



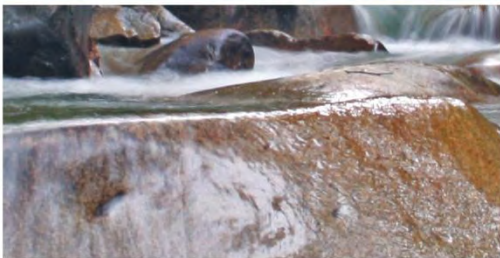
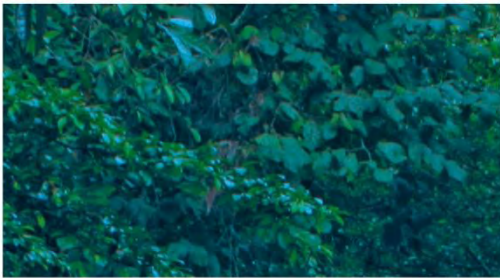
# Appendix 31

Social Impact  
Assessment

**BYERWEN COAL PROJECT**  
Byerwen Coal Pty Ltd

**SOCIAL IMPACT ASSESSMENT**

**JANUARY 2013**



## CONTENTS

<b>EXECUTIVE SUMMARY</b>	<b>VII</b>
<b>1. INTRODUCTION</b>	<b>1-1</b>
1.1 Project Proponent	1-1
1.2 Project Overview	1-1
1.3 Objectives of the Social Impact Assessment	1-3
<b>2. SOCIAL AND CULTURAL AREA OF INFLUENCE</b>	<b>2-1</b>
<b>3. STUDY METHOD</b>	<b>3-1</b>
3.1 Scoping	3-1
3.2 Baseline Characterisation	3-3
3.3 Impact Identification and Assessment	3-3
3.3.1 Sensitivity	3-4
3.3.2 Magnitude	3-5
3.3.3 Significance of Impacts	3-5
3.4 Management, Mitigation and Enhancement Measures	3-6
3.5 Residual Impact Evaluation	3-7
3.6 Cumulative Effects	3-7
<b>4. LEGISLATIVE CONTEXT</b>	<b>4-1</b>
4.1 International	4-1
4.2 Commonwealth	4-1
4.3 State	4-1
4.4 Local Government	4-6
<b>5. EIS COMMUNITY CONSULTATION AND SIA STAKEHOLDER ENGAGEMENT</b>	<b>5-8</b>
5.1 Consultation Objectives	5-8
5.2 Stakeholder Engagement and Community Consultation Program	5-9
5.2.1 Phase 1: Exploration (2010 – Ongoing)	5-11
5.2.2 Phase 2: EIS and Approvals (Late 2010 to Approvals)	5-11
5.2.3 Phase 3: Construction 2014 and Phase 4: Operations 2015+	5-12
5.2.4 Glenden Stakeholder Engagement Group (SEG)	5-12
5.3 Stakeholder Engagement for the SIA	5-13
5.4 Stakeholder Identification	5-13
5.5 Engagement Methods and Materials	5-15
5.5.1 Stakeholder and Community Briefings	5-17
5.5.2 Government Stakeholder Briefings	5-17
5.5.3 Landowners and Residents	5-17
5.5.4 Indigenous Groups	5-17
5.6 Key Stakeholder and Community Consultation Findings	5-18
5.7 Ongoing Consultation and Communication	5-30
5.8 Conclusion	5-30

<b>6.</b>	<b>EXISTING SOCIAL ENVIRONMENT</b>	<b>6-31</b>
6.1	Historical Background and Settlement Pattern	6-31
6.2	Demographic and Demographic Change	6-32
6.2.1	Fulltime Equivalent (FTE) Population	6-32
6.2.2	Projected Populations	6-33
6.2.3	Age and Gender Distribution	6-33
6.2.4	Cultural Diversity	6-34
6.2.5	Family Structure and Household Composition	6-34
6.2.6	Indigenous Community	6-35
6.3	Employment, Income and Housing	6-35
6.3.1	Labour Force and Unemployment	6-35
6.3.2	Income	6-36
6.3.3	Disadvantage	6-36
6.3.4	Housing and Accommodation	6-36
6.4	Education	6-37
6.5	Health	6-37
6.6	Land Use and Land Ownership	6-38
6.7	Community Infrastructure and Social Services	6-38
6.7.1	Health	6-39
6.7.2	Education	6-40
6.7.3	Emergency Services	6-40
6.7.4	Recreational Facilities and Services	6-40
6.7.5	Communications Infrastructure	6-41
6.7.6	Transport Infrastructure and Services	6-41
6.7.7	Crime	6-41
6.7.8	Volunteering	6-42
6.8	Community Values	6-43
6.8.1	Strong Community Identity	6-43
6.8.2	Cohesive Communities	6-43
6.8.3	Affordable Rural Lifestyle	6-43
<b>7.</b>	<b>PROJECT DETAILS</b>	<b>7-44</b>
7.1	Key Project Timelines	7-44
7.2	Workforce Profile for Life of Project	7-44
7.2.1	Construction Workforce Profile	7-46
7.2.2	Construction Workforce Transportation	7-47
7.2.3	Operations Workforce Profile	7-47
7.2.4	Operations Workforce Transportation	7-49
7.3	Workforce Accommodation Strategy	7-49
7.3.1	Workforce choice	7-49
7.3.2	Provision of a mix of accommodation styles	7-49
7.3.3	Workforce Accommodation Strategy implementation	7-50
7.3.4	Role of Queensland Government	7-50
7.3.5	Role of local government	7-50
7.3.6	Construction Workforce Accommodation Requirements	7-51
7.3.7	Operations Workforce Accommodation Requirements	7-51
7.4	Financial Characteristics	7-52

<b>8.</b>	<b>ISSUES AND POTENTIAL SOCIAL IMPACTS</b>	<b>8-54</b>
8.1	Demographic and Demographic Change	8-55
8.1.1	Construction	8-55
8.1.2	Operations	8-55
8.2	History and Heritage	8-57
8.3	Indigenous Community	8-58
8.4	Housing and Accommodation	8-58
8.5	Residential Amenity	8-59
8.6	Employment, Education and Training	8-59
8.7	Local Economic Conditions	8-60
8.8	Health and Safety	8-60
8.9	Health and Community Infrastructure	8-61
8.9.1	Health Services	8-61
8.9.2	Essential Services	8-61
8.9.3	Emergency Services	8-61
8.9.4	Education Services	8-62
8.9.5	Recreational Facilities and Services	8-62
8.9.6	General Community Infrastructure	8-62
8.9.7	Land Allocation for Social and Community Services	8-62
8.10	Social Identity and Cohesion	8-62
8.11	Summary of Impacts	8-63
<b>9.</b>	<b>MANAGEMENT, MITIGATION AND ENHANCEMENT MEASURES</b>	<b>9-66</b>
9.1	Workforce Recruitment and Management Strategy	9-66
9.1.1	Workforce Recruitment Strategy	9-66
9.1.2	Workforce Management Strategy	9-67
9.1.3	Regional Procurement Program	9-70
9.2	Measures to Address Potential Impacts	9-72
9.2.1	Demographic and Demographic Change	9-72
9.2.2	History and Heritage	9-73
9.2.3	Indigenous Community	9-73
9.2.4	Housing and Accommodation	9-74
9.2.5	Residential Amenity	9-74
9.2.6	Employment, Education and Training	9-74
9.2.7	Local Economic Conditions	9-75
9.2.8	Health and Safety	9-75
9.2.9	Health and Community Infrastructure	9-76
9.2.10	Social Identity and Cohesion	9-77
9.3	Key Commitments	9-77
<b>10.</b>	<b>RESIDUAL IMPACT EVALUATION</b>	<b>10-83</b>
<b>11.</b>	<b>CUMULATIVE SOCIAL IMPACT ASSESSMENT</b>	<b>11-86</b>
11.1	Identification of Projects Considered	11-86
11.2	Cumulative Social Impacts	11-87
11.2.1	Newlands Coal Project	11-87
11.2.2	Newlands Coal Extension Project	11-87
11.2.3	Hail Creek Mine	11-89

11.2.4	Burton Coal Project	11-90
11.2.5	North Goonyella Mine and Eagle Field Mines	11-90
11.3	Cumulative Impacts Summary	11-91
11.3.1	Housing and Community Infrastructure	11-93
11.3.2	Traffic and Transport	11-93
<b>12.</b>	<b>CONCLUSION</b>	<b>12-94</b>
<b>13.</b>	<b>REFERENCES</b>	<b>13-95</b>
<b>14.</b>	<b>LIMITATIONS</b>	<b>14-98</b>

### Figures

2-1:	Primary Study Area	2-2
2-2:	Secondary Study Area and Local Government Boundaries	2-3
3-1:	Coffey Environments Social Impact Assessment Model	3-2
5-1:	Byerwen Coal Project and Consultation Timeline	5-10
7-1:	Byerwen Coal Project Construction Workforce- Phase 1	7-46
7-2:	Byerwen Coal Project Construction Workforce- Phase 2	7-46
7-3:	Byerwen Coal Project Operations Workforce	7-48
11-1:	Projects Considered in Cumulative Social Impact Assessment	11-89

### Tables

1:	Key Project Timelines	viii
3-1:	Criteria for Defining Sensitivity of Social Value	3-5
3-2:	Criteria for Defining Magnitude of Impact	3-5
3-3:	Significance Assessment Matrix	3-5
4-1:	State and Regional Policies	4-3
5-1:	Stakeholder List	5-13
5-2:	Stakeholder and Public Consultation Activities	5-15
5-3:	Summary of Stakeholder Consultation Feedback	5-19
6-1:	Demographic and Demographic Change	6-32
6-2:	Full-Time Equivalent (FTE) Population Estimate	6-33
6-3:	Project Population (Medium Series)	6-33
6-4:	Proportion of Males to Females	6-34
6-5:	Household Type	6-34
6-6:	Indigenous Persons	6-35
6-7:	Median Housing Costs Versus Median Income	6-37
6-8:	Property Tenure - Byerwen Coal Project	6-38
6-9:	Existing Health Services in the Study Area	6-39
6-10:	Availability of Educational Services in the Study Area	6-40
6-11:	Recreation groups and facilities in Glenden	6-41
6-12:	Rates of Crime Per Police Officer	6-42
6-13:	Volunteer Activities/Associations in the Communities of Interest	6-42
6-14:	Rates of Participation in Voluntary activities	6-42
7-1:	Key Project Timelines	7-44
7-2:	Estimated Workforce Numbers	7-45

Social Impact Assessment  
Byerwen Coal Project

7-3: Jobs by Occupation for Construction Phases	7-47
7-4: Jobs by Occupation for Operations Phases	7-48
7-5: Construction workforce accommodation plan	7-51
7-6: Workforce accommodation plan – operations*	7-52
8-1: Significance Assessment Matrix	8-55
8-2: Population Effects (Operations Workforce)	8-57
8-3: Summary of Potential Social Impacts	8-63
9.1: Overview of Social Commitments	9-78
10-1: Residual Impact Evaluation	10-83

Social Impact Assessment  
Byerwen Coal Project



## EXECUTIVE SUMMARY

Coffey Environments were commissioned by Byerwen Coal Pty Ltd (Byerwen Coal) to complete a Social Impact Assessment (SIA) and associated Social Impact Management Plan (SIMP) for the proposed Byerwen Coal Project (the project).

The SIA involves the identification and analysis of demographic and social characteristics of the study area against the proposed project activities to determine the potential social impact of the project. Mitigation and management measures relating to both positive and negative project impacts are provided in the associated SIMP which presents Action Plans relating to respective impact categories.

The key objectives guiding the completion of the SIA have been to:

- Fulfil all requirements outlined in Terms of Reference (ToR) for the Byerwen Coal Project provided by the Department of State Development, Infrastructure and Planning.
- Provide a definition of the social and cultural area of influence (social environment) through the collation and analysis of primary and secondary data.
- Identify the nature and extent to which project related effects may directly, indirectly or cumulatively impact on the defined social environment.
- Provide recommendations for the enhancement of positive impacts and the mitigation of negative impacts on the social environment.
- Contribute to the establishment of a continued partnership between the project and community stakeholders, enabling a collaborative approach to maximising the positive social outcomes associated with the project.
- Provide a sound basis for planning, consultation, ongoing strategy development, performance monitoring and reporting and assist the project to become a valued component of the social and economic fabric of the community.

The SIA investigates key aspects of the social environment of the primary and secondary study areas. These include:

- Demographics and Demographic Change.
- History and Heritage, Non-Indigenous.
- Indigenous Community.
- Housing and Accommodation.
- Residential Amenity.
- Employment, Education and Training.
- Local Economic Conditions.
- Health and Safety.
- Community Infrastructure and Social Services.
- Social Identity and Cohesion.

The project is comprised of a number of phases. The first is the construction and operation of the southern portion of the mine including a coal handling preparation plant. The second is the construction of a second coal handling plant in the northern portion of the mine and the subsequent expansion of operations. The final phase is decommissioning and rehabilitation of the

site. An overview in terms of the two construction phases and the operations' components are provided in Table 1.

**Table 1 Key Project Timelines**

<b>Construction</b>	<b>Timing</b>
Phase 1: Open cut mine and CHPP1	Project initiation – Project year 1
Phase 2: Construction of CHPP2	Project year 15 - 17
<b>Operations</b>	
Phase 1: Open cut mine and CHPP1	Project year 1- 46
Phase 2: Open cut mine, CHPP1 and CHPP2	Project year 15 - 46
<b>Rehabilitation</b>	
Rehabilitation	Project year 47- 48

The workforce requirements presented below represent the most accurate estimation of workforce numbers as at the date of EIS preparation.

There are two distinct construction phases. The first phase (construction of the open cut mine and coal handling preparation plant) is estimated to have a duration of 18 months to two years and requires a peak workforce 350 personnel.

The second phase (construction of the second coal handling preparation plant) is estimated to have duration of three years and requires a peak workforce 265 personnel.

In terms of the skill sets required for each of the two construction workforces, they are expected to be relatively similar.

The workforce required to operate the mine builds up relatively quickly as the open pit mine and first coal handling preparation plant become operational. After reaching an initial peak of 495 personnel in project year 5, the operations workforce then grows again in project year 15 as the second coal handling preparation plant comes on line. By project year 18 the operations workforce reaches its overall peak of 545 personnel.

By project year 40 it is anticipated that parts of the mine will begin winding down with the workforce reducing to 265 personnel by project year 46. In project year 47 and 48 the mine will be decommissioned and rehabilitated. This will require an estimated workforce of 115 personnel.

The operations workforce is comprised of three primary sectors:

- Operations management and supervision – peak of 75 personnel.
- Open cut mine operations – peak of 400 personnel.
- Coal handling preparation plant – peak of 70 personnel.

Impacts which the project may have upon the social environment were identified through a number of concurrent processes including direct engagement with potentially affected stakeholders, the analysis of project effects and the knowledge and insight held by members of the project team. A technically appropriate impact assessment methodology (significance assessment) was employed to identify and evaluate social impacts associated with the project. Central to the assessment method was the identification of intrinsic social values associated with the potentially affected community. Intrinsic social values are any attributes of the community, which residents consider important and can range from physical spaces or places to less tangible attributes such as community cohesion, friendliness or character.

Potential measures which manage, mitigate or enhance identified impacts were derived through direct consultation with the community and key stakeholders, further examination of project effects in the context of existing social conditions and through dialogue with the project proponent and key personnel involved in mining operations. Mitigation measures were identified for all impacts on the social environment, which were assessed as having a moderate, high or very high level of significance.

The SIA has informed the development of a Social Impact Management Plan (SIMP). A core component of the SIMP is the five action plans that provide specific mitigation and management measures relating to identified impact categories. The action plans which have been prepared and presented in the SIMP are:

- Housing and Accommodation.
- Employment, Training and the Local Economy.
- Indigenous Community.
- Social Identity and Cohesion.
- Health and Community Infrastructure.

Key to the effectiveness of any mitigation or management measure is implementation by the relevant responsible party or parties. Many issues and impacts associated with the social environment may only be effectively mitigated through a collaborative approach to implementation. Identification of the appropriate entity for implementation of mitigation and management measures has also been completed.

The final stage of the SIA was the assessment of residual impacts following the assumed effective implementation of mitigation and management strategies. In assessing residual impacts, consideration is made as to how the proposed mitigation affects the sensitivity of the value and the magnitude of the impact so as to derive an overall indication as to the significance of the residual impact.

This assessment concluded that the residual impacts which retained a 'moderate' level of significance related to the influx of the project workforce into the town and included an increased demand on health, and emergency services.

In addition to the assessment of the project's social impacts, a high level assessment was made of the cumulative, i.e., collective, social impacts likely to arise from the development of the project concurrently with other major projects in operation, being developed or likely to be developed in the greater regional area. While concurrent development of projects in the region has the potential to deliver both beneficial and adverse social and economic impacts, four projects were assessed as generating cumulative negative social impacts that have been assessed as high.

The key cumulative negative impacts on the social environment relate to:

- Increased demand on regional social and community infrastructure and accommodation resulting from higher numbers of people working in the region.
- Traffic related impacts associated with heavy vehicles and higher cumulative traffic volumes.

Significant positive impacts include the generation of employment, injection of wealth and vitality in Glenden, the stimulation of education and training, and the provision of opportunities for indigenous peoples. On balance, it is assessed that following the application of applicable mitigation and management measures, the project will have a generally positive social effect on the local and regional area.

## Abbreviations

Abbreviation	Description
ABS	Australian Bureau of Statistics
CALD	Culturally and linguistically diverse
CHPP	Coal Handling and Preparation Plant
CHMP	Cultural Heritage Management Plan
Coffey	Coffey Environments
DETE	Department of Employment, Education and Training
DIDO	Drive in, drive out workforce
DSDIP	Department of State Development, Infrastructure and Planning
EHP	Department of Environment and Heritage Protection
EIS	Environmental Impact Statement
EPM	Exploration Permits for Minerals
FIFO	Fly In Fly Out
FTE	Full-time equivalent
GP	General practitioner or doctor
GQAL	Good Quality Agricultural Land
HIA	Health Impact Assessment
EIS	Environmental Impact Statement
EPM	Exploration Permits for Minerals
IRC	Isaac Regional Council
LGA	Local Government Authority
MIA	Mine infrastructure area
ML	Mining Leases
MLA	Mining Lease Application
MP	Member of Parliament
MRC	Mackay Regional Council
NESB	Non-English speaking background
NNTT	National Native Title Tribunal
SEG	Stakeholder Engagement Group
SEIFA	Socio Economic Indicators for Areas
SES	State emergency service
SIA	Social Impact Assessment
SIMP	Social Impact Management Plan
SIAU	Social Impact Assessment Unit
SWOT	Strengthen, weakness, opportunity, threat table
SRN	Stock Route Network
TAFE	Tertiary and Further Education
TLF	Train loading facility
TOR	Terms of Reference
WRC	Whitsunday Regional Council

# 1. INTRODUCTION

Coffey Environments (Coffey) were commissioned by the Byerwen Coal Pty Ltd (Byerwen Coal) to complete a social impact assessment (SIA) for the Byerwen Coal Project which is proposed to be developed by Byerwen Coal in the Bowen Basin in Queensland.

SIA gauges the impact an organisation, or any of its major initiatives, has upon host communities and stakeholders. Through the collection of quantitative and qualitative data, the SIA identifies and compares impacts likely to eventuate across the life of a project, together with community perceptions about those impacts. This enables a proponent, in this case Byerwen Coal, to ascertain its host community's priorities and understand the effects associated with the project which need to be sensitively managed. With a greater understanding of the community's expectations, values and perceptions, Byerwen Coal will be better able to mitigate negative impacts and enhance opportunities to make a positive contribution to the community. The SIA will be an important reference for Byerwen Coal when developing its social performance framework and future communication plans, as well as providing a benchmark against which to measure and report the company's social performance in the future.

SIA involves analysis of the demographic and social characteristics of the study area against the proposed project activities to determine the potential social impact of the project. Existing research and documentation available from regional councils, the Queensland Government and other sources, details of the proposed project provided by Byerwen Coal, stakeholder interviews and community consultations undertaken by Byerwen Coal, have been used to inform the SIA.

The assessment has considered the nature of the proposed project in the context of the social environment in which it will operate. Recommendations are provided regarding measures to enhance the potential benefits and to mitigate the potentially negative impacts arising from the project. An assessment of residual impacts following the effective implementation of proposed mitigation measures has then been undertaken.

## 1.1 Project Proponent

The project proponent is Byerwen Coal Pty Ltd, a joint venture between QCoal Pty Ltd (QCoal) and JFE Steel.

QCoal is a privately owned, Queensland mining company. QCoal currently has two operational mines – Sonoma Mine and Jax Bulk Sample Project – and a number of mines under development in the northern Bowen Basin, including the proposed Byerwen Coal Project. QCoal has incorporated the knowledge acquired through ownership of these mines into the planning of the Byerwen Coal Project. As a result there are references in this SIA to QCoal where activities and consultation have been undertaken for the Byerwen Coal Project in conjunction with other QCoal projects. QCoal may also be responsible for implementing initiatives such as the QCoal Foundation and industry presentations.

## 1.2 Project Overview

The Byerwen Coal Project is a proposed open-cut mine located in Queensland's Bowen Basin about 20 kilometres west of Glenden.

The project will have the capacity to produce 10 million tonnes per annum (Mtpa) of high quality thermal coal and coking coal for export. The coal is proposed to be transported approximately 150 kilometres by rail, along the GAP rail line to the Abbot Point Coal Terminal.

Up to 350 jobs are expected to be created during initial construction and up to 545 jobs at full operational stage. The life of the project is expected to be 50 years. The proponent expects that the workforce will settle in Glenden or commute from larger regional centres as is common practice at other mines.

Subject to obtaining all necessary approvals, construction is expected to commence in 2014 and operations in 2015, with output progressively increasing over three years to the full production rate of approximately 10 Mtpa.

On 1 March 2011, the Coordinator-General declared the Byerwen Coal Project to be a significant project requiring the preparation of an environmental impact statement under section 26(1)(a) of the *State Development and Public Works Organisation Act 1971*.

On 13 January 2011, the Australian Government determined that the project constitutes a controlled action pursuant to the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act). The controlling provisions are:

- Listed threatened species and communities (EPBC Act, sections 18 and 18A)
- Listed migratory species (EPBC Act, sections 20 and 20A).

The project area comprises six mining lease application areas (MLAs), which were lodged on 29 and 30 June 2010, totalling approximately 22,697 hectares. The total available coal resource is approximately 690 million tonnes.

The following mine infrastructure is proposed at the site:

- Site water management controls, including mine affected water dams and sediment control ponds.
- Coal handling civil works, including run of mine (ROM) pads.
- Two coal handling and preparation plants (CHPPs), in the south and north of the tenements.
- Southern and northern Train Loading Facilities (TLFs) comprising rail loop, train loading bin and rail spur, connected to the GAP rail line.
- Two mine infrastructure areas (MIAs) including administration, ablution buildings, and vehicle maintenance workshops, in the south and north of the tenements.
- Internal haul roads or overland conveyor for product haulage, site access roads and a number of overpasses or bridges over existing and proposed railway lines and roads.
- Process water storage and distribution system.
- Rejects management infrastructure, including co-disposal dams.
- Depot for on-site blasting contractor.

Mining will occur 24 hours per day, seven days per week, 52 weeks per year. The open cut mining method will involve a dragline and large truck and excavator mining operation with truck haulage direct to the crusher dump hopper or the Run of Mine (ROM) pad adjacent to the CHPP.

ROM coal will be hauled on internal service road networks to one of the CHPPs designed to handle in excess of 2,000 tonnes per hour. Two CHPPs will be established to minimise haul distances and optimise the productivity of mining equipment.

The proponent has commenced discussions with a third party water supplier (SunWater) for the sourcing and delivery of water for the project from a pipeline that traverses the western side of the tenement area and connects to the Burdekin water supply scheme at Gorge Weir.

Power supply to the southern and northern tenement areas will be via spurs to an existing 66kV line that originates from the Newlands substation and traverses the project site. The existing line was built to provide power to a de-commissioned gold mine west of the project area. The spurs will be entirely on the proponent's mining leases.

Incoming power will enter the site substations in the south and north tenement areas and then reticulated throughout the site as required.

### **1.3 Objectives of the Social Impact Assessment**

The purpose of the SIA is to define the existing social environment, identify and consider the potential positive and negative social impacts of the project and to recommend ways to manage and mitigate negative impacts and enhance positive benefits.

The key objectives guiding the completion of the SIA have been to:

- Fulfil all requirements outlined in Terms of Reference (ToR) for the Byerwen Coal Project provided by the Department of State Development, Infrastructure and Planning Department of Heritage Protection (EHP).
- Provide a definition of the social and cultural area of influence (social environment) through the collation and analysis of primary and secondary data.
- Identify the nature and extent to which project related effects may directly, indirectly or cumulatively impact on the defined social environment.
- Provide recommendations for the enhancement of positive impacts and the mitigation of negative impacts on the social environment.
- Contribute to the establishment of a continued partnership between the project and community stakeholders, which enables a collaborative approach to maximising the positive social outcomes associated with the project.
- Provide a sound basis for planning, consultation, ongoing strategy development, performance monitoring and reporting and assist the project to become a valued component of the social and economic fabric of the community.

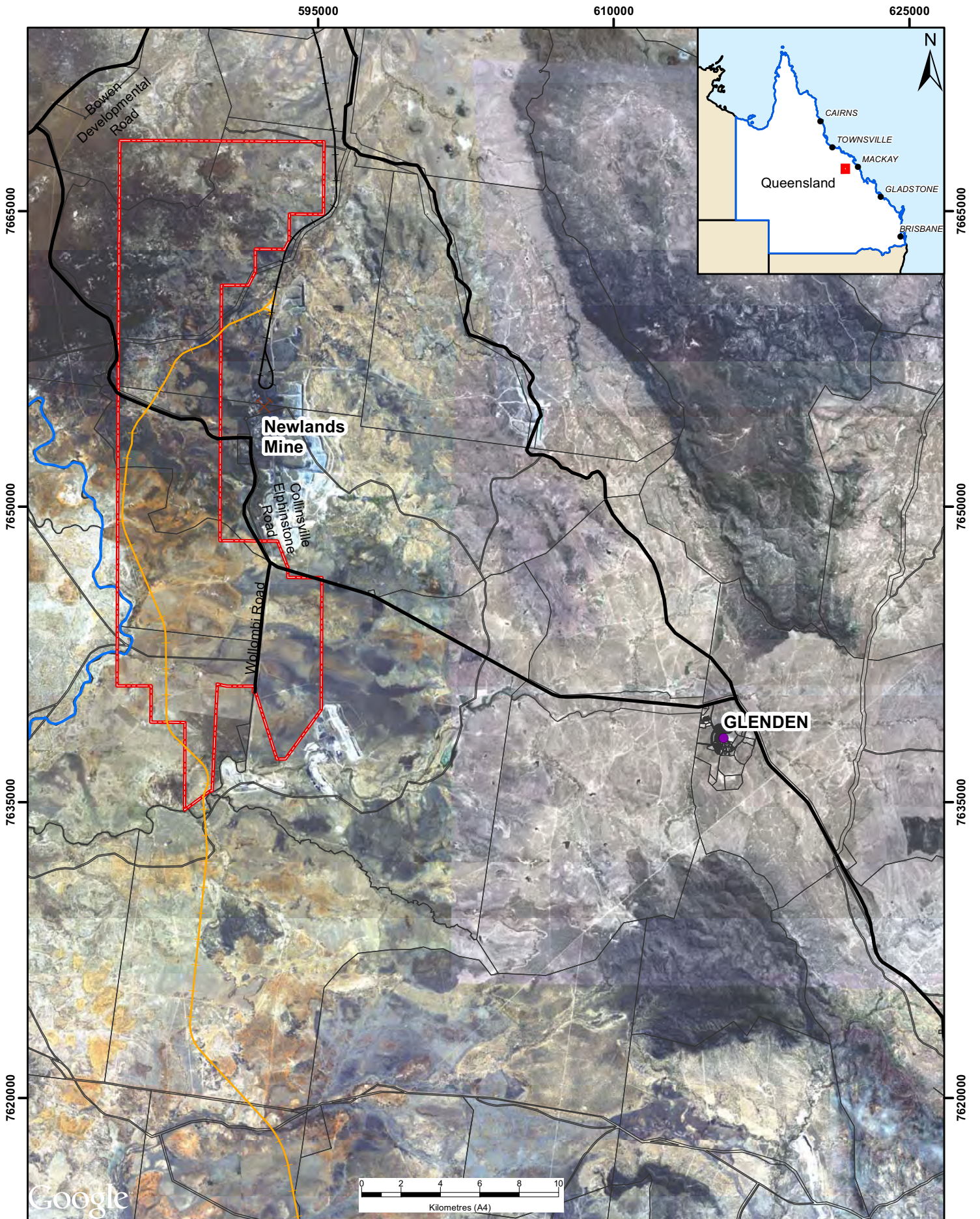
The SIA includes the characterisation of the social environment (social baseline), impact assessment, mitigation and management measures and an assessment of residual impacts. The SIA technical report informs the development of an associated Social Impact Management Plan (SIMP), which presents action plans relating to key areas of impact on the social environment.

## **2. SOCIAL AND CULTURAL AREA OF INFLUENCE**

The project is located approximately 20 kilometres from the existing town of Glenden in Queensland's Bowen Basin. Glenden is within the Isaac Regional Council area. As Glenden is the only populated area within a reasonable commuting distance (i.e., less than 40 minutes drive in accordance with health and safety guidelines) from the project area, this township is defined as the primary social and cultural area of influence relating to the project. Figure 2-1 shows the township of Glenden as the primary study area in relation to the project.

As there are likely to be some broader project related effects, a secondary social and cultural area of influence has been defined. This encompasses the local government authorities (LGAs) of Isaac Regional Council, Whitsunday Regional Council and Mackay Regional Council. This broad regional area is referred to as the Northern Bowen Basin. Figure 2-2 depicts the Northern Bowen Basin regional area as the secondary study area in relation to the project.



