportunities.

Key agents in the economic development of the SIA study area who will be engaged as part of refining capacity building strategies for local businesses include:

- Moranbah Traders Association, which offers a local business registration portal;
- Dysart Business Group;
- DCSG;
- Isaac Regional Council's Economic Development team;
- GW3; and
- the Mackay Isaac Whitsunday Regional Development Authority.

4.5.3 Indigenous businesses

BHP has developed a series of measures that form part of a comprehensive Local and Indigenous Sourcing Strategy, aimed at lifting capability and performance in working with local and Indigenous suppliers. 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. Subject to compliance requirements, this may include:

- letting minor contracts that can be negotiated directly without tender processes;
- unbundling larger contracts;
- preferencing Aboriginal and Torres Strait Islander enterprises using weightings;
- providing support to meet qualifications; providing information regarding emerging procurement opportunities; and
- explaining company policies and processes.

From a total of 15 Indigenous-owned businesses registered for BMA's Local Buying Program in 2018, there are currently 48 registered Indigenous-owned businesses, primarily from across Mackay, Isaac and Central Highlands LGAs. During June-December 2021, expenditure with Indigenous owned businesses accounted for more than $3 million dollars, equivalent to approximately 6.5 percent of the Local Buying Program's expenditure. The Project will adopt 6.5 percent as its 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. Recently this has included funding to Marabisda - Auspicing to Indigenous Business Builders to provide Trading Tracks, an Indigenous Business Support Program to enhance economic participation of Traditional Owner businesses and small-to-medium Indigenous enterprises in the Central Highlands, Isaac, Mackay and Woorabinda LGAs.

The Project will proactively share information on procurement opportunities, supplier qualification and performance requirements with BBAC, Aboriginal and Torres Strait Islander supplier networks such as Supply Nation and Black Business Finder, and through C-Res.

4.5.4 Effects on local business and key industries

Effects on agricultural land and businesses

There are no Priority Agricultural Areas (PAAs) located within or in the vicinity of the Project Site. The Strategic Cropping Land (SCL) trigger map identifies strategic cropping areas (SCAs) in the southern part of the Project site on MLA 70383. SCL assessment for the Project (GTE, 2020) verified a small portion of mapped area with potential SCA impacts, with the Project's proposed overhead powerline corridor traversing the SCA, however disturbance will be minor given the nature of the powerline infrastructure. BMA has completed further government consultation and application to secure relevant Regional Development Interest approval in this area.

SCAs have importance to the local community, with agricultural uses pre-dating mining in the Isaac LGA by several decades The post mining land use will be an undulating landscape that could be used as grazing land, consistent with the surrounding pastoral land use.

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 stock route (405ISAA) is located in the south of the Project Site where the Project's powerline is proposed and will intersect the stock route. BMA will liaise with IRC and the Department of Resources regarding management and mitigation strategies for the temporary closure of the stock route during construction, if construction activities would interfere with stock movements.

Business benefits

With BMA's Local Buying Program in place for the Project, businesses in the Isaac LGA and the broader region are likely to derive increased trade and opportunities as result of participating in the Project supply chain. There is also a likelihood that expenditure by new local residents, and to a lesser extent NRW, will increase demand for local goods and services, and support ongoing sustained development of local businesses.

In the six months to December 2021, BMA spent a total of $46,543,691 with small, local, and Traditional Owner and Indigenous Businesses in the Bowen Basin (C-res, 2022). Of this, 32 percent (almost $15 million) was expended with local suppliers based in the Isaac LGA.

As an indication of the Project's potential expenditure with Isaac, Central Highlands and Mackay LGA businesses as part of the Local Buying Program during 2021 included:

- Saraji Mine with production of 8.8 million tonnes in 2021 spent $6,516,368; and
- Broadmeadow Underground Mine with production of 5.2 mtpa spent a total of $14,652,700.

This indicates that the Project would be likely to expend several million dollars per annum with businesses in the Bowen Basin. Based on the inclusion of local businesses in the supply chains for Saraji Mine and Broadmeadows Mine, approximately 40 percent of this expenditure could be spent with businesses in the Isaac LGA. Flow-on economic benefits are discussed in EIS Appendix K.

As noted in Section 4.2.7, there is 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 after the Project commences, and see a drain of labour from local businesses and services to the Project, which would cause inconvenience and costs to business owners and service managers. Project personnel who move to the Isaac LGA for Project employment will bring partners and young people with them, which could offset labour drain.

Local initiatives and partnerships that would assist local businesses and services to improve their capacity to recruit and retain staff would be considered under the C-Res Local Buying Foundation Program (see Section 6.6.3).BMA will maintain a strong focus on workforce skills and development, to support development of the skills and labour capacity required by the Project, and help to reduce labour draw from other businesses.

IRC has prepared a mining tourism strategy to diversify and grow the LGA's economy by capitalising on local industry strengths. Tour access to an underground mine is likely to be welcomed as part of this strategy. If the Project is approved, BMA will liaise with IRC or the tourism strategy's delivery authority to investigate the potential for the Project to support the mining tourism strategy.

4.5.5 Summary of business and procurement impacts and benefits

Table 4.14 summarises impacts and benefits for local businesses, along with the relevant stakeholders and management measures.

Table 4.14: Business and industry impacts and benefits summary

Area	Stakeholders	Baseline values	Impact/Benefit	Management measures
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 at 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 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 percent could be spent with businesses in the Isaac LGA. Flow-on economic benefits are discussed in EIS Appendix K.	• 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 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 percent 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 percent goal for the percentage of Project supply expenditure with Indigenous businesses

Area	Stakeholders	Baseline values	Impact/Benefit	Management measures
				• 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 C-Res GW3 Mackay Chamber of Commerce	Whilst the Bowen Basin region including Isaac LGA has significant labour and business supply strengths supporting the mining industry, Councils, business and services, the region along with other Australian cities and regions is experiencing skills and labour shortages.	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.	• 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 a focus on workforce skills and development as described in Section 4.2.8

4.6 Cumulative impacts

4.6.1 Introduction

Cumulative social impacts are the incremental and combined impacts – positive, negative or both – of multiple projects. Cumulative impacts may occur at the local level, e.g. demands on local housing supplies, and/or at the regional level e.g. requirements for skills and labour.

Isaac LGA communities have significant experience with the cyclical nature of the mining industry, and have experienced cumulative impacts – most notably on housing affordability, social infrastructure and labour availability - during peak mining industry periods. They have also experienced social impacts such as population outflow and housing market slumps during mining downturns. Long experience coping with the mining industry' cycles has developed resilience to change, however cumulative social impacts remain a challenge for IRC and local communities.

The Project is proposed within an area where there are extensive existing and proposed mining operations. Existing mining operations form part of the social baseline as they contribute to population, employment, housing, social infrastructure and business opportunity factors.

This section considers the potential cumulative impacts of recent projects that:

- have completed or are undertaking an EIS process;
- are fully or partially within the Isaac LGA; and
- whose construction and early operational periods may potentially coincide with that of the Project.

Table 4.15 provides a summary of the projects considered and their status, i.e. under construction, seeking approval or approved (but with construction timeframes unknown). Execution timeframes and construction workforce numbers were drawn from the projects' Initial Advice Statements (IAS) and/or EISs, updated where possible from public sources. Employment numbers shown in Table 4.15 were sourced from the respective projects' EIS documentation and are subject to change. Given uncertainties in the timing of some projects, including this Project (SEMLP), the assessment of cumulative impacts is speculative.

Table 4.15: Major Projects within the Isaac LGA

Project	Proponent	Location	Status	Peak Workforce
Under construction or seeking approval				
Olive Downs Project (ODP)	Pembroke Resources South Pty Ltd	Approximately 40 km southeast of Moranbah and 40 km north of Dysart	New coal mine. EIS approved with conditions May 2019. Commenced construction in 2022, with operation expected to commence in 2023	Construction – 700 Operation – Year 2/3 – 960; Year 14: 1,300
Isaac Downs Project	Stanmore Coal	Approximately 5 km east of Moranbah	Extension to Isaac Plains Complex. Approved. Under construction 2020-22, first coal production expected in 2022	Construction – 250 Operations – 300

Project	Proponent	Location	Status	Peak Workforce
Winchester South Project (WSP)	Whitehaven Coal	30 km south of Moranbah	New coal mine, seeking EIS approval Construction could commence in 2023, and operation from around 2024/25	Construction – 500 Operations – 450
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 2023/2024, with operation from around 2026	Construction – 200 Operations – 350 – 400
Carborough Downs Mine	Vale	Approximately 20 km east of Moranbah)	Approved in September 2022. Development ongoing	Continuation of currently employed workforce (700)
Approved, not under development				
Ironbark No.1 Mine	Fitzroy Australia Resources	Approximately 30 km northeast of Moranbah	Formerly known as the Ellensfield Coal Project, approved in 2012. Reported as suspended in November 2019.	Construction - 160 Operation- 350 persons
Red Hill Mining Lease Project (RHMLP)	BMA	20 km north of Moranbah	EIS approved with conditions June 2015 Timing unknown.	Construction – 2,000 Operation - 1,500
Eagle Downs Project	South32 and Aquila Coal Pty Ltd	Approximately 20 km south-east of Moranbah	EIS approved with conditions 2010 Care and Maintenance since 2015, on hold as at 2020	Construction – 360 Operation - 570
New Lenton Project	New Hope Group	Approximately 65 km north-west of Nebo, 65 km north of Moranbah, and 20 km south of Glenden	EIS suspended 27 June 2018. Timing unknown	Construction - 200 Operation - 300

Projects considered in the cumulative social impact assessment as shown in Table 4.16 include:

- the Project (SEMLP);
- Olive Downs, an approved new coal mining project which commenced construction in 2022 to the east of the Project Site;
- Stanmore Coal's Isaac Downs project, part of the Isaac Plains Complex located to Moranbah's east, which commenced construction in 2020 and was expected to be complete in 2022;
- Winchester South Project, a proposed new coal mine seeking EIS approval to the Project's northeast; and

- the Lake Vermont Meadowbrook Project to the immediate east of the Project site, that is an extension to the existing Lake Vermont Mine, and is also seeking EIS approval.

An extension of Vale's Carborough Downs Mine (approximately 20 km east of Moranbah) was approved by the Queensland Government in September 2022, enabling the extension of the mine's life, however this would not result in additional personnel for construction or operation, or associated requirements on social resources such as housing and social infrastructure, so the extension of Carborough Downs Mine has not been considered as contributing to significant cumulative social impacts.

The time frame for any construction of the Ironbark No.1 Mine, Red Hill Mining Lease Project (RHMLP), Eagle Downs Project and New Lenton Project is uncertain, so consideration of their cumulative impacts was not possible.

The timing for decommissioning of each project is uncertain so assessment of the cumulative impacts of closure has not been attempted.

The Project is not expected to impact on landholders' access to groundwater, so no contribution to cumulative social impacts is expected in this regard.

The cumulative impacts of coal mining on dust levels are a current concern for the Moranbah community, but as the Project is an underground mine (with less dust generation) and is located approximately 35 kilometres from Moranbah, Project contributions to cumulative dust impacts have not been considered in this SIA.

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.

4.6.2 Potential cumulative social impacts

Relevant details of the projects that could contribute to cumulative social impacts in the Isaac LGA are summarised in Table 4.16.

Table 4.16: Projects that may contribute to potential cumulative social impacts

Project	Construction period (estimated and approximate)	Peak construction workforce	Commencement of operations (approximate)	Peak operations workforce
SEMLP	2023-2025	1,000	2025	500
Olive Downs Project	2022 – 2023	700	2023	960#
Isaac Downs Project	2020-2022	250	2022	300
Winchester South Project	2023-2024	500	2024	450
Lake Vermont Meadowbrook Project	2023 -2025	250	2026	860 (maintaining existing workforce)

Stage 1. Stage 2 is expected to see up to 400 additional operations personnel.

The Project's potential contributions to cumulative social impacts as assessed by this SIA, relative to the timing of other major projects in the Isaac LGA, are detailed in Table 4.17.

Table 4.17 has a different structure to the other impact summary tables due to the need to recognise multiple projects.

Baseline values of relevance to cumulative social impacts include:

- current rates of employment in mining (high) and unemployment (low);
- the current availability of construction and mining skills (constrained);
- current housing conditions (i.e. very limited rental housing availability); and
- the current Isaac LGA population (approximately 22,000 residents and 12,500 NRW), and consequent demands for social infrastructure.

Key stakeholders for cumulative impacts include:

- construction and mining industry personnel;
- Isaac LGA residents;
- Isaac LGA businesses;
- IRC;
- mining companies;
- Queensland Government agencies including Queensland Health, Department of Education DTATSIPCA, DCSSDS, QPS, QFES and QAS; and
- community and government service providers.

Table 4.17: Potential cumulative social impacts

Contributing projects	Impact Area	Impact	Time period (estimate)	Nature	Project mitigation
SEMLP, Olive Downs, Winchester South, Lake Vermont Meadowbrook, Isaac Downs	Construction - employment	At peak, the Project would require 1,000 construction personnel. If approved in 2023, Whitehaven Coal anticipates construction of the Winchester South Project could commence in 2023 and be complete in 2024, requiring 500 construction personnel at peak. If approved in 2023, construction of the Lake Vermont Meadowbrook mine (requiring 250 construction personnel) could also coincide with construction of the Project. This would be a cumulative total requirement of 1,750 personnel, in the event that all three construction workforce peaks coincided, with potential to compete with other regions for personnel. As an underground mining project, SEMLP would draw on a different construction skills base, but there is potential to contribute to labour shortages in the heavy and civil construction industry, impacting on local business and industries' capacity to attract and retain skills and labour. Development activities (construction) for the Isaac Downs project are expected to be substantially complete in 2023. Olive Downs Project construction commenced in 2022 and is also expected to be substantially complete in 2023/24. This would see up to 950 construction workers released to the labour market, which would be available to other projects, reducing the potential for significant cumulative pressures on labour and skill availability.	2023-2024	Neutral to negative	• Business capacity building programs
		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.	2023-2025	Positive	• N/A
	Construction – housing and accommodation	Olive Downs Project and Winchester South EISs describe NRW construction workers as being accommodated in existing WAVs (and for Olive Downs, rental housing subject to availability). Plans for accommodation of construction workers for the Lake Vermont Meadowbrook Mine were not specified in the EIS. SEMLP NRW construction personnel will be accommodated in a temporary WAV constructed for the Project. On this basis the Project would not contribute to cumulative impacts on housing and accommodation during its construction.	2023	Neutral	• Temporary NRW WAV on SEMLP lease area

Contributing projects	Impact Area	Impact	Time period (estimate)	Nature	Project mitigation
	Construction – NRW population	Based on their proposed timing, the construction workforce peaks for Olive Downs and Isaac Downs will have passed before SEMLP's construction commences. Coincidence of construction workforce peaks for SEMLP, Isaac Downs and the Lake Vermont Meadowbrook Project is possible, which could see up to 1,750 NRW based in the Isaac LGA. Whilst previous years have seen higher numbers of NRW, there is potential for locals to feel concerned about the rising numbers of non-local people in their towns, however the stimulus may also be welcomed in communities such as Dysart. This temporary influx of NRW is not expected to affect social conditions such as community cohesion or safety in Moranbah or Dysart.	2023-2024	Neutral	• Workforce code of conduct • Provision of accommodation on site for NRW
	Construction – traffic	The Project's plans to accommodate its construction personnel on site is expected to provide a significant reduction in workforce traffic movements, however the cumulative context would require careful management by each proponent to reduce traffic volumes and avoid impacts on traffic safety	2023-2024	Negative	• Traffic Management Plan • Fatigue Management Policy
	Construction – services	Health services including the Moranbah Hospital, Dysart Hospital and local GPs are likely to see an increase in demand and may strain health service resources if adequate notice of incoming workers is not provided. For example, with a cumulative non-local construction workforce of 1,750 personnel in the Isaac LGA (see previous row), and assuming 10 percent of those required access to a doctor during their rostered-on periods, a cumulative demand equivalent to 0.3-0.4 of a GP could result. Impacts are also likely on Queensland Police, Ambulance and Fire and Emergency service resources. These services have indicated that they have sufficient capacity to address changes in NRW numbers.	2023-2024	Negative	• Paramedical or nursing staff on site • Contract with a local GP clinic to provide workplace health services and access to a GP for personnel staying in WAV
		Cumulative demands on Council infrastructure such as water and wastewater systems, roads, parks and municipal services would be experienced, however it has been assumed here that, given previous numbers of NRW have been higher, capacity exists within Council infrastructure to absorb cumulative demands at this level. BMA's existing agreements with Council are considered adequate to address the Project's contribution to demand	2023-2024	Neutral	• Existing agreements – water supply, road use and maintenance, waste management
	Construction – businesses	The cumulative construction 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	2023-2024	Positive	N/A

Contributing projects	Impact Area	Impact	Time period (estimate)	Nature	Project mitigation
SEMLP, Olive Downs, Winchester South, Isaac Downs	Construction and operations - employment	The Project's construction phase could overlap with the early operational years of the Olive Downs, Winchester South and Isaac Downs projects. Olive Downs may employ up to 960 personnel, Winchester South up to 450 personnel and Isaac Downs up to 300 personnel around 2024, during which period the SEMLP Project could employ up to 1,000 construction personnel, which would see a significant cumulative contribution to job opportunities.	2025	Positive	N/A
SEMLP, Olive Downs, Winchester South, Isaac Downs	Operations – employment	With the commencement of Project operation, SEMLP and the Olive Downs, Winchester South and Isaac Downs project would collectively contribute to approximately 2,210 operational positions based in the Isaac LGA. This would be a significant benefit for Isaac LGA residents, particularly young people for whom 20+ years of operational employment would be a significant opportunity to support their wellbeing. The closure of two coal mines in the Isaac LGA (by around 2025) is expected to release up to 1,100 skilled mining personnel to the local market, reducing competition for labour.	2025 - 2044	Positive	• STEM training projects • Apprenticeship and traineeship programs •
	Operations – population	The Isaac LGA's continued growth is anticipated by IRC, residents and the Queensland Government, 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 (see Section 4.3.).	2025 - 2044	Neutral	• Provision of housing for personnel who wish to move to the Isaac LGA • Use of existing BMA WAVs for non-resident personnel
		Cumulative contributions to population growth would lead to increased demands for health, emergency, education, community and cultural infrastructure in the Isaac LGA. Whilst IRC and Queensland Government agency plans for population increases, provision of social and health infrastructure may lag behind population growth, which would reduce residents' access to services and facilities. A coordinated planning response is likely to be required to address increased needs for social and health infrastructure in the Isaac LGA during.	2023-ongoing	Negative	• Social investment programs • Cooperation with IRC in Council-initiated social infrastructure planning
		Assuming sufficient housing could be developed, and matched by services and infrastructure, the cumulative benefits of the projects considered could support Isaac LGA's economic and social sustainability for the next 20 years.	2025 - 2044	Positive	• Social investment programs • Provision of housing adequate to quantum of workforce need

Contributing projects	Impact Area	Impact	Time period (estimate)	Nature	Project mitigation
	Operation – landscape values	The SEMLP, Olive Downs project and Winchester South projects are all located to Dysart's north. Collectively, the three projects will change the nature of land use in this area, however SEMLP as an underground mine would have less visibility and require less additional infrastructure. Overall, mining is consistent with the existing land use in the area and supported by local communities. Planning for progressive rehabilitation and closure of the three projects will need to be conducted in compliance with the Mineral and Energy Resources (Financial Provisioning) Act 2018 and the associated Mined Land Rehabilitation Policy.	2025 - 2044	Neutral	N/A

4.6.3 Summary of potential cumulative social impacts and mitigation

While timeframes are uncertain, the potential cumulative effect of a number of projects proceeding, concurrently or sequentially over a 3–5-year window, can include significant benefits for employment rates, labour force participation and household wellbeing in the Isaac, Mackay, Central Highlands and other LGAs that would benefit through employment or supply chain participation.

All projects' operational workforce will contribute to cumulative demands on social infrastructure such as health, emergency and support services, and community, recreation and settlement services.

Local and regional businesses would experience substantial benefits from both cumulative population growth and projects' supply chains. However, the potential for labour draw and increased costs of competing for labour and skills could have significant negative impacts on both local and regional businesses.

In summary, 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 NRW;
- 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; and
- sustaining and enhancing opportunities for service industries and businesses in the LGA.

The potential for social impacts to occur during the Project's operations 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; and
- enhanced economic development opportunities across the Bowen Basin.

Cumulative impacts are likely to be significant, but their likelihood and timing are uncertain.

BMA's mitigation measures to minimise its contributions to cumulative social impacts are included in the action plans in Section 6.

4.7 Impacts of Project closure

The Project is likely to be in operation 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 could see some outflow of population from the Isaac LGA if other comparable local 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 WAVs, either on the Project site or in Dysart or Moranbah.

The decommissioning of the Project Site will occur on a staged basis over several years prior to closure. A comprehensive assessment of waste will be undertaken in line with the waste management hierarchy to identify the most appropriate measures to manage the remaining waste on the Project Site.

The following decommissioning strategies will be implemented for the Project:

- all mine roads will be rehabilitated, unless otherwise agreed with the subsequent landowner and in accordance with the EA;
- all water dams not required for long term water management will be decommissioned and removed, unless otherwise agreed with the subsequent landowner and in accordance with the EA;
- all major infrastructure, including the CHPP, will be decommissioned and removed offsite;
- concrete pads will be covered with benign waste rock or ripped and removed, then topsoiled and
  re-vegetated; and
- other facilities, including workshops and warehouses, will be decommissioned and removed, unless otherwise agreed with the subsequent landowner and in accordance with the EA.

During planning for decommissioning and rehabilitation, BMA will have regard for landholders living and working within 5 kms of the Project site, and engage with them to ensure that any potential impacts of mine closure (e.g. demolition of onsite infrastructure) are managed to avoid impacts on their amenity.

BMA will comply with the legislative amendments associated with the Mineral and Energy Resources (Financial Provisioning) Bill 2018. This will involve the development of a Progressive Rehabilitation and Closure Plan (PRC Plan). In planning for mine closure, BMA will engage with all stakeholders with a genuine interest in the impacts of mine closure, which will include Barada Barna People as the land's Traditional Owners, adjacent landholders, IRC, utility owners, and overlapping tenure holders.

A Progressive Rehabilitation and Closure Plan (PRCP) will be developed prior to construction commencing and will demonstrate that the proposed Project will:

- be rehabilitated to a safe and stable landform;
- not cause environmental harm; and
- sustain post-mining land uses.

BMA has prepared a Rehabilitation Management Plan in line with the *Mined Land Rehabilitation Policy* (DES, 2018). BHP's *Queensland Coal Rehabilitation Completion Criteria* (BHP, 2018) outlines the

completion criteria for meeting satisfactory rehabilitation for a number of post mining land uses. Post mining land uses may include:

- cattle grazing;
- dryland cropping;
- woodlands habitat;
- watercourses; and/or
- water storage.

The completion criteria set out objectives, indicators and criteria for achieving acceptable rehabilitation in the post mining land uses. The completion criteria consider goals of safety, stability, minimal pollution and the ability to sustain an agreed post mining land use.

The proposed post-mining land use will be an undulating landscape that could be used as grazing land, consistent with the surrounding pastoral land use that dominates the region. The exception to this is where remnant native bushland is disturbed. Where practicable, the post-mining land use for these areas is woodlands habitat as this is compatible with the pre-existing land use for biodiversity values. There may be instances in which a mix of native and non-native species will be implemented. Post-mining land uses for the Project will be confirmed prior to construction.

Table 4.18 provides a summary of the impacts and benefits of Project closure.

Table 4.18: Project closure impacts and benefits summary

Area	Stakeholders	Baseline values	Impact/Benefit	Management measures
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.	• Advice 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	As described in Section 4.3.3, 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.	• Advice 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	As described in Section 4.4, 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 population thresholds no longer support service provision levels.	• Advice to IRC, DTATSIPCA, DCSSDS, Queensland Health and Department of Education three years ahead of 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

5. Significance

This section summarises the key findings of Section 4 and evaluates their significance.

Significance evaluation of social impacts is complex, balancing:

- subjectivity: i.e. a Project effect that is a negative impact for some may be a benefit for others;
- scale: evaluation should ensure that changes that benefit a large number of people do not eclipse negative impacts in a local area;
- equity: management of impacts and benefits for vulnerable stakeholders require attention to ensure that disadvantage is not exacerbated; and
- sensitivity: large and resilient communities generally have the capacity to cope with change, but lack of a critical social resource (e.g. housing) can affect resilience.

The significance evaluation matrix shown in Table 5.1 was developed with reference to Queensland Treasury's risk management guidance, the IAIA's guidance on evaluating social impacts, (International Association for Impact Assessment, 2015) and DSD's 2013 SIA guideline risk assessment matrix (Queensland Treasury, 2011) (Queensland Department of State Development, 2013). The likelihood of impacts occurring and the consequences for stakeholders and social conditions have been estimated based on stakeholder inputs, social baseline values and experience in assessing social impacts and benefits. The combination of likelihood and consequence results in a significance rating of low, medium, high or very high.

Table 5.1: Impact 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	D1 Medium	D2 High	D3 Very high	D4 Very high

Table 5.2 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.

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

In the 'Nature' column, '✓' denotes a positive impact or opportunity, and '×' denotes a negative impact. Mitigation and enhancement strategies that address each significant impact and benefit are summarised in Table 5.2 and detailed in Section 6.

Table 5.2 Summary and significance

Impact/opportunity	Phase	Nature	Stakeholders	Preliminary Significance	Mitigation/ Enhancement measures	Residual Significance
Community and stakeholder values						
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 on amenity as a result of noise or dust from the Project area.	O	✘	Owners and onsite personnel - Saraji homesteads	B2	• Agreed coexistence agreements with the owners of these properties	B1
An area of approximately 33.5 ha will be disturbed for surface infrastructure and approximately 119.7 ha will be disturbed for power and transport corridors during the Project's operations phase, but with only minimal disruptions to grazing within BMA land.	C/O	✘	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	✘	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
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	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

Impact/opportunity	Phase	Nature	Stakeholders	Preliminary Significance	Mitigation/ Enhancement measures	Residual Significance
strengthen confidence and optimism in the town's future.						
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 Dysart show positive indicators of community safety, and QPS have advised that NRW represent a small proportion of service demands.	C/O	✘	IRC Dysart and Moranbah communities Community organisations	B2	• Construction WAV provision • BMA Workplace Conduct Policy • BMA's Community Development partnerships and programs	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 percent 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 • Business and industry engagement and procurement strategies	C2

Impact/opportunity	Phase	Nature	Stakeholders	Preliminary Significance	Mitigation/ Enhancement measures	Residual Significance
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), 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, the Project would represent an increase in job numbers (additionality) of approximately 2.9 percent during 2025-2026, and approximately 5.8 percent 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 • Support 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 personnel to the local market which would offset this.	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 SEMLP • BMA projects and partnerships focused on access to training and development in the mining and METS sectors (see Section 4.2.8.	B1

Impact/opportunity	Phase	Nature	Stakeholders	Preliminary Significance	Mitigation/ Enhancement measures	Residual Significance
					• 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 strategy • Training and development strategy	C2
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
BMA's Indigenous participation goal of 8.0 percent Indigenous employment 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 percent 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	C2

Impact/opportunity	Phase	Nature	Stakeholders	Preliminary Significance	Mitigation/ Enhancement measures	Residual Significance
					• Focus on Indigenous young people as part of each apprenticeship recruitment campaign	
BMA's workforce diversity goal for a 40 percent female workforce overall by 2025 will see an increase in employment opportunity for local and other women	O	✓	Employees and families	C1	• 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.	C2
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
Population and housing						
Assuming 90 percent of the Project's construction workforce would be NRW, the Project would account for an increase of approximately 5.6 percent on the projected number of NRW at peak in 2024. This would not make a large difference to the NRW/resident population balance (a change of approximately 3.5 percent).	C	✘	IRC Government and community agencies Dysart and Moranbah, communities	C2	• WAV provision, including onsite service provision • BMA Workplace Conduct Policy • BMA's Community Development partnerships and programs	A1

Impact/opportunity	Phase	Nature	Stakeholders	Preliminary Significance	Mitigation/ Enhancement measures	Residual Significance
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 WAV providers	D3	• Provision of WAV 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, equivalent to 1.1 percent 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, or an increase of 8.3 percent. 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
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 WAVs or other WAVs sufficient to accommodate non-residential operational personnel	B1

Impact/opportunity	Phase	Nature	Stakeholders	Preliminary Significance	Mitigation/ Enhancement measures	Residual Significance
An increase of 180 NRW operational personnel on shift by 2027 would represent an increase of 1.5 percent 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 WAV • 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 may be offset by market stimulation.	O	✘	IRC Government and community agencies Dysart and Moranbah communities	C2	• WAV provision and requirement for contractors to stay in WAV if the rental market is tight i.e. less than 2.5 percent 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 subsided 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 housing may also be available in Moranbah. This would avoid all but minor impacts on the housing market.	O	✘	IRC and local residents Government and community agencies Dysart and Moranbah communities	C3	• Provision of subsided housing in Dysart for all personnel who would move to the LGA • Provision of subsided housing in Dysart for all Project employees who live in the LGA and would lose current housing • Subject to availability, provision of subsidised housing in Moranbah if this is the employee's choice • Provision of access to BMA housing for contactors if shortfall identified	B1
Health and wellbeing						
At the peak of construction the Project could result in an increase of 5.6 percent on the projected number of non-resident workers. During operations, the expected increase in NRW is 1.5 percent. Increases of this	C/O	✘	IRC Government and community agencies Moranbah and Dysart Hospitals	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

Impact/opportunity	Phase	Nature	Stakeholders	Preliminary Significance	Mitigation/ Enhancement measures	Residual Significance
scale are not expected to impact on local community or cultural values.			Dysart and Moranbah communities Queensland Health QPS, QAS and QFRS			
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 QFRS	D2	• Health facilities and service provision for personnel accommodated in the WAV • EAP • 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, Queensland Health and IRC to implement strategies that will increase GPs availability	D1
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 percent 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	✘	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 QFRS to develop collaborative responses to any GP shortages	C1

Impact/opportunity	Phase	Nature	Stakeholders	Preliminary Significance	Mitigation/ Enhancement measures	Residual Significance
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	✘	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 Police on a commercial basis while they are off shift	B1
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	✘	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 at delivering 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 the school's capacity.	O	✘	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	✘	IRC MDSS, DCSG DTATSIPCA	D2	• BMA's Community Development partnerships and programs • Agreement with DCSG to provide settlement program ahead of operations	D1

Impact/opportunity	Phase	Nature	Stakeholders	Preliminary Significance	Mitigation/ Enhancement measures	Residual Significance
			Moranbah, Dysart and Middlemount communities		commencing, as part of existing arrangements between BMA and DCSG or new Project-specific arrangements	
In-migration of approximately 260 Project-related personnel and family members could see an increase of approximately 1.2 percent on the forecast LGA population in 2027, and result in an incremental increased demand for Council, recreational, cultural services and community services.	O	✘	IRC, DTATSIPCA, DCSSDS MDSS, DCSG 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, which is unsealed. Traffic impact assessment identified the need for one new intersection with Dysart Road to gain access to the Project and improved visibility at two key intersections, to support traffic safety.	C	✘	IRC, Project personnel and families motorists and community members in Moranbah and Dysart, QFES, QPS, QAS	B4	• Provision of a new/upgraded intersection on Dysart Road to gain access to the Project • Lighting installed at the Dysart Road / Lake Vermont Road and Dysart Road / Peak Downs Mine Road intersections	A2

Impact/opportunity	Phase	Nature	Stakeholders	Preliminary Significance	Mitigation/ Enhancement measures	Residual Significance
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						
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 percent could be spent with businesses in the Isaac LGA. Flow-	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

Impact/opportunity	Phase	Nature	Stakeholders	Preliminary Significance	Mitigation/ Enhancement measures	Residual Significance
on economic benefits are discussed in EIS Appendix K.						
Indigenous business will an important part of the Project's supply chain. Up to 6.5 percent 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 percent 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
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 as described in Section 4.2.8	B1
Cumulative impacts						
There may be a period of overlap when the cumulative demands of three or four	C	✘	Local and regional businesses relying on	B2	• Business capacity building programs through C-Res Foundation	B1

Impact/opportunity	Phase	Nature	Stakeholders	Preliminary Significance	Mitigation/ Enhancement measures	Residual Significance
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.			heavy and civil construction personnel Isaac Business Chamber IRC			
Health services including the Moranbah Hospital, Dysart Hospital and local GPs are likely to see an increase in demand e.g., increased demands for doctors' appointments could result.	C	✘	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
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	C/O	✘	IRC, ELAM, IAHT Moranbah and Dysart communities DHLGPPW	C2	• Provision of housing and accommodation for BMA personnel	B1

Impact/opportunity	Phase	Nature	Stakeholders	Preliminary Significance	Mitigation/ Enhancement measures	Residual Significance
Project's contribution to cumulative housing demand						

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
			DCSG
			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
					• Development of protocols with Queensland Police, QAS and QFRS
						B2

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 DCSG DHLGPPW DTATSIPCA, DCSSDS	B3	• N/A	B3
The cumulative construction and operational workforces would result in increased demands for retail,	C/O	✓	Local businesses, Moranbah Traders	B3	• N/A	B3

Impact/opportunity	Phase	Nature	Stakeholders	Preliminary Significance	Mitigation/ Enhancement measures	Residual Significance
hospitality, fuel and occasional meals at venue, in both Dysart and Moranbah, which would be experienced as a positive impact for local businesses						
Closure impacts						
Cessation of operations would result in redundancies, with the 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
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, DHCDE, 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

6. Social Impact Management Plan

This section details how BMA will work with local and regional stakeholders to mitigate social impacts and maximise opportunities identified in relation to the Project. This SIMP includes five management sub-plans for:

- Community and Stakeholder Engagement;
- Workforce Management;
- Housing and Accommodation;
- Health and Community Wellbeing; and
- Local Business and Industry Content.

Each sub-plan includes:

- the 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; and
- an action plan, providing a practical basis for implementing each measure.

Section 7 provides a monitoring framework, including social outcomes sought, stakeholder engagement in monitoring, how management of the impacts will be monitored and reported, and the timing and frequency of monitoring.

6.1 Introduction

This section describes:

- SIMP coordination and implementation responsibilities;
- integration of stakeholder inputs on impact management and opportunities;
- the mitigation hierarchy applied to avoid, manage and/or offset social impacts;
- the Project's approach to adaptive management of social impacts; and
- BMA's social investments in local communities.

6.1.1 SIMP Coordination and implementation

BMA will coordinate and monitor delivery of the SIMP through an internal SIMP Coordination Team. The SIMP Coordination Team which will be convened upon approval of the Project to develop a SIMP implementation program and commence actions with longer lead times. The SIMP Coordination Team will include:

- Project Director;
- Construction Project Manager;
- Engineering Procurement Construction Management (EPCM) Project Director;
- Environment Adviser;
- Human Resources Adviser;

- Manager Corporate Affairs - Community;
- General Manager Operations, Saraji East; and
- General Manager Operations, Saraji Mine.

BMA will maintain responsibility for implementing monitoring and reporting on management measures detailed in the SIMP. Accountabilities for key actions are detailed in Table 6.1.

Table 6.1: SIMP implementation roles

Management Plan	Accountable	Key actions
SIMP (overall) - Project life	Project Director/ General Manager Operations	• Convene SIMP Coordination Team • Include relevant SIMP commitments and conditioned requirements in construction contracts • Lead BMA and contractor involvement in SIMP implementation • Lead engagement, cooperation and joint advocacy with IRC • Implement local infrastructure agreements with IRC and other relevant parties
Community and stakeholder engagement - construction and operation	BMA Manager, Communities Corporate Affairs	• Maintain Project stakeholder register • Facilitate stakeholder engagement commitments • Coordinate and report on monitoring of SIMP delivery and effectiveness for community

Workforce management – construction	Principal Contractor	• Implement contractual agreements with BMA relating to SIMP commitments, including but not limited to:
		  ○ workforce management
		  ○ workforce health and wellbeing
		  ○ accommodation for NRW
		  ○ training and development
		  ○ local and regional business involvement
		  ○ Indigenous employment and business involvement
		  ○ complaints management
		• Provide monthly reports on workforce numbers, workforce diversity workforce management, and complaints management to BMA
		• Provide quarterly reports to BMA on delivery of relevant SIMP commitments

Workforce management – operation	BMA – Operations Manager	• Implement SIMP commitments for:
		  ○ workforce management
		  ○ recruitment
		  ○ choice and flexibility
		  ○ Indigenous and female employment
		  ○ training and development
		  ○ workforce health and wellbeing

Housing and accommodation – construction	Principal Contractor	• Ensure availability of WAV beds for all NRW

Management Plan	Accountable	Key actions
		• Monitor and report on accommodation usage monthly to BMA, including WAV occupancy and any new rentals of local housing
Housing and accommodation – operation	Housing and Accommodation Manager	• Utilise existing BMA housing portfolio for personnel who are new local residents • Ensure availability of WAV accommodation for NRW from within existing WAVs • Monitor housing uptake and occupancy rates • Report on any usage of non-BMA housing by Project personnel as part of SIMP reporting to OCG
Health and community wellbeing – construction	Principal Contractor	• Implement SIMP mitigation strategies relating to co-operation with police and emergency services • Implement health service mitigation strategies
	Corporate Affairs	• Consult with Queensland Health and Dysart and Moranbah and Dysart GPs to confirm mitigation of potential demands on local health services during construction • Implement stakeholder engagement and partnerships • Implement community investment strategies including settlement program if required
Health and community wellbeing – operation	Corporate Affairs	• Engage with Queensland Health and Dysart and Moranbah GPs to identify and provide support for recruitment of additional GPs or other health staff, if stakeholders indicate this is required • Implement stakeholder engagement and partnerships • Implement community investment strategies
Local business and industry – construction and operation	C-Res Manager	• Manage Project interface with BMA's Local Buying Program • Monitor and report on the Project's local buying achievements as part of SIMP reporting

6.1.2 Integration of stakeholder inputs in SIMP

The stakeholders involved in the SIA process, issues raised by stakeholders, and mitigation measures that were included in the SIA in response to stakeholder inputs were summarised in Table 2.9.

The outcomes of stakeholder engagement as relevant to mitigation and management measures are further detailed in Table 6.2.

In its interim response to the EIS, IRC raised issues regarding BMA's approach to community investment and impact mitigation. During April 2022 – February 2023, BMA met and corresponded with IRC representatives to reach a shared understanding on the approach to social impact mitigation, which is described in Section 6.1.5.

Table 6.2: Stakeholder inputs to SIMP

Stakeholders	Engagement Outcomes	How addressed in SIMP	SIA Section
Traditional Owners	BBAC are concerned to ensure: • appropriate management of cultural heritage • respect for native title • employment of Indigenous people • involvement of Indigenous businesses in the Project's supply chain.	The SIMP includes commitments to ongoing engagement with the Barada Barna People with respect to: • cultural heritage management • an ILUA which includes the Project Site • Project employment of Indigenous people • opportunities for Indigenous businesses (including those owned by Barada Barna people) to supply the project, with opportunities for involvement in mine site rehabilitation of particular interest.	6.2.7, 6.3.4, 6.6.4
Landowners	Landowners are comfortable with their existing consultative arrangements and agreements with BMA about how impacts such as noise exceedances would be managed.	Engagement with landowners and other landholders is described in the SIMP action plan for Community and Stakeholder Engagement.	Table 6.6
Isaac Regional Council	Council did not support a Project-specific workforce accommodation for non-local operations personnel.	BMA removed the proposed workforce accommodation facility for operational personnel from the Project.	4.3.6
	There is potential for the Project to strain Council waste management facilities' capacity, which will need to be managed.	The SIA notes that the Project's Waste Management Plan will include use of waste management sites outside the Isaac LGA, until IRC indicates that local waste management facilities' capacity is sufficient to manage Project waste without impacting on other users or Council's resource capacity.	4.4.2
	Residential and non-residential workforces' demand on water supply needs to be considered and appropriate contributions made.	The SIA notes that BMA's allocation of subsidised water to IRC takes into account the full BMA portfolio of sites and potential projects, however if town water supplies were unexpectedly insufficient to the address Project-induced demand, BMA would renegotiate its water supply agreement with IRC.	4.4.2
	IRC's interim response to the EIS identified the need for updated demographic data and cumulative impact assessments, updated	The SIA includes updated demographic data and cumulative impact assessments.	3.2 – 3.7

Stakeholders	Engagement Outcomes	How addressed in SIMP	SIA Section
	commitments, and increased investment in mitigation measures if additional impacts are induced by the Project. IRC also sought further information and detail on BMA's current and proposed community contributions and support, and requested demonstration of net benefits for local communities. IRC provided benchmark data and further explanation of expectations relating to contributions. Meetings were held in April 2022, November 2022 and February 2023 to discuss the updated SIA findings and SIMP. BMA explored the concept of additionality with IRC, and through consultation developed a mitigation framework which addresses Project-specific social investments, including the potential for the Project to make additional social investments if it increases employment levels and therefore demands on social resources.	Additional information is provided to explain adaptive management and social investment approaches.	6.1.4 and 6.1.5
		Project-specific measures (additional to BMA's current management approach) are summarised.	6.1.3
		The SIA articulates the expectation that social investment and contributions will continue, with recognition of the concept of 'additionality' as production and/or employment adjust over time	6.1.5
		Additional information on Project benefits has been provided.	6.5.2, 8.3
	BMA provided IRC with a copy of the updated SIA report in November 2022, and sought feedback. Council feedback included: • recognise not just additionality, but also change in community values and aspirations, and change in social conditions	Additional consideration of adaptive management and changes in social conditions as linked to social investment priorities was provided.	6.1.4, 6.1.5
	• demonstrate community support beyond the first 3 years	Community support during the life of Project operation is described in Section 6.1.3.	6.1.3, 6.5.4
	• consider offering bus transport between camp and work site	BMA will promote use of a contracted bus transport solution for workers to and from the WAV to work sites, and the Moranbah 'Bunhdhara' Airport. A commitment to engaging with personnel about the need for a bus service between Dysart and the Project site and provision of a pilot service pilot has been made, with potential to extend the service subject to evaluation.	6.3.6
	• clarify that social investment during construction ($500,000 each year) is an extension of current funding programs	This was clarified as a Project-specific contribution.	Table 6.3
	• ideally the SIMP would be regularly reviewed (at least annually) for the first 5-8 years of operations	The annual SIMP monitoring and review period for operations was extended to five years.	6.1.4

Stakeholders	Engagement Outcomes	How addressed in SIMP	SIA Section
	• need to understand potential social investment outcomes should production rates/workforce size decrease	This was clarified.	6.1.5
	• need for clarity regarding how additional funding for community development projects – construction phase Years 1-2 would be delivered	This was clarified, i.e., additional investment delivered through community grants and partnerships.	Table 6.3 and Section 6.5.4
Community members and businesses	Community members and businesses identify stimulation of business activity in Dysart and Moranbah (through Project supply opportunities and increased population) as a key opportunity.	Measures addressing local business involvement are provided in the SIMP action plan for Local Business and Industry.	6.6
	Community members and groups are concerned to ensure that Project impacts on already stressed housing supplies are avoided (relevant to both construction and operation phases).	The SIA outlines provision of an accommodation facility for non-resident construction workers, use of existing BMA housing stocks to accommodate operations personnel who would move to Dysart or Moranbah, and use of existing workforce accommodation for non-local personnel.	6.4
	There is a strong community desire for locally based employment options for existing residents and new residents, to strengthen population growth and support local towns' sustainability.	A recruitment hierarchy and a range of strategies to attract and support personnel from other LGAs are detailed as part of the SIMP action plan for Workforce Management.	6.3
	BMA's contributions to community wellbeing (e.g., water supply, community partnerships, training programs and employment opportunities) are valued and the community anticipates commensurate social investment for the Project.	BMA's commitments to mitigation of the Project's social impacts and supporting community wellbeing, including social investment, are detailed in the SIMP.	6.1.3, 6.1.5
Government agencies	The Project's operation has the potential to increase demand on childcare services which are already stretched, particularly with respect to adequate staffing levels.	BMA's commitment to community partnership through the Childcare Leadership Alliance is described in the SIA, also noting that if suitable increased capacity has not been achieved to meet estimated Project needs BMA will work with the Childcare Leadership Alliance and IRC to investigate options to expand childcare services	6.5.5
	Local police and emergency services identify adequate capacity to meet Project-related demands and are committed to working in partnership with mining companies and other stakeholders to manage the impacts on services of population influxes to local towns.	Strategies for cooperation with police and emergency services are described as part of the SIMP action plan for Health and Community Wellbeing	6.5.6

Stakeholders	Engagement Outcomes	How addressed in SIMP	SIA Section
	Queensland Health's redevelopment of Moranbah Hospital will increase the capacity of health services available to local residents, but mental health services and GP services in Dysart are constrained by recruitment difficulties.	Strategies to reduce demands on local health services and cooperation with key stakeholders to address health workforce issues are described as part of the SIMP action plan for Health and Community Wellbeing	6.5.7

6.1.3 Mitigation hierarchy and value of Project-specific mitigation measures

BMA has sought to avoid social impacts wherever possible, by making changes to the Project and committing to management measures that will prevent impacts from occurring. Measures that aim to reduce or offset social impacts are also provided in the SIA.

Table 6.3 summarises:

- the Project's mitigation hierarchy (avoid, reduce, offset or compensate);
- the mitigation measures that are specific to the Project and additional to BMA's standard practices;
- the period during which mitigation measures will be implemented, i.e. specific to the construction period, the first years of operation, or for the life of the Project; and
- approximate financial values shown, where known.

The Project's operational impacts relate primarily to incremental population increases during the first three years as the Project builds to full operation, and associated needs for increased service capacity, community development, and housing access. Recruitment for Project operation will be complete by the end of Year 3, so population increases that drive increased demands for housing, social infrastructure and community participation will have occurred during that period. As such, measures that address construction impacts and the impacts of population influxes related to the ramp-up of the operations workforce are time-limited to those periods.

Population changes resulting from mining operations are considered in Council and QGSO population forecasts, and as part of Government planning and funding for social infrastructure. Given the substantial royalties derived from mining operations within the Isaac LGA, there is also an expectation among Councils, communities and industry that an equitable portion of royalties is invested in the Isaac LGA's social and physical infrastructure as the population grows, and in social and economic transition.

In recognition that BMA's personnel and their families contribute to ongoing needs for social infrastructure, and with a strong commitment to supporting the livability of local communities, BMA invests in a wide range of community partnerships, projects and programs as described in Sections 6.5.3 and 6.5.4. BMA will continue to fund community investments and partnerships that strengthen local service access and support liveability, commensurate with the demand attributable to BMA operations, as described in Section 6.1.5.

Other measures that will be relevant throughout the Project's operation and will contribute to local communities' sustainability include:

- avoidance of impacts on material cultural heritage;
- reconciliation and cultural recognition strategies;
- coexistence agreements with nearby homestead owners;

- recruitment, training and development strategies including a focus on women, Indigenous people, young people and new entrants to mining;
- provision of access to subsidised BMA housing for Project employees;
- health facilities and service provision including EAP for personnel accommodated in WAVs;
- projects and partnerships focused on access to training and development in the mining and METS sectors;
- an increased water supply subsidy, if required to address Project-related demand, as agreed with IRC;
- BMA-IRC agreements regarding road use, road maintenance and waste management; and
- procurement strategies with a strong focus on local, regional and Indigenous businesses.

Detailed management and mitigation measures to be utilised during construction and operation are provided in Sections 6.2 – 6.6.

Table 6.3: Social impact management hierarchy

Impact Area	Mitigation measures	Project specific	Life of Project	Value of mitigation measures		
				Construction Year 1	Construction Year 2	Operations Year 1-3
AVOID IMPACTS						
Cultural heritage	CHMP	No	Yes	Avoidance of impacts on material cultural heritage in accordance with CHMP prepared for Saraji Mine and the ACHA		
Housing and accommodation	• Recruitment hierarchy and strategy with a focus on Isaac LGA residents • Removing the proposed operational WAV, which would have seen workers staying in accommodation on the ML rather than using existing WAV accommodation • Commitment to require all non-local construction personnel to stay in WAVs, avoiding impacts on rental housing availability and short term accommodation availability • Commitment to provide subsided housing for existing local operational personnel and new local operational personnel who require it, avoiding direct impacts on housing availability • Contractual agreements with existing BMA-owned WAVs or other WAVs sufficient to accommodate non-residential operational personnel • Requirement for operational contractors to stay in WAV if the rental market is tight i.e. less than 2.5 percent vacancy rate • Provision of access to BMA housing for contractors if a shortfall identified	Yes	Yes (operational period)	Avoidance of personal and community costs of housing access impacts		Assuming 70 BMA houses are made available with subsidy of $260/week, equivalent to $946,000 annually. At 130 houses, the housing subsidy would be equivalent to $1.75 million annually. Provision of subsidised housing to Project employees would be ongoing throughout Project operations.

Impact Area	Mitigation measures	Project specific	Life of Project	Value of mitigation measures		
				Construction Year 1	Construction Year 2	Operations Year 1-3
Community, Council and health services	• Advice to Mackay HHS and Northern Queensland PHN on workforce ramp-up for construction to enable planning • If a shortage of GPs or mental health workers are identified at the commencement of Project construction, work with stakeholders including community organisations, Queensland Health and IRC to implement strategies that will increase their availability • If housing access is a barrier to GP or mental health worker recruitment or retention, BMA will offer the use of a BMA dwelling in Dysart for a GP or mental health worker, for a period of 3 years	Yes	No, relevant to construction workforce	Housing subsidy for GP if required, at June 2022 rental median in Dysart ($320.00/week) p.a. plus maintenance costs - $20,000	$20,000 housing subsidy, plus value of cooperative strategies in attracting additional health services if needed	In Year 1, $20,000 housing subsidy, plus value of cooperative strategies in retaining health practitioners Longer term, Queensland Government support for health services is expected to be considered as part of returning royalties to the Isaac region.
	• Funding to DCSG for community support program ahead of full operations, to support integration of new residents. This may be as part of BMA's existing arrangements with DCSG or as part of Project-specific arrangements.	Yes	No, relevant to workforce ramp-up and integration of new personnel	Nil required	$50,000	$100,000 in Year 1 Subject to evaluation of outcomes and ongoing need, this could be extended into Year 2 and 3 to support new local employees and families
	• BMA will continue to support water supply security in Moranbah and Dysart in accordance with its agreements with IRC	Yes	Yes (operational period)	Value of additional water supply subsidy, if required, ongoing throughout Project operations as agreed with IRC		

Impact Area	Mitigation measures	Project specific	Life of Project	Value of mitigation measures		
				Construction Year 1	Construction Year 2	Operations Year 1-3
	• 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					
	• Existing BMA-IRC agreements regarding road use and maintenance, and waste management	No	Yes	Value as agreed with IRC, ongoing throughout Project operations		
Childcare	• Identify employees' childcare needs as part of recruitment process and identify and communicate options for childcare • With the STACs and a range of stakeholders, implement the Childcare Leadership Alliance with the aim to deliver increases in childcare capacity in Moranbah and Dysart	Yes	No, relevant to workforce ramp-up (Years 1-3 of operation)	BMA investment in 2023 supported initiation of the Childcare Leadership Alliance, which is implementing actions to increase childcare capacity in Moranbah and Dysart. If suitable increased capacity has not been achieved by Year 1 of operations to meet the estimated Project needs as shown in Table 4.11, and/or as determined through consultation with Project employees, BMA will pay the costs for recruitment and relocation of childcare workers to Dysart and Moranbah (including recruitment of internationally-sourced workers if necessary). The estimated value of this is up to $100,000 during the first three years of operations.		
Schools	• 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	Yes	No, relevant to workforce ramp-up (Years 1-3 of operation)	This enables the Department of Education to plan for adequate school capacity.		
Traffic safety	• Upgrade Lake Vermont Road in accordance with agreement as required with IRC • Provision of a new intersection on Dysart Road to gain access to the Project • Lighting installed at the Dysart Road / Lake Vermont Road and Dysart Road / Peak Downs Mine Road intersections	Yes	Yes, as agreed with IRC	Safe intersections to support safe travel		

Impact Area	Mitigation measures	Project specific	Life of Project	Value of mitigation measures		
				Construction Year 1	Construction Year 2	Operations Year 1-3
REDUCE IMPACTS						
Labour draw	• 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 • Training and development strategies will include a focus on new entrants to mining and re-training of existing mining personnel for underground mining • Monitor announcements of mine closures in the Isaac LGA and MIW and Central Queensland regions, and target recruitment campaigns accordingly to enable Isaac LGA residents who are made redundant by other mines to seek employment at SEMLP	Yes	Yes, except temporary construction WAV	Reduced costs for local businesses and IRC to recruit and train new staff Reduced delays and reduced costs in completion of planned works		
	• BMA projects and partnerships focused on access to training and development in the mining and METS sectors (see Section 4.2.8)	No	Yes	In 2023, approximately $3 million p.a. in the Bowen Basin. Investment levels may vary from year to year.		
Cultural heritage and connection to Country	• Reconciliation Action Plan • Cultural recognition strategies • Involvement in planning and or implementation of rehabilitation, post mining	No	Yes	Recognition of traditional ownership and ongoing connection to Country Rehabilitation phase offers opportunity to work on country and potential business opportunities for Traditional Owners		
Community, Council and health services	• BMA's Community Development projects – construction project phase contribution of $500,000 p.a.	Yes	Yes, Project-related increases	$500,000	$500,000	Further contributions subject to additionality, i.e.