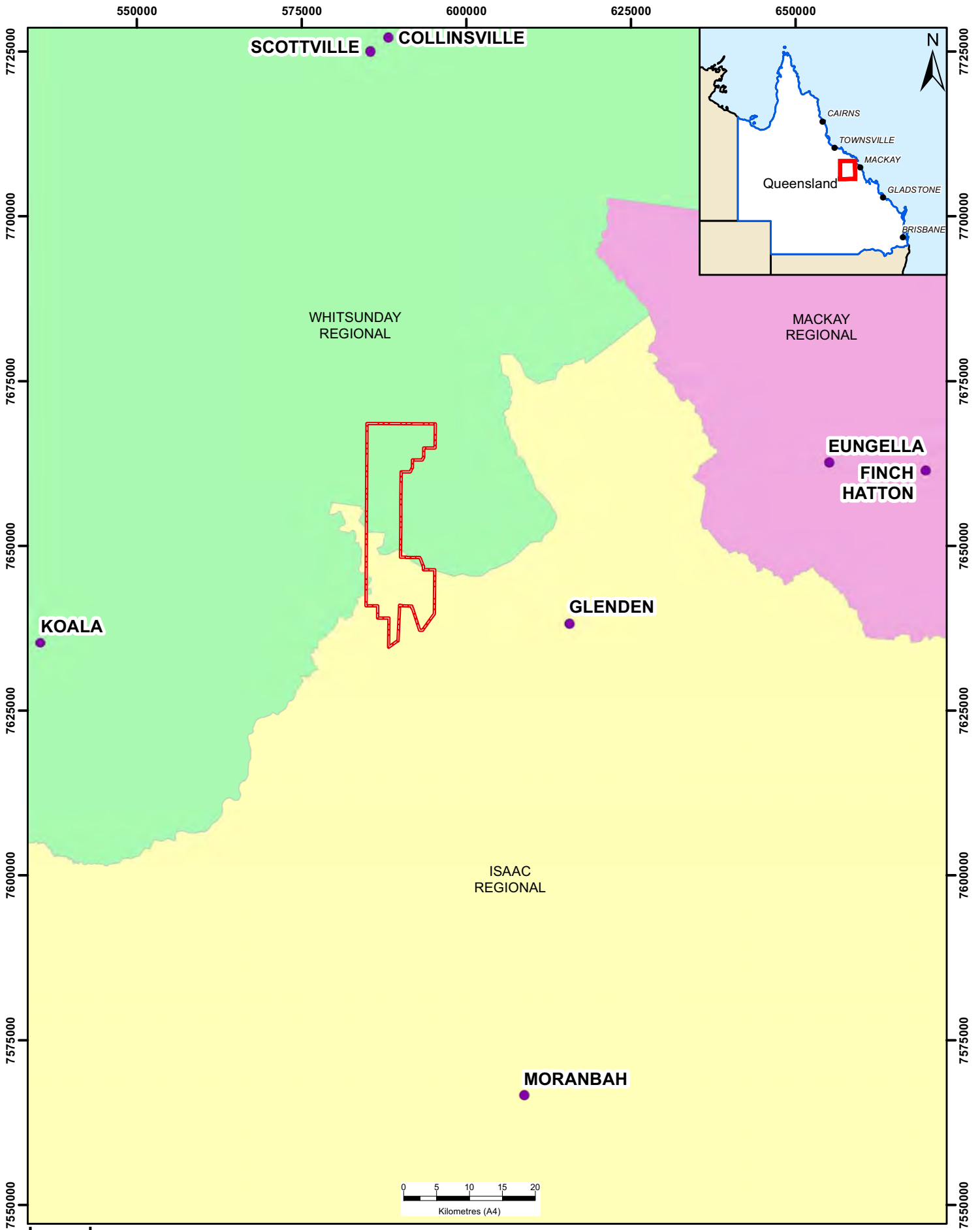


### Legend

- Project Area
- Towns
- Cadastre
- +— Northern Missing Link
- +— Newlands Railway
- Roads
- Sutor River

<b>Project Area &amp; Glenden</b>		 
<b>Figure 1</b>	<b>Byerwen Coal Project</b>	
Date: 6/08/2012		Author: samuel.ferguson
Revision: R2		Map Scale: 1:250,000
		Coordinate System: GDA 1994 MGA Zone 55
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**Legend**

Project Area

Towns

**Regional Council Boundaries**

ISAAC REGIONAL

MACKAY REGIONAL

WHITSUNDAY REGIONAL

**Project Area & LGA**



**Figure 1**

**Byerwen Coal Project**



Date: 6/08/2012

Author: samuel.ferguson

Map Scale: 1:750,000

Revision: R2

Coordinate System: GDA 1994 MGA Zone 55

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### **3. STUDY METHOD**

The SIA identifies the existing baseline social conditions of the defined study area and predicts the nature and extent of impacts which the project may have upon those conditions. These impacts may be direct or indirect, intended or unintended, positive or negative. The intent of the SIA is to use an evidence-based approach to determine the magnitude of impacts and identify practical ways to mitigate potential adverse social impacts and enhance potential project benefits.

A depiction of the model for the SIA is provided in Figure 3-1. The steps involved in each stage of the model include:

1. Scoping
2. Baseline characterisation
3. Stakeholder perception analysis
4. Impact assessment/evaluation
5. Development of mitigation and opportunity strategies
6. Residual risk/impact assessment.

The Social Impact Management Plan (SIMP) consists of:

7. Performance metrics (action plans)
8. Monitoring and evaluation
9. Reporting.

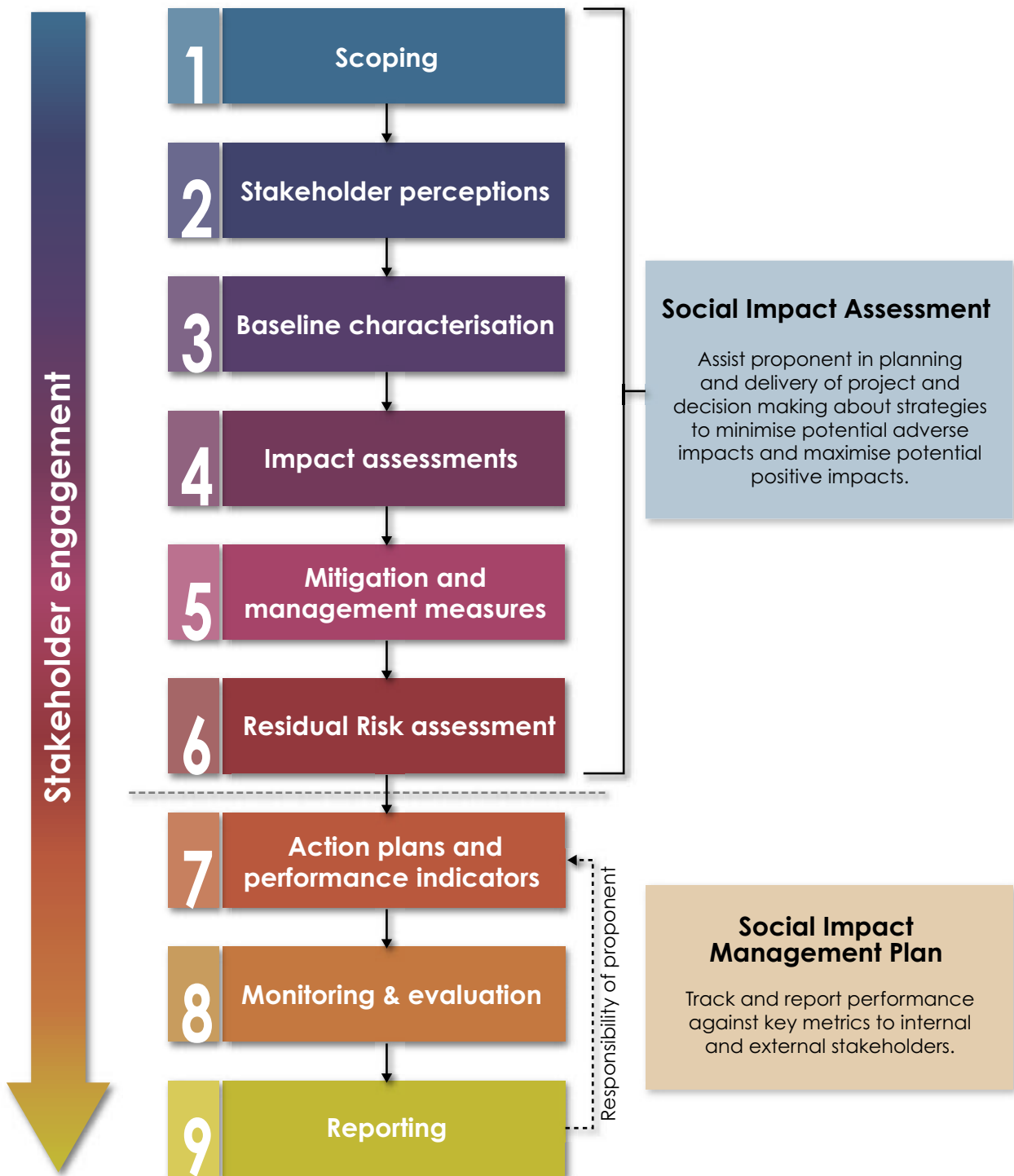
Further details of each stage are outlined in the following sections.

Coffey's approach to SIA was developed in consideration of the International Principles for Social Impact Assessment (IAIA, 2003) and incorporates the elements outlined in the International Finance Corporation's Good Practice Note, Addressing the Social Dimensions of Private Sector Projects (IFC, 2003).

Both the international principles and Coffey's approach broadens the traditional definition of social impact assessment beyond the identification and mitigation of adverse impacts, to the enhancement of the social performance of the project. Coffey's approach expands the scope and function of social assessment to include identification and assessment of positive impacts and opportunities for enhancing the socioeconomic wellbeing of the people who live and work in the project area.

#### **3.1 Scoping**

Scoping involves the preliminary identification of potential impacts of the project, and the framing of the assessment to ensure the most relevant impacts are adequately considered. Coffey Environments assessed the impact area via discussions with the proponent, an understanding of key risks drawn from Byerwen Coal's initial inception meetings with EHP, and in cognisance of the draft Terms of Reference (TOR) provided by Byerwen Coal to Coffey for the social impact assessment.



Key issues relating to the social environment identified during the scoping phase included the following:

- Positive effects associated with reinvigoration of Glenden.
- Adequacy of health and community infrastructure to cope with population growth.
- Impacts on present community wellbeing from increased population, demographic change and health and safety issues arising from commuting and employee fatigue.
- Adequacy of existing housing and accommodation to cope with workforce requirements and population growth.
- Positive local employment effects.
- Positive effects on local education and training opportunities.
- Impacts on social cohesion of present community.

Byerwen Coal has identified key project stakeholders and has developed a stakeholder engagement and community consultation plan, elements of which inform the SIA.

### **3.2 Baseline Characterisation**

Baseline characterisation involved the detailed profiling of the community of Glenden. Social profiling provided a definition of the existing situation in the study area – providing a snapshot of the social conditions at that point in time.

Baseline characterisation involved the investigation of a range of community aspects as outlined in the Terms of Reference (ToR) for the Byerwen Coal Project Environmental Impact Statement (EIS). This included population, demographic and economic conditions and trends, political structures, social services, infrastructure and accommodation, land tenure and use, community organisations and events, cultural and heritage matters and other factors which may influence the way local communities respond to potential changes brought about by the project.

The baseline characterisation utilised both primary and secondary data. Primary data was sourced by Byerwen Coal through qualitative and quantitative research, a review of stakeholder interviews and consultation with the community of Glenden and those in surrounding areas, and provided to Coffey. Secondary data was sourced by Coffey from the Australian Bureau of Statistics (ABS), the Queensland Government, historical literature, maps and spatial data, and other publicly available information obtained from the internet. Primary data collection activities have been used to 'ground-truth' secondary data.

A characterisation of the existing social environment provides a baseline against which to measure changing perceptions and social performance in the future. Understanding the existing social environment enables the prediction of the capacity of the local population of Glenden and those outside the study area to cope with the range of impacts the project may bring, as well as a community's ability to take advantage of opportunities the project may create.

### **3.3 Impact Identification and Assessment**

The impact identification and analysis component of the SIA involved assessing the project characteristics against the social context of the environment within which the project will occur (i.e., the social baseline characterisation). This was done through the assessment of the project's potential to impact key social and cultural values.

An initial impact scoping assessment was undertaken to identify potential impacts (positive and negative) of the project. This was based on review of the baseline data and desktop analysis of likely impacts which could result from project activities, and an assessment of the current impacts (real and perceived) occurring throughout the study area. A detailed study was then carried out to ascertain the likely nature, magnitude, timing and duration of potential impacts, and the population segment that could be affected, including an assessment of the affected population's capacity to adapt.

A wide variety of issues were considered in the SIA, which drew on desktop research, stakeholder engagement and the findings of other specialist studies that have been undertaken for the EIA/EIS, including cultural heritage, transport and traffic impacts, land use, community health and water management.

The assessment of identified issues has been undertaken utilising an impact significance assessment methodology. In this approach, the significance of an impact is assessed by considering the sensitivity of social values and the magnitude of a predicted impact. This approach assumes the identified impacts will occur, and enables a more comprehensive understanding and assessment of the likely impacts of the project.

Central to the assessment method is the identification of intrinsic social values associated with the potentially affected community. Intrinsic social values include the core attributes of any typical Australian community such as population, housing, environmental health, infrastructure and economic characteristics. Intrinsic values are also those values which are unique to a particular community. These are any attributes of the community which residents consider important and can range from physical spaces or places to less tangible attributes such as community cohesion, friendliness or character. Such values can usually only be identified through consultation and engagement with residents of the community.

The intrinsic social values examined as part of the social impact assessment are the following:

- Demographics and Demographic Change
- History and Heritage, Non-Indigenous
- Indigenous Community
- Housing and Accommodation
- Residential Amenity
- Employment, Education and Training
- Local Economic Conditions
- Health and Safety
- Community Infrastructure and Social Services
- Social Identity and Cohesion.

The significance of a particular impact is determined by assessing the sensitivity of a social value against the magnitude of a potential impact.

### **3.3.1 Sensitivity**

The sensitivity of a value is determined from its relative social significance in the context of the potentially affected community, which may be real or perceived, and the susceptibility of the value to change. The following provides a guideline as to the criteria for determining whether a value is of high, medium or low sensitivity.

**Table 3-1: Criteria for Defining Sensitivity of Social Value**

Sensitivity	Criteria
High	<ul style="list-style-type: none"> <li>Alteration of the value is likely to result in major public outrage</li> <li>Health effects associated with a negative impact on the value are likely to result in death or a widespread negative effect on human health</li> <li>Financial effects associated with a negative impact on the value are likely to result in huge financial loss</li> </ul>
Moderate	<ul style="list-style-type: none"> <li>Alteration of the value could possibly attract public concern in the wider community (i.e., outside of the directly affected community)</li> <li>Health effects associated with a negative impact on the value could result in injuries requiring medical attention</li> <li>Financial effects associated with a negative impact on the value could result in major financial loss</li> </ul>
Low	<ul style="list-style-type: none"> <li>Alteration of the value is unlikely to create public concern in the community</li> <li>Health effects associated with a negative impact on the value are unlikely to result in minor injuries that require first aid treatment</li> <li>Financial effects associated with a negative impact on the value are unlikely to result in minor financial loss</li> </ul>

### 3.3.2 Magnitude

The magnitude of an impact is an assessment of the extent, duration and severity of the impact upon environmental values. The following provides a guideline for determining whether an impact is considered as having a high, moderate or low level of magnitude.

**Table 3-2: Criteria for Defining Magnitude of Impact**

Magnitude	Criteria
High	An impact that is widespread, long lasting and results in substantial and possibly irreversible change to the social value.
Moderate	An effect that may extend beyond the direct impact area to the surrounding area with impacts being generally short-term and resulting in changes that can be ameliorated through collaborative mitigation and management.
Low	A localised impact that is temporary or short-term and either unlikely to be detectable or able to be effectively mitigated through simple control measures.

### 3.3.3 Significance of Impacts

The significance of impacts on an environmental value is determined by the sensitivity of the value itself and the magnitude of the change it experiences.

Table 3-3 shows how, using the criteria described above, the significance of impacts is determined by considering the sensitivity of the social value and the magnitude of the expected impact or change.

**Table 3-3: Significance Assessment Matrix**

Magnitude of Impact	Sensitivity of Social Value or Receptor		
	High	Moderate	Low
High	Major	High	Moderate
Moderate	High	Moderate	Low
Low	Moderate	Low	Negligible

The significance of an impact derived using Table 3-3 is explained below.

### **Major Impact**

A major impact occurs when the project effect or change will potentially cause irreversible or widespread harm to a social value or characteristic of the community. Avoidance through appropriate design responses is generally the only effective mitigation.

### **High Impact**

A high impact occurs when the project effect or change will potentially affect the intrinsic characteristics and structural elements of a social value. Avoidance through appropriate design responses or extensive mitigation and management is required.

### **Moderate Impact**

A moderate impact occurs when project induced effects would degrade a social value (in spite of its intrinsic resilience) due to the scale of the impact or alter the susceptibility of a value to further change. Appropriate mitigation and management of the change is required.

### **Low Impact**

A low impact occurs where a social value is of local importance and temporary and transient changes will not adversely affect its viability provided adequate control measures are implemented.

### **Negligible Impact**

A degraded (low sensitivity) social value exposed to minor changes (low magnitude impact) will not result in any noticeable change in its intrinsic value and hence the activities will have negligible impact.

## **3.4 Management, Mitigation and Enhancement Measures**

The objective of this stage is to identify and recommend management measures and opportunity strategies to minimise the potential negative impacts of the project and optimise positive effects. Potential measures to avoid, minimise or mitigate negative impacts and enhance positive impacts have been developed to address impacts identified as being of moderate or high significance. Byerwen Coal's stakeholder engagement and community consultation provided insight into community expectations around ways to enhance opportunities and manage negative impacts.

A series of discussions were held with Byerwen Coal to understand the social initiatives already being advanced by the company, and to discuss and agree on the mitigation measures that would be needed to address the impacts identified. These mitigation and management measures form the basis of the SIMP. The SIMP has been developed based on the *Social Impact Assessment – Guideline to preparing a social impact management plan* (DIP, 2010), and in consultation with the social impact assessment unit (SIAU) within the Department of State Development, Infrastructure and Planning (DSDIP).

Recommendations have been made in consideration of:

- The Terms of Reference for the Byerwen Coal Project Environmental Impact Statement (EIS).
- Byerwen Coal's policies and standards and their alignment with selected mine contractors.
- Byerwen Coal's existing stakeholder engagement and socio-economic program outcomes.
- Stakeholder perceptions and suggestions.
- National and international standards and guidelines.
- Coffey's experience in analysing social impacts.



Stakeholder suggestions, gathered during Round 3 consultation activities, are detailed in Section 0. Recommended mitigation and management measures are outlined in Section 0 of this report.

### **3.5 Residual Impact Evaluation**

The objective of the residual impact evaluation stage is to define the residual impact that remains after the assumed effective implementation of the opportunity strategy or mitigation measure.

The impacts were rated according to sensitivity and magnitude in order to define the residual significance of the impact.

### **3.6 Cumulative Effects**

Consideration has been given to the cumulative effect of a number of mining and major infrastructure projects occurring simultaneously in the Mackay-Isaac-Whitsunday region. Projects that have been included in the consideration of cumulative effects have been selected on the basis that they have either commenced or are scheduled to commence in the same timeframe as that proposed by the Byerwen Coal Project and are:

- Located within the study area
- Likely to contribute to impacts on the social environment.

Cumulative effects are presented in Section 11 of the report.

## 4. LEGISLATIVE CONTEXT

This section outlines the international, national, state and local legislation and policy relevant to undertaking an assessment of social impacts associated with the Byerwen Coal Project. The SIA is a component of the Environmental Impact Statement (EIS) prepared as an assessment requirement for Australian and Queensland Government approval of the proposed project.

### 4.1 International

This SIA has been developed in consideration of the International Principles for Social Impact Assessment (IAIA, 2003) and incorporates the requirements of the World Bank Group's performance standards for social assessment (World Bank, 2005/2012) and elements outlined in the International Finance Corporation's Good Practice Note, Addressing the Social Dimensions of Private Sector Projects (IFC, 2003), (IFC, 2007). Further information is provided in Section 3, Study Method.

### 4.2 Commonwealth

The *Native Title Act 1993* (Cwlth) recognises and protects native title, with objectives to:

- Provide for the recognition and protection of native title.
- Establish ways in which future dealings affecting native title may proceed and set standards for those dealings.
- Establish a mechanism for determining claims to native title.
- Provide for or permit the validation of past acts and intermediate period acts invalidated because of the existence of native title.

The Act, in association with the *Native Title (Queensland) Act 1993*, enables a process for native title dealings (for example, the preparation of Cultural Heritage Management Plans) in relation to the native title claim registered by the Birriah People that underlies part of the project area, and the Native Title Consent Determination made recognising the Jangga People's exclusive native title rights over their determination area, underlying part of the project area.

### 4.3 State

Queensland legislation applicable to the SIA includes:

- *Sustainable Planning Act 2009* (Qld) – administered by the Department of State Development, Infrastructure and Planning, this Act identifies activities that require development approval. To be granted approval, development must be consistent with planning intent including desired community outcomes. Activities associated with the project, such as the establishment of construction camps, will require development approval.
- *Local Government Act 2009* – administered by the Department of Local Government, this act is the principal legislation for local governments throughout Queensland. It provides councils with the flexibility to make choices suiting their individual size, location and administrative circumstances and provides checks and balances designed to improve transparency and accountability.

- *Mineral Resources Act 1989 (Qld)* - administered by the Department of State Development, Infrastructure and Planning, this act provides the legislative framework for exploration, development and mining tenure in the state. A mining lease is granted for mining operations, which entitles the holder, i.e. Byerwen Coal, to machine-mine specified minerals and carry out activities associated with mining or promote the activity of mining. This is determined in accordance with the amount of reserves identified and the projected mine life, and can be granted for those minerals specified in either the prospecting permit, exploration permit or mineral development licence held prior to the grant of the lease. Under the act, an exploration permit issued for the purpose of exploration allows the holder to take action to determine the existence, quality and quantity of minerals on, in or under land by methods which include prospecting, geophysical surveys, drilling, and sampling and testing of materials to determine mineral bearing capacity or properties of mineralisation. This exploration may lead to an application for a mineral development licence or mining lease, which can be granted for a period of up to five years and may be renewed.
- *Aboriginal Cultural Heritage Act 2003 (Qld)* – administered by the Department of Environment and Heritage Protection (EHP) this act recognises Indigenous Australians as the primary guardians and knowledge holders of their cultural heritage and as owners of secret and sacred material. It requires that a Cultural Heritage Management Plan (CHMP) is agreed on between the land user and Traditional Owners to minimise harm to Aboriginal Cultural Heritage for high-impact activities where an EIS is required by law.
- *Queensland Heritage Act 1992*– administered by the Department of Environment and Heritage Protection (EHP) this act established the Queensland Heritage Council as an incorporated body for the purpose of protecting areas and sites of cultural heritage State significance. The Queensland Heritage Council maintains the Queensland Heritage Register, and the act explains the criteria and process for any addition or removal of heritage places on the register.

State government policies pertaining to the SIA for the project are provided in Table 4-1.

**Table 4-1: State and Regional Policies**

Scope	Policy/Strategy	Description and Aims	Applicability
State	Sustainable Resources Communities Policy (Queensland Government).	<p>The Sustainable Resources Community Policy focuses on communities that are being impacted by rapid development as a result of the resource industry. These impacts, primarily on community infrastructure and services and social structures, have the potential to change the landscape of existing communities throughout the state, in particular the <b>Bowen Basin</b> and the North West Minerals Province.</p> <p>It aims to:</p> <ul style="list-style-type: none"> <li>• Strengthen the Government’s coordination role.</li> <li>• Improve linkages between social impact assessment and regional planning.</li> <li>• Foster partnerships with local government, industry and community.</li> <li>• Enhance the regulatory environment for social impact assessment.</li> </ul>	As this policy pertains to resource projects assessed under the <i>State Development and Public Works Organisation Act 1971</i> , it is directly applicable to the completion of an SIA for the project.
State	Major Resource Projects Housing Policy (Queensland Government, 2011).	The objective is to make clear the government’s expectations of the accommodation and housing issues that project proponents submitting an EIS will need to consider, working alongside the SIA and SIMP Guidelines.	As this policy pertains to resource projects assessed under the <i>State Development and Public Works Organisation Act 1971</i> , it is directly applicable to the completion of an SIA for the project.
State	State Planning Policy 1/07 on Housing and Residential Development (Queensland Government, 2007).	The policy applied when making or amending a planning scheme, for local governments to address housing needs of their community and analyse, and modify if necessary, their planning scheme to remove barriers to and provide opportunities for a range of housing options that respond to the housing needs of the community.	<p>The policy applies to local governments that meet the following criteria:</p> <ul style="list-style-type: none"> <li>• Population of 10,000 or more within at least one urbanised area.</li> <li>• Minimum average dwelling approval rate of 100 dwellings per annum over the latest five year period.</li> </ul> <p>The policy is not directly applicable to the completion of a SIA for the project.</p>

**Table 4-1: State and Regional Policies (cont'd)**

Scope	Policy/Strategy	Description and Aims	Applicability
State	Resources Skills and Employment Plan (Skills Queensland, 2012).	<p>This policy proposes initiatives to better understand the workforce needs of the resources industry, and to maximise the opportunities for the state's workforce and jobseekers to secure jobs within it. Key objectives are to:</p> <ul style="list-style-type: none"> <li>• Provide a better understanding of industry needs.</li> <li>• Build the workforce in targeted communities.</li> <li>• Increase workforce participation.</li> <li>• Maximise skills development in mining and gas operations and construction.</li> </ul> <p>Key to the success of these initiatives must be leadership by the industry in the identification and development of programs. The plan also proposes greater integration of Queensland and Australian Government workforce programs.</p>	<p>An estimated 40,000 additional resource sector jobs are required by 2020 in Queensland. The growth in semi-skilled jobs will provide the greatest opportunity to build pathways and link current jobseekers to the construction and operational jobs provided by the industry.</p> <p>This policy has relevance to the SIA in terms of the identification of impacts and the development and implementation of mitigation and enhancement measures.</p>
State	Queensland Regionalisation Strategy.	<p>Key economic zones and emerging opportunities are identified in the strategy. The focus is upon actions that will improve the efficiency of supply chains through infrastructure provision, improve energy and water security and productive capacity, sustain long-term growth, ensure access to a skilled labour supply, as well as build on the capacity of local businesses.</p> <p>It aims to:</p> <ul style="list-style-type: none"> <li>• Ease growth pressures in South-East Queensland</li> <li>• Facilitate more widespread prosperity by promoting and improving economic links across regional cities and towns.</li> </ul>	<p>The Regionalisation Strategy may become the pre-eminent State planning tool, informing statutory regional plans, infrastructure plans and other supporting programs. The central north Queensland region is emerging as a key area within the state for economic growth and development. Key initiatives as part of this strategy aim to direct growth and opportunities to regional Queensland. These may incentivise living in rural and regional areas, such as Isaac-Mackay-Whitsunday, and include housing affordability measures for persons and families within these areas, or wishing to relocate to these areas.</p> <p>As such, the strategy has relevance to the SIA in terms of the identification of impacts and the development and implementation of mitigation and enhancement measures.</p>

**Table 4-1: State and Regional Policies (cont'd)**

Scope	Policy/Strategy	Description and Aims	Applicability
Regional Queensland	Blueprint for the Bush (DEEDI, 2010).	<p>The Blueprint for the Bush program is a 10-year plan focused on partnerships with AgForce and the Local Government Association of Queensland that build strong and economically sustainable communities across rural and remote Queensland.</p> <p>The main goals are:</p> <ul style="list-style-type: none"> <li>• Sustainability of primary production.</li> <li>• Liveability of rural communities.</li> <li>• Prosperity for rural Queensland.</li> <li>• Strengthening planning, coordination and delivery of services.</li> </ul>	<p>The Isaac-Mackay-Whitsunday local government areas are included in the Blueprint for the Bush.</p> <p>This policy is of some relevance but not directly applicable to the completion of the SIA for the project.</p>
Regional Queensland	Regional Roadmap (Regional Development Australia, 2011).	<p>The goals of Blueprint for the Bush were aligned to a Regional Roadmap developed in April 2011 between three tiers of Government.</p> <p>The priorities for the region are:</p> <ul style="list-style-type: none"> <li>• developing a robust, sustainable economy with employment opportunities for all.</li> <li>• encouraging a caring and inclusive community that embraces all cultures.</li> <li>• enhancing a great lifestyle that attracts and retains people.</li> </ul>	<p>These goals align to the Queensland Government's position of facilitating growth and providing support to rural areas.</p> <p>The Isaac-Mackay-Whitsunday local government areas are included in the Regional Roadmap.</p> <p>This policy is of some relevance but not directly applicable to the completion of the SIA for the project.</p>

## 4.4 Local Government

To further understand the governance context, a number of local government polices and plans which relate to the study area have been considered. A brief description of these is provided below.

The project is in proximity to three local government jurisdictions. These include:

- Isaac Regional Council, which was established in March 2008 following the amalgamation of Belyando, Broadsound and Nebo Councils.
- Mackay Regional Council, which was established in March 2008 following the amalgamation of Mackay City, Mirani Shire and Sarina Shire Councils.
- Whitsunday Regional Council, which was established in March 2008 after the amalgamation of Whitsunday Shire and Bowen Shire Councils.

Community plans for the following councils are available:

- Isaac Regional Council Corporate Plan 2009 – 2014.
- Mackay Regional Council Corporate Plan 2009 – 2014.
- Whitsunday Regional Council Corporate Plan 2009 - 2014.

### **Isaac Regional Council Corporate Plan 2009 - 2014**

The *Isaac Regional Council Corporate Plan* identifies five priority themes whereby emerging opportunities and objectives are recognised, the action to be taken is stated and how the council will measure their success is acknowledged. They are:

- Diverse lifestyles.
- Natural environment.
- Economy.
- Essential services.
- Governance, finance and leadership.

The *Operational Plan* has been developed in accordance with the strategic goals as outlined in the corporate plan. The plan prescribes tasks and outputs for implementation across the region for each focus area.

### **Mackay Regional Council Corporate Plan 2009 - 2014**

The *Mackay Regional Council Corporate Plan* identifies seven key strategic priorities and their corresponding corporate objectives. They are:

- Community and lifestyle.
- Economic development.
- Environmental sustainability.
- Strategic planning.
- Infrastructure service.
- Commercial services.
- Organisational excellence and governance.

The *Operational Plan* has been developed in accordance with the strategic goals as outlined in the corporate plan. The plan prescribes tasks and outputs for implementation across the region for each strategic priority.

### **Whitsunday Regional Council Corporate Plan 2009 - 2014**

The *Whitsunday Regional Council Corporate Plan* identifies six corporate objectives. They are:

- Tourism and economic development.
- Organisational development.
- Human resource management.
- Workplace health and safety.
- Emergency management – disaster management.
- Communications.

The *Operational Plan* has been developed in accordance with the objectives outlined in the corporate plan. The plan prescribes tasks and outputs for implementation across the region for each objective.



## **5. EIS COMMUNITY CONSULTATION AND SIA STAKEHOLDER ENGAGEMENT**

The stakeholder engagement strategy informing the EIS was designed to attain meaningful participation and involvement that enabled stakeholders and the community to actively contribute to the development of new ideas and options as the project is planned and developed. This information may also be drawn upon by the company in establishing a social licence to operate which relates to operating in a manner that aligns with predominant community expectations.

This section describes the consultation process for the Byerwen Coal Project (the project). Byerwen Coal recognises that the project has the potential to affect the Glenden and has undertaken a comprehensive consultation program as part of the environmental impact assessment process. Byerwen Coal has built productive relationships with the key community of Glenden, has consulted with various government and non-government organisations and has gained a valuable understanding of the issues and opportunities in the area. The following sections describe the consultation objectives, identification of stakeholders, stakeholder engagement methods and consultation material, key consultation activities and findings to date, and future consultation activities.

This section of the SIA report describes:

- Byerwen Coal / QCoal's stakeholder engagement and community consultation strategies both past and current.
- The stakeholder engagement and community consultation that has been conducted to date in Glenden and with surrounding communities (including two formal rounds to date as well as findings from ongoing consultation between rounds).
- Byerwen Coal / QCoal's ongoing consultation plans.

Flexibility and adaptability are important characteristics of stakeholder engagement and community consultation activities that are designed to optimise participation and the gathering of information. The stakeholder engagement and community consultation activities were part of an iterative process in which findings were constantly checked and adapted to the changing context and needs of the stakeholders and community as further rounds of consultation were conducted and further information was gathered.