Impact Area	Mitigation measures	Project specific	Life of Project	Value of mitigation measures		
				Construction Year 1	Construction Year 2	Operations Year 1-3
	• Commitment to increase the level BMA spends on investment in benefits for the Isaac LGA, if the Project's operation results in additional population beyond that supported by BMA's current operations • Provision of information on workforce ramp-up and expected population increases to enable IRC, services and business planning • Support for IRC advocacy for Government resources for service provision to match total FTE population		subject to additionality Advice on workforce ramp-up complete in Year 3 of operations			increase/decrease on BMA's total employment numbers (see 'Liveability' below)
Health and emergency services	• Contract with a local GP clinic to provide workplace health services and access to a GP for personnel staying in the construction WAV and WAVs used during operation • Health facilities and service provision including EAP for personnel accommodated in the WAVs • 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, and provided with on-site contacts	Yes	Yes, except advice on workforce ramp-up complete in Year 3 of operations	Minimal strain on local GP capacity Enables Queensland Health to plan for adequate capacity. Enables QPS, QAS and QFES to be ready for emergency responses		
Community cohesion	• Construction WAV provision to prevent impacts on housing and reduce impacts on public facilities e.g. hotels and clubs	Yes	No (relevant to construction period)	Avoidance of large numbers of NRW within towns		

Impact Area	Mitigation measures	Project specific	Life of Project	Value of mitigation measures		
				Construction Year 1	Construction Year 2	Operations Year 1-3
	• BMA Workplace Conduct Policy	No	Yes	Appropriate behaviour at work and in public which is consistent with local values		
	• BMA's social investment in community development programs	Yes	Yes, Project-related increases subject to additionality	Investment as above ($500,000 p.a. during construction) to include community participation programs		Further contributions subject to additionality, i.e. increase/decrease on BMA's total employment numbers (see 'Liveability' below)
Land disturbance	• Rehabilitation in accordance with BHPs completion criteria, EA and EIS approval conditions, and legislative requirements • Post-mining land uses will include safety and suitability for pre-mining land uses such as grazing	Yes	Yes, in accordance with EA conditions	Landform remediated to reduce visual impacts of operation Post mining land use safe, stable and capable of pre-mining use (e.g., grazing).		
OFFSET OR COMPENSATE FOR IMPACTS						
Amenity of homesteads	• Agreed coexistence agreements with the owner of nearby homesteads	Yes	Yes	Actions in accordance with coexistence agreement with landholders		
Liveability	• Investment in the liveability of Dysart and Moranbah through community partnerships and donations	No	Yes	BMA will continue to maintain its community investment, with consideration to employment and production levels, as well as existing community needs, social and economic transitions, and changes to social conditions e.g., housing and service availability.		
	• Additional funding for liveability initiatives	Yes	Yes, Project-related increases subject to additionality	Where additionality of activities (i.e., additional employees or production) occurs as a result of the Project, BMA will reflect this through proportional increases in community contributions. This may include support for accommodating key medical personal, support to enable additional childcare and out of school hours care places, and support for other community		

Impact Area	Mitigation measures	Project specific	Life of Project	Value of mitigation measures		
				Construction Year 1	Construction Year 2	Operations Year 1-3
				services, dependent on community needs at the time (see Sections 6.1.4 and 6.1.5)		
	• Engagement with IRC on shared value matters such as community amenity	No	Yes	Support for shared value initiatives as agreed from time to time		
Workforce diversity	• 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	No	Yes	Increased employment opportunities for women, towards a goal of 40 percent female representation in the Project's operational workforce		
	• Adoption of 8.0 percent goal for Indigenous employment in Project operations, and supporting strategies	Yes	Yes	Increased employment opportunities for Indigenous people, towards a goal of 8.0 percent		
	• Engagement with HCC to identify the employment aspirations of local people with disability, and match any State Government funding to support employment skills development and pathways to employment for people with disability who live in Moranbah or Dysart (up to $100,000)	Yes	No, targetted partnership initiative		Up to $100,000	
Housing	• Housing forum/roundtable facilitated by BMA's Smart Transformation Project in 2022/23 to discuss implementation on STAC's housing study recommendations	No	Dependent on agreements between BMA and other stakeholders	During FY24 and future years, recommendations from the study will be socialised and explored in cooperation with other stakeholders and in accordance with any agreed additional contributions by BMA.		
Local business and industry opportunities	• Use of BMA's existing extensive supplier network • Promotion of supply opportunities through C-Res and ICN	No	Yes	Capital, economic and community value as described in EIS Appendix M: Economic Impact Assessment		Estimated value of Local Buying contracts approximately $3

Impact Area	Mitigation measures	Project specific	Life of Project	Value of mitigation measures		
				Construction Year 1	Construction Year 2	Operations Year 1-3
	• BMA's Local Buying Foundation capacity building programs					million in Isaac LGA
	• 6.5 percent 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	Yes	Yes (operational period)	Support for the development and sustainability of Indigenous businesses		
	• Potential partnership to support BBAC capacity for involvement in Project construction, operations and rehabilitation	No	To be determined with BBAC	To be explored with BBAC – longer term prospect		
Approximate financial value – housing and community development – Project-specific **NB: Exclusive of currently committed social investments, water supply subsidy, investment in workforce training and development, and value of supply opportunities to local businesses**						
Project personnel housing subsidy – estimated range of investment for rental subsidy of 70 personnel and families – ongoing throughout operations			Yes (operational period)	N/A	N/A	$946,000
GP/mental health worker housing subsidy			No, targeted to initial increased demand	$20,000	$20,000	$20,000
DCSG funding for community programs, as part of existing arrangements or renewed arrangements between DCSG and BMA			No, targetted to settlement of personnel and families		$50,000	$100,000
Matched support for disability training/employment			No, targeted initiative		$ 100,000	
Support for recruitment of childcare workers if capacity is insufficient to meet Project demands			No, targeted initiative to increase capacity			UP to $100,000

Impact Area	Mitigation measures	Project specific	Life of Project	Value of mitigation measures		
				Construction Year 1	Construction Year 2	Operations Year 1-3
Additional social investment for community development projects funded through community grants and partnerships			Yes, Project-related increases subject to additionality	$500,000	$500,000	Subject to additionality, i.e. additional social investment if the Project increases BMA's overall impacts or community needs in the Isaac LGA – see Section 6.1.5
Estimated additional investment in housing provision and community development per annum				$520,000	$670,000	During Year 1 - $1,066,000, further contributions subject to additionality and need for increased childcare capacity

6.1.4 Adaptive social impact management

BMA will take an adaptive approach to social impact management, by modifying its approach to impact management as required, in response to changes to social conditions, social monitoring results and stakeholder feedback.

The adaptive management process will include:

- 12 months prior to the intended construction commencement date, BMA will:
    - review any changes to the Project's mine plan or infrastructure arrangements design;
    - review any changes to social conditions such as housing and accommodation availability, social infrastructure capacity and labour and skills shortages that would change how impacts and benefits are experienced;
    - engage with IRC to jointly consider any changes to social conditions and social impacts; and
    - if a material change in impacts is foreseen, revise the SIMP measures to address the expected change in social impacts;
- from the commencement of construction:
    - BMA will monitor the implementation and outcomes of SIMP measures as detailed in Section 7, and undertake annual reviews of SIMP effectiveness in consultation with IRC;
    - adaptation of management measures, if required, would be undertaken following the annual review;
    - following each annual review, a Social Impact Management Report (SIM Report) will be provided to DESI, OCG and IRC;
- from the commencement of operations and for a period of five years, BMA will:
    - monitor the implementation and outcomes of SIMP measures as detailed in Section 7, and undertake annual reviews of SIMP effectiveness in consultation with IRC, with adaptation of management measures, if required, undertaken following the annual review;
    - monitor the number of Project workers relative to employment numbers at the commencement of Project construction and adjust social investment funding as needed (as noted in the previous subsection); and
    - following each annual review, provide a Social Impact Management Report to DESI, OCG and IRC.

The Project will ensure the availability of a proactive responsive stakeholder engagement program and a responsive complaints management process to support identification of any issues that may require refinement of mitigation measures. BMA will maintain a stakeholder register, to ensure regular and consistent engagement with stakeholders. Stakeholder involvement in monitoring is discussed in Section 7.2.

As described in Section 7.3, the Project's SIMP will be regularly reviewed to determine any changes required to the SIMP to maintain its effectiveness, including external audits of the SIMP's effectiveness and delivery by a qualified third party.

6.1.5 BMA's social investment approach

BMA provides extensive financial and other benefits to communities in the Isaac LGA, including significant contributions to community wellbeing through BHP's local grants program, and community partnerships and investments. Recognising that BMA has several operations in the Bowen Basin, primarily within the Isaac LGA, BMA takes a portfolio-wide approach to social investment.

Currently, key social investment focus areas include Future of Work, Future of Community, Future of Environment, Community Wellbeing and Indigenous Engagement. BMA's social investment contributions and their relevance to Project communities are detailed in Sections 6.5.3 and 6.5.4.

BMA has regard to community characteristics, stakeholder feedback and local and state government policies when setting its community investment priorities. In refining its future community investment strategies, BMA will have regard to the Queensland Government's social policies (as current), including *Queensland: an age-friendly community - Strategic Direction*, *Queensland Women's Strategy 2022–27, Queensland Youth Strategy 2016*, and *Queensland's Disability Plan 2022-27, Together, a better Queensland*.

As noted in Section 2.5.2, IRC sought further information about BMA's community investment contributions, including detail on BMA's current and proposed community contributions and support. BMA met with IRC following receipt of Council's submission to understand their concerns, including the concept of 'additionality', 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, above and beyond BMA's contributions in respect to its existing portfolio.

During 2022, IRC provided benchmark data and further explanation of expectations relating to community investment contributions, given the benchmark data. In response, BMA provided Commercial in Confidence details to IRC that demonstrated that contributions in the current 'Business as Usual' (BaU) scenario well exceed the expenditure benchmarks provided by IRC. This resulted in development of a framework that:

- establishes a baseline of 'Business as Usual' (BaU) reflecting BMA's current operations and community investments in the Isaac LGA;
- establishes scenarios where additional community commitments over and above BaU may be agreed and established in line with increased operations over and above BaU, having regard to both BMA and industry operations within the Isaac region; and
- continues and further specifies BMA's commitment to mitigate impacts associated with the Project with additional measures e.g. social investment or road upgrades being necessary in a growth scenario.

BMA employment data identify the total number of people employed in BMA operations within the Isaac LGA. BMA will assess and monitor the Project's contribution to the number of BMA personnel employed in operations based in the Isaac LGA, as well as the Project's contribution to overall mining employment in the LGA. This will enable refinement of social impact mitigation measures (e.g. information sharing with Council, and the pipeline for employee housing provision) but will also be used as an input to social investment planning.

The mining industry is the Isaac LGA's major employer, with approximately 3,800 residents directly employed in mining in 2021. BMA's employment of Isaac LGA residents is a major contributor to this, and any changes (increases or decreases) in BMA's production and employment numbers may be reflected in changes in population numbers in Moranbah and Dysart, and/or in demand for Council, community or health services.

BMA recognises that 'additionality' is not a strictly linear equation. Project impacts are experienced differently depending on social and economic conditions and trends at the time that Project

construction and operation commence. For example, if rental housing availability is low, even small Project-related increases in housing demands may affect local households' access to housing and the capacity of businesses to access key workers. Conversely, improvements to health services (e.g. the new Moranbah Hospital) may see less need for investment in community health support, and economic transition may change the nature of training and development needs.

Broader factors which are directly relevant in the Isaac LGA include:

- social and economic transitions in support of decarbonisation, renewable energy and sustainable industries;
- how communities, industry, business Governments will cooperate in these transitions; and
- decisions by resource, energy and other industries about future investment.

The value of royalties paid by BMA to the Queensland Government to support provision of infrastructure and services to Queensland communities in 2021/2022 was approximately $3 billion. Under the new Queensland Government royalties regime, this has increased. It may also be expected that the proportion of royalties that the Queensland Government invests in services in Isaac LGA would increase, in recognition of local communities' importance to coal production in Queensland.

BMA reviews its social investment priorities on an annual basis in accordance with:

- BHP's social value framework;
- research undertaken from time to time including SIA processes, issue-specific research and community perceptions surveys;
- cooperation with a wide range of funding partners to evaluate and re-focus existing initiatives;
- engagement with IRC on at least a bi-annual basis to review the status and progress of agreements; and
- community feedback on community priorities (e.g. through the Moranbah and Dysart STACs and community perception surveys).

This ensures BMA's social investments are responsive to changing needs and social conditions. In addition to annual reviews of social investment at portfolio level, BMA will engage with IRC to confirm the Project's contributions and community investments, prior to Project construction.

Project commitments to social investment

BMA will implement a recruitment hierarchy which prioritises Project recruitment of local residents and personnel who would move to Dysart or Moranbah.

Prior to Year 1 of operations, BMA will also initiate a housing maintenance and upgrade program to prepare vacant housing in Dysart for Project personnel and families, to enable all existing and prospective new residents to access local housing that matches their needs. BMA will monitor Project personnel's housing needs and if a shortfall between the quantum of BMA housing and personnel's expected housing needs is identified, and in consultation with IRC, BMA will plan for additional housing development on BMA's vacant residential land to mitigate the Project's direct impacts (e.g. employees and contractors) on local housing availability.

These central commitments will strengthen the social and economic resource base supporting Dysart's social sustainability, and support Moranbah's ongoing role as a residential centre.

In addition to BMA's existing social investments and partnerships (as described in Sections 6.5.3 and 6.5.4), BMA has also made Project-specific commitments to social investment in Dysart and Moranbah. Project commitments are described in detail in Sections 6.1.3 and 6.5.4 and include:

- funding to DCSG for implementation of community support program/s ahead of full operations, to build community cohesion and support integration of new residents;
- support for development of pathways to employment for people with disability who live in Moranbah or Dysart;
- additional investment in community development projects in Dysart and Moranbah during Project construction, delivered through community grants and partnerships, as an extension of current funding programs;
- commitment to increase the level of BMA's social investment in the Isaac LGA, if the Project's operation results in additional population beyond that supported by BMA's current operations;
- provision of housing to support recruitment or retention of local GPs or mental health workers; and
- partnership and provision of funding for recruitment and relocation of childcare workers if local childcare capacity is insufficient to meet Project-induced demand.

Other commitments that will strengthen social resources in the Isaac LGA include:

- investment in Project workforce development and training, which will increase the Isaac LGA's skills base, particularly in underground mining;
- cooperation with local and regional businesses to maximise the value they derive from the Project's supply chain;
- renegotiating BMA's water supply subsidy agreement with IRC to enable provision of adequate town water to meet the increased demand, if current town water supplies were insufficient to the increased quantum of demand resulting from the Project; and
- continuing social investments which address opportunities identified by IRC, community groups and community members at the portfolio level.

Project development during a growth scenario

BMA acknowledges that expansion of its contributions to community programs and services, commensurate with expansion in its operations, will support the livability and attractiveness of local towns. BMA will consult with IRC and through its local community networks to identify and agree the priorities for community investment as part of updating the SIMP prior to commencement of Project construction. Priorities are anticipated to include support for community participation programs, upgrades to community service capacity, and support to strengthen liveability in Dysart and potentially Moranbah.

Should the Project be developed during a 'growth scenario' (i.e. result in an increase in BMA's overall production in the Isaac region), and the Project would result in increased employment, population and community needs compared to current levels, BMA is committed to increasing its community investment support proportionally, in consultation with IRC. For example, if the number of employees increases by five per cent as a result of Project operation (compared with the number of personnel employed when Project construction commences), a five per cent increase in BMA's social investments would be required.

Consideration of social investment priorities and contribution levels will also reflect an understanding of community priorities and social conditions at the time, as determined through the social investment review practices described above.

Project development during a decline scenario

As noted above, BMA will maintain its social investment, commensurate with its contributions to social impacts in the Isaac LGA, and with consideration to community priorities and changes in social and economic conditions.

In the event that BMA's current employment numbers in the Isaac LGA decline before the Project commences, or are expected to decline during the Project's operation, BMA will review its community contributions in accordance with the annual social investment review practice described above. This will include engagement with IRC to review social conditions, community needs and community priorities.

This is likely to result in refinement of community investment priorities, and may result in a reduction in BMA's overall community investments, commensurate with BMA operations' impacts on communities. For example, if the total number of BMA personnel declines by five per cent compared to the baseline at the time Project construction commences, a five per cent decrease in community investment would be expected.

6.2 Community and Stakeholder Engagement

6.2.1 Purpose, objectives, KPIs and outcomes

The purpose of this sub-plan is to describe:

- how the Project will engage with Project stakeholders to establish and/or maintain strong cooperative relationships;
- engagement processes that will support adaptive management of social impacts and opportunities identified by the SIA; and
- how stakeholder expectations, concerns and interests will be understood and taken into account in Project planning and SIMP implementation.

The objectives and KPIs for Project engagement are shown in Table 6.4.

Table 6.4: Community and Stakeholder Engagement Objectives and KPIs

Objectives	KPIs
Cooperate with Traditional Owners and nearby homestead owners to avoid or minimise impacts on their land interests or amenity	• Cultural heritage is protected and managed in accordance with an agreed CHMP and the ACHA • Any impacts on the amenity of homestead are temporary and managed in accordance with agreements with landowners
Provide community members, IRC and Government and community agencies stakeholders with appropriate and timely information about Project impacts and opportunities	• A range of opportunities is provided for engagement between stakeholders and the Project (as per Table 6.6) • Community members and IRC provide positive feedback on Project engagement • All identified stakeholders (as per Table 6.6) have access to information about the timing and status of Project works and the Project's workforce ramp-up/down
Ensure engagement supports adaptive management of social impacts by identifying stakeholder expectations, concerns and interests, to enable revision of any ineffective management measures	• Communications channels are maintained and/or established to enable identification of any new or emerging issues to be addressed • The Project's Stakeholder Engagement Register identifies Project stakeholders, their issues and information needs, all interactions with Project stakeholders and how their issues were addressed • The Project promotes access to BMA's community hotline and community complaints procedure, to enable affected communities and other stakeholders to register complaints,

Objectives	KPIs
	queries or comments and have them addressed in a timely manner • The SIMP monitoring process enables reporting of the delivery and effectiveness of social impact management plans and enables corrective actions to be instituted where necessary.

The desired outcomes for the Project's community and stakeholder include:

- Traditional Owners are involved in cultural heritage management and planning for post-mining land use and rehabilitation;
- BMA has cooperative relationships with nearby homestead owners, enabling amenity impacts to be avoided or minimised;
- engagement supports adaptive management of identified and unanticipated social impacts;
- consultation with IRC and government and community agencies enables planned, cooperative response to impacts on services;
- identification and implementation of shared value opportunities that improve community wellbeing in the Isaac LGA; and
- stakeholders are involved in closure planning to support mitigation of social impacts.

6.2.2 Stakeholders

BMA maintains an established Stakeholder Register to ensure stakeholders and their interests are central to the business, and that feedback and complaints are recorded and actioned.

Table 6.5 identifies the range of stakeholders at local, regional and state level who are involved in ensuring positive social outcomes as a result of mining and resource activity in the region. Many of these stakeholders have informed the SIA and will be involved in implementation and monitoring of this SIMP.

Table 6.5: Stakeholders

Stakeholder Group	Stakeholders
Queensland Government	• Office of the Coordinator General • DESI • DSDI • Queensland Health • Department of Education • DESBT
Local government	• Isaac Regional Council
Landowners	• Adjacent and nearby landholders
Traditional Owners	• BBAC and traditional owner community and businesses
Local community members and community organisations	• Local community members affected and/or interested in the Project • Local and regional residents interested in Project employment • DCSG • HCC

Stakeholder Group	Stakeholders
	• MDSS • Moranbah Emergency and Long Term Accommodation • Moranbah and Dysart STACs
Businesses	• Local businesses interested in supplying the Project • DCSG • Dysart Business Group • Isaac Business Chamber • Moranbah Traders Association • C-RES and supplier network
Social and health infrastructure providers / Government agencies	• Education Queensland - Dysart State High School, Dysart State School, Moranbah State High School, Moranbah State School, Moranbah East State School • Queensland Health - Dysart Hospital, Moranbah Hospital, Mackay Hospital and Health Service, Moranbah District Mental Health Service • Dysart Medical Centre • Oaktree Family Medical Centre • SonicHealth Plus • NQ PHN • QPS - Dysart and Moranbah Police, Mackay District Command • QAS - Moranbah and Dysart Ambulance officers, District Command • QFES - Dysart and Moranbah Fire Stations, Mackay Country Command, • Childcare Leadership Alliance

6.2.3 Communication measures

BMA's communication channels that will be used and promoted by the Project include:

- a free call number, answered 24 hours / seven days per week;
- a community email account to ensure community members have access to the Project team; and
- a reply-paid address for written correspondence from the community.

These communication mechanisms will be promoted on all Project communication materials.

Project information will also continue to be published online at https://www.bhp.com/environment/regulatory-information, and updated as the Project develops. Following Project approval, this site will be updated, or a new project information portal will be created, to publish project communications and monitoring information including:

- EPBC Act compliance reports;
- SIMP Review reports; and
- BMA's Feedback and Complaints Procedure, including a 24 hour toll-free complaints number.

Post-approval, BMA will also initiate the following regular communication mechanisms to share information about the Project, and agree the ongoing engagement processes to be implemented with each stakeholder:

- consultation and communication with adjacent landholders to identify and mitigate concerns;

- regular engagement with BBAC regarding Traditional Owners' interests;
- regular briefings to IRC on the schedule, progress, potential impacts and mitigation measures for the Project, and identification of partnership opportunities to maximise social opportunities;
- regular construction notices, published in local media and communicated through regular engagement with key stakeholders; and
- provision and promotion of a complaints and feedback mechanism accessible to all local stakeholders.

BMA's Communities team will provide ongoing information regarding the Project's construction and operation within the local community. This will also involve regular participation in local projects

6.2.4 Complaints resolution

As noted in the International Council on Mining and Metals good practice guideline for complaints management, any large-scale project, even if managed to the highest standards, may cause local concerns (International Council on Mining and Metals, 2009). BMA believes that effective complaints management is integral to building communication, respect and trust between its operations and local communities. It also assists in detecting and addressing local concerns at an early stage.

Responsibility for receiving complaints, and coordinating the responses, rests with the BMA Communities team. However, responsibility for addressing and resolving complaints rests with the Project's relevant Manager during construction, and with the mine's General Manager during operations.

All personnel including contractors will be made aware of the existence and importance of the complaints mechanism in their on-boarding program, and how to direct a complaint.

The following avenues will be promoted to community members and registered stakeholders for their feedback, input and complaints:

- publicised email, phone and reply paid addresses and included on the BHP website;
- in person to a community relations representative, or during a meeting with BMA employees;
- to a third party such as a government department (e.g. DESI), with links between BMA and departments to ensure that feedback is provided in a timely manner.

Upon receipt of a complaint, the responsible Manager will commence investigation into the cause of the complaint and where mitigation is required, take any reasonable actions required to address the complaint.

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

Upon closing out a complaint, the stakeholder will be contacted by the relevant BMA representative to determine if they are satisfied with the resolution.

BMA will utilise its established internal complaints register to record and report on all complaints that may be received during the construction and operation of the project.

6.2.5 Processes for incorporating stakeholder feedback

BMA's processes for incorporating stakeholder feedback into the adaptive management of the Project's social impacts include:

- consideration of submissions to the EIS for reflection in SIMP implementation;
- regular engagement with nearby landowners through individual meetings as requested by landowners and on at least an annual basis, to identify and address any issues relating to the Project's operation;
- meeting with BBAC to provide Project updates, encourage uptake of Project jobs and identify and address training needs;
- meeting with IRC every six months or to an agreed schedule to provide Project updates and seek their feedback on SIMP implementation;
- regular engagement with QPS, QFES and QAS regarding the adequacy and readiness of emergency management procedures;
- investigating community and stakeholder complaints and incorporating the result of complaints investigations in the revision of operating procedures or management plans as relevant; and
- seeking feedback from IRC and key stakeholders regarding the adequacy and effectiveness of SIMP measures as part of annual SIMP reviews.

Stakeholder feedback will enable any corrective actions to be undertaken e.g.

- amendment to environmental management plans, e.g. noise management
- better targeting of community investment as community needs change; or
- revision of the SIMP to reflect stakeholder feedback.

BMA will review its existing Stakeholder Engagement Register to ensure that all Project stakeholders are included, and maintain the register for the life of the Project to support consistent and inclusive stakeholder engagement and enable reporting on engagement. The Stakeholder Engagement Register will include the following details:

- stakeholder group (e.g. landowners, Government agencies) and individual stakeholders engaged;
- engagement activities and the date(s) of those activities;
- issues raised/discussed by stakeholders; and
- how issues have been considered and the outcomes of stakeholder engagement, including any commitments made by BMA.

6.2.6 CSEP for pre-closure and closure

BMA will engage with nearby landowners, Traditional Owners, IRC and local community groups as part of the ongoing development and implementation of the Project's Progressive Rehabilitation and Closure Plan. BMA will also participate in Council, industry and Government initiatives that support economic diversification and transition planning.

Five years prior to the planned closure of the Project, BMA will revise the Community and Stakeholder Engagement Action Plan to guide engagement with stakeholders during the decommissioning and closure stages, as detailed in Section 4.7.

As part of this revision, BMA will focus engagement with key stakeholders including regulatory bodies, nearby landholders, IRC, Traditional Owner representatives, community members and groups, employees and suppliers, to:

- communicate the timeframe for closure and confirm processes that will be put in place (e.g. contraction of the workforce or supply arrangements) prior to closure;
- develop the process for community and stakeholder engagement in consideration of potential impacts and benefits of Project closure;

- ensure all regulatory requirements are well planned for and addressed in a timely way, including definition of environmental outcomes and relinquishment criteria;
- identify and implement joint initiatives to transition BMA personnel and suppliers to other employment and business opportunities in the Isaac LGA;
- co-operate with local stakeholders including IRC, Department of Resources, DESBT and DSDI in programs enabling economic transition; and
- cooperate with other resource companies in the Isaac LGA to work towards a progressive ongoing focus on post-mining land use in the context of regional development and environmental protection.

A detailed plan for community and stakeholder engagement with regards to closure will then be developed to support engagement prior to and during mine closure and ML relinquishment process.

6.2.7 SIMP action plan: Community and Stakeholder Engagement

A number of the Project-specific mitigation strategies include consultation as a core component.

Prior to construction, the Project's stakeholder engagement strategy will be updated to ensure it continues to address interested and affected stakeholders and current social conditions, and includes stakeholder involvement in monitoring as detailed in Section 7. The Project's CSEP will be updated prior to operations commencing.

The following community and stakeholder engagement strategies will be employed by BMA for the Project (see Table 6.6).

Table 6.6: SIA Engagement Stakeholders and Engagement Plan

Stakeholder Group	Stakeholders	Purpose	Impact/benefit addressed	Responsibility	Engagement Type	Timing
Traditional Owners	• Barada Barna People – Barada Barna Aboriginal Corporation	Seek feedback on recommended strategies for Indigenous engagement and employment Foster reconciliation and respect Develop understanding of issues and expectations Meet Native Title and Heritage requirements and commitments	Lack of access to Country whilst mining occurs, cultural heritage impacts	Corporate Affairs & Indigenous Engagement	1. Formal meetings to consider native title and cultural heritage issues, 2. Heritage field work 3. Meetings to plan signage at the Project entrance and within the site recognising Barada Barna people 4. Engagement in planning and delivery of cultural awareness and cultural heritage management training to Project staff 5. Phone calls and email 6. Engagement as part of rehabilitation and closure planning for the Project	1. Six months prior to construction, and bi-monthly to 6-monthly, or as required 2. As required by ACHA 3. Prior to commencement of construction 4. Prior to commencement of construction 5. As required 6. In accordance with PRC plan
Landholders	• Residents living within 3 km of Project site	Adaptive management of project impacts such as dust or noise Cooperative relationships with near neighbours	Amenity impacts	Land Access & Approvals / Corporate Affairs	1. Meeting to advise of construction schedule and activities, environmental management measures and site contacts 2. Face to face meetings, phone calls and emails	1. Prior to commencement of construction 2. As required, e.g. prior to noisy events or major haulage
Local government	• IRC	Understand and respond to community needs and issues Create shared value	Community development; impacts on housing and Council services	Corporate Affairs	1. BMA IRC meetings 2. BMA Mackay Regional Council meetings 3. Participation in SIMP reviews	1. 6-Monthly Updates, and informally as required 2. As required 3. Annual 4. In accordance with PRC plan

Stakeholder Group	Stakeholders	Purpose	Impact/benefit addressed	Responsibility	Engagement Type	Timing
		Obtain Council feedback on SIMP delivery and effectiveness			4. Engagement as part of rehabilitation and closure planning for the Project	
Local communities	• Moranbah residents, businesses and community groups • Dysart residents, businesses and community groups	Communicate project progress and environmental management outcomes Secure community input and feedback on social impacts and benefits	Community development, impacts on housing and community services	Corporate Affairs Indigenous Engagement and Community	1. Project updates through local media and Community Connect 2. Smart Transformation Advisory Council briefings (Moranbah and Dysart) 3. Participation in community forums	1. Three months prior to intended construction date, at construction milestones, and 3 months prior to operations commencing 2. Three months prior to intended construction date, then annually Year 1-3 3. As required
Community organisations	• MDSS • ELAM • DCSG • HCC • Childcare Leadership Alliance	Support for initiatives that address community priorities	Increased demand for services, opportunities to increase service/program capacity, community development (addressed in detail in Section 6.5)	Corporate Affairs	1. Meetings to seek input on priorities for social investment and develop implementation partnerships 2. Partnership meetings to support and monitor project outcomes	1. Commencing three months prior to construction commencing 2. Six monthly
Local Businesses	• Dysart Business Group Inc. • Moranbah Traders • Isaac Business Chamber • C-Res and C-Res suppliers	Optimise local procurement outcomes	Business opportunities (addressed in detail in Section 6.6)	Corporate Affairs	1. Update to existing suppliers in C-Res network 2. Participate in Dysart Business Group Inc. and Moranbah Traders Association meetings and price Project information to promote supply opportunities	1. Three months prior to intended construction date, thereafter in accordance with C-Res's tendering procedures 2. Bi-annual during construction and prior to operations commencing

Stakeholder Group	Stakeholders	Purpose	Impact/benefit addressed	Responsibility	Engagement Type	Timing
	• Mackay Regional Chamber of Commerce • GW3					
Health services	• Dysart Hospital • Moranbah Hospital • Dysart Medical Centre • Moranbah District Mental Health Service • Mackay Hospital and Health Service • NQ PHN • Oaktree Family Medical Centre • SonicHealth Plus	Enable health services to plan for increased demand	Increased demand for health services from NRW and additional population during operations (addressed in detail in Section 6.5)	Corporate Affairs	1. Meetings to advise on workforce ramp-up 2. Meeting/correspondence to monitor project demands on health services 3. Local Disaster Management Group meetings	1. Six months prior to construction commencing, and six months prior to operations commencing 2. Six monthly 3. Six monthly
Police and emergency Services	• QPS - Dysart and Moranbah Police, Mackay District Command • QAS - Moranbah and Dysart Ambulance officers, District Command • QFES - Dysart and Moranbah Fire Stations, Mackay Country Command	Enable police and emergency services to plan for increased demand Consult on traffic management plans Support incident and issues management	Increased demand for emergency and police services (addressed in detail in Section 6.5)	Corporate Affairs Operational GMs HSE	1. Meetings to advise on workforce ramp up 2. Site orientation	1. Three months prior to construction commencing; 3 months prior to operations commencing, and as otherwise agreed 2. Prior to commencement of construction and commencement of operations

Stakeholder Group	Stakeholders	Purpose	Impact/benefit addressed	Responsibility	Engagement Type	Timing
	• SES • CQ Rescue • Westpac Rescue					
Education and Training providers	• Education Qld – Dysart and Moranbah Schools • QMEA • CQ University • Clontarf Academies • Youth Advisory Councils (YACs)	Partner to continue development of training and job entry pathways	Training and employment opportunities (addressed in detail in Section 6.3)	Corporate Affairs BMA Asset Integration	1. Meetings to advise on workforce ramp-up 2. Partnership meetings - School Programs – Bright Minds etc.	1. Three months prior to intended construction date, construction milestones, 3 months prior to operations commencing 2. Six monthly or as agreed
Closure stakeholders	• Barada Barna People • Adjacent landholders, IRC, • Utility owners • Overlapping tenure holders. • Project personnel • Queensland Health	Provide advice on closure to support management of potential social impacts Involve stakeholders with a genuine interest in closure impacts in progressive rehabilitation and closure planning	Redundancies, loss of supply opportunities, changes to housing access and/or service demands, post mining land use	Corporate Affairs Closure Planning team	1. Correspondence and meetings 2. Engagement in compliance with Mineral and Energy Resources (Financial Provisioning) Bill 2018 3. Review and revise SIMP for pre-and post-closure phases	1. 5 years prior to closure 2. 5 years prior to closure 3. 3 years prior to closure

6.3 Workforce Management

6.3.1 Purpose, objectives and KPIs

The Isaac LGA and MIW region have significant industry strengths in construction and mining. Fluctuations in coal prices and other global demand factors affect production and therefore employment levels in the Isaac LGA. Currently both the construction and mining industries, as well as industries such as transport and logistics, are experiencing national skills and labour shortages.

With an assumed two years before construction may commence and four years before operations may commence, labour availability is likely to change. For example, a resurgence in skilled immigration appears likely, and at least two coal mines in the Bowen Basin will close in the next few years, releasing skills and labour to the market. Monitoring strategies that address this variability are outlined in 7.

The purpose of this sub-plan is to address the impacts and opportunities of Project employment.

- During construction, social impacts and benefits include:
- local access to Project jobs;
- increased competition for skilled labour; and
- participation of local, regional and Indigenous businesses in Project construction.

During its operation, the Project is expected to contribute to:

- increased long-term availability employment and training options in the Isaac LGA and the MIW region;
- increased employment equity for women, Indigenous people and young people;
- increased competition for the recruitment of skilled personnel;
- local apprenticeship and training opportunities;
- opportunities for increased workforce-community participation;
- opportunity for skills diversification and development for BMA employees; and
- workforce health and wellbeing.

The objectives and KPIs for workforce management are shown in Table 6.7.

Table 6.7: Workforce management objectives and KPIs

Objectives	KPIs
Recruit personnel from within the Isaac LGA, MIW and Central Queensland regions	• Project recruitment follows a hierarchy commencing with local and regional recruitment
The Project attracts personnel who will move to the Isaac LGA	• Number of new individuals and families moving to Dysart for Project employment
Equitable participation of under-represented workforce sectors in Project employment	• Approximately 8.0 percent of the Project's workforce are Indigenous people by Year 3 of operations • A strong contribution to BHP's target of a 40.0 percent female workforce by Year 3 of operations
Contribute to a skilled and engaged workforce in the Isaac LGA	• Apprenticeships and training opportunities are available to Isaac LGA residents

Objectives	KPIs
	• BMA's training strategies and STEM initiatives contribute to strengthening the existing mining workforce base
Project personnel integrate into local communities, and behave with respect for local values	• New local personnel receive support and have opportunities to engage in community activities

6.3.2 Recruitment

BMA is committed to ensuring that the number of Isaac LGA residents (existing and in-migrating) employed by the Project is maximised.

The recruitment hierarchy for the Project's operation will prioritise employment of local residents by applying the following order of priority:

- residents of Moranbah and Dysart;
- other Isaac LGA residents;
- Mackay Whitsunday region resident; and
- other Queensland residents.

Scheduling of recruitment will be staggered in accordance with this hierarchy, with the following measures applied to encourage local residents to apply for Project roles:

- promoting Project roles to existing BMA employees prior to public advertising, via site communication channels (intranet and emails, toolbox talks and noticeboards) allowing ten working days for internal applications prior to external advertising;
- moving qualified internal candidates to the selection process and providing feedback to all internal candidates before an appointment or further advertising is publicly announced;
- including a statement in all job advertisements that Isaac LGA residents are strongly encouraged to apply;
- promoting the availability of underground mining vacancies to local open cut mining personnel and supporting them to access relevant training courses to re-train for work in the underground operation;
- providing BMA's current contractors with opportunities to apply or tender for Project work;
- using local networks and BMA partners to promote opportunities;
- advertising vacancies through local media (e.g. Moranbah Messenger and Dysart Diary), and through BMAs Community Connect and Coal Connect newsletters;
- maintaining relationships with employment agencies based in Mackay and Rockhampton, advising of potential vacancies and requesting their identification of suitable local candidates; and
- identifying interest in flexible work options and seeking to provide options that maximise local participation in Project employment.

Non-local candidates and recruits will be encouraged to move to the Isaac LGA through:

- provision of access to an on-line information pack including a profile of local communities to support 'new local' employees to understand the amenity, services and housing options on offer;
- identifying new personnel's housing needs and facilitating provision of housing for personnel who wish to move to Dysart or Moranbah;

- providing subsidised housing for all new employees who move to the LGA; and
- identifying 'new local' employees' childcare needs and supporting an increase in childcare capacity if needed (see Section 6.5.5).

BMA will report on the number of existing local personnel and the number of personnel settling locally to take up employment to IRC, QPS and DSDI on an annual basis for the first three years of operation (to the operations workforce peak).

6.3.3 Training and development

BMA will assess skills and labour availability for the construction phase, six months prior to construction, to enable evaluation of prospective principal contractors' training and recruitment strategies to address any labour and skills shortages.

To manage potential impacts and facilitate opportunities for local training and employment during the Project's construction phase, BMA will require its Principal Contractor to:

- coordinate across construction contractors to manage the demand for tradespeople over the course of construction;
- implement on-site training programs;
- offer traineeships and if possible apprenticeships (noting that the construction period is expected to be only two years);and
- liaise with Construction Skills Queensland and DESBT to align supply strategies with current policy objectives and initiatives.

BMA will also assess the availability of skilled and experienced underground mining staff, twelve months prior to operation, to enable specific training and recruitment strategies to be established in time to resource the Project.

BMA's training and development strategies to develop operational workforce capacity include:

- school and industry-based training partnerships across the Bowen Basin;
- structured training through traineeships and apprenticeships; and
- strategies to increase Indigenous people's employment opportunities in BMA operations.

BMA's current partnership projects supporting development of young people's capacity for Project employment include:

- supporting schools with STEM related outcomes that focus on integrating opportunities related to 4th industrial revolution through the Bowen Basin Bright Minds program delivered in cooperation with Bowen Basin schools;
- exposing students to the resources sector through targeted engagements and on-site activities through the Arise Program being delivered in partnership with QMEA and the Qld Resources Council; and
- the Qld Future Skills Project being delivered in partnership with TAFE Qld which is delivering fast-tracked development and delivery of automated technology career pathways through skill sets and qualifications in open-cut mining operations in Queensland.

BMA is also facilitating training and trade qualifications for local young people through its support for the Coalfields Technical Centre of Excellence (CTEC) in Moranbah.

Prior to operation, BMA will engage with DESBT and registered training organisations to align BMA's training supply strategies with current policy objectives and initiatives.

For operations, BMA will co-ordinate direct employment of apprentices and trainees. Training and development strategies for the Project's workforce will include:

- provision of up to ten apprenticeships by Year 3 of operations and maintaining this commitment throughout the Project life;
- in-service training and 'back to work' opportunities for injured workers will also support workforce development; and
- engagement of local and regional training organisations to support increased training and capacity development initiatives.

BMA's training supply strategy will include a focus on:

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

6.3.4 Employment diversity

The Project will support maintenance of BHP's goal of 8.0 percent Indigenous personnel, and is expected to achieve this goal within the first three years of operation. Measures to support this will include:

- direct communication with BBAC regarding:
    - the availability and interest of Barada Barna People who are living in the Isaac LGA or who may move to the LGA for Project employment;
    - the housing and accommodation needs of Barada Barna People who may take up Project employment;
    - types of training programs required to skill Barada Barna people for employment in Project construction and operation;
- the interest and capacity of BBAC and Barada Barna People's businesses to participate in progressive rehabilitation, and any programs or partnership required to build capacity;
- sharing information about Project opportunities for training and employment at the Project, prior to construction commencing and again prior to commencement of operations;
- promoting contact with BHP's Talent Acquisition team to Indigenous community members through schools and Native Title Registered Bodies;
- proving flexible work options including job-sharing and part-time roles;
- focusing on Indigenous young people as part of each apprenticeship recruitment campaign, through engagement with BBAC and local schools.

In support of achieving gender balance within the Project workforce, BMA will:

- improve employment messaging to target diverse audiences about BMA employment opportunities and benefits;
- progress market mapping to proactively target people or groups of people not actively looking to work for BMA;

- broaden employment and brand reach across social, digital and traditional media channels;
- enhance workforce development and retention through coaching and support materials for leaders; and
- implement mentoring and support networks for women.

As part of its commitment to workplace diversity and inclusion, BMA will collaborate with HCC and/or other relevant community organisations providing services to people with disability in Dysart and MDSS in Moranbah to identify and support programs that develop employment pathways for local people with disability.

6.3.5 Community and workforce integration

BMA will directly resource settlement support services (through its internal teams) and fund DCSG to support provision of settlement services. BMA's support for settlement of new local residents associated with the Project will include:

- coordinating welcome events and welcome information packs for new residents;
- providing information about community, education, recreation, arts and culture and health services;
- linking new residents to community networks and volunteering opportunities;
- providing emotional and practical support for families as they settle in; and
- supporting the facilitation of a diverse range of local events, activities and information resources such as the local publication, the Dysart Diary.

Settlement services will be provided for a three-year period commencing three months prior to the commencement of Project operations.

BMA will manage potential impacts on community identity and cohesion related to increased numbers of non-local personnel through a combination of BMA-wide strategies and Project-specific strategies as outlined below.

Strategies to enhance community and workforce cohesion identified by this SIA are as follows.

Respect for local values

- Provide induction training and a welcome pack for Project workers emphasising expected standards of behaviour in local towns, respect for local values and promoting local and regional attractions and activities;
- Develop and deliver Aboriginal and Torres Strait Islander cultural awareness and competency training, in consultation with Barada Barna people, to Project employees; and
- Provide information to the local community about BMA's expected standards of behaviour, access to its complaints mechanism, responses to reported incidences of anti-social workforce behaviour.

Workplace Conduct Policy

- During construction, require compliance with the Principal Contractor's 'Work Rules' (outlining expectations of behaviour and disciplinary action for non-compliance); and
- For operations, BMA's Workplace Conduct Policy will apply. Workers demonstrating behaviour that does not comply with the company requirements will face disciplinary action in line with the terms of their employment. Workers staying in WAVs will also be bound by the facilities' Codes of Conduct, with withdrawal of accommodation the result of non-compliance.

6.3.6 Workforce health and wellbeing

BMA is committed to providing workplaces that support physical and mental health. Specific strategies that will be employed by the Project to embed a workforce culture that promotes holistic health and wellbeing include:

- implementing the 'BHP Our Requirements' documents that are currently in use at all BMA operations;
- contracting an EAP provider to provide proactive support for mental health and family issues, and to support NRW to manage the pressures of the commuting lifestyle;
- providing a range of on-site facilities and services to meet the health and recreational needs of construction and (as required) non-local operational personnel;
- providing or facilitating workers' access to local health and recreational services to reduce demand for services, and support workforce-community integration;
- establishing a project in partnership with health agencies to develop personnel's skills to identify and respond to mental ill-health in the workplace, including staff awareness, referral pathways between the workplace and health care providers, and engendering a culture that supports mental wellbeing;
- promoting use of the Queensland Government's 13 HEALTH (13 43 25 84) confidential phone service that provides health advice, and will increase workforce awareness of domestic and family violence matters, and how to seek help at the worksite, through the EAP or through community services;
- consulting with Mackay HHS regarding the development of workforce health and wellbeing strategies;
- supporting mental health and wellbeing programs through social investment wherever possible;
- promoting recovery through return to work after illness or injury; and
- cultural mentoring support will be made available to all Indigenous employees working on-site, where required, and specific induction, training and support programs will be developed to support migrant workers if required.

Fatigue management

During construction:

- BMA will require its Principal construction and major contractors to demonstrate an excellent health and safety record, detail their workforce management procedures (including offsite driving) to minimise risks to personnel, and detail how they will promote a healthy workplace;
- BMA will promote its guidelines to workers which outline acceptable safe journey management practices and discourage the use of private transport by workers; and
- BMA's construction contractors will employ fatigue and journey management policies that are consistent with BMA's requirements. This will include rest days for construction workers to maintain sleep levels and attend to health and fitness.

During operation:

- BMA will implement a training approach that educates managers, supervisors and workers in fatigue management, including how to recognise the effects of fatigue, the influences of a healthy lifestyle and non-work activities, the effects of medical conditions, sleep disorders and drugs and alcohol, personal measures to manage fatigue, and how to access the EAP;
- BMA will maintain a standard roster system that can only be varied through risk assessment and authorised sign-off, and will monitoring employees and contractors shifts to ensure fatigue management guidelines are met; and

- BMA's construction and non-local operational personnel will be accommodated in ensuite rooms with light, noise and temperature control, and will have clear separation of crews on night and day shift.

BMA will promote use of a contracted bus transport solution for workers to and from the WAV to work sites, as well as to and from the Moranbah 'Bunhdhara' Airport.

BMA will also consult Project personnel regarding the need for a bus service between Dysart and the Project site, as they are onboarded. If sufficient interest is established, BMA will deliver a pilot bus service for six months. If evaluation of the bus service pilot indicates positive outcomes for personnel, it would be extended for a further twelve months and re-evaluated, to identify the ongoing need for the service.

6.3.7 SIMP action plan: Workforce Management

Table 6.8 outlines the key actions to be implemented by BMA and/or its Principal Contractor addressing the impacts and opportunities identified by this SIA.

Table 6.8: SIMP Action Plan: Workforce Management

Impact/benefit	Management measures	Outcomes sought	Stakeholders	Timeframes for implementation
Construction employment opportunities for local residents	• The Principal Contractor will promote construction employment opportunities through local briefing sessions in Dysart, Moranbah and Middlemount, C-Res, Moranbah Traders Association and Dysart Business Association, and through local media • BMA will promote C-Res Foundation business capacity building programs to local construct industry suppliers	Construction workers located in the Isaac LGA are aware of and supported to tender for construction employment opportunities	Local workers C-Res Local construction and service provision companies BBAC	Three months prior to construction
Employment opportunities for existing local residents	• BMA will implement the employment hierarchy detailed in 6.3.2 • BMA will use local networks, BBAC, local training providers and community networks and social media to advertise Project employment opportunities to Isaac LGA residents at an early stage of the recruitment process • BMA will include a statement in all job advertisements that Isaac LGA residents are strongly encouraged to apply • BMA will identify recruits' interest in flexible work options and seek to provide flexible options	All local residents who have appropriate training /experience are considered for Project operational roles	Current mining personnel and job seekers in Isaac LGA IRC Training and employment providers Local labour and service provision companies	From commencement of Project operation, for the life of operations
Recruitment and integration of new personnel to the Isaac LGA	• Provide job applicants with access to an on-line information pack including a profile of local communities to support 'new local' employees to understand the amenity, services housing and volunteer options on offer • Identify new personnel's housing needs and facilitate provision of housing for personnel who wish to move to Dysart (or Moranbah, subject to BMA housing availability) and associated settlement services • BMA will resource settlement support services (through its internal teams) and fund the DCSG to provide settlement support. BMA will consult Project personnel regarding the need for a bus service between Dysart and the Project site, as they are onboarded. If sufficient interest is established, BMA will deliver a pilot bus service for six months. to be extended subject to evaluation.	New local project workers and families are supported to integrate to communities	Job seekers in Isaac LGA and beyond, new local residents IRC DCSG	From commencement of Project operation, for the life of operations

Impact/benefit	Management measures	Outcomes sought	Stakeholders	Timeframes for implementation

Employment equity – Indigenous people	• Direct communication with BBAC regarding:
	  ○ the availability and interest of Barada Barna People for Project employment and supply opportunities
	  ○ types of training programs required to skill Barada Barna people for employment in Project
	  ○ Project opportunities for training and employment prior to construction commencing
	• The Principal Contractor will identify and contact Indigenous construction-related businesses in the Isaac, Central Queensland and MIW regions as part of the construction tendering and sub-contracting process
	• Focus on Indigenous young people as part of each apprenticeship recruitment campaign, through engagement with BBAC and local school
	• Cultural mentoring support will be made available to all Indigenous employees working on-site, where required
		Project achieves Indigenous participation in employment of 8.0 percent by Year 3 of operations	BBAC, Barada Barna jobseekers, Isaac LGA schools, Indigenous mining industry workers and jobseekers in Central Qld and other regions	Commencing three months prior to construction, and again prior to commencement of operation, and for life of Project or as required to maintain achievement of participation goal

Employment equity – women	• Improve employment messaging to target diverse audiences about BMA employment opportunities and benefits • BMA will enhance workforce development and retention through coaching and support materials for Project leaders • BMA will implement on-site mentoring and support networks for women	Strong Project contribution to a goal of 40 percent female employment by Year 3 of operations	Isaac LGA schools, female jobseekers in Isaac LGA, Central Qld and other regions	From commencement of Project operations, for life of Project or as required to maintain gender balance
Employment pathways – people with disability	• BMA will initiate engagement with HCC, MDSS and/or other relevant community organisations providing services to people with disability to identify the employment aspirations of their clients • BMA will match State Government funding provided to support employment skills development and pathways to employment for people with disability who live in Moranbah or Dysart, up to $100,000	Training opportunities and employment pathways for people with disability in Dysart and Moranbah, metrics to be agreed with partner organisation	Dysart and Moranbah residents with disability, Moranbah and Dysart based community providing services to people with disability, DTATSIPCA	Commencing Year 1 of operations, project term to be agreed with project partners

Impact/benefit	Management measures	Outcomes sought	Stakeholders	Timeframes for implementation
Training and development	• BMA will work with BMA's recruitment network and partners (including the Moranbah and Dysart State High Schools, Mackay TAFE, CQU, BBAC, Department of Education and Mackay and Rockhampton-based recruitment and employment support agencies to align BMA's training supply strategies with current policy objectives and initiatives. • BMA and its Principal Contractor will liaise with Construction Skills Queensland and DESBT to inform specific training and recruitment strategies. • BMA will assess underground mining skills availability in consultation with DESBT and local and regional training organisations, and develop specific training and recruitment strategies for operations • BMA will include a strong focus on the Isaac LGA in promoting its apprenticeship program through schools and local community networks, including a focus on new entrants to mining and re-training of existing mining personnel for underground mining • BMA will maintain its commitment to training strategies and programs developed in cooperation with training partners as per the examples provided in Section 6.3.3.	Local young people and people who are new to underground mining benefit from Project training and development opportunities	local young people seeking a career in underground mining	From commencement of Project activities, for life of Project