### **5.1 Consultation Objectives**

Byerwen Coal has adopted a stakeholder engagement and community consultation program that aims to build ongoing, long-term, mutually beneficial relationships with stakeholders and the Glenden community that will continue into the construction, operations and decommissioning stages of the project.

The stakeholder engagement and community consultation program, prepared in line with the Community Consultation in Mine Planning Guidelines (DME, 1995a), has been designed to provide timely, transparent and accessible information and engagement mechanisms.

The key objectives of the stakeholder engagement and community consultation program in relation to the EIS process have been to:

- Initiate and maintain open and honest communication on all aspects of the project and the environmental impact statement (EIS) with all interested and affected stakeholders, including the community of Glenden.
- Engage in a consultation process that provides genuine, active, two-way exchange and feedback.
- Provide a range of communication methods to engage and inform stakeholders about the project and to identify stakeholder issues of concern about the project.
- Consider and address stakeholder issues of concern via the technical studies conducted for the EIS.
- Record and address stakeholder issues of concern through the broader EIS process and establishment of a grievance/feedback mechanism.
- Provide ongoing feedback to stakeholders on their issues of concern and advise them how comments have been used to inform the project.

## **5.2 Stakeholder Engagement and Community Consultation Program**

Byerwen Coal has sought to ensure stakeholders, including the Glenden community, are aware of the proposed project and the EIS process. This has involved the development of a stakeholder engagement and community consultation program for the project to align with key stages of the EIS process. The consultation program is presented in Figure 5-1 below.

Social Impact Assessment  
Byerwen Project

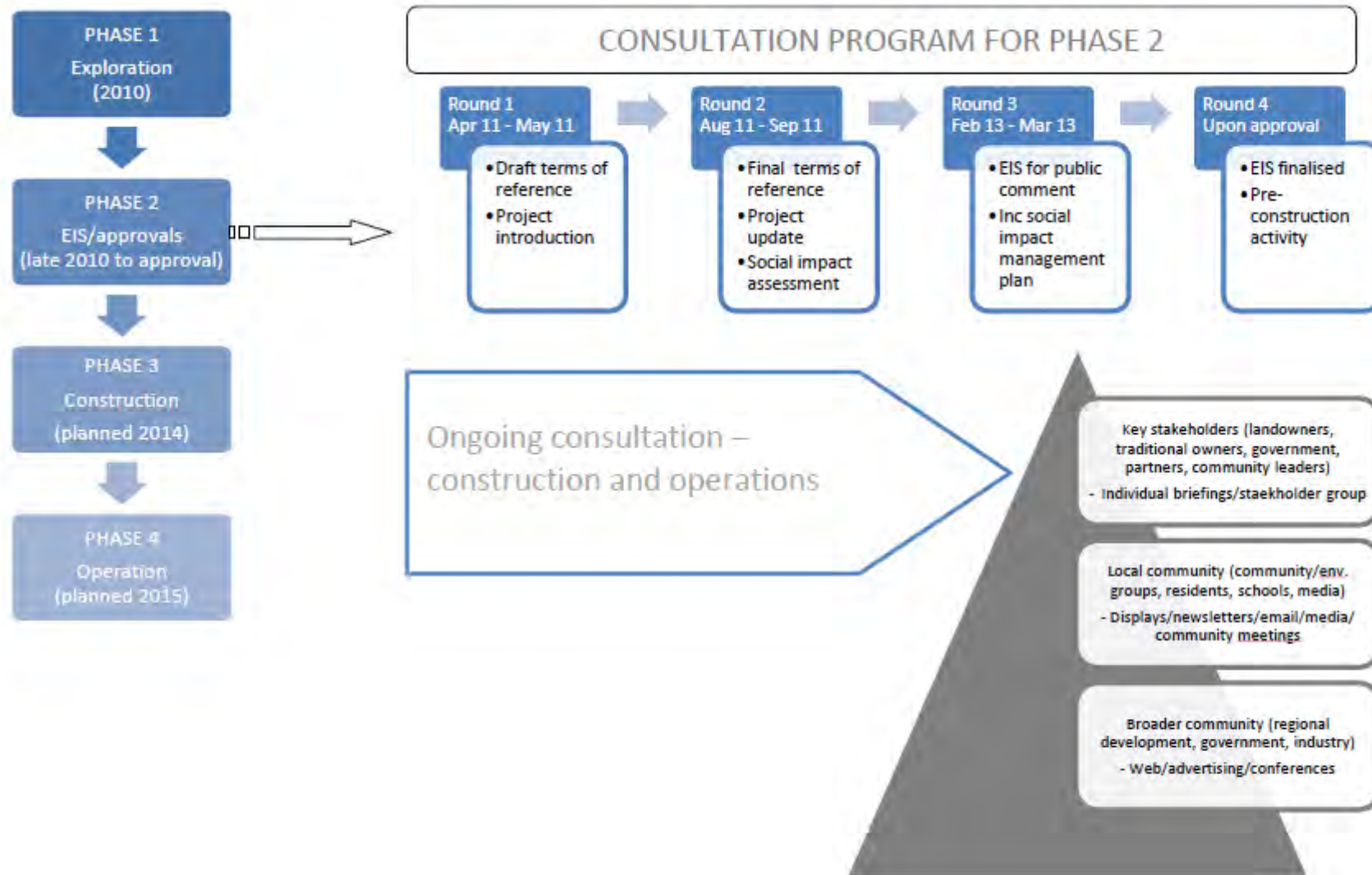


Figure 5-1: Byerwen Coal Project and Consultation Timeline

### **5.2.1 Phase 1: Exploration (2010 – Ongoing)**

The exploration phase of the project started in 2010 and is continuing. Consultation with landowners to determine land access agreements and compensation commenced during this phase.

### **5.2.2 Phase 2: EIS and Approvals (Late 2010 to Approvals)**

Consultation activities have been programmed for the planning phase (Phase 2) of the project, which includes the preparation of the EIS, SIA and SIMP. The consultation program for Phase 2 is divided into four separate formal rounds of consultation to reflect the project milestones. Structured consultation events and communication take place during each round to achieve the overall consultation objectives while consultation team members are available at all stages of the development and operation of the mine to respond to enquiries and provide information about the project.

#### **Round 1 (Complete) – Project introduction (including Draft Terms of Reference)**

The first round of formal public consultation activities commenced in April 2011 and was conducted through May 2011. The first round sought to introduce, and to raise stakeholder awareness of, the project and the EIS process and to announce the Coordinator-General's declaration of the project as a significant project. Initial issues of concern to stakeholders were identified, and feedback was used to refine future consultation methods and finalise the draft Terms of Reference for the EIS.

A copy of the draft terms of reference was available at the Glenden Post Office and the Isaac Regional Council (IRC), Whitsunday Regional Council (WRC), and the Mackay Regional Council (MRC) offices and on the Department of Environment and Heritage Protection's (EHP) website as well as the project webpage.

#### **Round 2 (Complete) – Project update (including Final Terms of Reference and SIA Consultation)**

The second round of public consultation was conducted from 24 August to 21 September 2011. This round sought to identify further issues for consideration by Byerwen Coal and the EIS team and to assist in developing the baseline for impact assessment. The final Terms of Reference were introduced and updates on the project were presented.

During this period the stakeholder engagement and community consultation specifically to inform the social impact assessment was conducted. The SIA specific consultation was undertaken to understand the existing community values, how the community operates, what the potential impacts of a new mine would be and to obtain mitigations suggested by the community.

The activities included face-to-face discussion with key stakeholders such as landowners, traditional owners, government, partners, community leaders, individual briefings to residents of Glenden, and a community forum at which the project was explained and advice was sought as to issues and concerns. Byerwen Coal staff encouraged members of the community to put forward ideas and suggestions about how the potential impacts could be minimised. Discussion was held to determine the preferred mitigation measures of the key stakeholders and members of the Glenden community.

The local community included community and environmental groups, residents, schools, and the media. The local community was engaged via face-to-face discussion, and displays of materials describing the project, and was kept informed via newsletters, email alerts and media articles.

Discussions in relation to the SIA also incorporated community development and informal meetings.

The broader community, which incorporated bodies representing regional development, government, and industry, were included via face-to-face discussion and using the internet, advertising and conferences to disseminate information.

### **Round 3 (At time of EIS release) – EIS Public Review**

The third round of public consultation involves the display of the EIS once the Queensland Government releases it for public review. Byerwen Coal will also release a project newsletter and public notices in the Daily Mercury and the Bowen Independent local newspapers to encourage community members to review and comment on the EIS.

Stakeholder meetings will be held to help to address specific areas of interest and briefings will be conducted with appropriate government agencies in the Bowen Basin region. The purpose of this public consultation round is to ensure EHP is able to consider all submissions received during the public submission period and Byerwen Coal is able to respond to these submissions, when the government's assessment report for the EIS is prepared.

This round of consultation enables stakeholders and the general public to understand the project's impacts and provides the opportunity for the community and other stakeholder to comment on the document including the draft SIMP. The SIMP will be finalised and regularly updated taking into account stakeholder input and implemented once the project is approved and proceeds to construction and operation.

### **Round 4 (At time of EIS approval) – Final EIS Released**

The fourth round of public consultation will take place at the completion of the EIS process and will be the release of the finalised EIS and information about the construction timeframes and process. It will aim to inform the community of the outcome of the EIS process and provide the opportunity to address questions about the construction and operations phases.

For more detail about the ongoing stakeholder and community consultation for the project, please refer to Section 5 of the SIMP.

## **5.2.3 Phase 3: Construction 2014 and Phase 4: Operations 2015+**

Byerwen Coal will conduct ongoing stakeholder engagement and consultation with the community of Glenden throughout Phase 3 (construction) and 4 (during operations) of the project.

## **5.2.4 Glenden Stakeholder Engagement Group (SEG)**

A coordinated group to represent the interests of the Glenden's community members, businesses and key stakeholders is an important vehicle in effective consultation and provides an efficient method of distributing Project information and collating stakeholder feedback.

A key component of Byerwen Coal's consultation strategy is its collaborative approach to impact management. The Glenden Stakeholder Engagement Group (SEG) was initiated by Xstrata and Byerwen Coal has been invited to join this group as a neighbouring project. The group operates to achieve the objective of keeping the community and other stakeholders informed about the progress of industry and projects in the area. QCoal will participate in the regular meetings with the intention of keeping the community up to date with the progress of the Byerwen Coal Project.

## 5.3 Stakeholder Engagement for the SIA

Byerwen Coal has conducted targeted stakeholder engagement activities to support the SIA. The stakeholder engagement process for the SIA required the following steps:

- The identification of stakeholders and members of the community.
- The provision of information to the stakeholders.
- Engagement with stakeholders and the collation of information provided.
- Integration of the information gathered into design of the project.

Stakeholder perceptions have been obtained through qualitative, quantitative and participatory research methods. Stakeholder engagement has included:

- Two rounds of formal public consultation and stakeholder engagement in Glenden and surrounding communities.
- Interviews of the Glenden and surrounding communities conducted to align with the social impact assessment to quantify the weight, or level of importance, placed on identified issues or opportunities. The interviews also sought to identify perceptions of Byerwen Coal's ability to manage identified potential impacts.
- A number of meetings with the Birriah People and the Jangga People to identify areas of concern and aspirations relating to the project.
- A review and interpretation of other independent stakeholder analysis.

The feedback and outcomes from consultation with stakeholders in Glenden and the surrounding communities are summarised in Section 0.

## 5.4 Stakeholder Identification

Table 5-1 provides a list of the major stakeholders consulted for the project.

**Table 5-1: Stakeholder List**

Stakeholder Category	Organisation or Agency
Political	<ul style="list-style-type: none"> <li>• State Members of Parliament.</li> <li>• Isaac Regional Council, Mackay Regional Council and Whitsunday Regional Council Mayors, CEOs, and Councillors.</li> </ul>
Government agencies and emergency services	<ul style="list-style-type: none"> <li>• The Australian Government Department of Sustainability, Environment, Water, Population and Communities (SEWPaC).</li> <li>• The State of Queensland Department of Aboriginal and Torres Strait Islander and Multicultural Affairs (DATSIMA).</li> <li>• The State of Queensland Department of Community Safety (formerly Department of Emergency Services).</li> <li>• The State of Queensland Department of Environment and Heritage Protection (EHP – formerly the Department of Environment and Resource Management).</li> <li>• The State of Queensland Department of Natural Resources and Mines (DNRM – formerly Department of Employment, Economic Development and Innovation (DEEDI) Mines and Energy) and the Social Impact Assessment Unit (now within the Department of State Development, Infrastructure and Planning (DSDIP)).</li> <li>• The State of Queensland Department of Employment, Education and Training (DETE – formerly Department of Education).</li> <li>• The State of Queensland Department of Local Government and Planning (now also linked with the Department of State Development, Infrastructure and Planning (DSDIP)).</li> </ul>

**Table 5-1: Stakeholder List (cont'd)**

Stakeholder Category	Organisation or Agency
Government agencies and emergency services (cont'd)	<ul style="list-style-type: none"> <li>• The State of Queensland Department of Families, Youth and Community Care (DFYC- formerly Department of Communities).</li> <li>• The State of Queensland Department of Transport and Main Roads.</li> <li>• Queensland Fire and Rescue Service.</li> <li>• Queensland Rural Fire Service.</li> <li>• Queensland Police Service.</li> <li>• Queensland Health.</li> <li>• Queensland Ambulance Service.</li> <li>• Department of Emergency Services.</li> <li>• Queensland State Emergency Services.</li> </ul>
Landholders and occupiers	<ul style="list-style-type: none"> <li>• Six directly affected landowners.</li> <li>• Adjacent landowners.</li> </ul>
Education and community services	<ul style="list-style-type: none"> <li>• Glenden State School.</li> <li>• Glenden Creche and Kindergarten Association Limited (C&amp;K) Community Childcare Centre.</li> <li>• Skills Queensland.</li> <li>• Construction Skills Queensland.</li> <li>• Central Queensland Institute of TAFE.</li> </ul>
Businesses	<ul style="list-style-type: none"> <li>• Thirteen businesses in Glenden.</li> <li>• Numerous businesses in the surrounding region.</li> </ul>
Business groups	<ul style="list-style-type: none"> <li>• Bowen Pastoral and Agricultural Association.</li> <li>• Bowen Tourism &amp; Regional Development Bureau Inc.</li> <li>• Chamber of Commerce and Industry Queensland – Mackay.</li> <li>• Whitsundays Marketing and Development (WM&amp;D) (merger between Enterprise Whitsundays and Tourism Whitsundays).</li> <li>• Mackay Area Industry Network (MAIN).</li> <li>• Mackay Whitsunday Regional Economic Development Corporation (REDC).</li> </ul>
Utilities and infrastructure	<ul style="list-style-type: none"> <li>• Ergon Energy.</li> <li>• QR National.</li> <li>• SunWater.</li> <li>• Telstra Regional.</li> </ul>
Industry and industry groups	<ul style="list-style-type: none"> <li>• Abbots Point Bulk Coal Pty Ltd.</li> <li>• Arrow Energy Limited.</li> <li>• Belyando Suttor Implementation Group.</li> <li>• Bowen Tourism.</li> <li>• Burdekin Solutions Pty Ltd.</li> <li>• Coal Connect Alliance.</li> <li>• Glenden Stakeholder Engagement Group (SEG).</li> <li>• Housing Industry Association Ltd.</li> <li>• Navaho Gold Pty Ltd.</li> <li>• Newlands Coal Project.</li> <li>• Mackay Area Industry Network.</li> <li>• Mackay Regional Council.</li> <li>• Mining &amp; Energy Services Council of Australia.</li> <li>• Ports Corporation Queensland.</li> <li>• QCoal Foundation.</li> </ul>

**Table 5-1: Stakeholder List (cont'd)**

Stakeholder Category	Organisation or Agency
Industry and industry groups (cont'd)	<ul style="list-style-type: none"> <li>• Regional Development Australia – Mackay Whitsunday.</li> <li>• Regional Economic Development Corporation</li> <li>• Xstrata Coal Queensland Pty Ltd</li> </ul>
Special interest groups	<ul style="list-style-type: none"> <li>• Capricorn Conservation Council</li> <li>• Dalrymple Landcare Committee</li> <li>• Mackay Conservation Group</li> <li>• Mining Communities United Inc</li> <li>• Moranbah Action Group.</li> </ul>
Indigenous groups	<ul style="list-style-type: none"> <li>• Representatives of the Birriah-Gubba People (Birriah People)</li> <li>• Birriah Enterprises</li> <li>• Representatives of the Jangga People (Jangga People)</li> <li>• Jangga Operations Limited</li> </ul>
Health services	<ul style="list-style-type: none"> <li>• Collinsville Hospital.</li> <li>• Glenden Community Health Centre</li> <li>• Glenden Medical Centre</li> <li>• Glenden Dentist</li> <li>• Moranbah Hospital</li> <li>• Royal Flying Doctor Service.</li> </ul>
Media	<ul style="list-style-type: none"> <li>• ABC Capricornia</li> <li>• Bowen Independent</li> <li>• Queensland Country Life</li> <li>• Daily Mercury</li> <li>• Courier-Mail</li> </ul>
Community groups	<ul style="list-style-type: none"> <li>• Community groups in Glenden and the region</li> </ul>
Community services	<ul style="list-style-type: none"> <li>• Community services in Glenden and the region</li> </ul>

## 5.5 Engagement Methods and Materials

By June 2012, more than 100 stakeholders had been engaged via face-to-face meetings and interviews during the Byerwen Coal Project EIS assessment process. In addition, 65 people had attended staffed and public displays of project materials and a range of people had attended unstaffed public displays. The following sections provide further detail on key engagement methods and stakeholders consulted.

Table 5-2 identifies a range of activities that QCoal undertakes to keep its stakeholders informed about its projects in the Bowen Basin, including the Byerwen Coal Project.

Direct contact with QCoal community relations team members is also promoted with contact details advertised including a community contact number and email address.

**Table 5-2: Stakeholder and Public Consultation Activities**

Activity	Project	Timing
Advertising	All projects	Ongoing
Byerwen Coal Project briefings and community visits	Byerwen Coal Project	Ongoing
Byerwen Coal Project community displays (TOR/SIA)	Byerwen Coal Project	Aug/Sep 2011



**Table 5-2: Stakeholder and Public Consultation Activities (cont'd)**

<b>Activity</b>	<b>Project</b>	<b>Timing</b>
Byerwen Coal Project community updates/newsletter	Byerwen Coal Project	May 2011 Aug 2011
Byerwen Coal Project road show	Byerwen Coal Project	Aug/Sep 2011
Byerwen Coal Project SIA consultation	Byerwen Coal Project	Aug/Sep 2011
Collinsville DIG forum	All projects	Annually
Collinsville DIG meetings	All projects	Quarterly
Collinsville DIG priority group meetings	All projects	As required
Drake Coal Project briefings and community visits	All projects	Ongoing
Drake Coal Project community displays (SIA/EIS)	Drake Coal Project	Apr 2010 May 2012
Drake Coal Project community updates/newsletter	Drake Coal Project	Apr 2010 Nov 2010 May 2011 May 2012
Drake Coal Project community values workshop (SIA)	Drake Coal Project	Apr 2010
Drake Coal Project factsheet	Drake Coal Project	Nov 2011
Drake Coal Project road show	Drake Coal Project	Jul 2011 May 2012
Email updates to database	All projects	Quarterly
Glenden SEG meetings	Byerwen Coal Project	Six monthly
Government agency consultation	All projects	Ongoing
ICN (Industry Capability Network) Gateway updates	All projects	Sep 2012 Ongoing
Key stakeholder briefings	All projects	2007 to present
Landowner consultation	All projects	2007 to present
Presence at Bowen Show	Drake and Byerwen Coal Project	Jun 2011
Presentation MAIN (Mackay Area Industry Network) 100 attendees	All projects	Mar 2011
Presentation Major Projects Summit 2011 150 attendees	All projects	May 2011
Presentation Major Projects Summit 2012 200 attendees	All projects	Sep 2012
Presentation MESCA (Mining & Energy Services Council of Australia) 300 attendees	All projects	Jun 2012
Presentation to Bowen Accommodation Forum, 65 attendees	All projects	May 2012
Project email and mobile contact number	All projects	Ongoing

**Table 5-2: Stakeholder and Public Consultation Activities (cont'd)**

Activity	Project	Timing
Byerwen Coal Project website with project web pages	All projects	Ongoing
Sonoma Mine community updates/newsletter	Sonoma	Oct 2011 Jun 2012
Traditional owner agreements	All projects	2007 to present
Traditional owner briefings	All projects	Ongoing

### 5.5.1 Stakeholder and Community Briefings

Stakeholder and community briefings were conducted in Glenden and surrounding areas to generate awareness about the project and the EIS process. Attendees at each briefing were provided with a project update and opportunities for input via face-to-face discussion or feedback forms. Attendees were encouraged to fill out a registration form so that briefing facilitators had a record of attendance to add to Byerwen Coal's consultation database.

Byerwen Coal kept notes of the discussions and collated a profile of comments, questions, and issues of concern throughout the briefings. Responses to key concerns were given at subsequent briefings and via regular updates to the community and other interested parties.

### 5.5.2 Government Stakeholder Briefings

Communication strategies to inform government stakeholders included:

- Presentations at EHP and DNRM meetings.
- Presentation to the Isaac Regional Council, Whitsunday Regional Council and Mackay Regional Council.
- Ongoing discussions with the Queensland Police and Ambulance Services.
- Ongoing discussions with SEWPaC.
- Discussions with DETE about land availability and acquisition process.
- Ongoing discussions with the Social Impact Assessment Unit, now housed within Department of State Development, Infrastructure and Planning (DSDIP).
- Presentation of the draft terms of reference to relevant agencies and response to their requirements.
- Ongoing consultation via briefings, email and telephone.

### 5.5.3 Landowners and Residents

Regular meetings with non-government stakeholders were held during which they were briefed on the project. In addition, a number of briefings were held with Traditional Owners and their organisations, and with the community of Glenden.

### 5.5.4 Indigenous Groups

The relevant Aboriginal Parties for the project area under the *Aboriginal Cultural Heritage Act 2003* (Qld, ACH Act) are the Birriah People (QUD6244/98; QC 98/012; formerly called the Birri People) and the Jangga People (QUD 6230/98; QC 98/10; QCD2012/009).

Regular meetings have been held with the two affected traditional owner groups to provide information about the project and reach agreement on native title and cultural heritage matters.

Pursuant to meetings held in July and August 2011, Byerwen Coal has entered into Cultural Heritage Management Plans with both parties. Additional discussions regarding scholarships and training opportunities have also taken place, resulting in two scholarships being offered to the Jangga People in 2012.

## **5.6 Key Stakeholder and Community Consultation Findings**

Table 5-3 below summarises the feedback and outcomes from stakeholder consultation. The stakeholders are grouped into categories to maintain privacy and efficiency and the mitigations that have been suggested or discussed during consultation are also included.

QCoal is keen to continue to support and work with the community, local and state government and other industry players to achieve positive community outcomes. This willingness for continued consultation, to maintain an awareness of issues and opportunities and to work collaboratively to implement suitable mitigation strategies will ensure that stakeholder's priorities are considered on an ongoing basis. The SIMP (Appendix 10) outlines mitigations to address current issues but it should be acknowledged that QCoal will continue to develop suitable responses to any arising issues or opportunities and update this document accordingly.

A number of other impacts and mitigations are included in the action plans within the SIMP. These are included in an effort to go beyond those findings of the SIA consultation in preparation for potential issues that may arise as a result of developing the Byerwen Coal Project even if they have not yet been raised in stakeholder discussions.

**Table 5-3: Summary of Stakeholder Consultation Feedback**

Stakeholder category	Issues/opportunities raised	Suggested mitigations
Health services (community health)	<p><b>Community health centre</b></p> <ul style="list-style-type: none"> <li>• Service focuses on provision of wellbeing and preventative health care – medical treatment is provided by the private medical practice and emergencies are treated by the ambulance officer.</li> <li>• Service has capacity to cater to a growing population but will need additional administrative assistance (hours are currently stretched).</li> <li>• Service currently assists the ambulance officer with midwifery emergencies (pregnant women are encouraged to go to Mackay two weeks prior to the due date to reduce risk of being too far from a hospital if it is required).</li> <li>• Staff have a sense that the community is not growing and could be declining in terms of numbers.</li> </ul>	<p><b>Community health centre</b></p> <ul style="list-style-type: none"> <li>• Continue to monitor utilization of the service.</li> <li>• If pressure increases, assist in data collection and provide to Queensland Health to demonstrate service utilization (providing input into resource planning for local services).</li> <li>• Consider community health service requirements as part of the community grants program.</li> </ul>
Health services (private health)	<p><b>Private medical practice (underwritten by Xstrata)</b></p> <ul style="list-style-type: none"> <li>• Discussion about how the service will provide for both Xstrata's and QCoal's requirements.</li> <li>• Suggestions to consult the practice owners – the owners have suggested they will develop a proposal to address forecast future requirements.</li> <li>• Agreement that liaison with Xstrata will need to continue to understand the existing arrangements and how to work towards a suitable arrangement once the mine is approved.</li> <li>• Consideration required about ensuring sufficient space to accommodate additional medical staff (and the impacts of expansion on existing service delivery).</li> <li>• The current service was previously at capacity with daily waiting lists (with a focus on Xstrata coal board medicals) but is currently coping with demand.</li> <li>• There are a number of initiatives currently being developed for implementation including meeting compliance requirements by Medicare to participate in the eHealth.gov.au program.</li> </ul>	<p><b>Private medical practice (underwritten by Xstrata)</b></p> <ul style="list-style-type: none"> <li>• Continue to liaise with the practice to ensure an appropriate arrangement is reached and maintained (ahead of construction) for ongoing medical service delivery for families and workers</li> <li>• Encourage workers and health service providers to use eHealth.gov.au to centralize patient records and reduce the pressure on services</li> </ul>

**Table 5-3: Summary of Stakeholder Consultation Feedback (cont'd)**

Stakeholder category	Issues/opportunities raised	Suggested mitigations
Health services (private health) (cont'd)	<ul style="list-style-type: none"> <li>• Video conferencing facilities are being established to provide link ups for doctor/specialist/patient appointments (such as surgery follow ups where there are no issues) to reduce the need for patients travelling long distances to appointments in Mackay and Townsville.</li> </ul>	
Health services (dental)	<p><b>Glenden Dentist</b></p> <ul style="list-style-type: none"> <li>• The dental clinic has been open since late 2011.</li> <li>• Demand for the service is reasonably low but steady.</li> <li>• Competition from visiting dental services (such as a mobile dental clinic) would be considered to have a negative impact for the business.</li> </ul>	<p><b>Glenden Dentist</b></p> <ul style="list-style-type: none"> <li>• Suggest the dentist encourages nearby communities (such as Collinsville) to visit for treatment.</li> <li>• Suggest the dentist promote the importance of oral health to encourage more dentist visits.</li> <li>• Do not include Glenden as a town on the route for the QCoal and RFDS' planned mobile dental initiative.</li> <li>• Refer patients who visit the QCoal and RFDS mobile dental unit in nearby towns to Glenden Dentist for any additional treatment not provided by the mobile clinic.</li> </ul>
Health services (hospitals)	<p><b>Hospitals in Moranbah and Collinsville (no local hospital)</b></p> <ul style="list-style-type: none"> <li>• Concern that an increased population in Glenden will increase demands on existing services and resources in Moranbah and Collinsville (whereas the local health and emergency service providers indicate it is more likely that the overflow will continue to go to Mackay).</li> <li>• In particular, there is additional administrative resource required with creating new patient charts each time a new patient presents for treatment.</li> <li>• Concern that non-resident workers will provide their temporary address instead of home address, which affects Medicare funding.</li> <li>• Concern that a higher number of non-resident patients will place pressure on hospital resources because of the need to coordinate treatment with remote health care providers.</li> </ul>	<p><b>Hospitals in Moranbah and Collinsville (no local hospital)</b></p> <ul style="list-style-type: none"> <li>• Encourage workers and health service providers to use eHealth.gov.au to centralize patient records and reduce the pressure on services.</li> <li>• Provide workers the choice of where to live so that commuting to work is not necessary (reducing fatigue-related issues).</li> <li>• Include information about preventative health and support in induction packs and toolbox talks such as mental health awareness information.</li> <li>• Monitor workforce demands on health services.</li> <li>• Provide rest facilities at the end of shift rosters to give workers the opportunity to rest before commuting (and encourage but not force them to do this).</li> <li>• Contribute to the delivery of a dental service into nearby communities in the region to assist in delivering a broader range of health services.</li> </ul>

**Table 5-3: Summary of Stakeholder Consultation Feedback (cont'd)**

Stakeholder category	Issues/opportunities raised	Suggested mitigations
Health services (hospitals) (cont'd)	<ul style="list-style-type: none"> <li>• Concern for the lifestyle of non-resident and shift workers - mental health with shift work and absence from family, poor nutrition, drug and alcohol issues, health issues related to shift work and the associated impacted sleep cycles (mental health, fatigue).</li> <li>• There is a limited range of health services available and people have to travel long distances to access some services.</li> </ul>	
Emergency services	<ul style="list-style-type: none"> <li>• Concern that the local ambulance and police stations are currently one-officer stations covering broad geographical areas, often requiring officers to undertake extensive overtime to deliver the service.</li> <li>• Concern that the Queensland Government is not providing adequate resources to local stations to enable officers to deliver quality services.</li> <li>• Officers are currently facing issues with fatigue due to covering large distances and inadequate opportunity to take sufficient rest periods between shifts.</li> <li>• Concern that the Queensland Ambulance Service will not provide the additional required resources now or with an increased population when the service is already considered to be at capacity.</li> <li>• Concern about the formula used particularly in the calculation of police resources by Queensland Government.</li> <li>• Concern that the incorrect phone numbers are being used to contact emergency services (ie. ambulance officer's home number).</li> </ul>	<ul style="list-style-type: none"> <li>• Continue monitoring the demands on the services by collecting service utilisation data to demonstrate the existing and future demand on the service.</li> <li>• If the service continues to be under pressure, provide this data to Queensland Government as input into resource planning.</li> <li>• QCoal to provide its own emergency response and first aid personnel on site to address potential risk.</li> <li>• Provide well-equipped first aid facilities on site (and consider a helipad).</li> <li>• Maintain contact with emergency services to ensure their familiarity with the site and contact personnel.</li> <li>• Provide accurate contact details (000 and 1300 HEALTH and the appropriate use of these) and emergency management material in induction packs, accommodation and toolbox talks.</li> <li>• Establish productive partnerships with emergency service providers through: <ul style="list-style-type: none"> <li>– Mine site familiarisation with emergency service officers.</li> <li>– Invite emergency service officers to give toolbox talks.</li> <li>– Provide health and support resource information in induction packs to alleviate unnecessary emergency calls.</li> <li>– Development of a Safety Plan which implements preventative measures on-site and at the accommodation village, including an Emergency Management Plan to address emergency incidents.</li> </ul> </li> <li>• Implementation of a Traffic Management Plan which includes actions to address potential safety issues due to increased traffic.</li> </ul>