Potential to exacerbate skills shortages – construction	• BMA will engage with local business groups and industry groups to assess skills and labour availability for the construction phase, to enable evaluation of prospective principal contractors' training and recruitment strategies addressing any labour and skills shortages
	• The Principal Contractor will:
	  ○ provide on-site training to address construction skills shortages, as informed by the above engagement and consultation with CSQ
	  ○ coordinate across construction contractors to manage the demand for tradespeople over the course of construction
	  ○ provide a WAV to enable employment of construction personnel from other regions
		Construction workforce includes local residents as well as workers from other regions, in balance to minimise significant impacts on other businesses	IRC, Dysart and Moranbah businesses, Moranbah Traders Association, Dysart Business Group, CSQ	Commencing six months prior to construction, and throughout construction

Impact/benefit	Management measures	Outcomes sought	Stakeholders	Timeframes for implementation
Potential to exacerbate skills shortages or draw skills and labour from other businesses – operation	• The Principal Contractor will provide a temporary construction WAV to support recruitment from other Queensland regions (construction period only) • BMA will assess the availability of skilled and experienced underground mining staff, twelve months prior to operation, to enable specific training and recruitment strategies to be established in time to resource the Project • BMA will monitor announcements of mine closures in the Isaac LGA and MIW and Central Queensland regions, and target recruitment campaigns accordingly to enable Isaac LGA residents who are made redundant by other mines to seek Project employment • BMA will maintain a strong focus on training and workforce development, to increase labour force capacity required by the Project, and help to reduce labour draw from other businesses • BMA will utilise its established supply chain of recruitment and labour hire companies in Mackay and Brisbane to recruit personnel from across Queensland	BMA training strategies increase workforce capacity so that draw of labour from IRC and local businesses is minimised	IRC, Dysart and Moranbah businesses, Moranbah Traders Association, Dysart Business Group	Commencing 12 months prior to operation, and throughout operation
Potential for inappropriate workforce behaviour	• BMA will develop a workforce induction pack and provide induction training to emphasise respect for local values • BMA will provide information to the local community about BMA's expected standards of behaviour, its complaints mechanism, and responses to reported incidences of anti-social workforce behaviour • During construction, the Principal Contractor will require compliance with the 'Work Rules' (outlining expectations of behaviour and disciplinary action for non-compliance) • Workers staying in WAVs will also be bound by the facilities' Codes of Conduct, with withdrawal of accommodation the result of non-compliance • For operations, BMA's Workplace Conduct Policy will apply to all personnel	Project personnel behave in accordance with local values and Codes of Conduct	Dysart and Moranbah residents, IRC, QPS	Commencing from the start of construction (Principal Contractor 'Work Rules') and throughout Project operations (BMA's Workplace Conduct Policy)

Impact/benefit	Management measures	Outcomes sought	Stakeholders	Timeframes for implementation
	• Specific induction, training and support programs will be developed to support migrant workers employed by the Project if required			
Workforce wellbeing	• BMA will implement and require its Principal Contractor to implement the fatigue management measures provided in Section 6.3.6, and promote workforce journey and fatigue management requirements of all personnel and contractors. • BMA will implement the workforce health and wellbeing actions detailed in Section 6.3.6. • BMA will scope partnerships with local health agencies and community services to develop Project personnel skills in the identification of mental ill-health in the workplace and appropriate response strategies. • BMA will implement on-site workforce wellbeing programs that are aligned with community-based health, wellbeing and integration initiatives. • BMA will implement in-service training and 'back to work' opportunities for injured workers will also support workforce development	On-site access to health services that support workforce wellbeing and minimise impact on local health services All project personnel have access to services that support their health and wellbeing, including mental health	Project employees and contractors, QPS, QAS, QFES, Queensland Health	From commencement of Project construction, for life of Project
Closure impacts	• Provide regular updates to Project personnel regarding the ramp-down and closure of open cut operations and the ramp-down and closure schedule for the Project	Project personnel are aware of the period of employment available and able to pursue other employment options when appropriate	Project personnel and families	3 years, 2 years and then six monthly prior to the Project ceasing production
	• Provide a re-training/transition program for personnel	Project personnel are supported to identify other employment options, and supported to undertake re-training if needed	Project personnel and families	Commencing 12 months prior to the Project ceasing production
	• Keep IRC updated on changes to the Project's workforce numbers, including providing advice at least three years prior to the planned cessation of Project operation.	IRC is aware of the timeframe for closure and is able to plan for impacts resulting from closure	IRC	3 years, 2 years and then six monthly prior to the Project ceasing production

6.4 Housing and Accommodation

6.4.1 Purpose, objectives and KPIs

The purpose of this sub-plan is to ensure housing and accommodation are available to all Project personnel, avoiding impacts on local housing availability, and to support cooperative management of any indirect or unanticipated impacts on housing access.

Housing availability and costs in Moranbah and Dysart are strongly influenced by mining industry resource cycles. Severe housing shortages are common in mining 'boom' times, and it can be difficult for key workers and low-income households to access housing at most times in the resource cycle. Moranbah's rental market is currently be considered tight and Dysart's market very tight (see Section 3.4.5).

The objectives and KPIs for management of impacts on housing and accommodation are shown in Table 6.9.

Table 6.9 Objectives and KPIs for housing and accommodation management

Objectives	KPIs
Ensure sufficient accommodation is available for all construction NRW, avoiding impacts on short-term accommodation and rental housing	• The capacity of the WAV provided on the mining lease during construction is sufficient to accommodate all workers from outside a safe daily driving distance
Avoid the need for Project personnel to use private rental housing in Dysart and Moranbah	• All operational personnel who chose to move to Dysart are provided with housing, with potential for housing to also be available in Moranbah subject to the needs of other BMA mines situated closer to Moranbah
Avoid impacts on the availability of rental housing to key workers and low income households	• No increase in the number of people seeking social housing attributable to housing use by Project personnel (employees and contractors) • No increase in rental costs attributable to an influx of construction or operational personnel
Ensure operational NRW have access to quality WAV accommodation	• Percentage of NRW accommodated in local WAVs • NRW personnel provide positive feedback about their accommodation

6.4.2 Construction accommodation

Non-resident construction workers would require short-term accommodation. As described in Section 4.3.4, the Project includes an on-site WAV to accommodate non-local construction personnel. This strategy will:

- discourage use of local housing by contractors and avoid inflation of rental costs;
- mitigate the potential for housing choice limitations for permanent residents;
- limit travel time to and from site and associated demand on local roads; and
- provide access to health, recreation and support services within the WAV, which will reduce demands on local services.

BMA will engage a specialist village management contractor to operate the WAV. This contractor will provide employees whose responsibility is to ensure workers have access to recreation options, transport to access essentials in town, and health and well-being programs.

Prior to construction, BMA will require its construction contractor to provide a draft Accommodation Village Management Plan (AVMP) that will inform the management of the construction WAV. The AVMP will be finalised in consultation with the specialist accommodation provider and key stakeholders within the first three months of WAV operation, and will include:

- workforce wellbeing and facility provision;
- engagement with local services including Queensland Police Service, Fire and Rescue and Ambulance Services;
- management of behaviour in the WAVs; and
- the complaints management procedure.

On-site health facilities and service provision will include:

- access to a first aid clinic, 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;
- EAP for counselling and emotional health issues;
- regular health promotion programs such as physical activity programs, weight management, reduced smoking and alcohol consumption;
- health monitoring programs such as skin checks and blood pressure testing, programs; and
- nutrition and education programs delivered through the Villages' dining facilities.

Physical infrastructure provided within the village to manage health and avoid impacts on local infrastructure includes waste management and recycling facilities, bus parking and transit facility, water and energy infrastructure, a sewerage treatment plant, as well as roads and paths.

Responsible service of alcohol will be practiced in the licensed village facility under management of the specialist WAV management contractor.

Access to the internet and mobile phone services to maintain daily connection with family members and friends will be provided within the WAV.

6.4.3 Operations

BMA maintains a portfolio of dwellings in Dysart and Moranbah to accommodate locally based members of its workforce. This portfolio will be utilised to facilitate the relocation of Project personnel who choose to move to Dysart or Moranbah. There are an estimated 144 unused BMA dwellings in Dysart that can be utilised for this purpose. This fluctuates slightly from month to month but there is no currently foreseeable reason to consider that availability will materially change in coming years.

BMA expects that both existing local mining workers who would move to the Project and new local recruits may require housing. As an estimate, 70 dwellings could be required during the first year of operation, and 130 dwellings could be required from Year 3 of operation. As noted in Section 4.3.5:

- all BMA employees are eligible for company-provided accommodation options that include units, houses and WAV accommodation, with allocation of accommodation options determined by employee preferences and needs; and

- with up to 144 vacant BMA dwellings currently available in Dysart and a further 36 vacant dwellings available in Moranbah, BMA has a sufficient number of dwellings in Dysart and Moranbah to accommodate the number of Project personnel who may choose to move to the LGA, as estimated in the SIA.

The expected need for housing will be assessed during the first six months of operations, based on new personnel's intentions regarding their living arrangements, i.e., how many will move to the Isaac LGA. There are currently 70 dwellings (36 in Dysart and 34 in Moranbah) ready for immediate occupancy.

Further monitoring of personnel's intentions would be undertaken on a quarterly basis during Years 1-5 to identify the need for additional dwellings to be made available. This will enable planning and implementation of maintenance and upgrades to properties that are currently in Care and Maintenance to make a sufficient number of dwellings ready for new tenants as they move to the LGA.

If this housing supply is inadequate due to more personnel moving to local towns than has been assumed or unforeseen factors, BMA will develop new housing on its vacant and build-ready lots, equivalent to the shortfall between the number of BMA-owned dwellings available and the number of Project personnel who wish to move to the Isaac LGA. The availability and uptake of housing will be carefully monitored to enable timely planning for any new housing development needs.

On the expectation that BMA will provide housing in Dysart and/or if available, in Moranbah, for all personnel who wish to move to the Isaac LGA, impacts on housing affordability are not expected.

In recognition of the Isaac LGA's longstanding housing issues, the Moranbah and Dysart STACs commissioned a housing study in 2021 to examine barriers to a robust housing market and develop recommendations for the consideration of stakeholders. BMA is providing financial support for stakeholders' assessment of the housing issues and recommendations and will cooperate with other stakeholders to progress agreed recommendations. This integrated, cooperative approach is expected to improve housing market capacity and cooperation between stakeholders, for the long term, and mitigate indirect housing impacts resulting from indirect employment.

BMA will ensure that a sufficient number of WAV beds is secured within existing WAVs in the Isaac LGA to accommodate all non-local personnel. There is currently sufficient WAV capacity in the region to accommodate the expected commuting workforce as demonstrated by the analysis in Section 4.3.4. Should this situation change, and insufficient WAV beds are available, BMA would consider reverting to a new site-based WAV, if the justification at the time is satisfactory to the Office of the Coordinator-General in consultation with the IRC.

6.4.4 SIMP action plan: Housing and Accommodation Management

Table 6.10 outlines the key actions to be implemented by BMA and/or its Principal Contractor to avoid Project impacts on housing and accommodation

Table 6.10: SIMP Action Plan: Housing and accommodation

Impact/benefit	Management measures	Outcomes sought	Stakeholders	Timeframes for implementation
Requirement for temporary accommodation for an estimated 900-1,000 NRW, assumed to be during 2023-2024	• BMA will ensure construction WAV design includes adequate health and recreation facilities to meet the needs of construction and operational personnel • BMA will engage a specialist village management contractor and require its construction contractors to develop an Accommodation Village Management Plan for the construction WAV for BMA's approval • All non-local construction personnel required to utilise NRW accommodation provided or contracted by BMA	Avoidance of impacts on local housing availability and costs Avoidance of crowding out other users from short term accommodation	IRC, WAV providers, Project construction personnel, Principal Contractor	WAV constructed as early works
Requirements for housing for operational personnel (estimated at up to 130 dwellings)	BMA will: • assess local and regional workforce availability and review estimates of local employment (existing and new residents) • consult with personnel when they are appointed to identify their specific housing needs and match individual's needs to the BMA housing register • assess capacity and quality of vacant BMA dwellings and privately-owned rental dwellings to meet Project demand • initiate a housing maintenance and upgrade program to prepare vacant housing in Dysart for Project personnel and families (at least 70 dwellings ready for occupancy during Year 1 of operations) • monitor personnel intentions to enable dwellings under care and maintenance to be upgraded to meet demand for housing if required • if a shortfall between the quantum of BMA housing and personnel's expected housing needs is identified, and in consultation with IRC, identify the need for additional housing development on BMA's vacant residential land to mitigate the Project's direct impacts (e.g. employees and contractors) on local housing availability	Planning for Project housing needs enables timely provision and avoids impacts on the local housing market	IRC Dysart and Moranbah community members DHLGPPW Real estate agents Rental property owners	Commencing twelve months prior to commencement of operations.
	• BMA will maintain housing availability for new and existing personnel including:	All Project personnel who move to the Isaac LGA and existing residents who lose	Project personnel, IRC	From commencement of operations, for life of Project

Impact/benefit	Management measures	Outcomes sought	Stakeholders	Timeframes for implementation
	○ Provide subsided housing in Dysart for all personnel who would move to the LGA, including employees and contractors ○ Provide subsided housing in Dysart for all personnel who already live in the LGA and require new housing arrangements ○ Subject to availability, provide subsidised housing in Moranbah if this is the employee's choice	their current housing entitlements are accommodated in BMA housing		
Requirement for accommodation for non-resident operational personnel (an estimated 180 personnel on shift)	• In consultation with IRC and WAV providers, BMA will identify the availability of workforce accommodation in and near Moranbah and Dysart • BMA will secure accommodation beds for all NRW (employees and contractors) through agreement with BMA-owned accommodation managers and/or commercial arrangements with other WAV providers	All NRW Project personnel have access to safe and comfortable accommodation whilst on shift	IRC, WAV providers, Project personnel	Commencing twelve months prior to commencement of operations, for life of Project
Indirect housing impacts through stimulation of increased employment in businesses and services	• BMA will engage with IAHT and ELAM at least six monthly during construction and the first five years of operation to identify any unanticipated impacts on affordable housing access, including housing access by people with disability • If Project impacts on access to affordable housing are identified, BMA will take corrective action e.g. expanding the use of BMA's housing portfolio by contractors or local businesses, or prioritisation of affordable housing in its community investment program	Project impacts on housing access or affordability are avoided or offset	IRC, local residents, local businesses ELAM, IAHT	Six monthly during construction and the first five years of operation
	• BMA is supporting stakeholders' assessment of local housing issues and recommendations, and will cooperate with other stakeholders to progress agreed recommendations, ahead of the Project's commencement • BMA will consult with the Dysart Business Group, Moranbah Traders Group and Isaac Business Council regarding their expectations of increased business employment (and housing requirements) as a result of Project operations, any shortages of housing to address this need, and potential arrangement for use of BMA housing, such as leasing of surplus housing to businesses or provision of accommodation through the IAHT	Cooperation between stakeholders to address cumulative impacts on housing access in Moranbah and Dysart	IRC, local residents, local businesses, ELAM, IAHT housing property owners, residential land owners, other mining companies	Cooperation commenced in 2022, outcomes to be progressed in ensuing years

Impact/benefit	Management measures	Outcomes sought	Stakeholders	Timeframes for implementation
Closure impacts	• BMA will keep IRC and local community members updated on changes to the Project's workforce numbers, including providing advice at least three years prior to the planned cessation of Project operation.	IRC and community members are aware of the timeframe for closure and likely changes to housing requirements	IRC	3 years, 2 years and then six monthly prior to the Project ceasing production

6.5 Health and Community Wellbeing

6.5.1 Purpose, objectives and KPIs

The purpose of this sub-plan is to detail how BMA will avoid or minimise impacts on health and community wellbeing, and contribute to the wellbeing of local communities.

During construction, the Project could result in an increase of 5.6 percent on the projected number of non-resident workers (at peak) in the Isaac LGA, resulting in:

- increased demand for local GP and hospital services during construction;
- demands on emergency services as part of on-site incident response and management, wide load supervision, and possibly for callouts to the construction WAV; and
- the need for workforce behaviour management as discussed in Section 6.3.5.

During operations, the Project's population increase has been estimated at an increase of 1.2 percent by the second year of operations (accounting for resident workers, family members and NRW), resulting in:

- a small increase in demand and competition for local access to health services (GP, hospital and mental health) and emergency services;
- increased demand for settlement and recreation services, school enrolments and childcare services; and
- a commensurate increase in demand for town water supply.

The Project is also expected to have a range of positive impacts for community wellbeing as shown in Section 6.5.2.

Objectives and KPIs for health and wellbeing are shown in

Table **6.11**.

Table 6.11: Health and wellbeing objectives and KPIs

Objectives	KPIs
Minimise potential for NRW use of local health services to impede residents' access to services	• Provision of access to GP services for NRW, avoiding impact on residents' access • Any need for supplementation of GP services in Dysart is identified and addressed, where possible, in collaboration with stakeholders
Minimise strains on local services as the result of temporary or permanent population increases	• Department of Education, Queensland Health QPS, QAS and QFES have sufficient information able to plan for increases in services to address Project-induced population increases
Contribute to the wellbeing and development of communities in the Isaac LGA	• New local personnel and family members are integrated to local communities • Local community services and organisations are supported to increase their capacity and increase the attractiveness of local towns

6.5.2 Positive social outcomes

The Project's operation would result in a range of positive social outcomes for Isaac LGA residents. These are summarised in Table 6.12, along with enhancement measures that aim to optimise local community benefits.

Table 6.12: Project benefits and enhancement measures

Social outcomes	Enhancement measures
Community and Stakeholders	
Support for Moranbah and Dysart communities' identities as mining towns and for their function as home towns for local mining personnel	• Recruitment hierarchy and strategy with a focus on Isaac LGA residents
A long-term positive contribution to community cohesion through increased long term mining employment and population increases	• Local recruitment • Provision of subsidised BMA housing for Project personnel • BMA's social investment partnerships and programs
Potential to strengthen population growth and community cohesion in Dysart, Moranbah and the Isaac LGA as a whole through direct and indirect employment	• BMA's Community investment partnerships and programs • BMA housing provision
Employment	
Up to 500 operational personnel would be employed. Recruitment of local personnel and personnel who wish to move to the LGA will ensure that local community members benefit from the Project's employment and training opportunities	• Work with BMA's recruitment network and partners • Recruitment hierarchy and strategy • Support settlement strategy • Provision of housing for personnel who wish to move to Moranbah or Dysart
Increased long-term availability of mining employment in the Isaac LGA and contribution to employment diversification through increased underground mining opportunities	• Local recruitment strategy • Training and development strategy
Opportunities for local young people and people who are new to underground mining to benefit from training and development opportunities	• 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 maintaining this commitment throughout the Project life.
BMA's Indigenous participation goal of 8.0 percent Indigenous employment by Year 3 of operations will see an increase in employment opportunity for Indigenous people	• Adoption of 8.0 percent goal for Indigenous employment in Project operations
BMA's workforce diversity goal for a 40 percent female workforce overall by Year 3 of operations will see an increase in employment opportunity for local and other women	• Enhanced recruitment practices, mentoring and support networks for women
Potential to offer employment opportunities to people from within the Isaac LGA who have disability	• Engagement with HCC, MDSS and/or other relevant community organisations providing services to people with disability to identify the employment aspirations of local people with disability

Social outcomes	Enhancement measures
	• Match State Government funding provided to support employment skills development and pathways to employment for people with disability who live in Moranbah or Dysart, up to $100,000
Population and housing	
Attracting Project personnel and their families to the Isaac LGA would increase or sustain Isaac LGA's population. This could include an increase of 8.3 percent in Dysart's population, This would support community vitality and sustainability	• 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 • Engagement with IRC on shared value matters such as community amenity
Health and wellbeing	•
Personal development and access to financial resources for Project workers' that support wellbeing.	• Local and regional recruitment hierarchy • BMA training pathways including 10 apprenticeships to be offered by the Project • On-the job training
BMA investments in Isaac LGA communities supports their wellbeing	• Provide an increase in social investment funding commensurate with any increase in BMA portfolio-wide employment numbers introduced by the Project
Local business and industry	
The Project is likely to expend several million dollars per annum with businesses in the Bowen Basin, of which up to 40 percent could be spent with businesses in the Isaac LGA.	• 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
Indigenous business will be an important part of the Project's supply chain.	• 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 percent 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

6.5.3 Stakeholder partnerships

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 FY18 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 1 percent of pre-tax profits in meeting these objectives.

Table 6.13 provides an overview of current BMA initiatives and partnerships that focus on improving social outcomes in the SIA study area, many of which will continue and support the Project's engagement with local and regional stakeholders. All partnership programs are contracted, with the current contracted term shown. Partnerships and community priorities evolve over time, so the table below captures the main programs that are current at the time of writing, which are indicative of the partnerships that BMA will implement during the Project's operation.

In addition to contracted partnership programs, BMA supports community wellbeing through its Benefiting My Community Program. This annual small grants program provides grants of up to $10,000 for grassroots community organisations across the Isaac, Central Highlands and Mackay regions.

Table 6.13: BMA Partnerships at 2024

Social Value Priority	Partner Name	Term	Description
Community Services, Health and Safety	RACQ CQ Helicopter Rescue Support	to 2024	Support for critical emergency services in the Northern Bowen Basin, incorporating training on ERT response
Community Services, Health and Safety	RACQ Capricorn Helicopter Rescue Support	to 2024	Support for critical emergency services in the Northern Bowen Basin, incorporating training on ERT response
Thriving Empowered Communities	Mental Health support	3 years to June 2025	Support to train Mental Health First Aid Officers and deliver school based programs around Respectful Behaviours
Thriving Empowered Communities	DCSG	to 2024	Provide opportunities to attract and retain individuals/ families to Dysart. Utilise continuous improvement measures and maintain strong community presence. Support the well-being of long term residences through engagement.
Thriving Empowered Communities	Affordable Housing Study (through Smart Transformation Project)	to 2025	Address recommendations from Smart Transformation Affordable Housing study, and subsequent commitments following FY22 Q4 roundtable engagement.
Childcare, Inclusion and Diversity	Childcare Leadership Alliance	to June 2024, with future implementation as agreed	Following the Bowen Basin Child Care Needs Assessment project (FY21), support the establishment of the Childcare Leadership Alliance and the implementation of innovative approaches to address childcare shortages.

Social Value Priority	Partner Name	Term	Description
Education skills and Training	Central Qld University Chair for Indigenous Engagement	To June 2028	BHP Chair of Indigenous engagement role and delivery of the Indigenous Engagement Strategy in regional communities.
Education Skills and Training	Bowen Basin Bright Minds	to 2024	Supporting schools with STEM related outcomes that focus on integrating opportunities related to 4th industrial revolution.
Economic diversification and resilience	Collective Action Approach Greater Whitsunday Alliance	to 2026	Collective action initiative to support BHP's broader transformation agenda that focuses on delivering a strategic plan for the region.
Education Skills and Training, Indigenous empowerment and enhancement	QMEA and ARISE Program and Qld Resources Council	to 2024	Exposing students to the resources sector through targeted engagements and on-site activities.
Education Skills and Training, Economic diversification and resilience	Qld Future Skills Project and TAFE Qld	to 2025	The partnership is designed to facilitate the fast-tracked development and delivery of automated technology career pathways through skill sets and qualifications in open-cut mining operations in Queensland.
Education Skills and Training, Economic diversification and resilience	Smart Transformation including Youth Advisory Councils	to 2025	Smart Transformation works to future-proof the towns of Dysart and Moranbah, with local community members driving the project through the Smart Transformation Advisory Councils.
Education Skills and Training, Economic diversification and resilience	4RFM	to 2026	Student engagement program that supports alternative career pathways for region
Education Skills and Training, Economic diversification and resilience	Resources Centre of Excellence	to 2025	Organisational support to the Resources Centre of Excellence to establish a sustainable facility for the resources sector in the region. Project support for Circular Economy Project Pit To Port.
Education Skills and Training, Economic diversification and resilience	Clontarf Aboriginal Academies	to 2025	At-risk student support to encourage primary and high school attendance through engagement with mentors and before and after school program activities.
Environment	Qld Indigenous Land Conservation Program	to 2024	Queensland Indigenous Land Conservation Project that works with Traditional Owners to deliver on country conservation activities that contribute to reducing the sediment within the Fitzroy Basin catchment to improve water quality outcomes in the Great Barrier Reef.
Thriving Empowered Communities	Woorabinda Arts Program	to 2024	Establishment of Woorabinda Arts and Cultural Centre to promote Indigenous art and create opportunities for the community

Social Value Priority	Partner Name	Term	Description
Environment	Reef Catchments Program	to 2024	Mackay Whitsunday Isaac Healthy Rivers to Reef Partnership
Environment	Fitzroy Basin Association	to 2024	Fitzroy River report card informs key stakeholders of the water quality levels within the Fitzroy Basin Catchment area
Environment	Environment Research Project	to 2025	Restoration of degraded woodlands on agricultural land (Box or Brigalow)
Community Services, Health and Safety	Artspace Mackay	to 2025	Regional arts program that supports toddler age children with basic skills that contribute to fine motor skill development.
Thriving Empowered Communities	CQ Uni Chair in Automation and Future Skills	To 2025	Support for research and microcredential development in areas that enhance Future of Work and transformation for the region.
Responsible Supply Chains	National Indigenous Business Support Program (Trading Tracks)	To 2024	Support for local indigenous businesses to build capacity enabling greater commercial and economic opportunities across the region.

6.5.4 Social investment

BHP's goal for social investment is to bring communities and BHP together to achieve outcomes for the workforce, society and environment. This approach encourages collective impact, local activation, empowerment and advocacy. Social investment aims to achieve shared social value by enhancing community amenity, pathways to local employment opportunities, environmental management and economic development.

Project-specific investments

BMA has committed to Project-specific social investments that acknowledge:

- the value of community development projects that strengthen community resilience and sustainability;
- the benefits of locally run programs which integrate new residents and build community cohesion;
- the potential for increased demands on local health practitioners relating to the construction and operations phases; and
- an aspiration to support local residents with disability to increase their employment options.

Table 6.14 describes Project-specific social investments, their financial value, the timing for implementation, proposed delivery mechanisms, and potential partners for delivery.

Table 6.14: Project specific social investments

Social investment	Value over three years	Timing	Delivery mechanism	Potential partners
Investment in community development projects in Dysart and Moranbah during Project construction Commitment to increase the level of BMA social investment the Isaac LGA, if the Project's operation results in additional population beyond that supported by BMA's current operations	$1,000,000	Commencing with commencement of construction - contribution of $500,000 p.a. over two year period	Bi-annual call for community grant/partnership applications to implement community development projects responding to identified community needs and/or aspirations	MDSS, HCC, DCSG, ELAM, IRC, Moranbah Community Radio, Dysart and Moranbah schools, Dysart and Moranbah sporting clubs
Funding to DCSG for implementation of community support program/s ahead of full operations, to build community cohesion and support integration of new residents	$150,000	Program development and commencement in construction Year 2, implementation during first year of operations	Program outcomes and delivery mechanism will be developed in consultation with DCSG and potentially Dysart STAC members. Delivery may be as part of existing arrangements between BMA and DCSG, or as part of new Project-specific arrangements. Funded programs could include e.g. community events, playgroups, support for children's sport, or community inclusion projects with seniors and/or people with disability.	Dysart Community Support Group
Support development of pathways to employment for people with disability who live in Moranbah or Dysart, through matched funding of up to $100,000	$ 100,000	During construction Year 2, subject to agreement with HCC	Engagement with HCC to identify the employment aspirations of local people with disability and submit for DESBT funding (e.g. Skilling Queenslanders for Work) to develop locally applicable skills training and employment support pathways, to be jointly funded by DESBT and BMA	Hinterland Community Care, DESBT
Provision of housing to support recruitment or retention of local GPs or mental health workers	$60,000	During construction and the first year of operations	If consultation with Moranbah and Dysart STAC Members, local GPs and Queensland Health identifies housing access as a barrier to recruiting or retaining GP or mental health workers, BMA will provide a dwelling via a free/peppercorn lease to Dysart Medical Centre or Queensland Health to accommodate health workers	Dysart Medical Centre, Queensland Health

Portfolio-wide social investment and relevance to local communities

BHP's key focus areas include Future of Work, Future of Community, Future of Environment, Community Wellbeing and Indigenous Engagement. BHP's local grants program and partnerships are key delivery mechanisms for social investment. Current focus areas of relevance to the Project region and their relevance to Project communities are shown in Table 6.15. It is expected that cooperation on current priorities such as expanding childcare options and addressing the need for affordable housing will be significantly progressed ahead of the Project's commencement.

In addition to project and partnership funding, BHP's 'Benefiting My Community' Program provides community grants, donations and sponsorships of up to $10,000.

In the time before the Project commences, changes in community needs and BMA partners' priorities are likely. Prior to the commencement of construction, BMA will renew engagement with IRC and relevant state agencies to identify existing initiatives, local priorities and regional planning outcomes to be recognised in social investments during the construction and early operational years. This will inform ongoing planning for social investment in Isaac LGA communities.

As detailed in Section 6.1.5, BMA will monitor the Project's contribution to the number of BMA personnel employed overall employment levels in the Isaac LGA, in the context of changes to social conditions and community aspirations with respect to social and economic transitions. This may result in changes to the portfolio-wide social investments, such as those summarised in Table 6.15.

Table 6.15: Social investment of relevance to local communities, as at June 2023

Focus Area	Project	Action	Relevance to Project communities
Indigenous Engagement	Qld Indigenous Land Conservation Project	Continuation during 2023-2025, working with Native Title holders and Traditional Owners across the Bowen Basin to deliver on country conservation activities.	Involvement of Barada Barna people who are developing capabilities for conservation that could be utilised in progressive rehabilitation
	Reconciliation Qld	Partnership with Reconciliation Qld to provide Reconciliation Capacity Building and training will continue in 2023-2025.	Project staff will benefit from Reconciliation Capacity Building and training, which also supports recruitment and retention of Indigenous employees
Future of Community	Childcare	Provision of support for the Childcare Leadership Alliance establishment in October 2022. Implementation of childcare-related recommendations in Moranbah and Dysart, in cooperation with other stakeholders.	This project will address the existing shortages and capacity deficits that constrain childcare access in Moranbah and Dysart.
	Affordable Housing Study	The affordable housing study was conducted as part of a Smart Transformation Roadmap project. Implementation of recommendations will be undertaken in cooperation with key stakeholders.	Implementation of this study which focusses on Moranbah and Dysart will address housing affordability and access issues.

Focus Area	Project	Action	Relevance to Project communities
	Mental Health Community First Aid Officers Program	A project has been conceptualised to deliver training to Mental Health First Aid officers across BMA's communities of interest, including a targeted youth program to strengthen teacher and school capacity to engage with students and an Indigenous specific program. This may be undertaken in cooperation with Wesley Medical Research.	Access to local mental health first aid officers would address a current community priority for increased mental health support.
Community Wellbeing	4RFM	This partnership was renewed in FY23.	Local residents will continue to have access to a key communication channel and opportunities for students within the region.
	Benefiting My Community Grants	Funding has been significantly increased for grants to community organisations in the Isaac Region. Support will also be considered for local business chambers and small businesses through the grants program as a priority area.	Local organisations will continue to have access to community grants that enhance local amenity, services and cohesion
	DCSG	Continued support for the DCSG	Essential community support to the most vulnerable members of the Dysart Community
Future of Work	Smart Transformation Roadmap activities	Roadmap activities continued in FY23, including the STACs and Youth Advisory Council (YAC), support for the Resource Centre of Excellence (RCOE) and CQU Chair of Automation	Project employees and local young people will have access to training opportunities that equip them for technological change in the resource sector and have access to enhanced STEM education
	Qld Future Skills project	Partnership involving BMA, TAFE Queensland and CQ University in a collaboration to introduce training targeting new technologies within the resources sector	
	Bowen Basin Bright Minds	This regional program will be implemented during 2023-2025. Support to the schools and teachers in the development of STEM remains a priority.	
Future of Environment	Pathway to Nature Positive CSIRO	This project was implemented during 2023 to allow industry to understand its impacts on biodiversity and enable the planning/application required to achieve nature positive outcomes through the targeted application of conservation and ecosystem restoration.	The learnings from these projects will be relevant to rehabilitation planning for the Project.
	Restoration of Degraded Woodlands on Agricultural Land	This research project is running for three years through to 2024.	

6.5.5 Childcare and Education

The Project's population increases (and therefore demands for childcare and school enrolments) will primarily occur in Dysart. Increased capacity of childcare is a key prior for Dysart and Moranbah residents, and for IRC.

As noted in Section 4.4.3 BMA is working with a range of stakeholders to initiate and implement the Childcare Leadership Alliance, which will improve the availability and flexibility of childcare in Moranbah and Dysart. This is expected to deliver an increase in capacity at least meeting the needs of new local families that would result from the Project.

In addition, BMA will:

- advise the Lady Gowrie Centre, Simply Sunshine and MELC of the anticipated number of personnel with children who are planning to settle in Dysart and Moranbah respectively;
- promote the potential availability of employment for qualified educators through employee networks for advice to partners; and
- provide other financial support as agreed with the Childcare Leadership Alliance, e.g. for the training of local residents to be childcare educators; and
- if suitable increased capacity has not been achieved by Year 1 of operations to meet the estimated Project needs as shown in Table 4.12, and/or as determined through consultation with Project employees, BMA will pay the costs for recruitment and relocation of childcare workers to Dysart and Moranbah (including international recruitment if required), commensurate with the additional demands induced by SEMLP personnel in Dysart and Moranbah.

Prior to Project construction, BMA would liaise with local childcare providers, the Department of Education and IRC to understand the alliance's achievements in increasing childcare availability. If suitable increased capacity has not been achieved to meet the estimated project needs shown as shown in Table 4.11, and collaborative monitoring of Project-related demand establishes that additional childcare places are required and are beyond childcare services' capacity, BMA will work with the Childcare Leadership Alliance and IRC to investigate options to expand childcare services.

The Department of Education and all state schools plan annually for increases and decreases in enrolments. BMA will consult with personnel as they are on-boarded to determine the number of school age children who would require enrolments in local schools, and advise the Department of Education of anticipated enrolment numbers in October and May during Years 1-3 of operation.

6.5.6 Police and Emergency Services

Temporary and permanent changes to the population will induce incremental increases in demand for police and emergency services. As soon as practicable after the start of construction, BMA or its Principal Contractor will meet with QPS, QFES, and QAS to:

- provide on-site orientation as well as a site map to QPS, QAS and QFES members, providing overview of the Project site, its access roads, fences, security points, chemical storage and use areas, and emergency management facilities and helipad site;
- provide the QPS, QFES and QAS with a briefing on:
    - construction schedule and activities;
    - rosters, and scheduled fatigue management days;
    - village 'rules of conduct' and 'work rules';
    - initiatives to integrate workers with residents and local values; and

    - the complaints procedure;
- exchange contact details for Officers in Charge and key Project and site personnel; and
- discuss and agree the protocol with QPS for incidents.

Throughout operations, Project strategies will include:

- providing advice on the timing of workforce ramp ups or wind downs, fatigue management arrangements, and events that may disrupt traffic; and
- identifying potential for shared recreational events (e.g. after training exercises, or through sport) which would develop relationships between mine employees and contractors, and local service personnel.

Engagement during operations will be reviewed prior to commencement and addressed in the next BMA's Emergency Management Procedure notes that all personnel will work co-operatively with Police, Fire and Ambulance services, and do as instructed by them if safe to do so. The procedure includes reference to the responsibilities of local services, noting:

- Queensland Police Service is responsible for the overall coordination of the management of an incident (and later for investigation in relation to potential criminal issues), and for public safety matters including wide-load supervision;
- Queensland Ambulance Service is responsible for directing the medical aspects of casualty extrication and transportation to an appropriate care facility; and
- Queensland Fire and Emergency Service is responsible for off-lease management of fires, hazardous material management and rescue of casualties. While QFES jurisdiction does not apply to mine sites, QFES welcomes an opportunity to work in cooperation with mine site personnel. Contact should be directed to the Sustainable Development Unit in the first instance.

6.5.7 Health services

BMA is committed to mitigating the impacts of NRW on local health services. BMA's on-site WAV for construction will include on-site services and facilities to enhance workers' health and reduce impacts on local services.

To minimise non-local employees' demands on local services, the workforce on-boarding process will also ensure that all non-local employees and contractors understand:

- routine matters and existing health issues should be addressed before they commence their rosters;
- where relevant, prescription drugs, prescriptions and records of health issues should be brought to site for every roster;
- on site health staff's assistance can be sought in relation to health concerns; and
- their supervisor or manager should be made aware of any health issues that are hampering their ability to undertake usual duties.

Twelve months prior to construction, BMA will consult with Dysart and Moranbah primary health service providers to determine an appropriate mitigation to potential demands on local GP services during construction. Subject to this consultation, an agreement with a GP service may be required to provide workplace health services e.g. Coal Board medicals, immunisation, health promotion programs, and to facilitate access to a GP for employees living in WAVs.

BMA will also employ staff with first aid or paramedic qualifications to manage minor health issues on site and deliver health and wellbeing programs focused on physical and mental health.

BMA will monitor the level of GP provision in Dysart in consultation with IRC and the North Queensland Primary Health Network (PHN) and collaborate with IRC, the PHN and Queensland Health to facilitate an increase in the supply of local GPs if analysis indicates that there is a shortage of GPs that would be exacerbated by Project-related demands. BMA's previous strategies in this regard have included participation in and support for recruitment initiatives, in partnership with Queensland Health and local GPs.

6.5.8 Community and cultural services

Community and cultural services in the Isaac LGA are funded through rates and other Council revenue, and through primarily Queensland Government programs funded by taxes and royalties. Mining companies including BMA also make significant contributions to community services and facilities through their community investment programs.

Prior to commencement of construction, BMA will consult with IRC, DTATSIPCA, DCSSDS, DHLGPW HCC and MDSS regarding the existing capacity of community and cultural services, and any opportunities for BMA to invest in enhancement strategies, through its community investment strategy or through the Royalties for Regions program, in respect to identified impacts. BMA will also support IRC in its advocacy to Queensland Government departments for increased funding for community support services if IRC requests this support.

The need for community and individual support services will need to be closely monitored during the first five years of operations, in cooperation with MDSS, DTATSIPCA, DCSSDS, and HCC. BMA will participate in initiatives led by community, Council and/or Queensland Government agencies to address identified needs for community and individual support services in Moranbah and Dysart, both to mitigate impacts of Project-induced population increases, and to optimise local residents' access to services and programs that enhance their wellbeing. BMA will also prioritise its community investments to meet identified community needs, that may include support for services for people with disability, family support and/or youth support and community participation.

6.5.9 Local infrastructure agreements

BMA's agreements with IRC address the impacts of its operations on local infrastructure, including:

- contributions to road maintenance, as outlined in the Transport and Traffic Assessment;
- contributions to the LGA's water supply, as per BMA's agreements with IRC; and
- support for the ongoing operations of the BMA-owned Moranbah 'Bunhdhara' Airport.

6.5.10 SIMP action plan: Health and Community Wellbeing

Table 6.16 outlines the key actions to be implemented by BMA address the impacts and opportunities identified by this SIA.

Table 6.16: SIMP Action Plan: Health and community wellbeing

Impact/benefit	Management measures	Outcomes sought	Stakeholders	Timeframes for implementation
Town water requirement	• 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 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 subsidy agreement with IRC to enable provision of adequate town water to meet the increased demand	Project-related increases are within the capacity of Isaac LGA's town water supply	IRC, local residents	Review to commence with Isaac LGA six months prior to Project operations
Increased demand for health services	• BMA will consult with Dysart and Moranbah primary health service providers to determine an appropriate mitigation to potential demands on local GP services during construction and if primary health service capacity is already under stain, develop an agreement with a GP service to provide workplace health services for employees living in WAVs. • The Primary Contractor and BMA (during construction and operation respectively) will employ staff with first aid or paramedic qualifications to manage minor health issues on site and deliver health and wellbeing programs focused on physical and mental health	Excessive demands on local health services are avoided	IRC, local residents, Queensland Health, Moranbah and Dysart GP clinics, NQ PHN	Twelve months prior to construction Paramedic services provided during construction and operation (life of Project)
	• BMA will collaborate with IRC, the NQ PHN and Queensland Health to monitor the level of GP provision in Dysart and facilitate an increase in the supply of local GPs if Project-related demands would exacerbate strains on GP services. If needed, this would include provision of rental housing for a GP during the Project's first three years.	Sufficient GP capacity to meet the needs induced by Project personnel	IRC, local residents, Queensland Health, Moranbah and Dysart GP clinics, NQ PHN	Twelve months prior to operation commencing, and housing provision for the first three years of operation if required

Impact/benefit	Management measures	Outcomes sought	Stakeholders	Timeframes for implementation

Increased demand for police and emergency services	• The Primary Contractor will meet with Queensland Police, Ambulance, Fire and Emergency Services and Hospital representatives to:
	  ○ consult on the Project's Emergency Management Plan
	  ○ advise of the workforce build up and WAV and traffic management plans.
	  ○ orient service representatives to Project sites and site contacts
	• BMA will update the Project's Emergency Management Plan for operations in consultation with key stakeholders including QFES and QPS
	• If requested by IRC, support advocacy for increased Government resources for health, police, ambulance and/or fire and emergency services
		Police and emergency services have sufficient information to plan for ay demands on services	QPS, QAS, QFES	Six months prior to operations commencing

	• BMA will provide on-site orientation as well as a site map to QPS, QAS and QFES members • BMA will provide regular advice to police, health and emergency service stakeholders on workforce profile, fatigue and traffic management procedures.	Police and emergency services are oriented to the Project site and its emergency procedures	QPS, QAS, QFES	At commencement of operations and annually or as agreed with stakeholders
Increased school enrolments	• 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 on a six-monthly basis	Department of Education has sufficient information to plan for increased enrolments	Department of Education, Moranbah and Dysart schools	From the commencement of operational recruitment for five years
Increased childcare requirements	• BMA will invite Project recruits to advise their childcare needs as part of the acceptance of offer process • BMA will advise all childcare centres and services in Dysart and Moranbah of the expected number and age of children needing childcare • Prior to Project construction, BMA would liaise with local childcare providers, the Department of Education and IRC to understand the achievements increasing childcare availability. If suitable capacity increased have not been achieved (refer to Table 4.11), and/or as determined through consultation with Project employees, BMA will partner with the Childcare Leadership Alliance and pay for the costs of	Childcare services have sufficient capacity to meet Project demand	Lady Gowrie Centre, Simply Sunshine Childcare Centre, Moranbah Early Learning Centre, Family Day carers, IRC, DTATSIPCA	From the commencement of operational recruitment for three years (to workforce peak)

Impact/benefit	Management measures	Outcomes sought	Stakeholders	Timeframes for implementation
	recruitment and relocation (including international recruitment if necessary) of childcare workers to Dysart and Moranbah, commensurate with the demands induced by Project personnel • Subject to the availability of BMA housing, BMA may also provide access to affordable housing for childcare workers, if needed			
Increased need for community and cultural services	• BMA will consult with IRC, DTATSIPCA and DCSSDS regarding the capacity of community and cultural services, and any opportunities for BMA to invest in enhancement strategies, through its community investment strategy or through the Royalties for Regions program, in respect to identified impacts • BMA will work with HCC, MDSS and DTATSIPCA to monitor disability service availability, and if a deficit is identified prior to Project operations commencing, BMA will prioritise its community investment to include investment in additional service disability service capacity through HCC or other agencies • If Project-related population increases or other factors result in an impact on community and individual support services used by seniors, people with disability or Aboriginal or Torres Strait Islander peoples, BMA will consult with DTATSIPCA and/or DCSSDS (as relevant) regarding potential responses (BMA or Government responses) • The need for community and individual support services will be monitored during the first three years of operations, in cooperation with MDSS, DTATSIPCA, DCSSDS, DCSG and HCC, to identify the need for any focussed community investment • BMA will participate in initiatives led by community, Council or and Queensland Government agencies to address identified needs for community and individual support services in Moranbah and Dysart, both to mitigate impacts of Project-induced population increases, and to optimise local residents' access to services and programs that enhance their wellbeing	Community and cultural services are adequate to meet increased needs resulting from Project-related population increases	IRC, DHCDE, DSCG, MDSS, HCC	Consultation and monitoring commenced Prior to commencement of construction, monitored bi-annually during the first five years of operations

Impact/benefit	Management measures	Outcomes sought	Stakeholders	Timeframes for implementation
Enhancement of liveability and amenity	• Prior to the commencement of construction, BMA will renew engagement with IRC, MDSS, DCSG and relevant state agencies to identify existing initiatives, local priorities and regional planning outcomes to be recognised in the execution of the Project. This will inform ongoing planning for social investment in Isaac LGA communities • BMA will work with local community organisations including MDSS, HCC and DCSG to identify strategies and investments to increase human resources and skills available to support recreational and cultural facilities, including sporting clubs, e.g. volunteer training and support • BMA will provide $500,000 additional community investment funding per annum during the Project's two year construction period, to support community initiatives that enhance the amenity of Dysart and Moranbah • BMA will continue to maintain its community investment, with consideration to employment and production levels. Where additionality of activities (i.e. additional employees or production) results, BMA will reflect this through proportional increases in community contributions. • BMA will continue regular (biannual) liaison with Isaac Regional Council regarding SIMP strategies including local infrastructure contributions and other potential projects	The liveability and amenity of Moranbah and Dysart is enhanced.	Moranbah and Dysart community members, MDSS, HCC, DCSG, IRC	Additional community investment funding during construction period Workforce numbers and community investment levels assessed during first six months of operations and reviewed every six months during the first five years of operation

6.6 Local Business and Industry

6.6.1 Purpose, objectives and KPIs

As described in Section 3.7.8, the Isaac LGA and the MIW region have well-established construction and mining services industries.

The purpose of the Project's Local Business and Industry sub-plan is to maximise participation of local, regional and Indigenous businesses in Project construction and operation, including enhancement of the capacity of local businesses. As an underground mine, the Project also offers the opportunity for greater diversification of local business capacity and offerings.

BMA complies with the Queensland Resources and Energy Sector Code of Practice for Local Content 2013 (the Code) (QRC, 2013), including the principle of 'full, fair and reasonable' opportunity for capable local businesses to participate. BMA's key delivery mechanism is the Local Buying Program (C-Res) established in 2012 to assist small to medium businesses in the Bowen Basin to competitively supply goods and services to BMA operations. As at December 2021, there were 209 businesses from the Isaac LGA registered for BMA's Local Buying Program.

The Project will ensure local and regional suppliers have full and fair opportunities to contribute to its supply chain, and will take full advantage of the Local Buying Program to ensure suppliers are supported to do so.

As noted in Section 4.2.6, there is potential for the Project's labour and skills needs to affect other employers' access to labour and skills. Mitigation strategies addressing labour draw during construction and operation are provided in Section 6.3.7

Objectives and KPIs for the Local Business and Industry sub-plan are shown in Table 6.17.

Table 6.17: Objective and KPIs for local business and industry

Objectives	KPIs
Local (Isaac LGA) and regional businesses have full, fair and reasonable' opportunity in the supply chain for Project for construction and operation	• Increased number of Isaac LGA businesses registered for C-Res by Year 3 of operations • All project supply opportunities appropriate to SMEs are promoted through C-Res • Compliance with the Queensland Resources and Energy Sector Code of Practice for Local Content
Project opportunities support increased business vitality and sustainability in the Isaac LGA	• At least 50 Isaac LGA business supplying Project operations by Year 3 of operations
The Project's supply chain includes Indigenous businesses from the Isaac LGA and MIW region	• A goal of 6.5 percent of Project supply expenditure through the Local Buying Program with Indigenous businesses by Year 3 of operations

6.6.2 Local business involvement

BMA's Local Buying Program (C-Res) in the MIW region has been very successful in building a local and regional supplier base for BMA operations. The C-Res program offers:

- simplified engagement via a website;

- greater exposure and visibility through an online supplier directory;
- greater exposure to work opportunities;
- quicker payment terms;
- dedicated C-Res Business Development Advisors providing continuous support and assistance to local businesses; and
- access to business development programs to enhance the long term sustainability of individual businesses (e.g. business planning, succession planning, cash-flow, customer service, online marketing strategies, accounting software packages).

Prior to Project construction commencing and again prior to operations commencing, BMA will promote the availability of the C-Res program to Isaac LGA businesses though the Moranbah Traders Association, Dysart Business Group, local media and community forums.

C-Res will support Isaac LGA businesses to access Project supply opportunities. The Project is likely to expend several million dollars per annum with businesses in the Bowen Basin, of which up to 40 percent could be spent with businesses in the Isaac LGA. Flow-on economic benefits are discussed in EIS Appendix K.

6.6.3 Enhancing local business capacity

BMA is committed to ensuring local businesses grow alongside BMA's development projects and long-term operations. Recent examples of business capacity building projects supported by the C-Res Local Buying Foundation include:

- GW3's Isaac Business Support Program which connects small businesses to a range of resources and support to address key local challenges to build capability, capacity and resilience;
- the Bridging the Boundaries: Business Facilitator Program in Isaac LGA which funded a Business Resilience Coach and a business photography marketing workshop for local businesses;
- sponsorship of the Mayor's Business Breakfast in Moranbah;
- support for the Isaac Tourism development project, by funding Mackay Tourism to recruit a Tourism Development Officer for the Isaac region;
- participation in Mackay Chamber of Commerce forums and events to share information about opportunities to supply BMA operations; and
- support for the Energy Future Work Skills Futures program being conducted by the Resource Centre for Excellence.

A similar range of business capacity building projects would be available to local businesses to support their participation in Project supply opportunities. BMA will continue to work with a wide range of partners including GW3 and the Resources Centre of Excellence on strategies that address skill shortage areas, maximise local businesses' capacity for supply opportunities, and support diversification and long-term competitiveness of local business and industry.

BMA will engage with IRC, QRC, DSDI, Queensland ICN and the Resource Industry Network (RIN) approximately six months prior to construction, to identify opportunities for enhanced alignment of the Project's Local Business and Industry Plan with regional and State-wide capacity building strategies.

To maximise local access to Project supply opportunities during construction and in the lead up to operations phase, BMA will:

- hold local briefing sessions for businesses and prospective applicants in Dysart, Clermont, Moranbah and Middlemount to learn about project opportunities and register for BMA's C-Res Local Buying Program;
- promote contracting and employment opportunities through C-Res and local and regional stakeholder networks; and
- provide advance notice of the Project schedule to local and regional businesses (via the C-Res supplier register, and related stakeholder groups such as Moranbah Traders Association, Dysart Business group and DCSG).

To support the diversification and sustainability of local business and industry, BMA will continue to engage with and partner regional development stakeholders on the design and implementation of capacity building strategies for local businesses. These stakeholders include:

- Moranbah Traders Association;
- DCSG;
- Dysart businesses and any Dysart business group that is established;
- Greater Whitsunday Alliance;
- Isaac Regional Council's Economic Development team; and
- the Mackay Isaac Whitsunday Regional Development Authority.

6.6.4 Indigenous business involvement

BMA has developed a series of measures that form part of a comprehensive Local and Indigenous Sourcing Strategy, aimed at lifting capability and performance in working with local and Indigenous suppliers. Subject to compliance requirements, this may include:

- letting minor contracts that can be negotiated directly without tender processes;
- unbundling larger contracts;
- preferencing Aboriginal and Torres Strait Islander enterprises using weightings;
- providing support to meet qualifications; providing information regarding emerging procurement opportunities; and
- explaining company policies and processes.

BMA's Local Buying Program includes 48 registered Indigenous-owned businesses, primarily from across the Mackay, Isaac and Central Highlands LGAs.

The Project will adopt 6.5 percent as its 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, which is expected to continue enhancement of Indigenous businesses' capacity to supply the Project and other businesses and industries.

The Project will proactively share information on procurement opportunities, supplier qualification and performance requirements with BBAC, Aboriginal and Torres Strait Islander supplier networks such as Supply Nation and Black Business Finder, and through C-Res.