**Table 5-3: Summary of Stakeholder Consultation Feedback (cont'd)**

Stakeholder category	Issues/opportunities raised	Suggested mitigations
Education and child care (schools)	<p><b>School</b></p> <ul style="list-style-type: none"> <li>• The local school is keen to see more families living in town and encourages new enrolments (a current school population of 283 with a capacity for up to 500 or more students).</li> <li>• The school is keen for more enrolments in order to increase the educational opportunities and resources afforded to bigger schools.</li> <li>• The school wants to provide teaching jobs to a range of teachers but is currently restricted through the accommodation available to those choosing to live in DETE share houses or those living with their partner in an Xstrata house.</li> <li>• The school has surplus land and is keen for it to be sold to QCoal in order for development to provide family housing.</li> <li>• The school would welcome an opportunity to secure additional teacher housing as part of the QCoal accommodation development.</li> <li>• The school is a high quality school and the winner of regular academic excellence awards capable of attracting families to live in town.</li> <li>• The school wants to work closely with QCoal to establish ways in which QCoal can support the school to continue to provide high quality education.</li> <li>• The school wants to encourage its students to perform well and prepare for future jobs and qualifications by establishing opportunities for the students at the mine.</li> </ul>	<p><b>School</b></p> <ul style="list-style-type: none"> <li>• Encourage workers to choose to live locally by providing incentives.</li> <li>• Byerwen Coal to develop accommodation to suit families and couples.</li> <li>• Maintain integrity of the accommodation development with the surrounding area.</li> <li>• Consider good urban design in the development of the accommodation to maximize opportunities for positively-utilized shared spaces and recreation areas.</li> <li>• Establish facilities for construction and non-resident workers at a location not within close proximity to the school.</li> <li>• Consider how to include teacher housing as part of accommodation development.</li> <li>• Contribute to the school through the community grants program.</li> <li>• Provide education bursaries as part of the community grants program to encourage students to continue their education.</li> <li>• Provide apprenticeship opportunities at the mine and keep the school informed of opportunities.</li> <li>• Work with teachers to establish a program for introducing students to mining industry jobs to assist in decisions about their future.</li> </ul>
Education and child care (child care)	<p><b>Child care</b></p> <ul style="list-style-type: none"> <li>• The demand for child care is unpredictable but there is often a waiting list – there is insufficient space to introduce a new group (but there is also not a steady demand requiring an additional group).</li> <li>• There are a number of projects the centre would like to implement to improve the centre such as landscaping.</li> </ul>	<p><b>Child care</b></p> <ul style="list-style-type: none"> <li>• Assist the child care centre staff to monitor child care demand by waiting lists per age group.</li> <li>• If additional space is required, work together with C&amp;K, Isaac Regional Council, Glenden State School and other industry stakeholders to assess the requirements and establish funding options.</li> </ul>

**Table 5-3: Summary of Stakeholder Consultation Feedback (cont'd)**

Stakeholder category	Issues/opportunities raised	Suggested mitigations
Education and child care (child care)	<ul style="list-style-type: none"> <li>Child care workers can be difficult to recruit if there is no local interest due to accommodation arrangements not suitable to attract a person with a family.</li> </ul>	<ul style="list-style-type: none"> <li>Consider contributions to the child care centre in conjunction with other industry stakeholders as part of the community grants program.</li> </ul>
Education and child care (further education)	<p><b>Further education</b></p> <ul style="list-style-type: none"> <li>Regional training providers are keen to understand QCoal's future needs to assist in developing their programs and providing training, skills and education services if required.</li> <li>Training organizations and industry associations could benefit from coordinating their efforts to achieve synergies.</li> </ul>	<p><b>Further education</b></p> <ul style="list-style-type: none"> <li>Keep TAFE and other registered training organizations informed of the progress of QCoal projects and the forecast workforce requirements.</li> <li>Training, skills and employment organizations to establish a coordinated forum through which requests to mining and other companies for involvement can be made and through which coordinated services can be delivered (or link in with existing relevant groups).</li> </ul>
Individuals/ residents/industry	<ul style="list-style-type: none"> <li>All individuals consulted except one were keen to see the community grow through more people moving to town if appropriate housing was available.</li> <li>Accommodation provision was the most common topic of discussion.</li> <li>With land acquisition and developments progressing the residents are now keen to hear of the outcomes (at this time QCoal has made offers to purchase both state and council land and is awaiting the outcome).</li> <li>There is curiosity about how the relationship between Xstrata and QCoal will work.</li> <li>Positive feedback about reinvigorating the community with more people using more of the facilities and encouraging the council to implement needed maintenance programs.</li> <li>Individuals are largely associated with the current mine, either as a mine worker or the partner of a worker and tend to spend off-shift time out of town as much as possible.</li> <li>People without school-aged children tend to take breaks out of town when not on shift so population numbers do not represent the actual number of people in town at any time - school holidays are a particularly quiet time in Glenden.</li> </ul>	<ul style="list-style-type: none"> <li>Provide contact details to respond to community enquiries (mobile number, email address).</li> <li>Regular visits to the community to demonstrate progress and interest in how the community operates and how best to integrate a new mine workforce and families into town.</li> <li>Demonstrate positive relations with other industry and mining companies to reassure the community that their interests are being considered and adequately addressed.</li> <li>Improve familiarity of the town and its residents with regular visits, meetings and opportunities for discussion.</li> <li>Coordinate consultation efforts with other industry and mining companies to alleviate duplication of effort for community and stakeholders – QCoal to contribute to Glenden Stakeholder Engagement Group (SEG) and work collaboratively to address issues and capitalize on opportunities.</li> </ul>



**Table 5-3: Summary of Stakeholder Consultation Feedback (cont'd)**

Stakeholder category	Issues/opportunities raised	Suggested mitigations
Individuals/ residents/industry (cont'd)	<ul style="list-style-type: none"> <li>• Potential housing subsidies to provide for QCoal's mining workforce.</li> <li>• Vegetation offsets.</li> <li>• Water management.</li> <li>• Protection of the threatened Brigalow species (<i>Acacia harpophylla</i>).</li> <li>• Impact on properties.</li> <li>• Water and power infrastructure requirements.</li> <li>• Rail infrastructure requirements.</li> <li>• Management of pit water.</li> </ul>	
Local government	<ul style="list-style-type: none"> <li>• Supportive of new developments in the area.</li> <li>• Supportive of accommodation strategy to develop a mixed range of accommodation to provide for worker choice but also to encourage families where possible to live in Glenden.</li> <li>• Received written letters of support to present to various government agencies to assist in the process of obtaining land in Glenden for accommodation developments.</li> <li>• Tendered to council for industrial land as a site for a construction workforce accommodation facility and waiting to hear outcome.</li> <li>• Suggested speaking directly to relevant council contact once detail of the SIMP is available for discussion prior to the formal public review period.</li> <li>• Regular project briefings are offered to council and will be provided at council's request.</li> <li>• Planning in accordance with the objectives for district rural activity centre within an urban footprint area, i.e., suitable for urban development but not flagged for significant growth relative to the planned major regional centres such as Moranbah.</li> </ul>	<ul style="list-style-type: none"> <li>• Continue to seek land in Glenden for the development of a range of accommodation styles, including family housing.</li> <li>• Continue to offer briefings (messages are regularly left with administrative staff to arrange meetings as well as directly with key council representatives).</li> <li>• Keep council informed of the accommodation developments.</li> <li>• Work with IRC to develop accommodation concepts.</li> </ul>

**Table 5-3: Summary of Stakeholder Consultation Feedback (cont'd)**

Stakeholder category	Issues/opportunities raised	Suggested mitigations
State government	<p><b><i>Employment, training and business opportunities</i></b></p> <ul style="list-style-type: none"> <li>• Concern that large workforce numbers will require a detailed strategy for proponents and contractors to be sure they have sufficient workers – however without the challenges of remoteness that other regions face, and with a number of population centres within the region and surrounding regions, it was considered to be less of an issue for QCoal mines.</li> <li>• Discussions around how the workforce will be sourced and trained.</li> <li>• Discussions around promoting opportunities to local and regional suppliers.</li> <li>• It was acknowledged that the terms of reference for the project does not require workforce management plans and local industry participation plans – however it was suggested that the SIMP include the tables of the anticipated workforce roles and breakdown into numbers or percentages.</li> <li>• It was also suggested that the SIMP include principles of a regional procurement program, which would enable local and regional suppliers to be aware of opportunities and to be considered where practicable in supplying or servicing the mine.</li> <li>• Ongoing consultation with departments and stakeholders involved in the preparation of the EIS and SIA/SIMP – incorporating feedback in advance of the formal public review period.</li> </ul>	<p><b><i>Employment, training and business opportunities</i></b></p> <ul style="list-style-type: none"> <li>• Inform relevant training, employment and indigenous groups of forecast workforce requirements.</li> <li>• Note in the SIMP that sourcing the workforce is not considered an issue at this time due to proximity to population centres and the success of recruiting workforces in the nearby region to date.</li> <li>• Provide notification of workforce opportunities to relevant training, employment and indigenous groups.</li> <li>• Participate in an initiative to support indigenous business participating in the mine.</li> <li>• Provide specific training and apprenticeship opportunities including underrepresented groups (at appropriate project stages).</li> <li>• Participate in initiatives to assist with training and development of local people into the mining industry (e.g., Bursaries).</li> <li>• Continue to engage with stakeholders.</li> <li>• Contact government agencies with relevant sections of SIMP for feedback prior to submitting EIS.</li> <li>• Update FIFO coordinators about workforce requirements.</li> </ul>
	<p><b><i>Housing</i></b></p> <ul style="list-style-type: none"> <li>• Discussions around affordable housing opportunities and how this issue will be managed.</li> <li>• Ongoing consultation with departments and stakeholders involved in the preparation of the EIS and SIA/SIMP – incorporating feedback in advance of the formal public review period.</li> </ul>	<p><b><i>Housing</i></b></p> <ul style="list-style-type: none"> <li>• Provide workforce housing in Glenden for families, couples, singles and commuting workers.</li> <li>• Continue to engage with stakeholders.</li> <li>• Contact government agencies with relevant sections of SIMP for feedback prior to submitting EIS.</li> </ul>

**Table 5-3: Summary of Stakeholder Consultation Feedback (cont'd)**

Stakeholder category	Issues/opportunities raised	Suggested mitigations
State government (cont'd)	<p><b>Health</b></p> <ul style="list-style-type: none"> <li>• Discussions around the capacity of Glenden Community Health Centre to provide services to the growing community.</li> <li>• Capacity of key Queensland Health facilities in the Bowen Basin, which include the Collinsville and Moranbah Hospitals, to provide the full range of specialist services, clinics, and allied health along with outreach and support services.</li> <li>• Ongoing consultation with departments and stakeholders involved in the preparation of the EIS and SIA/SIMP – incorporating feedback in advance of the formal public review period.</li> </ul>	<p><b>Health</b></p> <ul style="list-style-type: none"> <li>• See local health service section for specific suggested mitigations that resulted from discussions.</li> <li>• Continue to engage with stakeholders.</li> <li>• Contact government agencies with relevant sections of SIMP for feedback prior to submitting EIS.</li> </ul>
	<p><b>Transport</b></p> <ul style="list-style-type: none"> <li>• Impact on Xstrata’s haul road to Newlands (adjacent to Wollombi Road).</li> <li>• Impact on gazetted road (in the northern corner of Colinta Holdings to Suttor Creek).</li> <li>• Locations of access into the mine.</li> <li>• Quality of surrounding road networks.</li> </ul>	<p><b>Transport</b></p> <ul style="list-style-type: none"> <li>• Intersection upgrades for Collinsville-Elphinstone Rd intersection with site access roads.</li> <li>• Pavement maintenance contributions.</li> <li>• Traffic management for interaction of Xstrata haul road and Byerwen project roads.</li> <li>• Access or alternate access to local roads provided.</li> </ul>
	<p><b>Emergency services (police, ambulance and fire)</b></p> <ul style="list-style-type: none"> <li>• Discussions around current staffing of Glenden’s police station and back up police services from Nebo and Mackay.</li> <li>• Queensland Police Services does not assume that an increase in population necessarily means an increase in crime and requested that the situation be monitored before deciding if any mitigations to address police-related concerns are necessary.</li> <li>• Discussions about support for Glenden’s fire station by Queensland Fire and Rescue Services, and involvement from Nebo.</li> </ul>	<p><b>Emergency services (police, ambulance and fire)</b></p> <ul style="list-style-type: none"> <li>• Continue monitoring the demands on the services by collecting service utilisation data to demonstrate the existing and future demand on the service.</li> <li>• If the service continues to be under pressure, provide this data to Queensland Government as input into resource planning.</li> <li>• Continue to engage with stakeholders.</li> <li>• Contact government agencies with relevant sections of SIMP for feedback prior to submitting EIS.</li> <li>• Establishment of productive partnerships with emergency service providers through: <ul style="list-style-type: none"> <li>– Mine site familiarisation with emergency service officers.</li> </ul> </li> </ul>

**Table 5-3: Summary of Stakeholder Consultation Feedback (cont'd)**

Stakeholder category	Issues/opportunities raised	Suggested mitigations
State government (cont'd)	<ul style="list-style-type: none"> <li>• Discussions relating to ongoing provision of Queensland Ambulance Service and the private medical practice providing medical services and patient care to Glenden and surrounding landholders.</li> <li>• Ongoing consultation with departments and stakeholders involved in the preparation of the EIS and SIA/SIMP – incorporating feedback in advance of the formal public review period.</li> </ul>	<ul style="list-style-type: none"> <li>– Invite emergency service officers to give toolbox talks.</li> <li>– Provide health and support resource information in induction packs to alleviate unnecessary emergency calls.</li> <li>• Development of a Safety Plan which implements preventative measures on-site and at the accommodation village, including an Emergency Management Plan to address emergency incidents.</li> <li>• Implementation of a Traffic Management Plan which includes actions to address potential safety issues due to increased traffic.</li> </ul>
Environmental activists	<ul style="list-style-type: none"> <li>• General concerns about mining, industry and the impact on the environment.</li> <li>• It was mentioned in one instance that wildlife carers are not adequately supported financially – it was acknowledged that it is difficult to set up a support program for individuals, or where this is not consistency in carer qualifications or level of care provided.</li> <li>• To date the environmentalists' objections to QCoal's approval applications on other projects have not been successful.</li> <li>• QCoal continues to develop strategies that as a minimum meet government requirements to address environmental impacts.</li> <li>• The environmentalists feel the government regulations are inadequate to address environmental impacts.</li> </ul>	<ul style="list-style-type: none"> <li>• Continue to develop and implement strategies to address environmental impacts as required by government.</li> <li>• Keep community and interested stakeholder informed of extent of potential impact and the mitigation measures to maintain the level of impact to within an acceptable range.</li> </ul>
Community action groups	<ul style="list-style-type: none"> <li>• Concerns around the potential to encourage FIFO workers – reassured by the strategy to provide workers the choice to live locally or commute (and there is understanding that target percentages cannot be imposed where the choice is given to workers).</li> <li>• Concern around whether there will be accommodation provision for workers and families – reassured with the strategy to provide a range of accommodation options to workers and their families as well as commuting workers.</li> <li>• Concern around road safety between Mackay and Glenden in particular – with increased worker traffic on the road as well as the families travelling long distances.</li> </ul>	<ul style="list-style-type: none"> <li>• Provide regular updates about the project.</li> <li>• Give workers choice of where to live and ensure provision of suitable accommodation options to support choice.</li> <li>• Provide rest facilities after shifts and encourage workers to rest before travelling.</li> </ul>

**Table 5-3: Summary of Stakeholder Consultation Feedback (cont'd)**

Stakeholder category	Issues/opportunities raised	Suggested mitigations
Community action groups (cont'd)	<ul style="list-style-type: none"> <li>• Concern around whether there will be local and regional business and employment opportunities – reassured with the strategy of providing workforce choice of where to live and encouraging workers to live locally as well as giving consideration to local and regional suppliers where requirements, quality and price requirements are met.</li> </ul>	
Community social groups	<ul style="list-style-type: none"> <li>• Community groups are interested to see how QCoal will support their objectives.</li> <li>• Group representatives feel that Glenden is lacking in the number and type of events and activities available in larger towns and would like to improve the range of activities on offer (if supported by the community).</li> <li>• There is a lack of interest in running or participating in community groups and activities – key community members would like to encourage community members to get more involved.</li> <li>• Community groups rely on industry financial support in many cases to deliver these events and activities.</li> </ul>	<ul style="list-style-type: none"> <li>• Implement community grants program to support community groups.</li> <li>• Offer rosters to give workers and their families advance notice of work and leave days in order to improve ability to plan and participate.</li> <li>• Structure rosters to support workers to live locally – providing the opportunity for increased family and community involvement.</li> </ul>
Businesses	<ul style="list-style-type: none"> <li>• Local businesses are looking forward to growth opportunities through either servicing the mine or a growing population.</li> <li>• Mention of space concerns if expansion is required.</li> </ul>	<ul style="list-style-type: none"> <li>• Use local suppliers where viable – must be competitive, meet requirements and specifications for mine supply contracts, etc.</li> <li>• Notify interested suppliers of planning progress through regular email updates.</li> <li>• Continue to liaise with other local industrial companies about current facilities and ensure an agreement is reached in terms of expansion opportunities if there are businesses that have a requirement for it.</li> </ul>
Landowners	<ul style="list-style-type: none"> <li>• Landowner consultation is ongoing with the discussions focused almost entirely on land compensation agreements.</li> <li>• Landowners are concerned about the amount of time being spent on addressing compensation agreements and the number of companies they are being approached by.</li> </ul>	<ul style="list-style-type: none"> <li>• Continue to engage with landowners and respond to enquiries.</li> <li>• Continue to progress and finalise land compensation agreements.</li> <li>• Address landowner project concerns if and when they arise.</li> </ul>

**Table 5-3: Summary of Stakeholder Consultation Feedback (cont'd)**

Stakeholder category	Issues/opportunities raised	Suggested mitigations
Landowners (cont'd)	<ul style="list-style-type: none"> <li>• There is an interest in the timing of the mine but not much discussion around the mine itself – one concern about dust affecting the quality of cattle drinking water has been raised to date.</li> <li>• It is likely that mine impacts have rarely been raised due to the large distances between the homesteads and the proposed mine (or that QCoal now owns one of the nearby properties and one is uninhabited)</li> </ul>	
Industry associations	<ul style="list-style-type: none"> <li>• Industry groups are interested in project timeframes and requirements on behalf of their network and members' interests.</li> <li>• QCoal has made frequent presentations at industry association functions and events with positive feedback about the value of these resulting in many more requests.</li> <li>• Interest in accommodation arrangements and timeframes.</li> <li>• Interest in skills and training opportunities for a future workforce of up to 1,000 people – frequent requests to be involved in careers expos.</li> <li>• Provide contact details of current contractor, Leighton, to participate in career expos to discuss current opportunities.</li> <li>• There is increasing demand for mining companies to attend and present at a range of industry events including breakfast meetings, summits, conferences, industry events, careers and skills expos due to the high volume of organisations delivering similar services – which is important to do but there would be benefit if the organizations in close proximity or targeting the same audiences coordinated some of their activities.</li> </ul>	<ul style="list-style-type: none"> <li>• Continue to provide regular briefings and presentations to industry associations.</li> <li>• Continue to encourage contractors to participate in careers expos.</li> <li>• Continue to respond to individual enquiries about the project.</li> <li>• Encourage service providers to coordinate their efforts to alleviate the duplication of effort with multiple programs and concepts intended for the same target audience and trying to achieve the same objectives.</li> </ul>

## **5.7 Ongoing Consultation and Communication**

QCoal will undertake two further formal rounds of stakeholder and community consultation with community relations team members available via phone, email and in person throughout the project planning and delivery. .

The third formal round of public consultation will be conducted when the EIS is placed on public display to enable stakeholders and the general public to understand the project's impacts, the draft social impact management plan, and to provide comment on the project.

Stakeholders and the community will be consulted during the preparation of the EIS supplementary report; this will comprise the fourth round of consultation.

Round four will display the final environmental impact statement, ensure the key stakeholders and the community of Glenden are kept informed about the project status, provide information about construction timeframes and maintain relationships that have been established with the community.

During the construction, operations and decommissioning stages of the project, the community will continue to be informed of project activities via project newsletters and responses to concerns and complaints registered via QCoal's grievance/feedback mechanism and dispute resolution process. In the case of complaints, all complaints will be provided with a response within 48 hours. This process is outlined in Attachment A, Social Impact Management Plan. The processes for independent monitoring, incident reporting and management of complaints are also presented in the attachment.

Following the completion of the EIS process, community consultation and stakeholder engagement will be ongoing through the implementation and adaptive management of the social impact management plan.

## **5.8 Conclusion**

Consultation to date has provided valuable information and local knowledge about environmental, social, economic and health issues relevant to the project study area. Byerwen Coal wishes to avail itself of such knowledge throughout the life of the project and develop partnerships to benefit the project's overall environmental and social performance.

## 6. EXISTING SOCIAL ENVIRONMENT

This chapter presents an overview of the social characteristics of the study area. It includes a detailed quantitative profile along with a synopsis of the qualitative values expressed by members of the community in community consultation and stakeholder engagement undertaken for the EIS. The section identifies and describes social parameters at a point in time so as to define a social baseline from which an assessment of project related impacts may be advanced.

The ability to characterise and define the social attributes of an area relies on the identification, summary and analysis of meaningful data. The availability of current data relating to a geographic area which is relevant to the study area, can present a challenge. Data such as that provided by the Australian Bureau of Statistics (ABS) is produced for a variety of geographic classifications, only some of which will be relevant to the defined study area. Complicating the ability to clearly define data relevant to this project, the Queensland local government went through a major reform process that commenced in 2007 and ended at the local government elections on 15 March 2008. As a result of this reform process, the local government areas in Queensland were reduced from 157 to 73, and local government areas relevant to the project area were amalgamated into regional councils.

The baseline report profiles a range of relevant social characteristics at the following geographical areas:

- The ABS defined Glenden Gazetted Locality, which is the primary study area.
- The Mackay, Isaac and Whitsunday Local Government Area's (LGAs), which is referred to as the Northern Bowen Basin region and is the secondary study area.
- The State of Queensland.

Throughout this section, data is represented in text, table and figure formats. Tables and figures have been produced to provide detailed data describing the primary and secondary study areas along with the applicable state averages.

### 6.1 Historical Background and Settlement Pattern

The town of Glenden is named after the Glenden Station (1918), which adjoined the site chosen for the township. Located in the Bowen Basin, Glenden is a mining town that was established by XStrata (then MIM) to support the nearby Newlands Coal Mine, which started construction in 1981. Whilst the town and its facilities were built by the company, the services and public facilities of the town have been handed to the Isaac Regional Council to administer.

The Bowen Basin covers an area of approximately 60,000 square km in Central Queensland. The area derives its name from the Bowen River, which was named after Queensland's first governor, Sir George Bowen. Prior to the arrival of the European settlers, the Birriah people in the north and the Jangga people in the south inhabited the area. Colonial practices and expansion of agriculture and mining has led to degradation of customary contact with 'country' and has impacted on the health and lifestyles of traditional owners.

European settlement of the region began in 1861 with the opening of the land to pastoral activity which was primarily the grazing of sheep and cattle. Mineral prospecting was undertaken as the land was explored and settled. Coal was discovered in 1866 and large-scale mining operations commenced in the 1920s. Key townships include the predominantly mining communities of



Moranbah and Collinsville, with Mackay on the coast being the primary population and service centre. The combination of rural (pastoral) activity along with resource exploration and development has shaped the character and heritage of the region.

## 6.2 Demographic and Demographic Change

Changes to population and migration patterns are stimulated by numerous variables including employment opportunities, family ties, age and climate. Table 6-1 details the population at the time of the 2001, 2006 and 2011 census events conducted by the ABS.

**Table 6-1: Demographic and Demographic Change**

Locality	2001 population	2006 population	2011 population	Population change 2001-2011
Glenden	977	1,112	1,793	83.5%
Mackay	89,877 <sup>a</sup>	101,015 <sup>a</sup>	112,798	25.5%
Isaac	19,013 <sup>b</sup>	19,822 <sup>b</sup>	22,588	18.8%
Whitsunday	34,688 <sup>c</sup>	29,335 <sup>c</sup>	31,426	-9.4%
Northern Bowen Basin Region	143,578	150,172	166,812	16.2%
Queensland	3,585,639	3,973,961	4,332,739	20.8%

a) Compilation of Mackay, Sarina and Mirani LGAs. b) Compilation of Broadsound, Belyando and Nebo LGAs. c) Compilation of Whitsunday Shire and Bowen Shire LGAs. Source: (ABS, 2012a, b, c, d, e)

As indicated in Table 6-1, the population of Glenden as recorded in 2011 was 1,793, which represents approximately 1.1% of the region's recorded population of 166,812. Population growth in Glenden between 2001 and 2011 has been substantial (83.5%); notably higher than that which has occurred in the region (16.2%) or Queensland (20.8%).

### 6.2.1 Fulltime Equivalent (FTE) Population

Since the introduction of commuting work practices, it has become increasingly common for mining areas to have a high incidence of non-resident workers who commute long distances to work and live in the area temporarily while rostered on, but return to their place of usual residence when rostered off. The FTE population measure includes the usual resident population (people who live in the area permanently) and non-resident workers (those who regularly stay in the area for extended periods when working, but who are not counted as usual residents). The concept was developed to provide a more complete picture of the service population of an area and provides a more effective measure of total demand for goods, services and infrastructure in regions where there is a high incidence of commuting workers.

The FTE population estimate for Glenden and Isaac and Whitsunday LGAs is presented in Table 6-2.

**Table 6-2: Full-Time Equivalent (FTE) Population Estimate**

Locality	Residential population	Non-resident workforce <sup>d</sup>	FTE estimate
Glenden	1,793	1,620	3,413
Isaac	22,588	13,590	36,178
Whitsunday	31,426	720 <sup>e</sup>	32,146

d) This data is from Bowen and Galilee Basins Population Report (OESR, 2011b). e) This data is for Bowen (S) only not the entire Whitsunday LGA (OESR, 2011b).

As at 2011, there were an estimated 3,413 persons residing in the township of Glenden including those in short term accommodation. This almost doubles population of the town; however it is recognised that due to shift rotations, not all of these people are likely to be 'in residence' at any one time. The non-resident workforce of Isaac Council is also substantial, accounting for an additional 60% to the resident population.

## 6.2.2 Projected Populations

The Office of Economic and Statistical Research (OESR) has produced population projections for the LGAs that comprise the Northern Bowen Basin Region. Medium series projections predicting population from 2016 to 2031 are provided in Table 6-3. There were no population projections available for Glenden.

**Table 6-3: Project Population (Medium Series)**

Locality	2011 (current)	2016	2021	2026	2031
Mackay	112,798	138,348	156,117	172,604	187,367
		22.7%	12.8%	10.6%	8.6%
Isaac	22,588	28,266	31,418	34,270	37,000
		25.1%	11.1%	9.1%	8%
Whitsunday	31,426	40,618	46,008	50,928	55,451
		29.2%	13.3%	10.7%	8.9%
Northern Bowen Basin Region	166,812	207,232	233,543	257,802	279,818
		24.2%	12.7%	10.4%	8.5%
Queensland	4,332,739	5,092,858	5,588,617	6,090,548	6,592,857
		17.5%	9.7%	9%	8.2%

Source: (OESR, 2011a).

The population projections indicate that each of the Isaac, Mackay and Whitsunday LGAs are predicted to have strong population growth in the period from 2001 to 2016, with overall growth for the region (24.2%) being substantially higher than that of Queensland (17.5%). Elevated rates of predicted growth taper off in the period 2016 - 2031. The most likely explanation for high predicted growth rates across the Isaac, Mackay and Whitsunday LGAs is the predominance of mining activity this region, with 29 operational mines and an additional 23 mines planned. These are likely to stimulate population growth over the next 5 to 10 years.

## 6.2.3 Age and Gender Distribution

Age and gender are key demographic variables which influence the character of a community and the needs of its residents. Census information (2011) indicated that the population of Glenden (32 years) and the Isaac LGA (31 years) was comparatively young when compared to Whitsunday (38 years) and Queensland (36 years). There were very few persons aged 60 and above

recorded in Glenden, accounting for just 3% of the population. Employment opportunities and housing affordability are likely to be factors attracting younger age cohorts.

The ratio of males to females as at 2011 for the primary and secondary study areas is presented in Table 6-4.

**Table 6-4: Proportion of Males to Females**

Locality	Proportion of females	Proportion of males
Glenden	35.3%	64.8%
Mackay	48.4%	51.6%
Isaac	44.4%	55.6%
Whitsunday	47.4%	52.6%
Queensland	50.4%	49.6%

Source: (ABS, 2012a, b, c, d, e).

The population of Glenden recorded a substantially higher ratio of males to females, with males comprising 64.8% of the population. With respect to the broader region, the proportion of males and females was more balanced, with the exception of Isaac LGA in which the proportion of males was 6% higher than the state average.

## 6.2.4 Cultural Diversity

The degree of cultural diversity in a community provides an insight into the cultural characteristics of residents and an indication of the type of services which may be required. Both the primary and secondary study areas recorded a lower proportion of persons born overseas than the state average (20.5%). In the population of Glenden, 10.4% were recorded as being born overseas, whilst Isaac recorded 9.9% and Mackay 11.7%. Accordingly, Glenden and Isaac also recorded very low rates of a language other than English being spoken at home.

## 6.2.5 Family Structure and Household Composition

The way in which households and families are structured can provide an indication as to the character of the built environment along with social relationships and latent social capital within a community. Table 6-5 provides information as to household type.

**Table 6-5: Household Type**

Locality	Ave. household size (persons)	Total dwellings	Detached dwellings (%)	Family households (%)
Glenden	3	656	50.8	67.8
Mackay	2.7	43,086	76.2	76.3
Isaac	2.9	8,751	67.1	77.6
Whitsunday	2.4	10,848	75.3	70
Queensland	2.6	1,725,214	70.4	72.4

Source: (ABS, 2012a, b, c, d, e).

In terms of the physical nature of the built environment, Glenden recorded a relatively low proportion of houses which are detached houses- 50.8% compared to a state average of 70.4%. Glenden recorded a higher average household size than the LGA's, however when related to the small number of dwellings, the low proportion of detached dwellings and the lowest percentage of family households, this is likely to indicate that residents are sharing houses for employment purposes. Glenden also recorded a very low proportion of lone person and lone parent households.

## 6.2.6 Indigenous Community

Aboriginal and Torres Strait Islander people are a uniquely important stakeholder in Australian society. In recognition of this, it is appropriate to examine the population profile of the Indigenous population in more detail. The Mining Lease Application (MLA) recognises the traditional owner groups in the mining lease area as being the Birriah people and the Jangga people. A Cultural Heritage Management Plan (CHMP) has been negotiated and finalised with both the Birriah People and the Jangga People for the Byerwen Coal Project. These plans detail any impact that the project may have upon artefact sites and mitigation steps taken to minimise impact wherever possible.

A summary of the Indigenous population of the primary and secondary study areas is provided in Table 6-6.

**Table 6-6: Indigenous Persons**

Locality	Indigenous proportion of total population (%)	Number of Indigenous Residents (persons)
Glenden	1.84	33
Mackay	4.35	4,912
Isaac	2.66	601
Whitsunday	4.24	1,334
Northern Bowen Basin Region	3.8	6,847
Queensland	3.6	155,824

Source: (ABS, 2012a, b, c, d, e).

Mackay has the largest proportion of Indigenous persons, while Glenden has the lowest, with a proportion which is 50% less than the Queensland average.

A notable feature of the Indigenous population of the region is the lack of persons aged 55 and over. This is reflective of national trends where socioeconomic disadvantage and poor health is resulting in Indigenous Australians having a notably shorter life expectancy compared to the mainstream population. The gender ratio for the Indigenous population in both the primary and secondary study area was comparable to the Australian average, being 51.2% female and 48.9% male.

## 6.3 Employment, Income and Housing

### 6.3.1 Labour Force and Unemployment

A notable feature of the primary study area is the comparatively very low level of unemployment in Glenden and across the Isaac Regional Council compared to the state average. As at the September 2010 quarter, the estimated proportion of unemployed persons aged 15 years and over in Glenden was less than 1%. For the Isaac LGA the rate of unemployment was also low, being 1.6% compared to a Queensland rate of 5.6%. The Mackay (4.1%) and Whitsunday rates (6.1%) were comparable to the state average.

In terms of labour force characteristics the most notable feature in Glenden is the predominance of mining as the industry of employment, recorded as being approximately 70% of the labour force. Considering that Glenden is effectively a purpose built mining community, it is considered that the actual proportion of the labour force employed in the mining industry is higher than 70% and that the lower figure recorded in the Census is due to confusion between 'occupation' and 'industry of employment'.

For the Isaac Regional Council, mining is also recorded as being the most significant industry of employment with 39% of all employed persons working in this industry, compared to a state average of 4.2%. The Mackay and Whitsunday LGA's more closely mirror state trends with construction and manufacturing being key industries and agriculture accounting for a relatively high proportion of employment in the Whitsunday LGA.

In terms of employment by occupation, technicians and trade workers, labourers, machinery operators and drivers were the most prevalent occupational groups in both Glenden and across the region. Managers are also highly represented in Whitsunday, again reflecting the importance of the agricultural industry in this LGA.

### **6.3.2 Income**

The median individual (\$1,586) and family weekly income (\$2,770) recorded in 2011 for Glenden was considerably higher than that for the regions (median individual income ranging from \$621 and family income ranging up to \$2,671) and Queensland (median individual income of \$587 and family income of \$1,453). It is likely that high wages associated with employment in the mining sector is the explanation for such high median incomes in Glenden.

### **6.3.3 Disadvantage**

The Socio-economic Index for Areas (SEIFA) developed by the ABS provides a measure of comparative social and economic wellbeing across localities. One such index focuses upon indicators of advantage/ disadvantage with relative disadvantage being associated with a low score. A high proportion of the population within Isaac and Mackay regions was recorded as being in Quintile 4, which means that they fall within the highest 70% of the population of Queensland with regard to measures of socio economic advantage (OESR, 2011). Glenden recorded one of the highest scores in the Isaac LGA (Decile 9 -10) indicating that it is one of the most relatively advantaged areas in Queensland (OESR, 2010).

### **6.3.4 Housing and Accommodation**

The housing market in Glenden differs substantially to that which exists elsewhere. As at the 2011 census there were 656 dwellings recorded in Glenden, 50.76% of which were separate houses. A most notable feature is the high proportion of dwellings which are being rented (93.8%), compared to the regional average of 31.5%, and the state average of 33%. Additionally, no dwellings were being purchased, and a very low proportion of dwellings were fully owned in Glenden (1.1%). The median rent paid in Glenden is just \$30 compared to a Queensland average of \$300. This indicates that in Glenden there is an artificial housing market whereby housing is provided for a specific purpose, i.e., by an employer for direct employees.

As these figures suggest, the housing market in Glenden is substantially different to that of a typical Queensland township. The township is a purpose built mining community with the housing stock provided by Xstrata for employees of the Newlands mining operations. Housing is part of a salary package offered to employees and subsequently the housing market in Glenden is an artificial market. The private housing market is limited to a very small proportion of the overall housing stock- approximately 4-5 houses. Table 6-7 provides an overview of housing in the study area.

**Table 6-7: Median Housing Costs Versus Median Income**

Locality	Median individual income (\$/weekly)	Median rent (\$/weekly)	Median housing loan repayment (\$/monthly)
Glenden	1,586	30	0*
Mackay	705	310	2,167
Isaac	1,052	64	1,907
Whitsunday	621	260	1,768
Queensland	587	300	1,850

\*There were no mortgage holders in Glenden at the time of the 2011 Census. Source: (ABS, 2012a, b, c, d, e).

As at July 2012 there was 1 property for sale in Glenden.

### Temporary Accommodation

Temporary accommodation is constrained and is limited to the Glenden Country Motor Inn which provides a total of 19 rooms available over and above those which have been allocated to companies operating in the Glenden area. The inn is located at Ewan Drive, Glenden.

### Low Cost, Social and Community Housing

Isaac Regional Council's Affordable Housing Project has responded to the region's need for affordable housing, but has focussed upon the Moranbah community, via the Isaac Views Housing Project.

Mackay Regional Council released a draft Residential Densities Strategy in 2011 to support planning for the region's continued population growth and changing demographics and to encourage higher density residential development.

There was no specific data available from the Whitsunday Regional Council. This council is liaising with the Isaac Regional Council in relation to their Affordable Housing Project.

## 6.4 Education

Census data (2011) indicated that approximately 38% of the population of Glenden had completed schooling to a Year 12 level. The proportion of the population which has completed Year 12 schooling for the state of Queensland was substantially higher at 48.04%. Overall, the recorded level of attainment of a secondary education in both the primary and secondary study areas was lower than the applicable state average. The dominance of mining related occupations in both the primary and secondary study areas suggests that a primary reason for the lower than average recorded rates for completion of secondary education is that of employment opportunities which do not require higher levels of formal education.

## 6.5 Health

No health related baseline data was identified during consultation that was specific to Glenden.

No disability prevalence related baseline data was identified during consultation that was specific to Glenden. However, anecdotal evidence during the consultation process suggests disability prevalence is low to very low for the township. Information provided in the Newlands Coal Extension Project EIS outlines the existing workforce as at 25 January 2012 for the Newlands Coal Project, located adjacent the Byerwen Coal Project site, included two persons with a disability.

## 6.6 Land Use and Land Ownership

Land use within the region surrounding the project is a mix of large-scale grazing, cropping, and mining activity. The seven leasehold properties that are either within or intersected by the project MLAs are all used for grazing. Details of these properties are outlined in Table 6-8.

**Table 6-8: Property Tenure - Byerwen Coal Project**

Lot	Plan	Tenure	Description and land use
1	CP905226	Lands Lease	Tenure: Grazing Homestead Perpetual Lease (GHPL) 30/4120.
3	SP171922	Lands Lease	Tenure: TL 0/235865 Lessee: Collinta Holdings. Pty. Ltd. - Grazing
4	SP171921	Lands Lease	Tenure: GHPL 5/2123 Lessee: Private Individual - Grazing
14	SP225054	Lands Lease	Tenure: Term Lease (TL) 0/35642 Lessee: Collinta Holdings Pty. Ltd. - Grazing
667	PH1321	Lands Lease	Tenure: Lands Lease (Mount Lookout Holding) Lessees: Private individuals. - Grazing Tenure Reference Pastoral Holding (PH) 5/667.
682	CP906890	Lands Lease	Tenure: Lands Lease (Suttor Creek Holding). Lessees: Private individuals - Grazing Tenure Reference TL 0/235783.
689	SP251696	Lands Lease	Tenure: Lands Lease Lessee: Leichhardt Pastoral Pty. Ltd. - Grazing Tenure Reference TL 0/235359

Lot 689 SP251696 will experience the largest direct impact from the project relative to the property's size. This property is owned by a wholly owned subsidiary of Byerwen Coal Pty Ltd. Lot 3 SP171922 and Lot 14 SP225054 are leased by the same party and will experience direct impacts from the project. Lot 1 CP905226 and Lot 682 CP906890 will experience direct impacts from the project. The proponent will negotiate compensation arrangements with landholders that are directly impacted. Minor portions of Lot 4 SP171921 and Lot 667 PH1321 are within the project area but are not directly within the project footprint. The proponent will negotiate compensation arrangements with these landholders, if required.

Suttor North homestead (Lot 689 SP251696) will be vacated prior to any construction for the project. Wollombi homestead on Lot 1 CP905226 is unoccupied and will remain unoccupied for the life of the project.

## 6.7 Community Infrastructure and Social Services

The provision of infrastructure and services which support and maintain community health and well being is often a challenge in sparsely populated rural and remote areas. However the primary

study area differs somewhat from similarly sized townships in that there is a relatively high level of provision of community infrastructure.

### 6.7.1 Health

Table 6-9 indicates the availability of health services across the region.

**Table 6-9: Existing Health Services in the Study Area**

Locality	Health services available
Glenden	<ul style="list-style-type: none"> <li>• Glenden Community Health Centre.</li> <li>• Glenden Medical Practice.</li> <li>• Glenden Dentist.</li> </ul>
Mackay	<ul style="list-style-type: none"> <li>• Mackay Base Hospital.</li> <li>• Mackay Mater Misericordie Hospital.</li> <li>• Eight Community Health Centres.</li> <li>• General practitioners.</li> <li>• Other health services.</li> </ul>
Isaac	<ul style="list-style-type: none"> <li>• Nebo Medical Centre.</li> <li>• Moranbah Hospital.</li> </ul>
Whitsunday	<ul style="list-style-type: none"> <li>• Whitsunday Community Health Centre.</li> <li>• Collinsville Hospital.</li> <li>• Bowen Hospital.</li> <li>• General practitioners.</li> <li>• Visiting health services.</li> </ul>

Source: Queensland Health website, July 2012.

The Glenden Community Health Centre is staffed by a nurse and in addition to emergency, the centre offers a range of nursing services to residents including a well baby clinic, immunisation programs, community nursing, Triple P parenting programs, antenatal classes and aged care support. There is a range of visiting health services also available at Glenden Community Health including counselling, mental health support for both children and adults and speech pathology. The mobile women's health clinic and school based youth health nurse also visit Glenden regularly.

The Glenden Medical Practice is underwritten by Xstrata and is staffed by a single doctor. The Glenden Dentist is a private Dental Surgery in Glenden which opened in 2011.

The key Queensland Health provided facilities in the Bowen Basin include the Collinsville and Moranbah Hospitals. Collinsville Hospital is a public hospital with less than 10 beds providing accident and emergency services, admissions, aged care, cancer treatment and outpatient services. Moranbah Hospital is a public hospital with less than 20 beds, which provides accident and emergency services, admissions and outpatient services. The Mackay Base Hospital is the major hospital for the Central Queensland Region providing the full range of specialist services, clinics, and allied health along with outreach and support services. There is also a private hospital located in Mackay.



There appears to be limited disability services provided in the Glenden region corresponding to an expected low to very low disability prevalence for the region.

### 6.7.2 Education

Educational facilities in the primary and secondary study areas are provided in Table 6-10. In terms of the primary and secondary study area, the city of Mackay is the regional hub and provides an array of educational facilities and services including an education and research centre under the auspices of James Cook University.

**Table 6-10: Availability of Educational Services in the Study Area**

Locality	Education services available
Glenden	Glenden State School (P-12 and special education program), C&K Glenden Community Childcare Centre,
Mackay	45 state schools, 14 non-state schools, Central Queensland Institute of TAFE, Central Queensland University, James Cook University. Collinsville State High School.
Isaac	20 state schools, Central Queensland Institute of TAFE, Central Queensland University.
Whitsunday	5 state schools, 14 non-state schools, Barrier Reef Institute of TAFE, Central Queensland University.

Source: (DETE, 2012a, b, c), (Whitsundays Australia, 2012).

Glenden State School reported 283 enrolments in 2010, from Prep to Year 12 and includes a special education program (GSS, 2010). The school is well regarded and has capacity across all years (prep- Year 12) and a total capacity for in excess of 400 students.

Kindergarten and childcare services are provided in Glenden by the C&K Glenden Community Childcare Centre. The centre is open from Monday to Friday and capacity currently fluctuates.

### 6.7.3 Emergency Services

There is a police station located in Glenden which is attended by a single police officer who is permanently based in the town. Back up police services are provided from Nebo and Mackay.

The Glenden fire station is supported by the Queensland Fire and Rescue Services, which operates from 38 urban fire stations with a staff of over 620 full time and auxiliary firefighters. There is a Glenden State Emergency Services shed that is only staffed during emergencies and disasters.

The Queensland Ambulance Service and the private Glenden Medical Practice provide medical services and patient care to Glenden and surrounding landholders. There is one full time ambulance officer based in Glenden. The Glenden Medical Practice is open Monday to Friday from 9am to 12pm and 1pm to 5pm.

The Glenden SES is no longer operational and as such all SES involvement is provided from the Nebo SES.

### 6.7.4 Recreational Facilities and Services

Existing community facilities, sporting and recreational groups are outlined in Table 6-11.

**Table 6-11: Recreation groups and facilities in Glenden**

Locality	Community facilities	Sporting facilities
Glenden	Children's playground Community centre and gymnasium Library Bowling Club Arts and Craft Centre Glenden Recreation Centre Golf course	Motocross track, swimming pool and tennis courts.

Source: (Regional Council websites, accessed July 2012).

The Mackay, Isaac and Whitsunday regions afford a range of recreational facilities and services, which include, but are not limited to, galleries and museums, national parks, local parks and playgrounds, the BlueWater Lagoon, walking trails, as well as golf and sailing clubs, swimming pools, tennis courts and sports grounds.

In addition to recreational facilities, natural areas and reserves offer opportunities for informal recreational pursuits such as hiking and swimming.

### **6.7.5 Communications Infrastructure**

Compared to the Queensland average of 78.3%, the proportion of households with connection to the internet in Glenden (84.5%) is relatively high. As at the 2011 Census date, Glenden recorded 10.8% of dwellings without internet connection. Across the region, the internet was available in all townships, with local call rate access. In addition all libraries offer computers with internet access to students, staff and the general public for a range of purposes.

### **6.7.6 Transport Infrastructure and Services**

Access to Glenden from Mackay is the Peak Downs Highway to the Suttor Developmental Road, and then to the Collinsville-Elphinstone Road. There is no passenger railway to Glenden. Coal from Newlands Mine is railed via Collinsville to Abbot Point Coal Terminal. Byerwen Coal Project has negotiated capacity for its coal and the initial years of production are catered for within the existing 50 Mtpa allocated for the Newlands-Abbot Point rail line.

There is no existing public transport in Glenden with the closest bus service running from the town of Nebo. Accordingly there is a high dependency on private motor vehicles for all transportation requirements.

Collinsville airport is the closest airport to Glenden and is classified as a small airport. Regional and domestic flights are all serviced by Mackay airport.

### **6.7.7 Crime**

The study area is located within the Mackay District of the Central Police Region. It is served by 297 Police Officers and 59 Staff Members. In the 2010-2011 year for the Mackay Police District there were a total of 901 reported offences against the person, 5823 reported offences against property and 5735 reported other offences. Rates of crime per police officer for the Mackay District and for Queensland are presented in Table 6-12.

**Table 6-12: Rates of Crime Per Police Officer**

Locality	Offences against person per officer	Offences against property per officer	Other offences per officer
Mackay	3.0	19.6	19.3
Queensland	2.8	20.4	14.8

There is one police officer permanently based in Glenden, who reports a very low crime rate in the town.

### 6.7.8 Volunteering

Participation in volunteer activities provides a measure of social capital in a community. Identifying volunteer activities provides insight into the opportunities for social participation and of the importance placed in the valued of community ownership and assistance. Table 6-13 details volunteer activities and associations in Glenden and the Northern Bowe Basin Region. Table 6-14 provides comparative rates of participation in voluntary activities.

**Table 6-13: Volunteer Activities/Associations in the Communities of Interest**

Community	Volunteer associations
Glenden	<ul style="list-style-type: none"> <li>• Queensland Fire and Rescue Service.</li> <li>• Glenden and District Arts Council.</li> <li>• Glenden Progress Association.</li> </ul>
Mackay	<ul style="list-style-type: none"> <li>• Natural Environment Centre.</li> <li>• Conservation Volunteers Australia.</li> <li>• Mackay Conservation Group.</li> <li>• Mackay and District Turtle Watch.</li> <li>• Pioneer Catchment and Landcare Group.</li> </ul>
Isaac	<ul style="list-style-type: none"> <li>• Hinterland Community Care Inc.</li> <li>• Reef Catchments Public Fund.</li> </ul>
Whitsunday <sup>a</sup>	<ul style="list-style-type: none"> <li>• Whitsunday Community Services Inc.</li> <li>• OUCH Volunteers (Environment).</li> <li>• Proserpine Community Centre Association.</li> </ul>

<sup>a</sup> An extensive list of volunteer organisations can be found on the council's local volunteer directory. Source: <http://www.whitsunday.qld.gov.au/web/guest/local-volunteer-directory>, July 2012.

**Table 6-14: Rates of Participation in Voluntary activities**

Locality	% Voluntary Activity	Number of People Volunteering
Glenden	10.5%	189
Mackay	15.9%	14,081
Isaac	15.3%	3,446
Whitsunday	13.8%	4,347
Northern Bowen Basin Region	15%	21,874
Queensland	14.90%	645,543

Source: (ABS, 2012a, b, c, d, e).

In Glenden, four volunteer organisations were identified. The rate of participation in voluntary activities (10.5%) as recorded in 2011 was slightly lower than the rate for the Northern Bowen Basin Region (15%) and Queensland (14.90%) reflecting the predominant focus upon work activities and the needs of shift work.

## **6.8 Community Values**

Complementing the collection and analysis of secondary, quantitative data which describes Glenden and the Northern Bowen Basin Region, primary data has been collected through consultation with members of the community and associated stakeholders. In addition to seeking feedback on specific issues relating to proposed project activities, an objective has been to identify the aspects of life which are most highly valued by members of the Glenden community. As described in Section 5, a broad range of consultative activities have been completed in the course of undertaking the EIS. Feedback has informed the identification of the three broad community values as described below.

### **6.8.1 Strong Community Identity**

Residents of Glenden and in the Isaac region more broadly reported the existence of a strong community spirit that exists among residents. The community has been founded on mining and agricultural production and this provides a distinct community identity. Residents identify with being part of a mining and rural community and value the hard work and determination that has gone into its creation. Furthermore there is a general appreciation of being able to earn high financial rewards through hard work.

### **6.8.2 Cohesive Communities**

Residents of the study area value living in cohesive, stable communities, which offer a high standard of living. A number of key qualities were consistently raised as being factors that contributed to a cohesive community. First, residents highly valued that their community was safe and offered a healthy environment to raise a family. There was a strong public perception of community safety, which is reflected in relatively low rates of crime across the study area. Living in a quiet, non-polluted environment with clean air and access to natural landscapes was considered by residents as a preferred environment in which to raise a family.

Residents also appreciated the availability of social services and facilities, which support a good standard of living. Accessibility of health, education and recreational services was considered a valuable attribute of communities. A concern is that the expansion of Glenden may place further pressure on existing health services. Conversely it is seen as a positive effect on the school which has substantial additional capacity.

### **6.8.3 Affordable Rural Lifestyle**

Residents celebrate and enjoy lifestyle aspects associated with living in a rural area that provides wide open spaces and diverse recreational opportunities. A less hectic and slower-paced lifestyle, as compared to perceptions of life in major cities, was seen as a beneficial aspect of living in the study area. This includes a lack of traffic and ease of commuting to employment and recreational destinations.

The pace of life, combined with relatively small, stable, close-knit communities, fosters a sense of rural friendliness, which is highly valued by residents. Residents also valued the relative affordability that the study area offered. A key element of affordability is the housing arrangement which exists in Glenden.

## 7. PROJECT DETAILS

This section describes particular aspects of the project which will influence the direct or indirect effects the project may have on the social and cultural environment. In particular, this relates to project timeframes, the required workforce and particular financial characteristics of the project. The section provides:

- Key project timeframes.
- A profile of required workforces for the construction, operations and decommissioning phases of the project.
- Accommodation and transportation arrangements for the workforce.
- An overview of key financial characteristics of the project.

### 7.1 Key Project Timelines

The development and operation of the project is comprised of a number of phases. The first is the construction and operation of the southern portion of the mine including the first coal handling preparation plant (CHPP). The second is the construction of a second CHPP in the northern portion of the mine and the subsequent expansion of operations. The final phase is decommissioning and rehabilitation of the site. An overview in terms of the two construction phases and the operations components are provided in Table 7.1.

**Table 7-1: Key Project Timelines**

<b>Construction</b>	<b>Timing</b>
Phase 1: Construction of mine and CHPP1	Project initiation – Project year 1
Phase 2: Construction of mine and CHPP2	Project year 15- Project year 17
<b>Operations</b>	
Phase 1: Operation of mine and CHPP1	Project year 1- Project year 46
Phase 2: Operation of mine, CHPP1 and CHPP2	Project year 15- Project year 46
<b>Rehabilitation</b>	
Rehabilitation	Project year 47- Project 48

### 7.2 Workforce Profile for Life of Project

An overview of the workforce requirements of respective phases of the project is outlined in Table 7-2 below. These numbers represent the most accurate estimation of workforce numbers as at the date of EIS preparation.

Social Impact Assessment  
Byerwen Project

**Table 7-2: Estimated Workforce Numbers**

Project Phase		Construction South			Construct ion and Operation South	Operation South				Operation South / Construction North			Operation South and North						Rehabilit- ation	
Duration		1.5 years			1 year	13 years				3 years			29 years						2 Years	
Project Period		- 1.5yrs	- 1yr	-6 mths	1yr	2yrs	3yrs	5yrs	14 yrs	15yrs	16yrs	17yrs	18yrs	19yrs	20yrs	30yrs	40yrs	46yrs	47yrs	48yrs
Construction Workforce		40	265	350	40	-	-	-	-	40	265	130	-	-	-	-	-	-	-	-
Operational Workforce		-	-	-	195	365	365	495	495	515	515	515	545	545	545	545	445	265	115	115
Operation Workforce Breakdown	Management Staff				25	45	45	75	75	75	75	75	75	75	75	75	75	45	20	20
	Open Cut				150	300	300	400	400	400	400	400	400	400	400	400	300	150	75	75
	CHPP				20	20	20	20	20	40	40	40	70	70	70	70	70	70	20	20
TOTAL WORKFORCE		<b>40</b>	<b>265</b>	<b>350</b>	<b>235</b>	<b>365</b>	<b>365</b>	<b>495</b>	<b>495</b>	<b>555</b>	<b>780</b>	<b>645</b>	<b>545</b>	<b>545</b>	<b>545</b>	<b>545</b>	<b>445</b>	<b>265</b>	<b>115</b>	<b>115</b>

### 7.2.1 Construction Workforce Profile

There are two distinct construction phases. The first construction phase (construction of the southern portion of the mine and first coal handling preparation plant (CHPP1)) is estimated to have a duration of 18 months to two years and require a peak workforce 350 personnel. Figure 7-1 below provides an overview of the anticipated construction workforce required for phase 1.

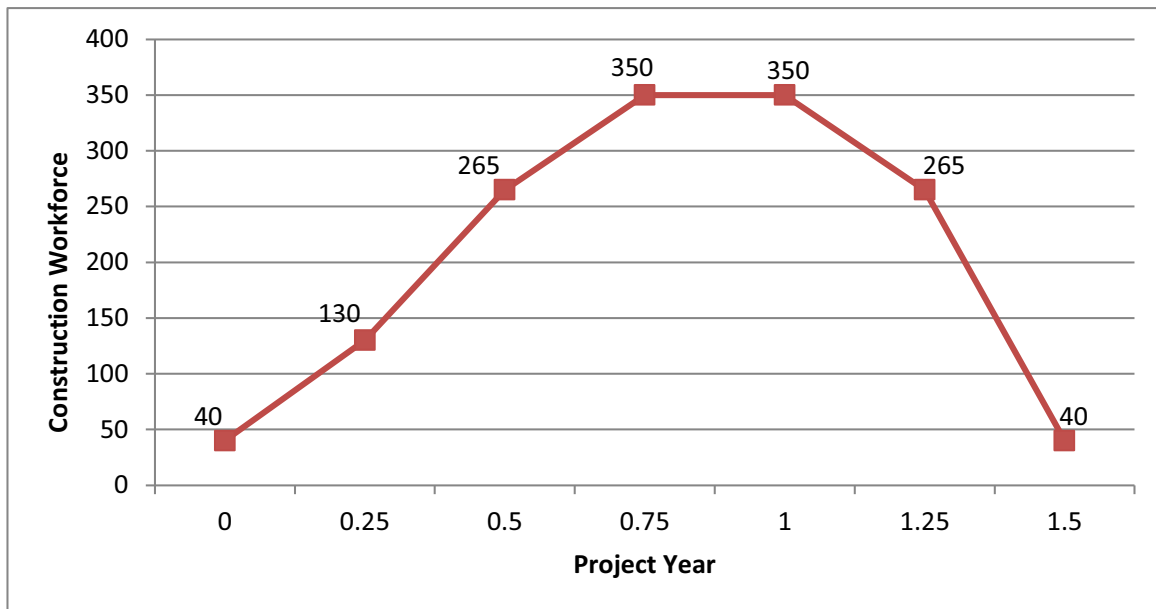


Figure 7-1: Byerwen Coal Project Construction Workforce- Phase 1

The second construction phase (construction of the mine components for the northern portion of the site and the second coal handling preparation plant (CHPP2)) is estimated to have a duration of three years and require a peak workforce 265 personnel. Figure 7-2 below provides an overview of the construction workforce required for phase 2.

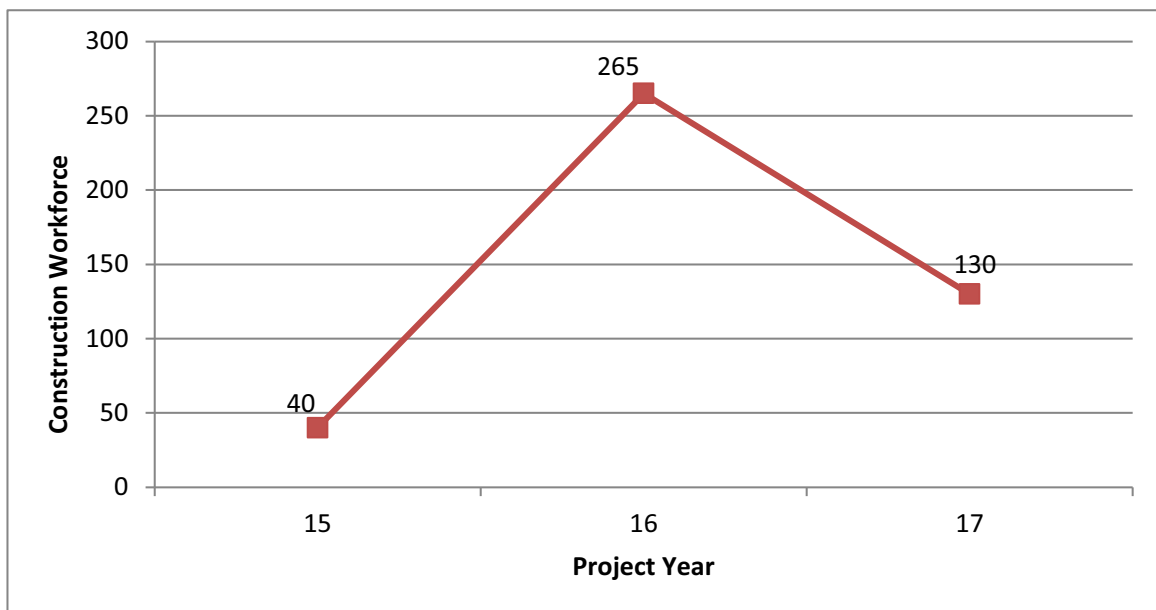


Figure 7-2: Byerwen Coal Project Construction Workforce- Phase 2

In terms of the skill sets required for each of the two construction workforces, they are expected to be relatively similar. An estimate of the specific occupations which will comprise the construction workforce is provided in Table 7-3.

**Table 7-3: Jobs by Occupation for Construction Phases**

<b>Occupation</b>	<b>% of construction workforce</b>
Management and Administration	3%
Engineers	2.5%
Surveyors	1%
Supervisors/Superintendent	5.5%
Civil Plant Operators	15%
Trade Services & Labourers	16%
HSSE	2.5%
Heavy Machinery Operators	43%
Relief operators/operators in training	2.5%
Drill & Blast Team	10%
<b>Total</b>	<b>100%</b>

## 7.2.2 Construction Workforce Transportation

The construction workforce will primarily commute to/from Glenden at the start and end of shift rosters. With respect to daily mobilisation of the workforce, personnel accommodated at the mine village will be transported to the mine site for their daily shift rotation via shuttle bus.

## 7.2.3 Operations Workforce Profile

The workforce required to operate the mine builds up relatively quickly as the mine and first coal handling preparation plant become operational. After reaching an initial peak of 495 personnel in project year 5, the operations workforce then grows again in project year 15 as the second coal handling preparation plant comes on line. By project year 18 the operations workforce reaches its peak of 545 personnel.

By project year 40 it is anticipated that parts of the mine will begin winding down with the workforce reducing to 265 personnel by project year 46. In project year 47 and 48 the mine will be decommissioned and rehabilitated. This will require an estimated workforce of 115 personnel.

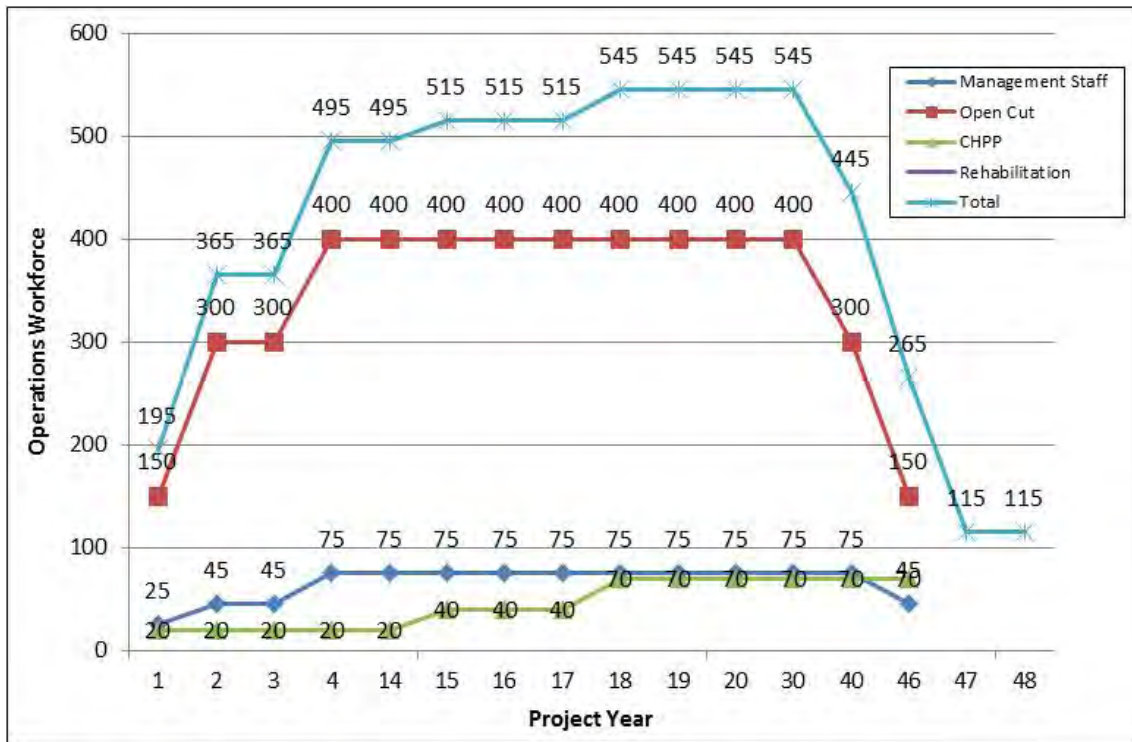
The operations workforce is comprised of three primary sectors:

- Operations management and supervision – peak of 75 personnel.
- Open cut mine operations – peak of 400 personnel.
- Coal handling preparation plant – peak of 70 personnel.