6.6.5 SIMP action plan: Local Business and Industry

Table 6.18 outlines the key actions to be implemented by BMA and/or its Principal Contractor to address the impacts and opportunities identified by this SIA.

Table 6.18: SIMP Action Plan: Local Business and Industry

Impact/benefit	Management measures	Outcomes sought	Stakeholders	Timeframes for implementation
Opportunity for local businesses to supply the Project	• The Project will train its procurement and contracting staff in C-Res procedures and require the use of C-Res for supply opportunities of relevance to SMEs	Project Staff equipped to fully utilise C-Res	Procurement and contracting staff, C-Res	Commencing three months before construction, and again three months prior to operation
	• The Project will comply with the Queensland Resources and Energy Sector Code of Practice for Local Content 2013	Transparency in reporting on local content outcomes	QRC, local and regional businesses	Annual reports from commencement of construction
	• BMA will: o hold local briefing sessions for businesses and prospective applicants in Dysart, Clermont, Moranbah and Middlemount to learn about project opportunities and register for BMA's C-Res Local Buying Program o provide advance notice of the Project schedule to local and regional businesses via the C-Res supplier register, and business groups o promote contracting and employment opportunities through C-Res and local and regional stakeholder networks	Local businesses form an important part of the Project's supply chain and have access to C-Res and its capacity building programs	Local (Isaac LGA) and regional (MIW and CQ) businesses BMA C-RES DCSG, Dysart Business Group, Moranbah Traders Association Greater Whitsunday Alliance (GW3)	Three months before construction, and again three months prior to operation
Contribution to enhanced capacity of local and regional businesses	• BMA's Local Buying Foundation capacity building programs will assist in developing the capacity of local businesses • BMA will engage with key stakeholders to identify opportunities for enhanced alignment of BMA's business and industry capacity building programs with regional and State-wide capacity building strategies	Alignment with regional and State-wide capacity building priorities	IRC, QRC, DSDI, Resources Center of Excellence, Queensland ICN and the Resource Industry Network (RIN), Moranbah Traders Association, Dysart Business Group, GW3	Six months prior to construction and again six months prior to operation

Impact/benefit	Management measures	Outcomes sought	Stakeholders	Timeframes for implementation
	• BMA will continue to engage with and partner regional development stakeholders on the design and implementation of capacity building strategies for local businesses to support their diversification and sustainability	Collective positive impacts on local and regional business diversification	Moranbah Traders Association; Dysart Business Group GW3, IRC, MIW RDA	From commencement of construction, until Year 3 of operations
Opportunity for Indigenous businesses to supply the Project	• BMA will consult with BBAC, DTATSIPCA, and local Indigenous community organisations to inform the development of the Project's procurement strategy • BMA will share information on procurement opportunities, supplier qualification and performance requirements with BBAC, Aboriginal and Torres Strait Islander supplier networks, and through C-Res • BMA's Local Buying Foundation will continue to include a focus on capacity building with Indigenous businesses • BMA will explore a potential partnership to support BBAC capacity for involvement in Project operations and rehabilitation	Goal of 6.5 percent goal for the percentage of Project supply expenditure with Indigenous businesses	BBAC Indigenous businesses in MIW and CQ regions C-Res Black Business Finder Supply Nation DTATSIPCA Black Business Finder	Six months prior to operations commencing, and biannually during the first two years of operation

7. SIMP Monitoring and Reporting

This section outlines how BMA will monitor the performance and effectiveness of the SIMP, to ensure that:

- BMA's commitments are delivered;
- desired outcomes are achieved;
- local communities and stakeholders are involved in implementation and monitoring of the SIMP; and
- SIMP strategies and management measures can be modified in response to monitoring data.

7.1 Monitoring framework

The monitoring framework provided in Table 7.1 includes:

- the Project impacts and benefits addressed;
- the desired outcomes for each impact and benefit;
- management measures (noting full details are provided in Section 6);
- performance indicators;
- monitoring mechanisms, including stakeholder engagement; and
- the timing and frequency of monitoring.

This will form the basis of the SIMP monitoring plan that will be initiated prior to the commencement of construction.

The SIMP Coordination Team will be responsible for monitoring SIMP delivery and performance indicators, supported by the BMA personnel identified in Section 6.1.1 and the stakeholders identified in Table 7.1, and for reporting against the monitoring plan.

7.2 Stakeholder engagement in monitoring

SIMP monitoring will involve the engagement mechanisms identified in Table 7.1, which include:

- engagement with IRC on matters of shared value and community priorities;
- consultation with community partners regarding BMA's contributions to communities;
- seeking landholder feedback at least annually;
- consideration of community investment partners' records with respect to the success of BMA-supported program implementation;
- consultation with IAHT and ELAM regarding affordable housing;
- consultation with the NQ PHN, local GPs, and Mackay HHS regarding health service capacity and opportunities for collaboration;
- collaboration through the Childcare Leadership Alliance to identify and respond to any increased demand as a result of Project personnel's requirements;
- consultation with IRC and community investment partners regarding demand for community services and collaborative responses; and

- regular engagement QPS, QAS and QFES to monitor service demands and support cooperation.

7.3 Reporting and review

This assessment has assumed that Project construction could commence in 2023. There is a possibility that social conditions such as housing availability, labour and skills demands, or health service access may have changed by the time the Project commences.

Six months prior to the planned commencement of construction, BMA will consult with IRC regarding any changes to social conditions that would materially affect the significance of social impacts as assessed in Section 5. If material changes to social conditions are identified, BMA will review SIMP actions to ensure that the strategies recommended in the SIMP remain relevant.

During construction, the SIMP Coordination Team will provide biannual updates on SIMP implementation to IRC, and seek their feedback, which will inform SIMP implementation. From the commencement of operations and for a period of two years, these bi-annual updates (or as agreed with Council) will continue, with any need for further updates agreed with Council at that time.

During construction, BMA will undertake annual reviews of the SIMP, in consultation with stakeholders including IRC and stakeholders identified in the monitoring framework. The review process will address:

- changes to social conditions;
- current Council and community priorities;
- progress with SIMP delivery; and
- the results of monitoring mechanisms outlined in Table 7.1.

Monitoring results and stakeholder feedback will enable BMA to identify if desired outcomes aren't being achieved, e.g.:

- targets for Indigenous or female employment are not being reached;
- local residents are not seeking and obtaining Project employment;
- there has been no in-migration of personnel and their families to live locally; or
- commitments have not been delivered to the program established as part of the SIMP Implementation Plan.

Adaptation of management measures, if required, would be undertaken following the annual review.

The SIMP will be revised prior to operations, with key indicators tracked quarterly or six monthly as identified, and annual reviews undertaken for the first five years of operation.

Following each annual review, a Social Impact Management (SIM) Report will be provided to the OCG and IRC. The SIM reports prepared annually for the Project's construction phase and the first five years of operation will report on:

- implementation of SIMP actions (which measures have been completed, and the status of ongoing measures);
- the status of KPIs;
- any measures that were ineffective; and
- any required changes to SIMP measures as indicated by monitoring data.

This will involve a total monitoring and review period of seven years from the commencement of construction.

An external audit of the SIMP effectiveness and delivery will be undertaken by a qualified third party at the completion of construction, and again after three years of operation. This will be done in consultation with relevant stakeholders including IRC, Queensland Health, DSDI and community organisations such as MDSS and DCSG. A report on each audit's findings will be provided to the Office of the Coordinator-General within 60 days of completion of the relevant period.

Any need for further review, reporting or auditing would be agreed with the OCG when Year 5 of operations is complete.

Table 7.1 provides the SIMP monitoring program.

Table 7.1: SIMP Monitoring Program

Impacts and benefits	Outcomes sought	Performance Indicators	Monitoring Mechanism/data sources	Timing / frequency
Community and Stakeholder Engagement Plan				
Lack of access to land whilst mining occurs	Traditional Owners are involved in cultural heritage management and planning for post-mining land use and rehabilitation	• Cultural heritage is protected and managed in accordance with an agreed CHMP and the ACH Act • Meetings are held with BBAC to a schedule agreed with them, to discuss cultural heritage management, employment pathways and business capacity for rehabilitation works	Engagement records Engagement reported as part of SIM reports	Annually for five years from commencement of construction, or as agreed with BBAC
Potential for noise impacts at nearby homesteads	BMA has cooperative relationships with nearby homestead owners, enabling amenity impacts to be avoided or minimised	• Any impacts on the amenity of homesteads are temporary and managed in accordance with coexistence agreements with landowners • Saraji Homestead owners confirm satisfaction with management of amenity impacts	Engagement with homestead owners to confirm satisfaction with impact management	Annual engagement during construction, and then as agreed with landholders
Contribution to the wellbeing and liveability of Isaac LGA communities	Identification and implementation of shared value opportunities which improve community wellbeing in the Isaac LGA	• A range of opportunities is provided for engagement between stakeholders and the project (as per Table 6.6) • Community members and IRC provide positive feedback on Project engagement and social investments	Partnership meetings to develop and evaluate partnerships, outcomes to be agreed with partners and reported in SIMR Engagement with IRC to monitor satisfaction with community engagement Workforce numbers and community investment levels regularly reviewed	Annual engagement during construction, and then as agreed with IRC Workforce numbers and community investment levels monitored every six months during the first five years of operation

Impacts and benefits	Outcomes sought	Performance Indicators	Monitoring Mechanism/data sources	Timing / frequency
Increased demands for community and health services	Consultation with IRC community organisations and DHCDE enables planned, cooperative responses to impacts on services	• BMA's regular engagement with IRC, NQ PHN and local services identifies any Project-related strains to support collaborative responses and adaptive management	Engagement with IRC, NQ PHN and local services (ELAM, MDSS and DCSG)	At least annually from commencement of construction and for the first five years of operation
Potential variability in impacts due to changes in baseline conditions or unanticipated impacts	Engagement supports adaptive management of identified and unanticipated social impacts	• The Project stakeholder engagement register identifies stakeholders, their issues and information needs, all interactions with Project stakeholders and how their issues were addressed • Engagement with IRC, Queensland Health, DTATSIPCA, DCSSDS, QPS, QFES and QAS enables feedback on SIMP effectiveness and corrective action where required, and supports Council and agencies to plan for any changes • Communication channels are maintained and or established to enable identification of any new or emerging issues to be addressed • The Project promotes access to BMA's community hotline and complaints procedure to enable affected community members and other stakeholders to register complaints queries or comments, and have been addressed in a timely manner • The SIMP monitoring process enables reporting of the delivery and effectiveness of social impact management plans and	Annual engagement with IRC and Government stakeholders to review baseline conditions and SIMP effectiveness, reported in the SIMR Complaints register	Annually during construction and for the first five years of operation

Impacts and benefits	Outcomes sought	Performance Indicators	Monitoring Mechanism/data sources	Timing / frequency
		enables corrective actions to be instituted where necessary		
Closure impacts (e.g. on population, housing or service demand)	Stakeholders are involved in closure planning to support mitigation of social impacts.	• Pending closure date is communicated at least three years prior to that date, with the engagement process for the closure phase agreed and documented at that time	Progressive rehabilitation and closure planning engagement records	From three years prior to closure
Workforce management				
Construction employment opportunities for local residents	Construction workers located in the Isaac LGA are aware of and supported to apply for construction employment opportunities	• Contractor will engage with IRC and CSQ, and set a target for local residents' involvement in Project construction work, having mind to local skills shortages	Contractor's employment register enabling reporting on the number of local personnel employed, made available to IRC and DSDI	Engagement three months prior to construction, monitoring results provided on request
Employment opportunities for existing local residents	The Project offers long-term employment opportunities to Isaac LGA residents	• Project recruitment follows a hierarchy commencing with local and regional recruitment • All Isaac LGA residents who have appropriate training/experience are considered for Project operational roles, with training provided to address skills gaps	Employment and training register, enabling reporting on the number of existing local personnel and new local personnel to IRC, QPS, DESBT and DSDI	Six monthly monitoring, monitoring results provided on request during the first five years of operation
Integration of new personnel to the Isaac LGA	New local project workers and families are supported to integrate to communities	• Number of individuals and families moving to Dysart for project employment • DCSG and/or MDSS have sufficient resources to plan and provide settlement support including support for personnel and family involvement in community groups and accessing support needs	Partnership meetings to develop and evaluate settlement support partnership, outcomes to be agreed with partners and reported in SIMR	Commencing six months prior to operation, monitored annually for the partnership term (1-3 years)

Impacts and benefits	Outcomes sought	Performance Indicators	Monitoring Mechanism/data sources	Timing / frequency
Employment equity – Indigenous people	Project achieves Indigenous participation in employment of 8.0 percent by Year 3 of operations	• Continual progress is made during the first three years of operations towards a goal of 8.0 percent Indigenous employment by the end of Year 3	Employment register, enabling reporting on the number of Indigenous personnel to OCG on request	Six monthly from Year 1 of operations, monitoring results provided on request during the first three years of operation
Employment equity – women	Strong Project contribution to a goal of 40 percent female employment by Year 3 of operations	• Continual progress is made during the first three years of operations towards a goal of 40.0 percent female employment by the end of Year 3	Employment register, enabling reporting on the number of women employed by the Project to OCG on request	Six monthly from Year 1 of operations, monitoring results provided on request during the first three years of operation
Employment pathways – people with disability	Training opportunities and employment pathways for people with disability in Dysart and Moranbah, metrics to be agreed with HCC, MDSS or another partner organisation	• Dysart and/or Moranbah community members with disability have access to training and employment pathway program funded by a partnership of BMA and DCSSDS/DESBT during Project Year 2/3	Record of partnership and record of outcomes as agreed with partners, outcomes reported in SIMR	Upon completion of program
Training and development	Local young people and people who are new to underground mining benefit from training and development opportunities	• Apprenticeships and training opportunities are available during each year of operations, with local young people the primary recruitment pool	Employment and training register, enabling reporting on traineeships and apprenticeships in the annual SIMR	Annually for five years from the commencement of operations
Potential to exacerbate skills shortages – construction	Construction workforce includes local residents as well as workers from other regions, in balance to minimise significant impacts on other businesses	• Number of traineeships and/or apprenticeships targeting skills shortages offered during construction (goal to be agreed between Construction Contractor and BMA)	Employment and training register, enabling reporting on traineeships and apprenticeships in the annual SIMR	Annually during construction
Potential to exacerbate skills shortages – operation	BMA training strategies increase workforce capacity so that draw of labour from IRC and local businesses is minimised	• Number of traineeships and/or apprenticeships offered during operation (goal to be agreed with BMA)	Employment and training register, enabling reporting on traineeships and apprenticeships in the annual SIMR	Annually during the first five years of operation

Impacts and benefits	Outcomes sought	Performance Indicators	Monitoring Mechanism/data sources	Timing / frequency
		• BMA's training strategies and STEM initiatives contribute to strengthening the existing mining workforce base • Business group feedback indicates levels of labour draw to the Project are acceptable		
Potential for inappropriate workforce behaviour	Project personnel behave in accordance with local values and Codes of Conduct	• Number of complaints about workforce behaviour from the public or QPS	Complaints register Annual QPS engagement	Complaints register monitored monthly, reported as part of SIMR annually during construction and first five years of operation
Workforce wellbeing	On-site access to health services that support workforce wellbeing and minimise impact on local health services	• GPs report that Project construction personnel's demands for GP services are within their services' capacity	Engagement with Dysart and Moranbah GP clinics, reported in the annual SIMR	Six-monthly engagement, annual reporting during construction
	All Project personnel have access to services that support their health and wellbeing, including mental health	• Number of people accessing on-site health services and the EAP program • New local personnel receive support and have opportunities to engage in community activities	Provision of health services and EAP reported in SIMR Records of community programs provided by DCSG	Annually reported during first five years of operation
Closure impacts	Project personnel are aware of the period of employment available and able to pursue other employment options when appropriate	• The Project's pending closure is communicated to Project personnel at least three years prior to the intended closure date	Progressive rehabilitation and closure planning engagement records	From three years prior to closure
	Project personnel are supported to identify other employment options, and supported to undertake re-training if needed	• The Project provides employment transition support including leave to undertake re-training	HR records	From one year prior to closure

Impacts and benefits	Outcomes sought	Performance Indicators	Monitoring Mechanism/data sources	Timing / frequency
	IRC is aware of the timeframe for closure and is able to plan for impacts resulting from closure	• The Project's pending closure is communicated to Project personnel at least three years prior to the intended closure date	Progressive rehabilitation and closure planning engagement records	From three years prior to closure
Housing and accommodation				
Requirement for temporary accommodation for an estimated 900-1,000 NRW, assumed to be during 2023-2024	Avoidance of impacts on local housing availability and costs Avoidance of crowding out other users from short term accommodation	• Sufficient WAV capacity is provided on the Mining Lease to accommodate all workers from outside a safe daily driving distance (up to 1,000 bed capacity), with NRW required to stay in the WAV • Any decrease in rental vacancy rates is not attributable to construction personnel	Construction Contractor's records of WAV provision, reported annually, consultation with local real estate agents; monitoring of rental vacancy rates and costs (e.g. SQM Research or realestate.com.au) in Moranbah and Dysart	Six monthly consultation with real estate agents and monitoring of rental vacancies and costs during construction
Requirements for housing for operational personnel (estimated at up to 130 dwellings)	Planning for Project housing needs enables timely provision and avoids impacts on the local housing market	• All operational personnel who choose to move to Dysart are provided with housing • Personnel requests to move to Moranbah are supported when BMA housing is available in Moranbah, subject to the needs of other BMA mines situated closer to Moranbah • 70 BMA-owned dwellings are available for occupancy by the commencement of Project operations, with further dwellings brought from back from care and maintenance to the available housing pool as needed to house new personnel	BMA housing and accommodation register, Consultation with local real estate agents, monitoring of rental vacancy rates and costs (e.g. SQM Research or realestate.com.au) in Moranbah and Dysart	Six monthly consultation with real estate agents and monitoring of rental vacancies and costs, reported in annual SIMR for first five years of operation
	All Project operations personnel who move to the Isaac LGA and existing residents who lose their current	• The availability of BMA housing is maintained throughout Project operations, commensurate with Project demand	Employee intentions monitored during recruitment, BMA housing register monitored quarterly during the first three	From commencement of operations, employee intentions and housing availability monitored quarterly for three years

Impacts and benefits	Outcomes sought	Performance Indicators	Monitoring Mechanism/data sources	Timing / frequency
	housing entitlements are accommodated in BMA housing		years of operations and annually thereafter	(to operational workforce peak) and reported annually in the SIMP
Requirement for accommodation for non-resident operational personnel (an estimated 180 personnel on shift)	All NRW Project personnel have access to safe and comfortable accommodation whilst on shift	• BMA has contractual arrangements with providers of BMA-owned or other WAVs, sufficient to meet the needs of all operations NRW • Percentage of NRW accommodated in local WAVs • NRW personnel provide positive feedback about their accommodation	BMA housing and accommodation register, annual survey of NRW personnel Years 1-3 of operation	Accommodation register and occupancies monitored annually during the first three years of operation (to operational workforce peak), and reported annually in the SIMP
Indirect housing impacts through stimulation of increased employment in businesses and services	Cooperation between stakeholders to address cumulative impacts on housing access in Moranbah and Dysart	• BMA participates in Council, community and cross-industry forums addressing housing availability and affordability	Engagement records	As required
	Project impacts on housing access or affordability are avoided or offset	• No increase in rental costs attributable to an influx of construction or operational personnel • No increase in the number of people seeking social housing attributable to housing use by Project personnel • Any unexpected Project impacts on housing affordability are identified and corrective action taken if impacts are identified, e.g. expanding the use of BMA's housing portfolio by contractors or local businesses, or prioritisation of affordable housing in community investment	Monitor rental vacancy rates via (e.g. SQM Research or realestate.com.au) Engagement with IRC, IAHT and ELAM to monitor affordable housing demand	Rental vacancy rates monitored 6 monthly from commencement of construction until Year 5 of operation Engagement six monthly during construction and the first five years of operation

Impacts and benefits	Outcomes sought	Performance Indicators	Monitoring Mechanism/data sources	Timing / frequency
Closure impacts	IRC and community members are aware of the timeframe for closure and likely changes to housing requirements	• The Project's pending closure is communicated to IRC and community members at least three years prior to the intended closure date	Progressive rehabilitation and closure planning engagement records	From three years prior to closure
Health and community wellbeing				
Town water requirement	Project-related increases are within the capacity of Isaac LGA's town water supply	• IRC feedback indicates that the capacity of Isaac LGA's town water supply to meet Project-induced demands is adequate	Engagement and water supply subsidy agreement with IRC	Annually or as agreed with IRC up until Year 3 of operations (to operational workforce peak)
Increased demand for health services	Excessive demands on local health services from non-local construction workers are avoided	• BMA provides Queensland Health and NQ PHN with estimates of workforce numbers annually • The Construction Contractor provides access to GP services for NRW, avoiding impact on residents' access • Queensland Health and local GPs agree that sufficient information was provided to plan for adequate hospital and health service delivery	Contractor records of health service provision Engagement with GPs six monthly or as agreed during Project's first five years	Monitored six monthly during construction Six monthly from commencement of construction, monitoring results provided in annual SIMRs
	Sufficient GP capacity to meet the needs induced by Project personnel	• BMA will provide access to GP services for NRW employed in Project operations • Any need for supplementation of GP services in Dysart is identified and addressed in collaboration with IRC and Queensland Health • BMA supports joint Government-Council-community-industry efforts to increase GP provision if required	Participation in forums on request, recorded in engagement records. Dwelling provided for GP for the first three years of operation, if required	On request, participation reported annually in SIMRs

Impacts and benefits	Outcomes sought	Performance Indicators	Monitoring Mechanism/data sources	Timing / frequency
		• BMA will provide a subsided dwelling for a GP in Dysart if this would assist to attract and retain a GP		
Increased demand for police and emergency services	Police and emergency services have sufficient information to plan for ay demands on services	• QPS, QAS and QFES report satisfaction with the level of information and involvement in the Project	Engagement annually or as agreed	Engagement during construction, the first three years of operation and then as agreed
	Police and emergency services are oriented to the Project site and its emergency procedures	• Site orientation and site contacts are provided to QPS, QAS and QFES	Orientation provided at the commencement of construction and again three months prior to operations	Commencement of construction and three months prior to operations, ongoing as agreed
Increased school enrolments	Department of Education has sufficient information to plan for increased enrolments	• BMA provides Department of Education with estimates of Project-related enrolments to a schedule agreed with the Department e.g. in October and August annually	Employee advice on school enrolment needs during recruitment, record of engagement with Department of Education	Biannually during the first three years of operation (to the operational workforce peak) and then as agreed
Increased childcare requirements	Childcare services have sufficient capacity to meet Project demand	• BMA identifies personnel's childcare needs and communicates these needs to childcare providers in Dysart (and Moranbah as relevant) • Prior to Project construction, BMA would liaise with local childcare providers, the Department of Education and IRC to understand the achievements in increasing childcare availability. If suitable capacity increased have not been achieved as shown in Table 4.11, BMA will work with the Alliance (or its successor) to induce the required additional capacity.	Employee advice on childcare needs during recruitment, engagement with childcare providers as personnel are recruited	From the commencement of operations, annually during the first five years of operation

Impacts and benefits	Outcomes sought	Performance Indicators	Monitoring Mechanism/data sources	Timing / frequency
Increased need for community and cultural services	Community and cultural services are adequate to meet increased needs resulting from Project-related population increases, and new local personnel and family members are integrated to local communities	• BMA invests $1 million in Isaac LGA community projects (additional to its existing community investment expenditure levels) during the construction period ($500,000 p.a.) to build community service capacity and cohesion • MDSS, DTATSIPCA, DCSSDS, DCSG and HCC identify that community and individual support services are adequate to any increased demand resulting from the Project • BMA participates in initiatives led by community, Council or and Queensland Government agencies to address identified needs for community and individual support services in Moranbah and Dysart • BMA collaborates with IRC and community and industry partners to prioritise its community investments	Engagement with MDSS, DTATSIPCA, DCSSDS, DCSG and HCC Community investment expenditure records, partnership and funding agreements	Project-specific investments reported annually in SIMR during construction Annual engagement to review BMA employment numbers, community needs and investment priorities during the first five years of operations
Enhancement of liveability and amenity	The liveability and amenity of Moranbah and Dysart is enhanced.	• BMA will continue to maintain its community investment, with consideration to employment and production levels. • Where additionality of activities (i.e. additional employees or production) occur, BMA will reflect this through proportional increases in community contributions.	Community investment records, employment and contracting register - workforce numbers for BMA operations, BMA community investments relevant to Project reported annually	From commencement of operations, annual monitoring and reporting to Year 3 of operations

Impacts and benefits	Outcomes sought	Performance Indicators	Monitoring Mechanism/data sources	Timing / frequency
Local business and industry				
Opportunity for local and Indigenous businesses to supply the Project	Project Staff equipped to fully utilise C-Res	• Use of C-Res commences with the commencement of Project operations • Project staff have ongoing access to C-Res	Local procurement procedures, C-Res records	From commencement of operations, monitored annually for five years
	Transparency in reporting on local content outcomes	• All Project supply opportunities appropriate to SMEs are promoted through C-Res	C-Res event and participation records	From commencement of operations, annual monitoring and reporting to Year 5 of operations
	Local businesses form an important part of the Project's supply chain and have access to C-Res and its capacity building programs	• Increased number of Isaac LGA businesses registered for C-Res by Year 3 of operations • At least 50 Isaac LGA business supplying Project operations by Year 3 of operations • C-Res business briefings, capacity building advice and training programs continue to be available to businesses in the Isaac LGA • Compliance with the Queensland Energy Sector Code of Practice for Local Content	BMA will report on the number of Isaac LGA businesses involved in the Project's supply chain using construction contractor's procurement records and C-Res records	From commencement of construction, annual monitoring and reporting to Year 3 of operations (to operational peak)
	Indigenous businesses are involved in the Project's supply chain	• A goal of 6.5 percent of Project supply expenditure through the Local Buying Program with Indigenous businesses by Year 3 of operations	BMA procurement records and C-Res records	From commencement of construction, annual monitoring and reporting to Year 3 of operations
Contribution to enhanced capacity of local and regional businesses	Alignment with regional and State-wide capacity building priorities	• Engagement with GW3, DESBT and IRC indicates that BMA's training strategies align with regional priorities to address skills shortages in the MIW region	Engagement records	At commencement of operations

Impacts and benefits	Outcomes sought	Performance Indicators	Monitoring Mechanism/data sources	Timing / frequency
	Collective positive impacts on local and regional business diversification	• Participation local and regional partnerships with GW3, MIW RDA, RCOE to support economic diversification and transition	Engagement records	From commencement of construction, annual monitoring and reporting to Year 3 of operations

8. Conclusion

This section summarises:

- the Project's alignment with local and regional community planning goals;
- the Project's negative and positive social impacts of significance, as assessed in Table 5.2; and
- conclusions regarding the Project's benefits to local communities.