Figure 7-3 below provides an overview of the anticipated operations workforce required for the project.



Social Impact Assessment  
Byerwen Project



**Figure 7-3: Byerwen Coal Project Operations Workforce**

In terms of the skill sets required for each of the two construction workforces, they are expected to be relatively similar. An estimate of the specific occupations which will comprise the construction workforce is provided in Table 7-4.

**Table 7-4: Jobs by Occupation for Operations Phases**

Occupation List	Percentage of operations workforce
<b>Managerial and Supervisory Staff (75 total)</b>	
Mine Managers	2%
Engineers	20%
Geologists	18%
Surveyors	13%
Specialists	47%
<b>TOTAL</b>	<b>100%</b>
<b>Mining Contractors (Open Pit and CHPP)</b>	
Project Managers	1%
Contract Administrators	1%
Senior Administration Clerks	1%
Administration Clerks	2%
HSSE	2%
Workshop Managers	1%
Workshop Leading Hands	3%
Heavy Duty Plant Fitters	9%
Trade Services	7%

**Table 7-4: Jobs by Occupation for Operations Phases (cont'd)**

Occupation List	% of operations workforce
<b>Mining Contractors (Open Pit and CHPP) (cont'd)</b>	
Production Superintendents	1%
Mining Supervisors	2%
Heavy Vehicle and Equipment Operators	44%
Relief operators/operators in training	4%
Mining Engineers	2%
Mining Surveyors	1%
Drill & Blast Teams	20%
<b>TOTAL</b>	<b>100%</b>

The operations workforce will be operating on a 7 day on, 7 day off roster.

## **7.2.4 Operations Workforce Transportation**

The operations workforce will be comprised of those who commute to/from Glenden at the start and end of shift rosters and those who live permanently in Glenden. It is likely that a proportion of those who commute will utilise private transport when starting and completing shift rotations, however bus transportation will be provided from key localities such as Mackay.

With respect to daily mobilisation of the workforce, both employees accommodated in the mine village and those in permanent accommodation will be transported to the mine site for their daily shift rotation via shuttle bus.

## **7.3 Workforce Accommodation Strategy**

### **7.3.1 Workforce choice**

Byerwen Coal will provide its future workforce with the choice of where to live and will encourage workers to live locally by providing accommodation choice, which supports the region's vision for a stronger community.

### **7.3.2 Provision of a mix of accommodation styles**

Byerwen Coal will develop a Glenden Urban Design Master Plan, which will incorporate an accommodation plan that enables the provision of a mix of houses and duplexes to attract families and couples and take into account functionality, comfort, recreational uses, access to services and integration into the existing community.

Byerwen Coal is seeking to acquire suitable land in Glenden to develop accommodation facilities for construction and operational workers, management staff and contractors. There are land parcels within Glenden, currently owned by Queensland Government and Isaac Regional Council, which are considered suitable to acquire for the development of a mixed style of accommodation facilities to suit:

- Contractors and construction workers (village-style or temporary accommodation segregated from other accommodation).
- Commuting operational workers (village-style or temporary accommodation).
- Residential operational workers (duplexes and family housing).

- Management staff (family housing for residents and duplexes for visiting staff).

### **7.3.3 Workforce Accommodation Strategy implementation**

The Workforce Accommodation Strategy will be implemented based on the following guidelines:

- Byerwen Coal will secure land in Glenden for the facilities and ensure the development meets the required local government approvals requirements.
- Facilities will be of a standard commensurate with other facilities in the Bowen Basin.
- Byerwen Coal will select partners based on financial capacity and on experience in design, construction and operation of similar facilities in the Bowen Basin.
- Byerwen Coal will appoint facility operators to manage and maintain the facilities to meet all relevant industry standards.
- Byerwen Coal is seeking to acquire sufficient land in Glenden so that there is flexibility and the ability to respond rapidly to changing demands for the quantity and style of housing.

If sufficient land in Glenden is unable to be acquired, accommodation will be provided at an alternative location outside of Glenden such as on or near the mining lease.

### **7.3.4 Role of Queensland Government**

The principal of Glenden State School has provided written support for Byerwen Coal's intention to acquire surplus school land from the Department of Education, Training and Employment for the development of housing for couples and families.

The Office of the Coordinator-General and the Department of Education, Training and Employment are providing regular liaison about available land and assistance with acquiring that land.

Byerwen Coal's Workforce Accommodation Strategy is consistent with the *Mackay, Isaac and Whitsunday Regional Plan*, which identifies Glenden as an urban footprint suited to developments of this nature.

### **7.3.5 Role of local government**

As part of its vision for the sustainable development of Glenden, Isaac Regional Council has provided written support for Byerwen Coal's approach to secure sufficient land in Glenden to meet its accommodation requirements and to provide a range of accommodation suitable for singles, couples and families.

Isaac Regional Council is considering a tender submission from Byerwen Coal for industrial land that is considered suitable for a construction and contractors accommodation village as it is located in close proximity to existing facilities for the same purpose.

Byerwen Coal will seek all relevant approvals for the Glenden Urban Design Master Plan under the *Sustainable Planning Act 2009*. Should approval for accommodation facilities in Glenden not be granted then accommodation facilities will be provided at an alternative location outside the town. However, as Isaac Regional Council has provided written support for Byerwen Coal's Workforce Accommodation Strategy for the project it is not anticipated that approvals should cause delay or the need to locate accommodation facilities outside of Glenden.

### 7.3.6 Construction Workforce Accommodation Requirements

The construction workforce will be accommodated in purpose-built accommodation designed for a temporary workforce. This village-style accommodation will be located separately and of a different standard to operations workforce accommodation in most cases.

Contractors will also utilise this accommodation.

The anticipated number of construction workers requiring this style of accommodation is shown in Table 7-5.

**Table 7-5: Construction workforce accommodation plan**

Timing	Workforce Number	Accommodation Provision (per # of workers)
Construction south Year – 1 to 1.5	350	350 rooms (350 workers)
Construction north Year 15	40	40 rooms (40 workers)
Construction north Year 16	265	265 rooms (265 workers)
Construction north Year 17	130	130 rooms (130 workers)

### 7.3.7 Operations Workforce Accommodation Requirements

Byerwen Coal's Workforce Accommodation Strategy is to maximise local residency as this will assist in management of employee turnover and absenteeism as well as strengthen the community.

The percentage of workers who will choose to live in Glenden will not be known until the workforce is employed and the workers make their choice of whether to live in town or commute to work. It is particularly difficult to assume this percentage based on existing conditions as it is currently a single-mine town and the shift to a town with multiple industrial developments, including the Byerwen Mine, is likely to influence the number of people choosing to live in the town. This ratio may vary from time to time throughout the life of the mine.

With this in mind, Byerwen Coal is planning its initial quantities of operational worker accommodation based on an assumption that 30% of workers might choose to live in Glenden with 70% commuting at the start and end of shift rosters and staying in purpose-built accommodation villages during their roster. This percentage is solely for the purposes of initial accommodation planning. However, sufficient land is being sought prior to it being required in order to respond to the demand of workers' accommodation choice. The percentage of 30% is lower than the current percentage of Xstrata mine workers living locally in Glenden and Byerwen Coal expects this will change over time in response to a range of conditions.

For the purpose of this accommodation plan, residents are assumed to prefer houses and duplexes while non-residents will be provided rooms at purpose-built accommodation villages. The duplexes include two self-contained units, each suitable for a single or couple and it is therefore assumed that one duplex will accommodate at least two workers and in some cases more.

The accommodation plan, in expectation of operations workforce accommodation requirements based on 30% resident and 70% non-resident workers, is provided in Table 7-6.

**Table 7-6: Workforce accommodation plan – operations\***

Timing	Workforce Number (Based on 30% resident workers)	Accommodation Provision (per # of workers)
Operations - south Year 1	136 (non-res) 59 (res) <b>195 total (maximum)</b>	<i>(Build as required for up to Year 14) – consider accommodation supply as Newlands Mine reduces its workforce through the decommissioning phase starting in 2024.</i>
Operations – south (cont) Years 2 - 14	346 (non-res) 149 (res) <b>495 total (maximum)</b>	200 rooms (400 non-res workers) 120 houses (120 workers) 20 duplexes (50 workers)
Operations – south (cont) Years 15 - 17	360 (non-res) 155 (res) <b>515 total (maximum)</b>	<i>(As for yrs 2 – 14)</i> 200 rooms (400 non-res workers) 120 houses (120 workers) 20 duplexes (50 workers)
Operations – south/north (cont') Years 18 – 46 545 workers (maximum)	381 (non-res) 164 (res) <b>545 total (maximum)</b>	<i>(As for yrs 2 – 14)</i> 200 rooms (400 non-res workers) 120 houses (120 workers) 20 duplexes (50 workers)
Rehabilitation Years 47-48 115 workers (maximum)	80 (non-res) 35 (res) <b>115 total (maximum)</b>	Manage reallocation of accommodation as workforce numbers reduce

\*Indicative only – based on predictions of expected resident and non-resident workers

NB. With 7 days on/7 days off rosters, half of the total operational workforce will be on shift and requiring accommodation for each shift rotation

## 7.4 Financial Characteristics

This section briefly outlines some of the projects financial characteristics so as to gain an indication of the economic effects which might be experienced by communities in the social and cultural area of influence.

Capital expenditure during the first construction phase of the project is anticipated to directly inject approximately \$1,634 million into the broader economy, resulting in \$2,712 million in output (or consumption); \$703 million in household incomes; 5,609 full time equivalent (FTE) direct and indirect jobs in any one year (Year -1) and \$1,314 million in value added to the economy.

Once operation has commenced, the region will experience ongoing economic effects throughout the 50 year life of the project. The economic modelling shows the project operational expenditure will be almost \$1 billion per annum from the fifth year of operations. On an annual basis this will result in \$2,299 million in output, \$482 million in household incomes, 6,208 FTE direct and indirect jobs and \$1,133 million in value added for the regional and state economies.

The project will have a variety of economic implications for the region. In total, and subject to coal prices and exchange rate variations, it is estimated that up to approximately \$23 billion in total royalty payments and levies over the life of the project, would be made to the Queensland Government.

Community grant schemes and royalty payments are anticipated to assist the funding of social and economic infrastructure which will benefit the community. Additionally, investment in the project is expected to generate increased economic activity and employment in the region, which in turn is anticipated to increase the region's population as workers and their families move to the area.

## 8. ISSUES AND POTENTIAL SOCIAL IMPACTS

This section of the report discusses the potential social impacts associated with the construction, operation and decommissioning of the Byerwen Coal Project. The issues and impacts discussed in this section have been identified through a number of concurrent processes including direct engagement with potentially affected stakeholders, both through the project community consultation strategy and the SIA stakeholder engagement program. Complementing direct engagement, issues and impacts have been defined through the assessment of project effects against the attributes of the existing social environment. Lastly, the assessment has drawn upon the knowledge and insight held by members of the project team and the application of best practice impact assessment methodology to identify and evaluate social impacts associated with the project.

The assessment of identified issues has been undertaken through an impact significance assessment methodology. In this approach, the significance of an impact is assessed by considering the sensitivity of social values and the magnitude of a predicted impact. This approach assumes the identified impacts will occur, and focuses on developing a comprehensive understanding and assessment of the impacts and the value it will affect.

Central to the assessment method is the identification of intrinsic social values associated with the potentially affected community. Intrinsic social values include the core attributes of any typical Australian community such as population, housing, environmental health, infrastructure and economic characteristics. Intrinsic values also include those values that are unique to a particular community. These are any attributes of the community which residents consider important and can range from physical spaces or places to less tangible attributes such as community cohesion, friendliness or character.

The intrinsic social values examined for the assessment of social impacts associated with the project are the following:

- Demographics and Demographic Change
- History and Heritage, Non-Indigenous
- Indigenous Community
- Housing and Accommodation
- Residential Amenity
- Employment, Education and Training
- Local Economic Conditions
- Health and Safety
- Community Infrastructure and Social Services
- Social Identity and Cohesion.

The sensitivity of an intrinsic value to the effects of a potential impact is derived through consideration of the fundamental characteristics of the existing social environment (expressed through both quantitative and qualitative measures) along with an appreciation of the attachment or importance held by the community either to the value or the potential impact. The magnitude of a potential impact with respect to a particular value is an assessment of the extent, duration and severity of the impact. As outlined in Table 8-1, the overall significance of an impact is determined by assessing the sensitivity of a social value against the magnitude of a potential impact.

**Table 8-1: Significance Assessment Matrix**

Magnitude of impact	Sensitivity of Social Value or Receptor		
	High	Moderate	Low
High	Major	High	Moderate
Moderate	High	Moderate	Low
Low	Moderate	Low	Negligible

## 8.1 Demographic and Demographic Change

The following provides an overview of the likely changes to population and demography attributable to the constructions and operations phases of the project.

### 8.1.1 Construction

As outlined above there are two distinct construction phases. The first construction phase (construction of the southern portion of the mine and CHPP1) is estimated to have a duration of 18 months to two years and require a peak workforce 350 personnel. The second construction phase (construction of the mine components for the northern portion of the site and CHPP2) is estimated to have a duration of three years and require a peak workforce of 265 personnel.

Due to the current use of available skills in Glenden, it is likely that the entirety of the construction workforces for both construction phases will need to be sourced from outside of the local area. It is anticipated that the majority of the required construction workforces may be sourced from the broader region, defined as the Northern Bowen Basin.

The temporary and transient influx of up to 350 construction workers (phase 1) into Glenden represents a 10.3% increase to the estimated FTE population (3,413) or a 19.5% increase to the 2011 resident population (1,793). The impact of this population increase is limited as shift scheduling and accommodation arrangements mean that members of the workforce will have limited opportunity to interact with the broader community.

The presence of the construction workforce is unlikely to substantially alter the existing demographic balance of Glenden as the construction workforce is likely to exhibit relatively young median age and constitute a relatively higher proportion of males - both of which are demographic features of the population of Glenden. Population and demographic effects associated with the construction workforce represent an impact of low sensitivity and moderate magnitude, resulting in a significance rating of **low**.

### 8.1.2 Operations

The workforce required to operate the mine builds up relatively quickly as the mine and first coal handling preparation plant become operational. After reaching an initial peak of 495 personnel in project year 5, the operations workforce then grows again in project year 15 as the second coal handling preparation plant comes on line. By project year 18, the operations workforce reaches its overall peak of 545 personnel.

The operations workforce is comprised of three primary sectors:

- Operations management and supervision – peak of 75 personnel.
- Open cut mine operations – peak of 400 personnel.
- Coal handling preparation plant – peak of 70 personnel.



By project year 40 it is anticipated that parts of the mine will begin winding down with the workforce reducing to 265 personnel by project year 46. In project year 47 and 48 the mine will be decommissioned and rehabilitate. This will require an estimated workforce of 115 personnel.

Glenden residents are predominantly employees or families of employees of Xstrata and while employment opportunities will be open to local residents it is highly likely that the majority of the operations workforce for the project will need to be sourced from outside the town.

As outlined in the Workforce Accommodation Strategy (Section 0) Byerwen Coal intends to provide a range of accommodation options so that the workers sourced from outside Glenden have a genuine choice of where they would like to live – either locally or remotely in which case they will be able travel in and out of town for their shift rosters.

The percentage of workers who will choose to live locally in Glenden will not be known until the workforce is employed and the workers make their choice of whether to live in town or commute to work. It is particularly difficult to assume this percentage based on existing conditions as it is currently a single-mine town and the shift to a town with multiple industrial developments, including the Byerwen Mine, is likely to influence the number of people choosing to live in the town. This ratio may vary from time to time throughout the life of the mine.

With this in mind, Byerwen Coal is planning its initial quantities of operational worker accommodation based on an assumption that 30% of workers might choose to live in Glenden with 70% commuting at the start and end of shift rosters and staying in accommodation villages during their roster. Those employees who choose to reside permanently in Glenden may choose to reside with family members or partners. Accommodation will provide for the mix of family, couple and single person households.

It is assumed that the mix of households for those employees who choose to reside permanently in Glenden will exhibit similar demographic characteristics to that of the existing population, with:

- 45% being families with children (assumed 4 person household).
- 22% being in couples (assumed 2 person household).
- 33% being single.

Applying the assumptions outlined above, for the initial phase of operations (project years 1- 15) it is assumed 149 employees of the 495 total workforce will choose to reside locally. With the addition of family members and the partners of these employees, the initial phase of operations will result in a total resident population impact in Glenden of 383 persons. This represents an increase of approximately 21% to the 2011 population of Glenden.

When the project becomes fully operational and the workforce comprises 545 personnel, it is assumed an additional 15 employees will choose to reside locally. Using the demographic characteristics above this results in an additional 39 persons living in Glenden, when taking into account employee families and partners. Therefore the total predicted resident population impact associated with the operations workforce is 421 persons. This represents an increase of 23% to the 2011 population of Glenden.

In addition, the economic stimulation generated by the project as a result of wages along with additional demand for goods and services will generate additional 'service' employment and subsequent population growth. Employment multipliers associated with mining projects will vary according to the attributes of a particular locality. In the case of Glenden, it is expected that service population growth may be inhibited by the lack of an open housing market as housing is predominantly provided by mining employer organisations. This results in a very small supply of

rental accommodation and uncertainty as to the true value of housing stock, which may serve to inhibit investment. Taking these considerations along with the remote locality of Glenden into account, a conservative multiplier of 0.3 is adopted (i.e., for each operations employee that resides in Glenden a 0.3 FTE will be created). Adopting the same demographic characteristics as those outlined above results in additional service population growth in Glenden of 116 (45 FTE positions) for the first phase of operations and 126 (49 FTE positions) when the project is fully operational.

A summary of expected population effects associated with the operations workforce is provided in Table 8-2.

**Table 8-2: Population Effects (Operations Workforce)**

Operational Workforce	545 employees
% likely to reside locally	30%
% likely to be existing residents	0%
Number of operational employees re-locating to local area	164 employees
Number of multiplier FTE positions created in local area	49
Proportion of new residents with families	45% (96 families/ 384 persons)
Proportion of new residents in couples	22% (47 couples/ 94 persons)
Proportion of new residents single	33% (70 persons)
Total estimated population increase	548 persons

The estimated addition of 548 permanent residents represents a 31% increase to the existing population of Glenden. Population and demographic effects associated with the operations workforce have a moderate level of sensitivity and moderate level of magnitude and therefore a **moderate** level of significance.

Change to the present demographic characteristics of the resident population of Glenden through both the construction and operation phases is assessed as being of low sensitivity, low magnitude and thus is of a **negligible** social significance.

## 8.2 History and Heritage

The footprint of the project will extend into agricultural land and thereby affect the heritage of agricultural land usage and properties. QCoal has purchased 'Suttor North' and is in negotiations with the owner of the 'Suttor Creek' property. Two other agricultural properties, which will be to some extent affected by the project, are Wollombi Station, which is owned by GVK (Mining Company) and Byerwen Station, which is owned by Xstrata. When phase 2 (northern) operations eventuate, two additional properties will be affected to some degree, i.e., Fig Tree Station and Mount Lookout Station.

The town of Glenden will be expanded to provide housing and accommodation for the construction and operations workforces. These activities will affect surrounding properties but, given that Glenden is an existing mining town with the housing stock provided by Xstrata for employees of the Newlands mining operations, the activities are likely to be compatible with the town as it presently operates. Loss or destruction of items or areas of heritage value due to the provision of accommodation is an issue of low sensitivity and low magnitude and carries an impact of **negligible** significance.

Given that Glenden is an existing town in a rural community there is a likelihood of a sense of diminished rural and agricultural identity with the increase in the population of the town. This is an issue of high sensitivity but low magnitude and is thus assessed as being of **moderate** social significance.

### 8.3 Indigenous Community

Aboriginal and Torres Strait Islander peoples are a uniquely important stakeholder in Australian society. In contemporary Australian society Indigenous people demonstrate lower life expectancy, poorer self-assessed health, higher psychological distress, lower levels of education and literacy, and poorer social and emotional wellbeing than non-Indigenous Australians. Indigenous peoples also are more likely to live in areas of socioeconomic disadvantage, have a reported disability and long-term health conditions than non-Indigenous people.

A significant contemporary impact upon indigenous people will be the manner in which the native claim titles within the mining lease are resolved. In addressing this impact, QCoal will need to manage the relationships with the indigenous people in the area and seek opportunities to involve them in all relevant opportunities such as employment and skill development.

Thus the project has capacity to impact on Indigenous people residing in Glenden and the broader region in a positive way via the provision of employment, education and training opportunities. The provision of such opportunities is assessed as being of moderate sensitivity and of moderate magnitude and thus is considered to be a positive impact of **moderate** significance.

The potential for the project to impact upon Indigenous people's artefacts and sites in Glenden and the regional area is an impact of moderate sensitivity and moderate magnitude. QCoal has entered into Cultural Heritage Management Plans with the relevant Aboriginal Parties for the project area being the Birriah People and Jangga People. The impact is therefore assessed as being of **moderate** significance.

In addition, the project has the potential to provide increased business opportunities for Traditional Owners. This positive impact is assessed as being of moderate sensitivity and of moderate magnitude and thus is considered to be a positive impact of **moderate** significance.

### 8.4 Housing and Accommodation

The population effects associated with any project have the potential to impact upon the local availability and affordability of housing and accommodation. In Australian communities, housing typically carries levels of meaning greater than merely the provision of adequate shelter, although this is one of our most basic social needs. The concept of the home and home ownership carries cultural values and any threat to these values carries a concomitant degree of sensitivity.

In Glenden, a high percentage of residents rent their homes (between 75 - 95 per cent (ABS, 2006)); which is higher than the Australian average of 27.2 per cent. Of note is that rental tenure in the region is 31.9 per cent and Collinsville it is 40.9 per cent (ABS, 2006), indicating a reliance on renting among a mining dominated population. This is not always by choice, as in Glenden's case, Xstrata owns nearly all of the dwellings. As such, the housing market in Glenden is an artificial one.

The concept of home and home ownership is not of immediate relevance to Glenden because it is a mining town in which accommodation is provided to employees. As such the project will not have any material impact on the existing housing affordability. The existing housing and

accommodation capacity in Glenden does not have the capability to meet project accommodation demands.

The need to provide temporary accommodation in Glenden to meet the needs of the construction phase is an issue of moderate sensitivity and moderate magnitude, and is thus assessed to be of **moderate** significance.

The requirement for permanent accommodation for employees entering the town and the broader region during operations is assessed as being of high sensitivity, moderate magnitude and therefore **high** social significance.

## 8.5 Residential Amenity

Residential amenity links with environmental health and refers to all aspects of the natural and built environment that may affect human health and wellbeing. This includes factors such as town facilities plus air quality, noise levels, contamination of land or water sources, offensive odours or lighting and any other environmental factors which have the potential to alter the health status of members of the community.

There are a number of aspects associated with construction of housing and accommodation that have the potential to affect the prevailing level of environmental health in the town of Glenden. Residential amenity is likely to be affected through increased vehicular movements in residential areas in Glenden, particularly during the proposed shift changeover times of 6am and 6pm, as well as changes to the existing urban design of Glenden, and increased demand upon municipal infrastructure such as roads and facilities.

These residential amenity issues have been ranked as being of moderate sensitivity and of moderate magnitude, and are thus assessed to be of **moderate** significance.

## 8.6 Employment, Education and Training

The construction phases will generate continued employment in Glenden and the broader region. This positive impact has been assessed as being of moderate sensitivity and moderate magnitude, therefore it is of **moderate** social significance.

The operations phases of the project will also generate and maintain employment in Glenden and the region. Due to the relative longevity of operations employment in comparison with construction work which is usually undertaken by contractors, this impact has been assessed as positive and as being of high sensitivity, moderate magnitude, and thus of **high** social significance.

Coupled with the creation of employment is the potential of the project to contribute to the creation of a regional skills shortage. This negative impact has been ranked as being of moderate sensitivity and of moderate magnitude, and is thus assessed to be of **moderate** social significance.

The project will be of benefit to Glenden State School, a preschool to year twelve facility, which has capacity for increased enrolments, with buildings available for use and the staff encouraging of new enrolments. The project will also have a direct impact on education and training in the study area through the creation of education and employment opportunities and the stimulation of training and skills development. Such project effects are a positive impact upon the social wellbeing of the community.

Associated with the creation of employment opportunities, is the stimulation of training and skills development, both locally in Glenden and in the broader region. Residents in the broader region will become aware of the employment opportunities which the project will create and will seek to develop the skills and capabilities required to attain such employment. Such a stimulation of demand for specialist training and skills development may be met by either public (schools, technical colleges etc.) or private sector providers, and training courses to be offered by the project.

Targeted training courses may be provided through Vocational and Educational Training organisations such as TAFE and or other private accredited training providers. Members of the regional communities most in need of training opportunities, such as unemployed persons and underemployed sectors of the community, stand to benefit if training is orientated so as to encourage participation. The stimulation of training and skill development opportunities is a positive social impact that has been ranked as being of moderate sensitivity and of moderate magnitude, and is thus assessed to be of **moderate** social significance.

## 8.7 Local Economic Conditions

Largely due to the competitive wages and conditions within the mining sector, Glenden ranks above the state average in most Socio-Economic Index For Areas (SEIFA) quintiles (the base indicator of socio-economic advantage and disadvantage). By all major economic indicators, the immediate Byerwen area and broader region has virtually full employment and workers on average have good wages and entitlements. In Glenden the unemployment rate is 0.62% compared to the Queensland rate of 5.6% (2011, OESR).

The project will have a direct impact on local economic conditions in Glenden and the broader region through the creation of opportunities for local businesses, particularly during the construction and operations phases. Such positive project effects are assessed as being of moderate sensitivity and moderate magnitude, and thus of **moderate** social significance for the community of Glenden and the broader region.

In addition, the project is likely to produce an injection of wealth into the local and regional economy during the construction and operations phases. This positive impact has been assessed as being of high sensitivity and moderate magnitude, and thus of **high** social significance.

Due to numerous competing projects and existing high levels of demand for skilled labour, the project may contribute to the constrained availability of certain skills in the local and regional area. Such a constrained labour market may affect local businesses in terms of attracting and retaining skilled staff. Despite the history of Glenden as a mining town, this potentially negative effect is considered to have a moderate level of sensitivity and a moderate level of relative magnitude and subsequently a significance rating of **moderate**.

Further negative effects are likely to arise due to the potential for an increase in the cost of living in the local area during the construction and operations phases. This negative impact has been assessed as being of moderate level of sensitivity and a moderate level of relative magnitude and subsequently a significance rating of **moderate**.

## 8.8 Health and Safety

The larger population drawn to Glenden via the project will have an effect on the community due to an increased number of shift workers living in the town that has the potential to create traffic-related incidents during the construction and operations phases. This negative impact has been

ranked as being of moderate sensitivity and of moderate magnitude, and is thus assessed to be of **moderate** social significance.

Social health effects may be generated via an increase in challenges to family life particularly where workers are engaged in shift work and commuting arrangements. This negative impact has also been ranked as being of high sensitivity but of low magnitude, and is thus assessed to be of **moderate** social significance.

Due to the increase in population there is also likely to be an increase in real or perceived deterioration in the safety and security currently enjoyed by Glenden residents. This negative effect is considered to have a moderate level of sensitivity and a moderate level of relative magnitude, and subsequently a social significance rating of **moderate**.

## **8.9 Health and Community Infrastructure**

Community health and wellbeing refers to influences other than direct environmental health factors that contribute to the way in which people interact with and enjoy the community they live in. Community health and wellbeing also relies on the provision of adequate infrastructure and the social services required to support a community. At a basic level this refers to feelings of inclusiveness and a sense of community connection. On the whole, people enjoy living in a community which is cohesive, resilient and provides an environment with infrastructure and social services that are conducive to attaining a sense of fulfilment.

### **8.9.1 Health Services**

The increase in population created by the project construction and operational workforces will have an effect on the demand for medical health services including allied health, mental and emergency health services located in Isaac LGA. This increased demand will therefore contribute to a shortage of supply of such services.

The increased demand on health services in Glenden has been assessed as being of high sensitivity and of moderate magnitude and thus of **high** social significance.

### **8.9.2 Essential Services**

Essential services such as water supply, sewage, electricity, telecommunications and waste management will typically be limited in terms of the number of people it has the capacity to supply. In the case of Glenden, the capacity of essential services corresponds to a population of 5,000. As the current population of Glenden is 1,793 the current essential services have the capacity to handle the increased demand associated with the population increase due to the project construction and operation workforces. Upgrades to the current essential services networks may however be required to service the permanent and temporary accommodation facilities associated with the project.

The increased demand on essential services in Glenden has been assessed as being of moderate sensitivity and of moderate magnitude and thus of **moderate** social significance.

### **8.9.3 Emergency Services**

There is likely to be an increased demand on emergency services in Glenden during the construction and operations phases. For example, regional emergency services such as ambulance, police and fire services may incur higher call out rates. With respect to SES, the stimulation of population and economic growth will ensure that the Department of Community Safety continues to support SES volunteers in the community.

This has been assessed as being of high sensitivity and of moderate magnitude and thus of **high** social significance.

#### **8.9.4 Education Services**

The influx of additional permanent residents to Glenden is likely to result in additional patronage of Glenden State School. As Glenden State School has the capacity to handle this additional patronage the project is expected to have a positive impact in terms of the increased demand on educational services which in turn supports the additional state government provided resources, educational choices and facilities. This positive impact has been assessed as being of high sensitivity and of moderate magnitude and thus of **high** social significance.

#### **8.9.5 Recreational Facilities and Services**

Recreation and leisure is associated with the provision of community and municipal infrastructure. An increased local population is likely to result in a revitalisation of the involvement and participation of residents in community life and recreational activities in Glenden with an accompanying increased usage of local recreational infrastructure. Whilst Glenden provides some recreational infrastructure this may become utilised to a higher degree than present and subsequently require sufficient maintenance and upkeep. Other forms of recreational infrastructure such as increased sporting and leisure facilities may need to be supplied to cater to the differing needs of families in contrast to a predominantly young, male workforce. The project is likely to have a positive impact on the community due to increased usage of recreational facilities and services. This impact has been assessed as being of moderate sensitivity and moderate magnitude, and thus is of **moderate** social significance.

#### **8.9.6 General Community Infrastructure**

The project is likely to have a positive impact on the community due to increased usage of general community infrastructure such as halls and meeting spaces due to increased participation by new members of the workforces. This positive impact has been assessed as being of moderate sensitivity and moderate magnitude, and thus is of **moderate** social significance. At the same time, the project is also likely to have a negative impact on the community due to increased usage of general community infrastructure such as halls and meeting spaces, particularly during the operations phase. Increased usage is likely to result in insufficient space, and wear and tear on facilities. This negative impact has been assessed as being of moderate sensitivity and moderate magnitude, and thus is of **moderate** social significance.

#### **8.9.7 Land Allocation for Social and Community Services**

A further negative impact is the lack of land allocation for the provision of social and commercial services that will support the sense of social identity and cohesion of the current community. This negative impact has been assessed as being of moderate sensitivity and moderate magnitude, and thus is of **moderate** social significance.

### **8.10 Social Identity and Cohesion**

New permanent residents in the community, particularly in a town of the size of Glenden, can alter the existing social balance. The project is likely to create a negative impact during the operations phase in terms of changing the existing social identity of Glenden. This impact has been assessed as being of moderate sensitivity and moderate magnitude, and thus is of **moderate** social significance.

Changes to Glenden may have a positive effect over time. A new mine with an intended 50 year life will provide continuity of employment prospects and is perceived as a mechanism to keep families in the district. Residents have advised during consultation that would like the population to grow via the introduction of new industry accompanied by improved services and social infrastructure. There is likely to be a reinvigoration of the Glenden community with the influx of the project workforce. The project is likely to have a positive impact on the town of Glenden with respect to the supply of social infrastructure and services as it will reinvigorate existing education and recreational infrastructure and stimulate an increase in the supply of medical and emergency services. This is a positive impact that has been assessed as being of moderate sensitivity and moderate magnitude, and thus is of **moderate** social significance.

The relatively large population increase associated with the construction and operations phases of the project has the potential to reduce community cohesion and negatively affect perceptions of safety and security, particularly if there is an associated increase in anti-social behaviour perpetrated by employees of the project. However, the staging of the project into two phases provides some relief from the potential development of an 'us and them' culture. While the influx of new residents to Glenden is predominantly a positive impact, such issues carry a moderate degree of sensitivity and moderate magnitude and have been rated as being of **moderate** significance.

Social identity and cohesion also includes the way in which residents perceive the level of social and commercial services on offer to them. Where they perceive their facilities and services as no longer capable of fulfilling the needs of a growing population there is likely to be a negative impact. This has been assessed as being of moderate sensitivity and moderate magnitude, and thus is of **moderate** social significance.

## 8.11 Summary of Impacts

A summary of potential social impacts associated with the project is provided in Table 8-3 below.

**Table 8-3: Summary of Potential Social Impacts**

Potential Impact	Phase	Positive/ Negative	Sensitivity	Magnitude	Significance
<b>Demographics and Demographic Change</b>					
Population growth associated with construction workforces.	Construction	Negative	Low	Moderate	Low
Population growth associated with operation workforces.	Operation	Negative	Moderate	Moderate	Moderate
Change to demographic characteristics of resident population of Glenden.	Construction Operation	Negative	Low	Low	Negligible
<b>History and Heritage (Non-Indigenous)</b>					
Loss or destruction of items or areas of heritage value.	Construction Operation	Negative	Low	Low	Negligible



**Table 8-3: Summary of Potential Social Impacts (cont'd)**

Potential Impact	Phase	Positive/ Negative	Sensitivity	Magnitude	Significance
<b>History and Heritage (Non-Indigenous) (cont'd)</b>					
Diminished rural and agricultural identity resulting from direct land use changes and development of a non-agricultural enterprise.	Construction Operation	Negative	High	Low	Moderate
<b>Indigenous Community</b>					
Increased employment, education and training opportunities.	Construction Operation	Positive	Moderate	Moderate	Moderate
Increased business opportunities for Traditional Owners.	Construction Operation	Positive	Moderate	Moderate	Moderate
Loss or destruction of items or areas of heritage value.	Construction Operation	Negative	Moderate	Moderate	Moderate
<b>Housing and Accommodation</b>					
Increased temporary accommodation requirements.	Construction	Negative	Moderate	Moderate	Moderate
Increased permanent accommodation requirements.	Operation	Negative	High	Moderate	High
<b>Residential Amenity</b>					
Amenity effects associated with increased traffic in residential areas.	Construction Operation	Negative	Moderate	Moderate	Moderate
Changes to existing urban design of Glenden.	Construction Operation	Negative	Moderate	Moderate	Moderate
Increased demand on existing municipal infrastructure.	Construction Operation	Negative	Moderate	Moderate	Moderate
<b>Employment, Education and Training</b>					
Generation of construction employment.	Construction	Positive	Moderate	Moderate	Moderate
Generation of operations employment.	Operation	Positive	High	Moderate	High
Stimulation of training and skill development opportunities.	Construction Operation	Positive	Moderate	Moderate	Moderate
Contribution to regional skills shortage	Construction Operation	Negative	Moderate	Moderate	Moderate
<b>Health and Safety</b>					
Traffic-related incidents due to increased population.	Construction Operation	Negative	Moderate	Moderate	Moderate

**Table 8-3: Summary of Potential Social Impacts (cont'd)**

<b>Health and Safety (cont'd)</b>					
Social health effects associated with commuting and shift work.	Construction Operation	Negative	High	Low	Moderate
Real or perceived deterioration of the safety of Glenden.	Construction Operation	Negative	Moderate	Moderate	Moderate
<b>Health and Community Infrastructure</b>					
Increased demand on health services.	Construction Operation	Negative	High	Moderate	High
Increased demand on essential services.	Construction Operation	Negative	Moderate	Moderate	Moderate
Increased demand on education services.	Operation	Positive	High	Moderate	High
Increased demand on emergency services.	Construction Operation	Negative	High	Moderate	High
Increased usage of recreational facilities and services.	Operation	Positive	Moderate	Moderate	Moderate
Increased usage of general community infrastructure (halls, meeting spaces etc.)	Operation	Positive & Negative	Moderate	Moderate	Moderate
Lack of land allocation for provision of social and commercial services.	Operation	Negative	Moderate	Moderate	Moderate
<b>Social Identity and Cohesion</b>					
Social identity of Glenden changed.	Operation	Negative	Moderate	Moderate	Moderate
Reinvigoration of the Gleneden community	Operation	Positive	Moderate	Moderate	Moderate
Social friction resulting from creation of an 'us and them' dynamic.	Operation	Negative	Moderate	Moderate	Moderate
<b>Local Economic Conditions</b>					
Generation of opportunities for local businesses.	Construction Operation	Positive	Moderate	Moderate	Moderate
Injection of wealth into local and regional economy.	Construction Operation	Positive	High	Moderate	High
Difficulties attracting and retaining skilled staff.	Construction Operation	Negative	Moderate	Moderate	Moderate
Increase to cost of living in local area.	Construction Operation	Negative	Moderate	Moderate	Moderate

## **9. MANAGEMENT, MITIGATION AND ENHANCEMENT MEASURES**

### **9.1 Workforce Recruitment and Management Strategy**

#### **9.1.1 Workforce Recruitment Strategy**

QCoal encourages local and regional residents to take up employment opportunities at its mines to assist in staff retention and strengthen the local communities and economies in which it operates. QCoal's contractors employ the majority of the workforces and they will develop workforce management plans to outline their approach to workforce recruitment and management.

QCoal will generate new opportunities to assist with skills development, such as educational bursaries through its community grants program. Contractors are expected to enhance employment opportunities for all groups including underrepresented groups by providing training, skills development and employment organisations with regular updates about workforce requirements. Only contractors with a commitment to implementing skills and training programs will be considered in the selection for Byerwen Mine Project operations.

The contractors' workforce management plans should include:

- Likely locations from which the workforce could be sourced.
- Contact details for local recruitment and skills development organisations with which partnerships would be established to ensure awareness of requirements and opportunities.
- Equal opportunity employment policy.
- Details of opportunities for structured training (e.g., apprenticeships, traineeships, graduate support programs) related to the workforce needs of the project.

Within the workforce management plan it is expected local and regional employment opportunities will be maximised by:

- Timely and regular communication of employment opportunities in each phase of the project and advice as to how such opportunities may be secured to members of the local and regional community.
- Notification of opportunities to relevant schools and TAFE colleges for graduate students forward planning.
- Collaboration with the Department of Aboriginal and Torres Strait Islander and Multicultural Affairs (DATSIMA) to inform about skills required and support matching of those with indigenous residents of the local and regional area.
- Ongoing consultation with Skills Queensland to assess employment requirements in the region.
- Assistance from Skills Queensland to secure funding for local and regional employees, where available.
- Collaboration with relevant agencies to promote access to nationally accredited courses for staff and local job seekers.

- Collaboration with relevant training providers to identify skills gaps and promote targeted training programs.
- Investigation of partnership arrangements with registered training organisations (RTOs) to conduct training for local businesses in procurement and HSSE standards.
- Provision of updates on required roles where there are shortages by:
  - Consultation with DETE and Skills Queensland.
  - Liaison with local, regional and state TAFE colleges offering the relevant certificate courses.
  - Liaison with James Cook University in Townsville and other Queensland based universities offering the relevant professional degree courses.
- Provision of in-house training where required.
- Information meetings on special topics if required.
- Forward planning to backfill from the local and regional employment base.

### **9.1.2 Workforce Management Strategy**

QCoal's workforce management strategy, which will be consistent with the selected contractors approach, includes consideration of the following elements:

#### **Recruitment Strategy/Workforce Sourcing**

Byerwen Coal's contractors will be responsible for the recruitment of the majority of the workforce. With respect to sourcing the workforce, the main populated area in vicinity of the work site is the town of Glenden. Glenden residents are predominantly employees or families of employees of Xstrata and while employment opportunities will be open to local residents it is highly likely that the majority of the workforce for both phases of the project will need to be sourced from outside the town.

Byerwen Coal intends to provide a range of accommodation options so that the workers have a genuine choice of where they would like to live – either locally or remotely in which case they will be able travel in and out of town for their shift rosters.

The broader region from which workers may be sourced include the surrounding towns of Nebo, Moranbah, Collinsville, Bowen, Proserpine, Airlie Beach, Ayr and Home Hill as well as population centres including Mackay and Townsville. It is anticipated that workers in these locations who do not choose to live locally will drive or be transported by bus into town at the start of their shift roster and stay in purpose-built, temporary accommodation villages for the duration of their shift.

In addition, Byerwen Coal will link with the Newland's Detailed Mine Closure Plan, which is to be completed five years prior to the proposed closure of that mine, to attract members of the workforce who will be leaving the Newland's project and searching for employment in the region.

Byerwen Coal's contractors will ensure relevant organisations such as Skills Queensland, WM&D, FIFO Coordinators and employment agencies have access to workforce profile information such as that contained within this report and will continue to liaise about other opportunities that could be developed to achieve a higher proportion of local and regional employees.

Byerwen Coal will aim for a target of 80% of its workforce to live within the Mackay, Isaac and Whitsunday regions.

## **Indigenous Employment**

Byerwen Coal will encourage its contractors to be culturally sensitive in terms of communication and process to the recruitment of indigenous people and to mentor, up-skill and retain indigenous employees. Byerwen Coal will require that the principal mining contractor provides the opportunity for two indigenous people to be employed at the Byerwen Mine as well as adhere to the commitments set out in the Cultural Heritage Management Plans.

Byerwen Coal will continue to work in collaboration with relevant traditional owners to increase the number of indigenous workers at the mine and will establish a revised employment target once the mine is operational. This target will be set and amended based on a number of factors including:

- Response levels by indigenous workers to advertised employment opportunities.
- Response and performance in relation to mentoring and training programs.
- Existing number of indigenous employees at the mine.
- Average duration of employment.

## **Employment of Women**

QCoal is committed to supporting and encouraging its female workers to continue a career in mining and related disciplines. QCoal wishes to encourage more women into these careers and to increase the proportion of female workers at its mines by promoting career development opportunities for women.

Byerwen Coal will establish an employment target for women once the mine is operational. This target will be set and amended based on a number of factors including:

- Response levels by women to advertised employment opportunities.
- Response and performance in relation to employee mentoring and training programs.
- Existing number of female employees at the mine.
- Average duration of employment.

## **Employment Opportunities for Persons with a Disability**

Byerwen Coal will encourage its contractors to liaise with disability employment organisations to assist job seekers with disabilities, learning difficulties, injury or medical condition gain employment at the mine.

## **Workers Code of Conduct**

A code of conduct will be developed for both the construction and operational workforce. The code of conduct will be linked to employee contract conditions and will include:

- Compliance with relevant state, territory and Commonwealth laws.
- 'Zero tolerance' for drug and alcohol use whilst working monitored through mandatory drug and alcohol testing.
- Minimum workforce behavioural standards with consequences for non-compliance including dismissal for serious non-conformances or repeated offences.
- Being respectful of the communities within which they work and visit and refrain from any behaviour which could be harmful and/or result in negative impacts on the communities.
- Using work vehicles appropriately and in accordance with the company's policies regarding transportation to and from the site.

All workers will be required to adhere to the code of conduct when on shift, staying in contractor provided accommodation, travelling to and from accommodation locations and when undertaking work related responsibilities (e.g., when in uniform or attending work related functions). The code of conduct will be applicable to all employees, contractors, sub-contractors and consultants with penalties for non-adherence.

### **Worker Health, Safety and Wellbeing**

In order to retain and attract workers and provide long term career pathways Byerwen Coal and its contractors will include conditions around worker health, safety and wellbeing strategies in their employment approach. These would include, but are not limited to:

- Provision of medical services for workforce while at work.
- Provision of transport from airports/key locations to mine/accommodation facility at the start and end of shift rosters.
- Provision of transport between accommodation facilities and the mine for the daily shifts.
- Access to counselling services.
- Development and implementation of safety and health policies.
- Provision of information about programs such as:
  - Financial planning and management.
  - Superannuation.
  - Housing or other financial investments.
  - Health and fitness programs.
  - Fatigue management.
- Health care providers and other representatives will be invited to make presentations to workers to educate on preventative health and wellbeing initiatives.

In addition to contractor responsibilities QCoal will support programs that address needs of the workers and their families who may choose to relocate to live locally. These programs will include:

- Workforce integration and cohesion programs through increased support and partnership with local community organisations contribution to initiatives to improve the liveability of local towns for example providing assistance to organisations that organise and promote community activities and events.
- Provision of information in induction packs to enable workers and their families to collate their health records providing medical staff with critical information prior to any medical incident.

### **Education and Training**

Byerwen Coal will maintain regular liaison with educational and training organisations about future workforce requirements to assist them in shaping their programs to respond to demand. There are numerous organisations and facilities offering educational and training services in the region, including in Bowen, Townsville and Mackay, such as the Barrier Reef Institute of TAFE and Registered Training Organisations. These facilities offer courses ranging from basic certification courses to apprenticeships and associate degrees. In addition federal and state government programs are available to assist with fees and other expenses. However, in order to attract and retain staff and ensure that an appropriately skilled workforce is engaged, Byerwen Coal will encourage the contractors to provide project-specific training opportunities.

The principal mining contractor will be required to:

- Maintain regular contact with organisers of training programs for up-skilling workforce, obtaining appropriate health and safety education and appropriate certification.
- Provide the opportunity for at least two apprentices per year across their operations.
- Provide employee induction and toolbox meetings (covering aspects of worker behaviour, company expectations, community perceptions of behaviour, health record, etc.).

Byerwen Coal will aim to support trainees and graduate students in its operations as well as offer a target of two education grants per year for tertiary studies. QCoal currently supports eight students in the Collinsville area with education grants and this program will be expanded to include students from Glenden and the surrounding region. The program will include the opportunity for students to undertake vacation work to build their experience in readiness for graduation.

Pathways and initiatives to support the development of students from Glenden State School in particular will be one of the key ways in which Byerwen Coal will create education and training opportunities in addition to the education grants program.

### **Indigenous Education and Training**

Byerwen Coal is committed to improving opportunities for indigenous people and its contractors will:

- Maintain regular contact with organisers of indigenous training programs for up-skilling workforce, obtaining appropriate health and safety education and obtaining the appropriate certification.
- Investigate a pathway between indigenous school students in relevant areas and work opportunities at the mine.
- Provide employee induction and toolbox meetings (covering aspects of worker behaviour, company expectations, community perceptions of behaviour, health record, etc.).
- Continue its existing Jangga educational grants program, with a target of awarding two education grants each year (there are currently two students on the program).

### **9.1.3 Regional Procurement Program**

Along with increased local and regional employment opportunities the project will also provide local and regional business the opportunity to supply goods and services to construction and operations contractors.

#### **Australian Industry Participation Policy**

QCoal encourages its contractors to maximise local industry participation and give preference to suppliers of Australian-manufactured equipment that is competitively priced and complies with the relevant standards and specifications via best practice approaches.

Byerwen Coal will source contractors in line with its Australian Industry Participation Policy to construct and operate the mine and coal handling preparation plant. Contractors will be required to outline how they will source sub-contractors with a focus on local and regional suppliers as part of the tendering process.

Byerwen Coal and/or its contractors will implement procurement procedures to include the following provisions:

- Promote supply opportunities to suppliers within the region and provide local industry with full, fair and reasonable opportunity to provide goods and services.
- Liaise with Industry Capability Network (ICN) Gateway and Whitsunday Industrial Workforce Development (WIWD) program to identify pre-qualified suppliers and to provide them the opportunity to submit expressions of interest and/or tenders.
- Promote the ICN Gateway and WIWD to local and regional suppliers.
- Provide notification of work packages to ICN Gateway and WIWD as they become available.
- Provide project progress updates to local and regional suppliers via email updates and presentations to industry groups (such as MAIN, Major Projects Summit, MESCA).
- Continue to support economic development initiatives and work with relevant organisations that assist local businesses to identify and prepare for business opportunities.
- Monitor and evaluate the effectiveness of the program through a count of the number of suppliers from the local and regional areas.

### **Selection Criteria**

Byerwen Coal and/or its contractors will engage product and service providers on the basis of the following criteria:

- Safety - all products will be assessed in relation to compliance with the *Coal Mining Safety and Health Act 1999* (Qld) and all its regulations.
- Performance – assessed on capacity to match or exceed specification and/or performance standards.
- Environment – products will be assessed with regard to relevant environmental considerations.
- Life-cycle costing – analysis to ensure that optimum cost efficiencies are obtained for the projected life of capital equipment items.
- Capital cost comparison – assessed on capital cost considerations including manufacture, supply, installation and commissioning costs, and for imported goods in regard also to risk associated with transportation and currency exchange.
- Availability – assessed on availability of the equipment, parts and services for operation, repair and maintenance.
- Proven reliability and on-time delivery.
- Demonstration that they have the resources available to perform the work required.
- Best practice processes to deliver safe, efficient and socially responsible services.

### **Indigenous Business Opportunities**

In addition to providing opportunities to the traditional owners as outlined in the Cultural Heritage Management Plan, QCoal is improving business opportunities for indigenous people by supporting a Leighton Contractors' indigenous business development initiative. This initiative provides assistance to indigenous groups interested in establishing business processes and



operations in order to be successful in securing sub-contracts on projects. Leighton Contractors is in the process of establishing the relationship for this initiative with Birriah People and Jangga People - the traditional owners of land associated with one or more QCoal projects.

QCoal's support for this program includes ongoing input into the development of the program, identification to Leighton Contractors of Birriah and Jangga people as potential beneficiaries of the program and coordination of site visits to QCoal's operations and developments for Leighton Contractors' senior management to assist in program development. QCoal will continue to liaise with program coordinators to inform them of business opportunities at the mines.

### **Contractors' Conditions of Engagement**

Byerwen Coal's construction and mining contractors' contract documents will include the Environmental Authority, the SIMP and the relevant Cultural Heritage Management Plans. Contractors will be commercially bound to comply with the conditions of these authorities and plans and will regularly report on their performance with respect to the requirements of these authorities and plans.

QCoal selects contractors with proven track record in successfully delivering mining contracts and with aligned values including a demonstrated commitment to best practice in workplace safety, training and development initiatives, workforce wellbeing and management, equal opportunity employment processes to be inclusive of under-represented groups, the local and regional economy and to being environmentally and socially responsible.

## **9.2 Measures to Address Potential Impacts**

This section provides details on management, mitigation and enhancement measures relevant to identified social impacts associated with the project. Potential measures which address identified impacts have been derived through the following processes:

- Direct consultation with the affected community.
- Engagement with associated key stakeholders including state and local government agencies.
- Examination of project impacts in the context of existing social conditions.

Mitigation measures have been identified for all impacts on the social environment which were assessed as having a moderate, high or major level of significance, as provided in Table 8.1. Management, mitigation and enhancement measures are presented in this section under applicable impact categories.

Key to the effectiveness of any management, mitigation or enhancement measure is implementation by the relevant responsible party or parties. Many issues and impacts associated with the social environment may only be effectively mitigated through a collaborative approach to implementation. Identification of the appropriate entity for implementation of management, measures and enhancement measures has been undertaken and is presented in the summary table (Table 9.1) which follows the discussion of respective impact categories.

### **9.2.1 Demographic and Demographic Change**

As outlined in Section 8, the project's construction and operations workforces are expected to generate an increase in the local population via employees residing in the potential accommodation village and families residing in Glenden. Such an influx of people into Glenden for the construction phases has been identified as an impact of **low** significance and has therefore not attracted specific mitigation measures beyond monitoring of statistical reports and ongoing stakeholder engagement.

Population growth associated with the operations phases has been assessed as being of a **moderate** social significance and thus requires mitigations addressing housing and accommodation, residential amenity, social identity and cohesion and community infrastructure. These are addressed in the sections below.

QCoal is highly cognisant of the need to work in partnership with local government, state government agencies and other proponents to derive and implement strategies that enable the provision and maintenance of a healthy and functioning social environment in Glenden. QCoal is actively working with Isaac Regional Council (IRC), Whitsunday Regional Council (WRC) and Xstrata to coordinate community and stakeholder consultation and address key emerging community issues.

### 9.2.2 History and Heritage

As outlined in Section 8, the project will generate negligible impacts in terms of loss or destruction of items or areas of heritage value because Glenden is an existing mining town and such change is unlikely to impact the history and heritage of the town. This issue is considered to be of **negligible** significance and has therefore not attracted specific mitigation measures beyond ongoing monitoring and stakeholder engagement.

However, the project is likely to alter land use in such a way as to diminish local residents' sense of rural and agricultural value and identity. This has been assessed as being of **moderate** significance and thus will be mitigated via a Residential Amenity and broader Social, Health and Community Infrastructure Action Plan (see SIMP – Appendix 10). In addition, QCoal will undertake to establish productive partnerships with the community through participation in the Xstrata initiated Glenden SEG, to integrate the workforce into the community through involvement and participation programs, to establish the QCoal Foundation (which will implement a program to fund and contribute to community development initiatives) and to develop and apply an Urban Design Master Plan to guide residential development.

### 9.2.3 Indigenous Community

The project has the capacity to positively impact on Traditional Owners in Glenden and Indigenous peoples in the region through the provision of increased employment, education, training and business opportunities. These impacts have been assessed as being of **moderate** significance. Although positive impacts, QCoal will undertake to enhance the benefits of the impact via the identification of appropriate methods to recruit and retain indigenous Australians in consultation with Traditional Owners, DATSIMA, Skills Queensland and other relevant indigenous community representatives. QCoal will also work to identify appropriate business opportunities and will invite applicable Traditional Owner Groups to apply.

The potential for the negative impact on Indigenous peoples in Glenden through impacts upon artefacts and sites in Glenden and the regional area, particularly in terms of loss or destruction of items or areas of heritage value has been assessed as being of **moderate** significance. It will be mitigated by the implementation Cultural Heritage Management Plans (CHMPs), a cultural awareness program as part of the Induction program for relevant staff and contractors to the project, and a chance finds protocol to manage new finds or human remains.

A Byerwen Coal bursary program has been established to support educational goals of Jangga students, with two students currently studying under the Byerwen Coal bursary program. A target of four bursaries will be awarded through this program each year.

#### 9.2.4 Housing and Accommodation

The project workforces associated with the construction and operations of the project will require adequate accommodation.

Throughout the construction phase there will be an increased demand for accommodation for short-term project contractors and other personnel associated with the project. This is an issue of **moderate** significance. The operations phase will generate an increased demand for permanent accommodation that has been assessed as being of **high** social significance. These impacts will be managed through implementation of the Workforce Accommodation Strategy outlined in Section 0.

#### 9.2.5 Residential Amenity

Project activities have the potential to cause a number of effects on the prevailing level of environmental health in Glenden. These effects include the likely increase in traffic in residential areas (particularly during shift changeover times at 6am and 6pm), potential changes to the existing urban design, and increase in demand on existing municipal infrastructure. The potential for project activities to generate these impacts has been identified as being of **moderate** significance.

QCoal will work in partnership with the Isaac Regional Council, the Queensland Department of Transport and the Queensland Police Service, where appropriate, to mitigate the negative impacts. QCoal will manage traffic related project effects via a reduction in traffic through provision of bus services for non-resident workforce shift rotations and for shift rotation (e.g. Mackay- Glenden) and daily mobilisation (accommodation-mine site), establishment of a road maintenance contribution scheme with relevant authorities and provision of adequate accommodation for all members of construction and operational workforces.

QCoal will manage changes to the urban design of Glenden via support for the Royalties for the Regions Program, specifically with respect to provision of funding to adequately maintain regional and local roads and with respect to provision of funding to enhance the liveability of Glenden.

QCoal will also implement their Workforce Accommodation Strategy, which includes formulation and application of a Glenden Urban Design Master Plan that provides the blueprint for residential growth and development in Glenden.

A code of conduct will also be developed for the project workforce and will be linked to employee contract conditions (refer Section 0). QCoal will also encourage integration of the workforce into the community through involvement and participation programs.

#### 9.2.6 Employment, Education and Training

One of the many positive impacts of the project will be the generation of construction employment, which has been assessed as an impact of **moderate** significance. QCoal will work to enhance this positive impact by the attraction of a skilled construction workforce through a rigorous contractor selection process, the provision of high quality workforce accommodation, the provision of equitable financial incentives, and the establishment of an equal opportunity policy.

The generation of operations employment has been assessed as a positive impact of **high** significance because it will enable a permanent workforce to settle in Glenden. QCoal will work similarly to enhance this positive impact via the attraction of a skilled operations workforce through a rigorous contractor selection process, advertising of employment opportunities and the application of a recruitment strategy as outlined in Section 9, provision of high quality workforce

accommodation and accommodation choice, provision of equitable financial incentives, and the establishment of an equal opportunity policy.

The project will also generate education and training opportunities in both the construction and operations of the first and second phases. The need for skills in certain fields will stimulate regional demand for relevant training. These positive project effects are of **moderate** significance and do not require mitigation. QCoal will take measures to enhance the positive impacts via the provision of traineeships and apprenticeships, and the promotion of employment opportunities and provision of workforce requirements to Skills Queensland, FIFO Coordinators and other relevant organisations.

The project also has the potential to contribute to regional skills shortages and to draw skills from other businesses, to generate opportunities for local businesses, and to increase the cost of living in local area, all of which have been assessed as being of **moderate** social significance. QCoal will work to mitigate the negative and enhance the positive aspects of these impacts via the implementation of a rigorous contractor selection process, assistance with skills development through provision of information to Skills Queensland and the promotion of employment opportunities. Byerwen Coal will also establish productive partnerships with the business community through the Glenden SEG.

To enhance positive impacts QCoal will also release work packages in accordance with the Australian Industry Participation Policy, advertise tender opportunities on the Industry Capability Network (ICN) Gateway, and will advertise business and tender opportunities locally.

### **9.2.7 Local Economic Conditions**

The project is predicted to generate a number of effects with respect to local economic conditions. This includes a positive impact on the generation of opportunities for local businesses, and the injection of wealth into the local and regional economies. These impacts have been assessed as being of **high** social significance and will be implementation of the Regional Procurement Program outlined in Section 0.

The positive impact are to be balanced against the negative impacts of increased competition for skilled labour in the region and the potential for an increase in the cost of living in the local area, both of which have been assessed as being of **moderate** social significance. The following mitigations are proposed. QCoal will assist in skills development through provision of information to Skills Queensland and other educational and training organisations, the promotion of employment opportunities and establish of productive partnerships with the business community through the Glenden SEG.

Byerwen Coal will maintain regular liaison with educational and training organisations about future workforce requirements to assist them in shaping their programs to respond to demand.

### **9.2.8 Health and Safety**

The project is likely to create increased challenges to family life for workers who commute to the mine site from Glenden, particularly where commuting is associated with shift work and additional commutes for non-residential workers. A potential for increased traffic related incidents due to the increase in population, for negative health effects associated with shift work, and real or perceived deterioration in the safety and security of Glenden as a community, have been assessed as impacts of **moderate** significance

Proposed mitigation measures on behalf of QCoal, in liaison with Queensland Health, to alleviate the magnitude of such impacts include:

- The provision on-site medical facilities for the project workforces.
- Development of a Safety Plan which implements preventative measures on and off site and includes an Emergency Management Plan to address emergency incidents.
- Support for the Royalties for the Regions Program (specifically with respect to provision of funding for adequate provision of health services).
- Collection of accurate baseline information relating to increased demands on health services so as to enable appropriate planning and support.
- Development and implementation of workforce wellbeing programs.
- Sponsorship of the Royal Flying Doctors Service.
- Support of auxiliary services such as mobile dental units.
- Establishment of productive partnerships with health service providers participation in the Glenden SEG.
- Enhancement of inductions and the screening of applicants to assess workers for their suitability to the lifestyle of shift work and inclusion of material in induction kits and application packages targeted at families to assist in any commuting arrangements.

### 9.2.9 Health and Community Infrastructure

Through stimulating population growth in Glenden, the project is likely to generate positive impacts via increased usage of a range of facilities and services and thus increased community participation. However, if not adequately planned for, increased usage could also result in service deficits for the local population.

The increased demand in health and emergency services is a potential negative impact that has been assessed as being of **high** significance.

The increased usage of general community infrastructure has been assessed as being of **moderate** social significance, as has the increased demand on essential services and the lack of land allocation for the provision of social and commercial services.

Negative impacts on health and community infrastructure are proposed to be mitigated by a broad range of actions which include:

- The provision of on-site medical facilities for project workforces.
- The development of a Safety Plan which implements preventative measures on and off site and includes an Emergency Management Plan to address emergency incidents.
- Support for the Royalties for the Regions Program (specifically with respect to provision of funding for adequate provision of health services).
- Collection of accurate baseline information relating to increased demands on health services so as to enable appropriate planning and support.
- Engagement of town planners to assess capacity of essential services networks in relation to project accommodation facilities with network expansion to be undertaken if required.

- Development and implementation of workforce wellbeing programs.
- Sponsorship of the Royal Flying Doctors Service.
- Support of auxiliary services such as mobile dental units.
- Establishment of productive partnerships with health service providers through participation in the Glenden SEG.

In addition, QCoal intends to establish the QCoal Foundation which will implement a program to fund and contribute to community development initiatives, education bursaries, and community development initiatives. QCoal also intends to establish productive partnerships with emergency service providers through the Glenden SEG, to develop a Safety Plan which implements preventative measures on and off site and includes an Emergency Management Plan to address emergency incidents, and to implement a Traffic Management Plan which includes actions to address potential safety issues due to increased construction traffic.

### 9.2.10 Social Identity and Cohesion

Through the stimulation of population growth in Glenden and the provision of accommodation for the construction and operations workforces, the project will provide a positive opportunity for community growth, increased involvement in community activities, and hope for new opportunities for residents in the broader region, specifically in relation to the operations phases when permanent workforces settle in the town. The positive impact of the potential for reinvigoration of the Glenden community has been assessed as being of **moderate** social significance.

However, there remains the potential for the emergence of a competitive 'us and them' dynamic that may cause friction between earlier residents and newcomers, for the potential for the social identity of Glenden to be altered due to growth and redevelopment, and for a lack of social and commercial services to develop. These impacts have been identified as being of **moderate** significance.