8.1 Alignment with planning goals

The Project's alignment with planning goals as expressed in the Isaac LGA Community Strategic Plan 2035 and MIW Regional Plan 2012 are summarised in Table 8.1.

Table 8.1: Project alignment with planning goals

Planning Goals	Project contributions
Isaac 2035 Goals	
Communities: Isaac will have strong and diverse communities that support all to live, work and raise families	• BMA will provide support for workers to settle in local communities that will strengthen community resilience
Economy: Isaac will continue to be Queensland's number one performing regional economy based upon a thriving, resilient and diverse mix of industry sectors	• The Project will support the continuation of coal mining in the LGA • Local and regional businesses will benefit from Project supply opportunities
Infrastructure: Isaac will have effective and sustainable infrastructure that supports the needs of the region's communities and its economic sectors	• BMA contributes to infrastructure provision (e.g. water supply and road infrastructure) by agreement with IRC to support the liveability of local towns • BMA will maintain and/or increase its community investment in local towns, commensurate with increases in BMA employment
Environment: Isaac will have an appropriate and sustainable balance between environment, economy and community to ensure our natural resources are sustainably managed and protected	• Project land use is consistent with existing and intended use of land in the Isaac LGA for resource developments • The Project will contribute to increased and diversified employment, and to the sustainability of Dysart.
MIW Regional Plan	
The development of resilient and cohesive communities with distinct character	• Support for workers to settle in local communities will strengthen community resilience • Investment in community facilities and workforce-community integration programs will support community cohesion
Recognising and fostering existing community values, including character, cultural heritage, diversity, amenity, safety, access, and social capital	• Existing community values such as communities' identity as mining towns would be strengthened by the Project • The Project avoids impacts on cultural heritage, diversity safety and access • Community development will strengthen social and human capital

Planning Goals	Project contributions
Retain regionally unique built and natural assets	• The Project's location avoids impacts on unique built assets • The EIS identifies impacts on natural assets and provides management measures to mitigate those impacts
Manage and sustain regional population growth and significant demographic changes	• Contribution to population growth in the Isaac LGA • Potential population increases as a result of the Project are identified in the SIA and will be monitored as part of the SIMP
Enhance the economic diversity of the region and support local business sustainability	• The Project's local supply chain and the availability of employment to local and regional personnel will strengthen business sustainability
Improve diversity of employment opportunities in the region	• Development of the Project as an underground mine will diversify employment and supply opportunities in the MIW region
Improve housing availability and affordability to support growth and healthy communities	• BMA will provide housing and accommodation for Project employees who choose to move to the Isaac LGA, and require effective accommodation planning by contractors, to avoid impacts on housing availability and affordability
Manage cumulative social impacts that result from development, particularly mining projects	• The SIMP includes a comprehensive monitoring framework, including stakeholder engagement in monitoring, to identify the Project's contributions to cumulative impacts
Increase the capacity and variety of social infrastructure and service (including community, cultural, educational, health and recreational facilities)	• BMA invests in community development, services and programs in the communities in which it operates to support the capacity and variety of services

8.2 Residual significance of social impacts

Table 8.2 summaries the Project's negative and positive social impacts that are assessed as at least medium significance, with respect to community wellbeing, and employment and economic development, noting the expected residual significance of impacts after mitigation measures are implemented.

Table 8.2: Residual significance

Impact area	Residual Significance	
	Negative impacts	Positive impacts
Community wellbeing		
Increased demands for GP services and hospital, emergency and mental health services, offset by direct service provision to personnel and collaboration to address any deficits identified through stakeholder engagement and monitoring	Certain, minor	
Small increased demand on police services, QAS and QFRS, offset through cooperation with police and emergency services	Likely, minor	
Increased demand for settlement and community support services, mitigated by BMA funding for provision of service	Certain, minor	

Impact area	Residual Significance	
	Negative impacts	Positive impacts
Incremental increased demand for Council, recreational, cultural services and community services, mitigated by ongoing community investment and additional investment commensurate with additional BMA employees	Certain, minor	
Traffic safety risk on Lake Vermont Road would increase, but new intersection construction would mitigate risk	Unlikely, moderate	
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		Likely, moderate
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		Likely, major
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	Possible, moderate	
Employment and local business participation		
Potential to draw construction labour and trade skills from businesses and industries if skills and labour shortages persist into 2023, mitigated by drawing from local, regional and broader labour forces	Possible, moderate	
Project closure would result in redundancies, with potential for disadvantage to Project workers, mitigated through advance notice and support for retraining	Possible, moderate	
Up to 1,000 construction jobs with an estimated 10 percent expected to be filled by Isaac LGA residents		Likely, moderate
Up to 500 operational jobs, with recruitment targeting existing local personnel and personnel who would move to the Isaac LGA		Certain, major
Increased long-term availability/continuity of mining employment in the Isaac LGA including increased underground mining opportunities.		Certain, moderate
Opportunity for local young people and people new to underground mining to gain employment including apprenticeships.		Certain, moderate
Workforce diversity and inclusion, including Indigenous workers and women, and potential for employment opportunities people with disability.		Likely, moderate
Likelihood of indirect employment benefits within Isaac LGA.		Likely, minor
Businesses within the Isaac LGA, Central Highland LGA and Mackay LGAs, will benefit from supply opportunities during construction and operation		Likely, major

Impact area	Residual Significance	
	Negative impacts	Positive impacts
Opportunities for Indigenous businesses throughout the Project lifecycle		Likely, moderate
Potential for Continuity of employment for local and regional construction contractors		Possible, moderate
Cumulative employment benefits of multiple projects		Possible, major
Cumulative benefits to local business from workers' and families' trade		Possible, moderate

8.3 Local benefits

The Project will offer employees and their families a choice of where they live, and will support employees' choices to live locally through the provision of accommodation, housing and investments in local communities.

As assessed in Sections 4 and 5, and summarised in Table 8.2, the Project is likely to have a range of minor impacts on social conditions supporting community wellbeing.

The Project is likely to make a significant positive contribution to community wellbeing and social sustainability in the Isaac LGA. In particular, a focus on local employment, provision of local subsidised housing and community investment are likely to increase Dysart's population and support community vitality.

The Project would also provide employment and business opportunities in the Isaac LGA, available to local residents, new local residents from other regions, and commuting workers from outside the Isaac LGA. Compared with the likely minor impacts on employment and business involvement that were identified, this would also produce a net positive benefit to the LGA's economic vitality.

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.

Assuming BMA's commitments to local employment, housing provision, community investment, local supply opportunities and cooperation with key stakeholders are met, it is likely that the Project would have net positive benefits for community wellbeing and social and economic sustainability in the Isaac LGA.

The SIA includes a comprehensive monitoring framework that will enable BMA and its stakeholders to track and evaluate the effectiveness of the Project SIMP, and provides a review process that will enable refinement and revision of SIMP actions where required to address unanticipated impacts.

References

References

ABS, 2016. *Census of Population and Housing 2016 Time Series Profiles* - State Suburbs of Moranbah, Dysart and Middlemount. Available at: https://www.abs.gov.au/census/find-census-data/search-by-area?opendocument&navpos=230. Accessed 31 July 2018

ABS, 2017. 2033.0.55.001 - *Socio-economic Indexes for Areas (SEIFA),* Data Cubes - 2011 and 2016 State Suburb (SSC) and LGA - Index of Relative Socio-economic Advantage and Disadvantage. Available at: https://www.abs.gov.au/ausstats/abs@.nsf/mf/2033.0.55.001. Accessed 31 July 2018

ABS, 2021a *Australian Statistical Geography Standard (ASGS) Edition 3*. Available at: https://www.abs.gov.au/statistics/statistical-geography/australian-statistical-geography-standard-asgs#. Accessed 12 June 2023.

ABS, 2021b. *Census of Population and Housing 2021 – General Community Profiles* - Suburbs and Localities of Moranbah, Dysart and Middlemount, and Isaac LGA. Available at: https://www.abs.gov.au/census/find-census-data/search-by-area?opendocument&navpos=230. Accessed 31 July 2022

ABS, 2021c: *ABS Census of Population and Housing 2021 – QuickStats* for Suburbs and Localities of Moranbah, Dysart and Middlemount, Isaac LGA and Queensland, Available at: https://www.abs.gov.au/census/find-census-data/quickstats/2021. Accessed 18 August 2022

ABS 2021d – ABS Census of Population and Housing 2021 - *Workforce profiles* for Suburbs and Localities of Moranbah, Dysart and Middlemount, Isaac LGA, Available at: https://www.abs.gov.au/census/find-census-data/search-by-area?opendocument&navpos=230 Accessed 18 August 2022

ABS 2021e. *ABS Census of Population and Housing 2021 Time series profiles* for Moranbah, Dysart and Isaac LGA. Available at: https://www.abs.gov.au/census/find-census-data/search-by-area?opendocument&navpos=230. Accessed 15 September 2022

ABS, 2021f. *ABS Census of Population and Housing 2021 Workforce profiles* for Mackay Isaac Whitsunday SA4 and Central Queensland SA4. Available at: https://www.abs.gov.au/census/find-census-data/search-by-area?opendocument&navpos=230 Accessed 20 April 2023

AEC Group, 2021. *Affordable housing study - Moranbah and Dysart*. Research report for Moranbah and Dysart STACs. Provided by STACs to consultant.

AECOM, 2018. *SEMLP EIS: Appendix J.1: Transport and Traffic Impact Assessment*. Provided by email.

Akbar, D., Kinnear. S. C., Chhetri, P. Smith, P., 2016. *Assessing Road Travel Conditions in the Bowen Basin Region: Implications for Transport Planning in Australian Mining Communities*. ANZRSAI Conference, Central Queensland University. Available at: https://apo.org.au/node/73972. Accessed 15 September 2019

Australian Government Department of Education (2021). *National Childcare Usage Survey.* Available at: https://www.education.gov.au/early-childhood/early-childhood-data-and-reports/quarterly-reports-usage-services-fees-and-subsidies/child-care-australia-report-june-quarter-2021. Accessed 31 August 2022

Australian Government Department of Industry, Science, Energy and Resources, 2022. *Resources and Energy Quarterly - March 2022.* Available at: https://publications.industry.gov.au/publications/resourcesandenergyquarterlymarch2022. Accessed 25 April 2022.

Australian Industry Group, 2021. *The Quest for Skills Tackling Shortages in a Disrupted World*. Available at: https://www.aigroup.com.au/globalassets/news/reports/2021/cet_report_quest-for-skills_sept21.pdf. Accessed September 2021

Australian Institute of Health and Welfare, 2018. *Mental Health services in Australia*. Online Available at: https://www.aihw.gov.au/reports/mental-health-services/mental-health-services-in-australia/report-contents/summary. Accessed June 2018.

Barada Barna People, 2022. *Our Story*. Available at: https://baradabarna.com.au/our-story/ Accessed 22 April 2022

BMA, 2011. *Caval Ridge EIS - Cultural Heritage Chapter*. Available at: http://www.bhpbilliton.com/-/media/bhp/regulatory-information-media/coal/bhp-billiton-mitsubishi-alliance/caval-ridge/environmental-impact-statement-eis on 030517. Accessed June 2018

Bowers, J. M. P. M. D. a. J. B., 2018. *Psychological distress in remote mining and construction workers in Australia*. Medical Journal of Australia.

Business Queensland, 2018. *Safety performance reports and statistics*. Available at: https://www.business.qld.gov.au/industries/mining-energy-water/resources/safety-health/mining/accidents-incidents/safety-performance. Accessed June 2018.

CDM Smith, 2019. *Economic Impact Assessment of Saraji East Mining Lease Project*. Provided by email.

Centre for the Government of Queensland, 2015. *Queensland Places – Broadsound*, *Dysart., Moranbah and Middlemount*. Available at: http://queenslandplaces.com.au/broadsound-shire Accessed May 2017.

Elliott Whiteing Pty Ltd, 2021. *Government Services Report* - for Moranbah and Dysart STACs, Unpublished.

Hunter Institute of Mental Health, 2012. *Mental Health and the NSW Minerals Industry*. Prepared for the NSW Minerals Council. University of Newcastle.

Integran, 2020. *Isaac Regional Council - Extrinsic Material to the Local Government Infrastructure Plan Revision 1.4.* Available at: https://www.isaac.qld.gov.au/downloads/file/3412/isaac-draft-lgip-extrinsic-material-document-1st-sr. Accessed 7 July 2022.

International Association for Impact Assessment, 2015. *Guidance for assessing and managing the social impacts of projects*. Available at: http://www.iaia.org/uploads/pdf/SIA_Guidance_Document_IAIA.pdf. Accessed May 2017

International Council on Mining and Metals, 2009. *Handling and Resolving Local Level Concerns and Grievances - Pilot Version*. Available at: http://www.icmm.com/page/15822/icmm-presents-new-guidance-note-on-handling-and-resolving-local-level-concerns-and-grievances. Accessed May 2017

Isaac Regional Council, 2013. *IRC Submission to the Productivity Commission's study into Geographic Labour Mobility*. Available at: https://www.pc.gov.au/inquiries/completed/labour-mobility/submissions. Accessed 30 June 2019.

Isaac Regional Council, 2021. *Disaster and emergency management*. Available at: https://www.isaac.qld.gov.au/community/disaster-and-emergency-management. Accessed 7 July 2022.

Isaac Regional Council, 2015. Isaac 2035: Community Strategic Plan - Isaac's 20-year vision. Available at: http://www.isaac.qld.gov.au/documents/12238/7241166/IRC_CommunityStrategicPlan_LowRes.pdf. Accessed 3 May 2017.

Isaac Regional Council, 2017a. Dysart Urban Design Framework. Available at: http://www.isaac.qld.gov.au/documents/12238/41133344/Visitor%20Information%20Guide Accessed May 2017.

Isaac Regional Council, 2017b. *Projects: Moranbah Reservoir*. Available at: http://www.isaac.qld.gov.au/moranbahreservoir Accessed May 2017.

Isaac Regional Council, 2005. *Broadsound Planning Scheme* - Dysart Map. Available at: http://www.isaac.qld.gov.au/documents/12238/133772/Map%2009%20Middlemount%20-%20Rural%20Preferred%20Use%20Area%20-%20Broadsound%20Planning%20Scheme. Accessed May 2017.

Isaac Regional Council, 2016. *Visitor Information Guide*. Available at: http://www.isaac.qld.gov.au/documents/12238/41133344/Visitor%20Information%20Guide. Accessed May 2017.

Lytton Advisory, 2020. *MIW METS Industry Capability and Supply Chain Study*. Available at: https://www.rdagw.org.au/news/miw-mets-industry-capability-and-supply-chain-study-september-2020 .Accessed May 2022.

McPhedran, S. a. D. L. D., 2014. *Relationship Quality, Work-family Stress and Mental Health Among Australia Male Mining Industry Employees*. Journal of Relationships Research, 5, (3), pp. 1-9.

Minerals Council of Australia, 2015. *Blueprint for Mental Health and Wellbeing*. Available at: https://www.minerals.org.au/file.../files/.../MCA_Mental_Health_Blueprint_FINAL.PDF Accessed 2018.

Murray, A., 1996. *Nothing but Scrub*. Published by Moranbah Silver Jubilee Committee, Belyando Shire Council. p. 13.

National Skills Commission, 2021a. *State of Australia's Skills 2021: now and into the future* Available at: https://www.nationalskillscommission.gov.au/reports/state-australias-skills-2021-now-and-future/chapter-2-australian-labour-market-2020/occupation-analysis. Accessed 27 February 2023.

National Skills Commission, 2021b. *2021 Skills Priority List*. Available at: https://www.nationalskillscommission.gov.au/2021-skills-priority-list. [Accessed September 2021].

National Skills Commission, 2021c. *Internal Vacancy Index - Job Vacancy Data Queensland*. Available at: https://www.nationalskillscommission.gov.au/topics/internet-vacancy-index. Accessed 27 February 2022.

National Skills Commission, 2023. *Small Area Labour Market data for SA2s and LGAs*, December 2019 – Dec 2022. Available at: https://www.nationalskillscommission.gov.au/topics/small-area-labour-markets. Accessed 27 February 2023.

Queensland Department of Education & Training, 2021. *Education Statistics and Information; Day 8 Enrolment Figures). h*ttp://education.qld.gov.au/schools/statistics/enrolments.html. Accessed August 2021.

Queensland Department of Environment and Science, 2023. *Environmental health and pollution management - Live air data*. Available at: https://apps.des.qld.gov.au/air-quality. Accessed 23 May 2023.

Queensland Department of Local Government and Planning, 2012. *Mackay, Isaac and Whitsunday Regional Plan*. Available at: https://www.dilgp.qld.gov.au/resources/plan/miw/miw-regional-plan.pdf [Accessed May 2017].

Queensland Department of Natural Resources and Mines, 1999. *QGN 16 Guidance Note for Fatigue Risk Management - Coal Mining Safety and Health Act 1999 Mining and Quarrying Safety and Health Act 1999*. Available at: https://www.legislation.qld.gov.au/view/pdf/inforce/2019-11-10/act-1999-039 Accessed 2017.

Queensland Department of State Development, 2013. *Social Impact Assessment Guideline*. Available at: http://www.statedevelopment.qld.gov.au/resources/guideline/social-impact-assessment-guideline.pdf

Queensland Government, 1994. *Environmental Protection Act 1994*. Available at: https://www.legislation.qld.gov.au/view/html/inforce/current/act-1994-062

Queensland Government, 2014. *Regional Planning Interests Act 2014*. Available at: https://www.legislation.qld.gov.au/view/pdf/inforce/current/act-2014-011 Accessed June 2018.

Queensland Government, 2016. *Barada Barna People and Widi People win native title rights*. Available at: ttp://statements.qld.gov.ay/Statement/2016/6/29/barada-barna-people-and-wildi-people-win-native-title-rights. Accessed 30 June 2018.

Queensland Government, 2017. *Strong and Sustainable Resource Communities Act 2017*. Available at: https://www.legislation.qld.gov.au/view/pdf/inforce/current/act-2017-028. Accessed 30 June 2018

Queensland Government, 2018. *Social impact assessment guideline*. Available at: https://www.statedevelopment.qld.gov.au/coordinator-general/strong-and-sustainable-resource-communities/social-impact-assessment. Accessed 30 October 2018

Queensland Government, 2022. *Offender numbers - police districts from Jan 2001*. Available at: https://www.data.qld.gov.au/dataset/offender-numbers-police-districts-from-jan-2001/resource/8b29e643-56a3-4e06-81da-c913f0ecff4b. Accessed 27 July 2022

Queensland Government, 2023. *Queensland Disability Plan 2022-27*. Available at: https://www.dsdsatsip.qld.gov.au/campaign/queenslands-disability-plan/about-plan/ 2022-27. Accessed 31 March 2023

Queensland Government Statistician's Office, 2015. *Broadhectare study 2016 profile, Mackay, Isaac and Whitsunday Region.* [Online] Available at: http://www.qgso.qld.gov.au/products/reports/broadhectare-study/bhs-miw-201502.pdf Accessed May 2017

Queensland Government Statistician's Office, 2016a. *Bowen Basin Non-Resident Population Report*. Available at: http://www.qgso.qld.gov.au/products/reports/bowen-basin-pop-report/index.php. Accessed 25 June 2019

Queensland Government Statistician's Office, 2016b. *Index of retail prices in Queensland regional centres*. Available at: https://www.data.qld.gov.au/dataset/index-of-retail-prices-in-queensland-regional-centres. Accessed 25 June 2019

Queensland Government Statistician's Office, 2017. *Queensland Domestic and Family Violence Report.* Available at: http://www.qgso.qld.gov.au/products/reports/domestic-family-violence/domestic-family-violence-report-2017.pdf. Accessed 31 May 2019.

Queensland Government Statistician's Office, 2022a. *Regional Profiles* - Moranbah SA2, Broadsound-Nebo SA2, Isaac LGA, Mackay SA4 and Central Queensland SA4. Available at: https://statistics.qgso.qld.gov.au/profiles/qrp/resident/. Accessed 22 February 2023.

Queensland Government Statistician's Office, 2022b. *Population Projections. 2021 edition (medium series). Available* a: t http://www.qgso.qld.gov.au/products/tables/proj-pop-lga-qld/index.php Accessed 22 June 2022

Queensland Government Statistician's Office, 2022c*. Bowen Basin Population Report, 2021* Available at: http://www.qgso.qld.gov.au/products/reports/bowen-basin-pop-report/index.php Accessed 15 June 2022.

Queensland Government Statistician's Office, 2022d. R*esidential land development activity profiles*. Available at: https://statistics.qgso.qld.gov.au/rlda-profiles.Accsssed 1 September 2022

Queensland Government Statistician's Office, 2022e. *Indigenous Profiles - Mackay and Central Queensland SA4s.* Available at: https://statistics.qgso.qld.gov.au/qld-regional-profiles.Accsssed 1 September 2022

Queensland Government Statistician's Office, 2022f. *Regional Youth Unemployment*. Available at: https://www.qgso.qld.gov.au/issues/3431/regional-youth-unemployment-202202.pdf Accessed February 2023.

Queensland Government Statistician's Office, 2023. *Workforce profiles* - Isaac LGA, MIW SA4 and Central Queensland SA4. Available at: https://statistics.qgso.qld.gov.au/profiles/qrp/resident/. Accessed 22 April 2023.

Queensland Health, 2017. *The burden of disease and injury in Queensland's Aboriginal and Torres Strait Islander People*. Available at: https://www.health.qld.gov.au/__data/assets/pdf_file/0031/660838/BoD-2016-HHS-FINAL.pdf. Accessed on 23 May 2019.

Queensland Health, 2021. *Hospital performance data for public hospitals*. Available at: http://www.performance.health.qld.gov.au. Accessed on 9 February 2021

Queensland Mines Rescue Service, 2021. *Training*. Available at: https://www.qmrs.com.au/training.html. Accessed on 9 February 2021

Queensland Resources Council. 2013a. *Code of Practice for Local Content.* https://www.qrc.org.au/wp-content/uploads/2016/07/Local-Content-Code-of-Practice.pdf. Accessed 23 August 2017

Queensland Resources Council, 2015. *Workforce Accommodation Arrangements in the Queensland Resources Sector*. Available at: https://documents.parliament.qld.gov.au/com/IPNRC-C217/FQ-6DD4/02-tp1-15Jul2015.pdf. Accessed 7 February 2022.

Queensland Resources Council, 2021. *Lack of skilled workers hits Queensland's resources sector*. Available at: https://www.qrc.org.au/media-releases/lack-of-skilled-workers-hits-qlds-resources-sector. Accessed 6 May 2022.

Queensland Resources Council, 2021. *Indigenous Participation Survey*. Provided by QRC via email.

Queensland Treasury, 2011. *Guide to Risk Management - Queensland Government*. Available at: https://s3.treasury.qld.gov.au/files/guide-to-risk-management.pdf

Real Estate Institute of Queensland, 2018. *Vacancy rates*. Available at: https://www.reiq.com/REIQ/Research/Queensland_Vacancy_Rates_/REIQ/Research/Analysis/Rental_Vacancies.aspx?hkey=901d5aa9-b298-4848-b036-0ed9268ee90c Accessed August 2018

REMPLAN, 2018. *Isaac Regional Council Economic Profile*. Available at: http://www.economyprofile.com.au/isaac/trends/business-counts/staff. [Accessed September 2018.

REMPLAN, 2021. *Economy, Jobs and Business Insights*. Available at: https://app.remplan.com.au/isaac/economy/summary?state=AnGoH4md7Hx4JGrs0rmrx1iehph9ax. Accessed June 2021.

REMPLAN, 2023. *Isaac Regional Council Community Profile*. Available at: http://www.communityprofile.com.au/isaac. Accessed August 2018

Rolleston, F., 1983. *The Broadsound Story*, Mackay, Broadsound Shire Council. Available at: http://queenslandplaces.com.au. Accessed 2017.

Royal Australian College of General Practitioners, 2018. *General Practice: Health of the Nation 2018*. East Melbourne, Vic: RACGP. Available at: https://www.racgp.org.au/download/Documents/Publications/Health-of-the-Nation-2018-Report.pdf. Accessed 15 February 2021.

SQM Research, 2019, 2022 and 2023. *Total property listings* – postcodes 4744, 4745 and 4746 Available at: https://sqmresearch.com.au/total-property-listings.php. Accessed in February each year.

SQM Research, 2019, 2022 and 2023. *Median dwelling asking prices* - postcodes 4744, 4745 and 4746 Available at: https://sqmresearch.com.au/asking-property-prices.php?postcode=2000&t=1. Accessed 16 March 2023.

SQM Research, 2019, 2022 and 2023. *Weekly Asking Rents* - postcodes 4744, 4745 and 4746. Available at: www.sqmresearch.com.au/weekly-rents Accessed in February each year.

Supply Nation, 2022. *Indigenous Business Register*. Available at: https://supplynation.org.au. Accessed May 2022

Torrens University Public Health Information Development Unit, 2017. *Social Health Atlas of Australia for LGAs and Population Health Areas*. [Online] Available at: http://phidu.torrens.edu.au/. Accessed September 2018.

Tourism and Events Queensland, 2014. *Mackay Destination Tourism Plan*. Available at: https://teq.queensland.com/about-teq-new/plans-and-strategies/destination-tourism-plans. Accessed June 2018.

YCharts, 2023. *YCharts Australian Coal prices*. Available at: https://ycharts.com/indicators/australia_coal_price.Accessed 2 June 2023.