These impacts will be mitigated by the development of partnerships between QCoal, Glenden SEG, the Isaac Regional Council and the relevant services such as the Queensland Police Service. The mitigations will entail the integration of the workforce into the community through involvement and participation programs, the establishment of the QCoal Foundation to implement a program to fund and contribute to community development initiatives, and the development and application of an Urban Design Master Plan to guide residential development.

QCoal will also support the Isaac Regional Council to preserve agricultural heritage and identity through the Isaac Region 2020 Vision Community Plan.

## 9.3 Key Commitments

At the time of approval, Byerwen Coal will commit to the mitigation strategies outlined in the action plans contained within the SIMP. QCoal has a number of initiatives already in place or in the process of being developed that relate to the mitigation of identified potential social impacts. The commitment register will be made available at the time of project approval upon request and will be updated regularly. Some of the project commitments are presented in Table 9.1.

**Table 9.1: Overview of Social Commitments**

Key commitments	
<b>Workforce Accommodation Strategy</b>	<p><i>Workforce choice</i></p> <ul style="list-style-type: none"> <li>• Provide workers choice of where to live.</li> <li>• Encourage workers to live in Glenden by providing accommodation choice: <ul style="list-style-type: none"> <li>– Assist in management of employee turnover and absenteeism.</li> <li>– Strengthen community.</li> </ul> </li> </ul> <p><i>Provision of a mix of accommodation styles</i></p> <ul style="list-style-type: none"> <li>• Develop and obtain approval for a Glenden Urban Design Master Plan incorporating a mix of houses and duplexes to attract families and couples as well as single person's accommodation.</li> <li>• Develop accommodation facilities in Glenden for construction and operational workers, management staff and contractors.</li> <li>• Take into account functionality, comfort, recreational uses, access to services and integration into the existing community.</li> </ul> <p><i>Workforce Accommodation Strategy implementation</i></p> <ul style="list-style-type: none"> <li>• Byerwen Coal will acquire land with the assistance of Isaac Regional Council and Queensland Government for the development of the facilities and ensure the development meets the required local government approvals requirements.</li> <li>• Facilities will be of a standard commensurate with other facilities in the Bowen Basin.</li> <li>• Byerwen Coal will select accommodation development partners based on financial capacity and on experience in design, construction and operation of similar facilities in the Bowen Basin.</li> <li>• Byerwen Coal will appoint facility operators to manage and maintain the facilities to meet all relevant industry standards.</li> <li>• Byerwen Coal is seeking to acquire sufficient land in Glenden so that there is flexibility and the ability to respond rapidly to workers' preferences for quantity and style of housing.</li> </ul> <p><i>Role of government</i></p> <ul style="list-style-type: none"> <li>• Written support from the principle of Glenden State School for accommodation development on surplus school land.</li> <li>• Written support from Isaac Regional Council for a mixed range of accommodation styles to support its vision for the sustainable development of Glenden.</li> <li>• Office of the Coordinator-General and the Department of Education, Training and Employment assistance in the process for potentially acquiring departmental land.</li> <li>• Mackay, Isaac and Whitsunday Regional Plan 2011 identifies Glenden as an urban footprint suited to developments of this nature.</li> <li>• Isaac Regional Council is considering a tender submission from Byerwen Coal for the purchase of industrial land for a construction and contractors accommodation village.</li> <li>• Approvals for the accommodation development under the <i>Sustainable Planning Act 2009</i>.</li> </ul> <p><i>Accommodation requirements (forecast)</i></p> <ul style="list-style-type: none"> <li>• Construction (two phases): <ul style="list-style-type: none"> <li>– First 18 mths            350 rooms (350 workers).</li> <li>– Year 15                    40 rooms (40 workers).</li> <li>– Year 16                    265 rooms (265 workers).</li> <li>– Year 17                    130 rooms (130 workers).</li> </ul> </li> <li>• Operations (assuming a 30% Glenden residency rate) – forecast resident and non-resident workforce numbers: <ul style="list-style-type: none"> <li>– Yr 1                        136 (non-res)/59 (res) = 195 total.</li> <li>– Yr 2-14                    346 (non-res)/149 (res) = 495 total.</li> </ul> </li> </ul>

**Table 9.1 Overview of Social Commitments (cont'd)**

<b>Key commitments (cont'd)</b>	
<b>Workforce Accommodation Strategy (cont'd)</b>	<ul style="list-style-type: none"> <li>– Yr 15-17     360 (non-res)/155 (res) = 515 total.</li> <li>– Yr 18-46     381 (non-res)/164 (res) = 545 total.</li> <li>– Yr 47-48     80 (non-res)/35 (res) = 115 total.</li> </ul> <ul style="list-style-type: none"> <li>• Accommodation quantities expected to be available by start of construction until year 14 (built as required): <ul style="list-style-type: none"> <li>– 200 rooms (400 non-res workers – half on shift and in accommodation at one time).</li> <li>– 100 houses (100 workers).</li> <li>– 20 duplexes (50 workers).</li> </ul> </li> <li>• Quantities will be revised at Year 15 and sufficient accommodation will be developed or existing accommodation utilised to meet requirements: <ul style="list-style-type: none"> <li>– Accommodation supply as Newlands Mine reduces its workforce through the decommissioning phase starting in 2024 will be considered.</li> <li>– There will be a reallocation of accommodation as workforce numbers reduce.</li> </ul> </li> </ul> <p>Bus transportation will be provided from key localities at the start and end of shift rosters as well as between the mine and accommodation for the daily shift rotation.</p>
<b>Workforce recruitment and management strategy</b>	<p><i>Workforce recruitment</i></p> <ul style="list-style-type: none"> <li>• Encourage local and regional residents to take up employment opportunities.</li> <li>• Contractors employ the majority of the workforces and will develop workforce management plans to outline approach to workforce recruitment and management (aligned with QCoal's principals).</li> <li>• Equal opportunity employment for all groups including underrepresented groups by providing training, skills development and employment organisations with regular updates about workforce requirements and adjusting employment processes.</li> <li>• Workforce management plan to include: <ul style="list-style-type: none"> <li>– Timely and regular communication of employment opportunities.</li> <li>– Notification of opportunities to relevant schools and TAFE colleges.</li> <li>– Collaboration with the Department of Aboriginal and Torres Strait Islander and Multicultural Affairs (DATSIMA).</li> <li>– Ongoing consultation with Skills Queensland and assist Skills Queensland to secure funding for local and regional employees, where available.</li> <li>– Collaboration with relevant agencies to promote access to nationally accredited courses for staff and local job seekers.</li> <li>– Collaboration with relevant training providers to identify skills gaps and promote targeted training programs.</li> <li>– Investigation of partnership arrangements with registered training organisations (RTOs) to conduct training for local businesses in procurement and HSSE standards.</li> <li>– Provision of updates on required roles where there are shortages.</li> <li>– Provision of in-house training where required.</li> <li>– Information meetings on special topics if required.</li> <li>– Forward planning to backfill from the local and regional employment base.</li> </ul> </li> </ul> <p><i>Workforce management</i></p> <ul style="list-style-type: none"> <li>• Workforce management strategy includes consideration of the following elements: <ul style="list-style-type: none"> <li>– Recruitment strategy/workforce sourcing: target – 80% workforce living in Mackay, Isaac and Whitsunday regions.</li> <li>– Cultural awareness: target – 100% workers receive cultural awareness induction.</li> <li>– Indigenous employment: two indigenous employees; target – to be revised once operational.</li> <li>– Employment of women: target – to be established once operational.</li> </ul> </li> </ul>



**Table 9.1 Overview of Social Commitments (cont'd)**

<b>Key commitments (cont'd)</b>	
<b>Workforce recruitment and management strategy (cont'd)</b>	<ul style="list-style-type: none"> <li>– Workers code of conduct: zero drug and alcohol tolerance; target – 100% workers adhere to code of conduct with penalties for non-adherence.</li> <li>– Worker Health, Safety and Wellbeing: onsite medical facilities; implement safety and health policy; target – zero harm.</li> <li>– Education and Training: two apprentices (principal mining contractor) with a target to increase numbers once operational; trainees and graduate students; school pathways; eight current QCoal educational grant recipients (Collinsville area); target – two QCoal educational grant recipients per year (Glenden and surrounding area).</li> <li>– Indigenous Education and Training: two current Byerwen Coal educational grant recipients; two apprentices from 4Mtpa; two apprentices from 6Mtpa; two additional apprentices each two years after.</li> </ul>
<b>Regional Procurement Program</b>	<p><i>Australian Industry Participation Policy</i></p> <ul style="list-style-type: none"> <li>• Maximise local industry participation and give preference to suppliers of Australian-manufactured equipment that is competitively priced and complies with the relevant standards and specifications via best practice approaches.</li> <li>• Source contractors in line with participation policy to construct and operate the mine and coal handling preparation plant.</li> <li>• Contractors will be required to outline how they will source sub-contractors with a focus on local and regional suppliers as part of the tendering process.</li> <li>• Procurement procedures to include the following provisions: <ul style="list-style-type: none"> <li>– Promote supply opportunities to suppliers within the region.</li> <li>– Liaise with Industry Capability Network (ICN) Gateway and Whitsunday Industrial Workforce Development (WIWD) program to identify potential suppliers.</li> <li>– Promote the ICN Gateway and WIWD to local and regional suppliers.</li> <li>– Provide notification of work packages to ICN Gateway and WIWD.</li> <li>– Provide project progress updates to local and regional suppliers via email updates and presentations to industry groups.</li> <li>– Continue to support economic development initiatives.</li> <li>– Monitor and evaluate the effectiveness of the program through a count of the number of suppliers from the local and regional areas.</li> </ul> </li> </ul> <p><i>Selection criteria</i></p> <ul style="list-style-type: none"> <li>• Byerwen Coal and/or its contractors will engage product and service providers on the basis of the following criteria: <ul style="list-style-type: none"> <li>– Safety.</li> <li>– Performance.</li> <li>– Environment.</li> <li>– Life- cycle costing.</li> <li>– Capital cost comparison.</li> <li>– Availability.</li> <li>– Proven reliability and on-time delivery.</li> <li>– Demonstration of available resources to perform the work required.</li> <li>– Best practice processes to deliver safe, efficient and socially responsible service.</li> <li>– Value proposition.</li> <li>– Aligned employment and training principles or policies.</li> <li>– Loyalty to contractors known by previous successful working arrangements.</li> </ul> </li> </ul> <p><i>Indigenous business opportunities</i></p> <ul style="list-style-type: none"> <li>• Cultural Heritage Management Plans.</li> <li>• Support Leighton Contractors' indigenous business development initiative.</li> </ul>

**Table 9.1 Overview of Social Commitments (cont'd)**

<b>Key commitments (cont'd)</b>	
<b>Regional Procurement Program (cont'd)</b>	<p><i>Contractors' Conditions of Engagement</i></p> <ul style="list-style-type: none"> <li>Contractors' contract documents include the Environmental Authority, this SIMP and the relevant Cultural Heritage Management Plans.</li> <li>Contractors will be commercially bound to comply with the conditions of these authorities and plans.</li> <li>Regular reporting to Byerwen Coal on performance with respect to the requirements of these authorities and plans.</li> </ul>
<b>Stakeholder Engagement Strategy</b>	<p><i>Communication and engagement methods</i></p> <ul style="list-style-type: none"> <li>Information displays.</li> <li>Face to face briefings, meetings and consultation.</li> <li>Communication channels (email, phone, post).</li> <li>Involvement in the Glenden Stakeholder Engagement Group (SEG).</li> <li>Working in partnership with local government and other industrial and mining companies.</li> <li>Complaints and review mechanism.</li> <li>Dedicated team members who will implement the strategy at a corporate and local level.</li> <li>Land compensation packages to compensate landowners for impacts of the project on their property.</li> <li>Social impact monitoring and evaluation strategy, which will be conducted as part of ongoing stakeholder engagement and include: <ul style="list-style-type: none"> <li>Methods for determining whether the potential impacts actually occurred and identifying any unexpected impacts or emerging issues.</li> <li>Evaluating the effectiveness of the management strategies.</li> <li>Capturing information for reporting back to community and government on progress and achievements.</li> </ul> </li> </ul>
<b>Community support initiatives</b>	<p>Byerwen Coal and its contractors will support community involvement programs targeted at increased social participation and assist with workforce integration and cohesion into local community. Support will include:</p> <ul style="list-style-type: none"> <li>Implementation of a grants program to support community development and support initiatives (Target – in line with existing Collinsville grants, rates and royalties payments).</li> <li>Promoting access to support services for workers assisting with a range of health, wellbeing and other goals such as safe driving, reducing fatigue, balancing family and shift work, quitting smoking, healthy eating and financial management.</li> <li>Continuing to engage with health care and emergency service providers in Glenden to understand arising issues and strategies to address them.</li> <li>Funding a regional mobile dental initiative for three years or more in partnership with the Royal Flying Doctor Service (Target - \$1,000,000).</li> </ul>
<b>Technical management plans</b>	<p>Cultural Heritage Management Plans (CHMPs): Protection of items and areas of indigenous cultural heritage.</p> <p>Traffic Management Plan:</p> <ul style="list-style-type: none"> <li>Actions to address potential safety issues of increased construction traffic on roads.</li> <li>Plan construction and operational activities to avoid creating delays to existing traffic where practicable.</li> <li>Provide notice of activities impacting roads to relevant authorities.</li> <li>Establish road maintenance contribution scheme with relevant authorities.</li> </ul> <p>Safety Plan:</p> <ul style="list-style-type: none"> <li>Preventative measures for a range of on and off-site incidents to address worker safety and potential community impact.</li> </ul>

**Table 9.1 Overview of Social Commitments (cont'd)**

<b>Key commitments (cont'd)</b>	
<b>Technical management plans (cont'd)</b>	<ul style="list-style-type: none"><li>• Emergency management plan to address any emergency incidents that might involve members of the public.</li></ul> <p>Construction Environmental Management Plan (CEMP):</p> <ul style="list-style-type: none"><li>• Construction methods designed to suppress dust and minimise noise.</li><li>• Provide relevant stakeholders with advance notice of blasting and other higher impact activities.</li></ul> <p>Environmental Management Plan (EM Plan): measures designed to minimise or where possible avoid negative impacts to existing environmental conditions.</p>

## 10. RESIDUAL IMPACT EVALUATION

The purpose of the residual impact evaluation is to define the residual impact that remains after the assumed effective implementation of applicable management and mitigation measures outlined in the Section 9 above. Only those negative impacts which are rated as being of a moderate or high level of significance are addressed in the assessment of residual impacts.

In assessing the residual impact, consideration was made as to how the proposed mitigation affects the sensitivity of the value and the magnitude of the impact. A management or mitigation measure will lower the significance of the impact if it:

- Lowers the degree to which people are concerned about the social value (sensitivity).
- Lowers a quantifiable attribute of the social value (sensitivity).
- Lowers the magnitude of the impact (magnitude).

The results of the residual impact evaluation are shown in Table 10-1 below.

**Table 10-1: Residual Impact Evaluation**

Potential Impact	Phase	Positive/ Negative	Impact Significance Without Mitigation*	Residual Impact Significance
<b>Demographics and Demographic Change</b>				
Population growth associated with construction workforces.	Construction	Negative	Low	-
Population growth associated with operation workforces.	Operation	Negative	Moderate	Low
Change to demographic characteristics of resident population of Glenden.	Construction Operation	Negative	Negligible	-
<b>History and Heritage (Non-Indigenous)</b>				
Loss or destruction of items or areas of heritage value.	Construction Operation	Negative	Negligible	-
Diminished rural and agricultural identity resulting from direct land use changes and development of a non-agricultural enterprise.	Construction Operation	Negative	Moderate	Low
<b>Indigenous Community</b>				
Increased employment, education and training opportunities.	Construction Operation	Positive	Moderate	-
Increased business opportunities for Traditional Owners.	Construction Operation	Positive	Moderate	-
Loss or destruction of items or areas of heritage value.	Construction Operation	Negative	Moderate	Low
<b>Housing and Accommodation</b>				
Increased temporary accommodation requirements.	Construction	Negative	Moderate	Low
Increased permanent accommodation requirements.	Operation	Negative	High	Low

**Table 10-1: Residual Impact Evaluation (cont'd)**

Potential Impact	Phase	Positive/ Negative	Impact Significance Without Mitigation*	Residual Impact Significance
<b>Residential Amenity</b>				
Amenity effects associated with increased traffic in residential areas.	Construction Operation	Negative	Moderate	Low
Changes to existing urban design of Glenden.	Construction Operation	Negative	Moderate	Low
Increased demand on existing municipal infrastructure.	Construction Operation	Negative	Moderate	Low
<b>Employment, Education and Training</b>				
Generation of construction employment.	Construction	Positive	Moderate	-
Generation of operations employment.	Operation	Positive	High	-
Stimulation of training and skill development opportunities.	Construction Operation	Positive	Moderate	-
Contribution to regional skills shortage	Construction Operation	Negative	Moderate	Low
<b>Health and Safety</b>				
Traffic-related incidents due to increased population.	Construction Operation	Negative	Moderate	Low
Social health effects associated with commuting and shift work.	Construction Operation	Negative	Moderate	Low
Real or perceived deterioration of the safety of Glenden.	Construction Operation	Negative	Moderate	Low
<b>Health and Community Infrastructure</b>				
Increased demand on health services.	Construction Operation	Negative	High	Moderate
Increased demand on essential services.	Construction Operation	Negative	Moderate	Low
Increased demand on education services.	Operation	Positive	High	-
Increased demand on emergency services.	Construction Operation	Negative	High	Moderate
Increased usage of recreational facilities and services.	Operation	Positive	Moderate	-
Increased usage of general community infrastructure (halls, meeting spaces etc.)	Operation	Positive & Negative	Moderate	-
Lack of land allocation for provision of social and commercial services.	Operation	Negative	Moderate	Low
<b>Social Identity and Cohesion</b>				
Social identity of Glenden changed.	Operation	Negative	Moderate	Low
Reinvigoration of the Gleneden community	Operation	Positive	Moderate	-
Social friction resulting from creation of an 'us and them' dynamic.	Operation	Negative	Moderate	Low

**Table 10-1: Residual Impact Evaluation (cont'd)**

Potential Impact	Phase	Positive/ Negative	Impact Significance Without Mitigation*	Residual Impact Significance
<b>Local Economic Conditions</b>				
Generation of opportunities for local businesses.	Construction Operation	Positive	Moderate	-
Injection of wealth into local and regional economy.	Construction Operation	Positive	High	-
Difficulties attracting and retaining skilled staff.	Construction Operation	Negative	Moderate	Low
Increase to cost of living in local area.	Construction Operation	Negative	Moderate	Low

\* as assessed in Section 8

The assessment found that the significance of the majority of residual impacts would be **low** following the effective implementation of mitigation and management measures. The residual impacts which retained a **moderate** level of significance related to the influx of the project workforce into the town. These moderate residual impacts included:

- Increased demand for regional and local health services throughout the construction and operations phases.
- Increased overall demand on regional emergency services including ambulance, police and fire services.

## 11. CUMULATIVE SOCIAL IMPACT ASSESSMENT

### 11.1 Identification of Projects Considered

This section provides a high level assessment of the collective social impacts likely to arise from the development of the project concurrently with other major projects either currently in operation, being developed or likely to be developed in the greater regional area. A key determinant as to the relevance of a particular project to the assessment of cumulative social impact is the existence of a clear pathway or linkage between the social effects of another project in the region and those identified for the Byerwen Coal Project. Predominant pathways or linkages between the respective social impacts of projects in the region relate to:

- Population growth and the effects which this has on the adequacy of existing social and economic infrastructure.
- Sourcing of skilled labour for required construction and operations workforces and the effects this has upon the cost and availability of labour.
- The accommodation of workforces and affiliated population growth and the effects on housing availability and affordability.
- The transportation requirements of projects and the associated effects on community safety and liveability.

This section evaluates the potential for cumulative social impacts arising from the project when considered in conjunction with a number of existing and proposed projects in the region. Due to the large number of existing and proposed projects in the Bowen Basin it is necessary to only assess those projects which are likely to directly influence which the project may have upon social values in the study area.

The criteria for inclusion in the assessment of cumulative social impacts are specified below:

- Projects must have sufficient information in the public domain to identify potential impacts.
- Available information must indicate that a project could potentially impact on one or more of the social values directly or indirectly affected by the Byerwen Coal Project (i.e., existence of an impact pathway).
- The third party project has or is being assessed in accordance with one of the following:
  - The *Environmental Protection Act 1994* and has completed an EIS or has an Initial Advice Statement listed on the Department of Environment and Heritage Protection website.
  - The *State Development and Public Works Organisation Act 1971* (Qld) and has been declared by the Coordinator General as a 'project of state significance' for which the status of the EIS is either complete or, as a minimum, has an Initial Advice Statement published on the Department of State Development, Infrastructure and Planning website.

Based on these criteria the following projects have been included in the assessment of cumulative social impacts:

- Newlands Coal Project.
- Newlands Coal Extension Project.
- Sonoma Mine.

- Hail Creek.
- Burton Coal Project.
- North Goonyella Mine and Eagle Field Mine.

These projects are shown in Figure 11.2 Cumulative Social Impacts.

Concurrent development of projects in the region has the potential to deliver both beneficial and adverse social and economic impacts. Beneficial impacts include:

- Increased economic activity, including gross regional product, employment and incomes
- Direct benefits for industries other than mining, e.g., construction, port activities, retail
- Increased government revenues through taxation and royalties.

Social and economic stresses that can be collectively created by multiple projects include:

- Population growth placing demand on social infrastructure, i.e., childcare, education, health.
- Labour shortage and labour draw through demand for mining and construction workers.
- Upward pressure on wages due to labour shortage, affecting the viability of some businesses.
- Impacts on agricultural production from land disruption and competition for land.
- Impacts on residential, industrial and commercial property availability and values.
- Impacts on trade-exposed industries through exchange rates.

Cumulative social impacts assessed for projects included in the assessment are outlined below.

### 11.2.1 Newlands Coal Project

The existing Xstrata Newlands Coal operation comprises two mines - Newlands and Eastern Creek. Based out of Glenden, the existing workforce is estimated to be 1,227. Newlands has recently had approved an application to extend the Wollombi mining area which will take output from 1.5 Mtpa to 2.5 – 3 Mtpa. This will provide an additional 125 operations positions and 60 construction positions. The impact pathway for the Byerwen Coal Project relates to the residence in Glenden and the associated impact on housing and community infrastructure, facilities and services in Glenden. This impact pathway also produces a cumulative impact on traffic and transport in Glenden with health and safety issues associated with use of roads. These cumulative impacts are assessed as negative and of **high** significance.

### 11.2.2 Newlands Coal Extension Project

Xstrata has submitted applications for three additional mining leases (EIS currently on display) which will extend the life of the Newlands mine. The proposed extensions would enable the existing workforce and equipment to move into new areas as coal reserves in exiting parts of Newlands are depleted. Subsequently, it is not anticipated that the extension will result in any additional workforce requirement. The cumulative impact will be the continuation of the project's impact on housing and community infrastructure, traffic and transport, facilities and services in Glenden. The impact associated with the mine extension is not expected to increase the cumulative impacts associated with the existing Newlands Coal Project as there is no new workforce being brought into the area.



## 11.2 Cumulative Social Impacts

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- Impacts on agricultural production from land disruption and competition for land
- Impacts on residential, industrial and commercial property availability and values
- Impacts on trade-exposed industries through exchange rates.

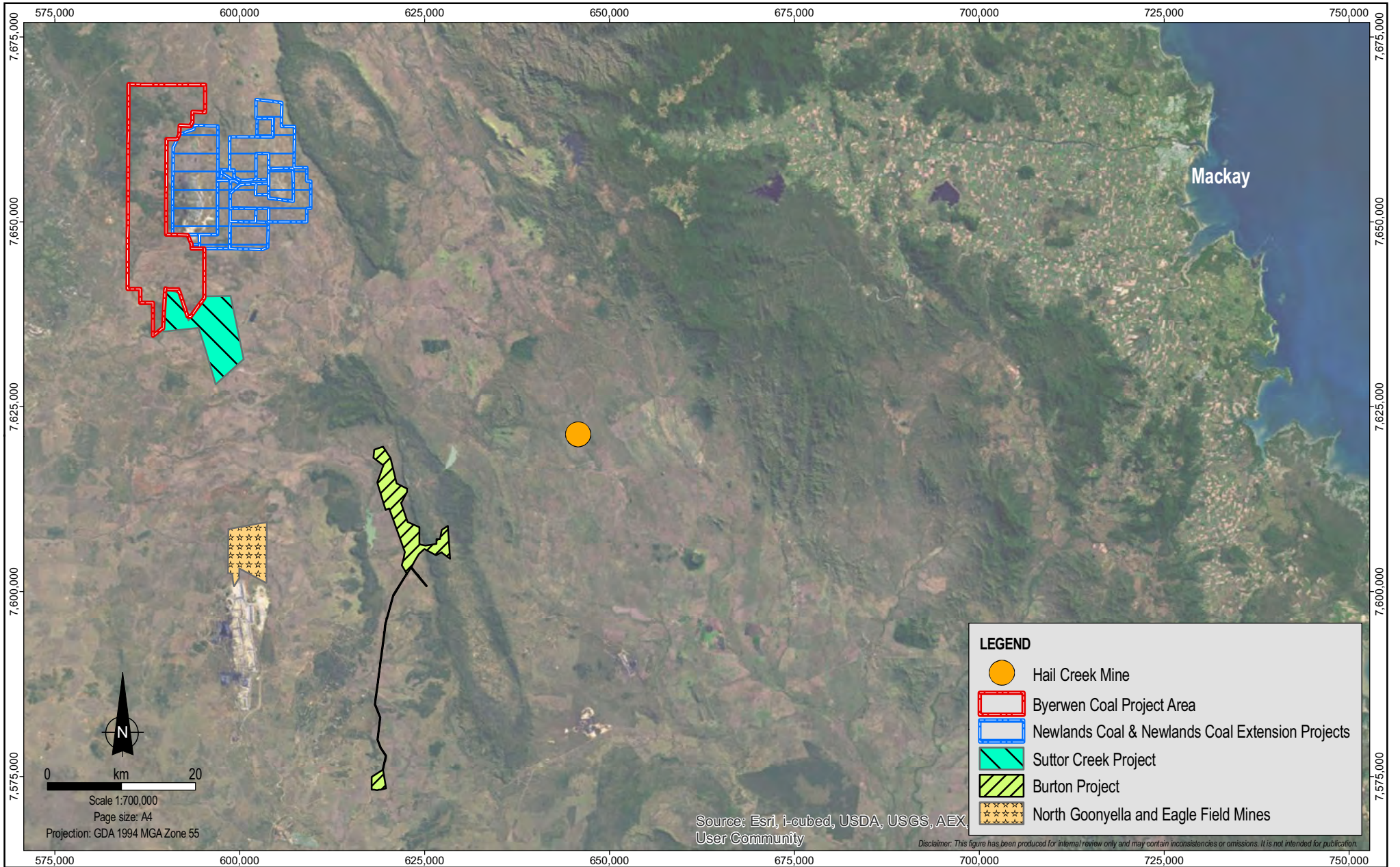
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Source: Esri, i-cubed, USDA, USGS, AEX, User Community

Disclaimer: This figure has been produced for internal review only and may contain inconsistencies or omissions. It is not intended for publication.

Source:  
Mine and project data from ELP.  
Satellite imagery from Bing (capture date unknown).



Date:  
17.01.2013  
MXD:  
9089\_SIA\_GIS001\_v0\_1  
File Name:  
9089\_SIA\_F11.01\_GIS

**QCoal Byerwen Project**  
**SIA**

**Projects Considered in  
Cumulative Social Impact Assessment**

Figure No:  
**11.1**  
**DRAFT**

The Newlands Coal Extension Project EIS released for public review in September 2012 states that there will be a reduction in workforce numbers at Newlands Coal Mine anticipated in 2024 once the underground development is complete. Further reductions will also be expected in 2026 at the completion of the underground mining works and from 2034 onwards when the open cut mining pits are progressively decommissioned.

According to the EIS, the total workforce at Newlands Coal Mine is 1,579 of which approximately 57% are residents of Glenden (906 resident workers). Of the total workforce, there are 473 underground workers (including about 270 residential workers). It is likely that once the underground development is complete in 2024, these 270 resident workers and their families will leave town, significantly reducing the town's population and subsequently the demand on its services.

The Byerwen Coal Project is likely to significantly increase Glenden's resident population from the start of operations (anticipated to be in 2015). The mitigation strategies outlined in the SIMP are designed to address the cumulative population of both Byerwen Coal Mine and Newlands Coal Mine Project in their respective construction and operating phases, where workforces are at their peak. These mitigations will be regularly reviewed during the nine years where both mines are in construction and/or operations phases and again leading up to 2024, when the town's population will start to reduce as a result of the decommissioning of Newlands Coal Mine.

In addition, Byerwen Coal will link with the Newland's Detailed Mine Closure Plan, which is to be completed five years prior to the proposed closure of that mine, to attract members of the workforce who will be leaving the Newlands Coal Project and searching for employment in the region.

### **11.2.3 Hail Creek Mine**

The existing Rio Tinto operated Hail Creek Mine is located approximately 45km to the south east of Glenden. Access to the mine site and accommodation village is off the Suttor Development Road. The mine currently employs approximately 850 personnel, consisting of 650 employees and 200 contractors. Rio Tinto provides bus transportation for employees to meet shift rotations. The Byerwen Coal Project will cumulatively lead to an increase in heavy vehicle and personnel traffic on the Suttor Development Road. The cumulative impact is increased traffic when added to this project and this has been assessed as **high**.

### **11.2.4 Burton Coal Project**

The Peabody Energy Burton Coal Project is an existing mine located approximately 55km to the south of Glenden off the Suttor Development Road. The current workforce is estimated to be approximately 400 employees. Peabody Energy are currently progressing an expansion of the Burton mine which will expand the workforce to approximately 500. The Byerwen Coal Project will cumulatively lead to an increase in heavy vehicle and personal traffic on the Suttor Development Road. The cumulative impact is increased traffic when added to this project and this has been assessed as **high**.

### **11.2.5 North Goonyella Mine and Eagle Field Mines**

Peabody Energy operates the North Goonyella and Eagle Field mines which are located off the Suttor Development Road approximately 35km in a direct line to the south west of Glenden. Current operations support a workforce of 220 employees at the Eagle Field Mine and 500 employees at the North Goonyella Mine. Peabody Energy is currently advancing the Eagle Field Expansion Project with the EIS for the project approved in October 2011 pending the submittal of an adequate EM Plan. The expansion project will require a predicted 650 construction employees

and 700 operations employees. If no accommodation options are available in Moranbah there is the potential for the workforce associated with these developments to look to Glenden for housing accommodation. The Byerwen Coal Project also will cumulatively lead to an increase in heavy vehicle and personal traffic on the Suttor Development Road. These cumulative impacts of pressure on housing and increased traffic have been assessed as **high**.

### **11.3 Cumulative Impacts Summary**

The summary of potential cumulative impacts is shown in Table 11-1.

**Table 11-1: Projects Contributing to Potential Cumulative Impacts**

<b>Project Name</b>	<b>Proponent</b>	<b>Description</b>	<b>Workforce/ Workforce Predictions</b>	<b>Impact</b>	<b>Significance</b>
Newlands Coal Project	Xstrata	Newlands recently had an application to extend the Wollombi mining area approved. This will take output from 1.5 Mtpa to 2.5-3 Mtpa. It will provide an additional 125 operations positions and 60 construction positions.	Operations: 250	Impact on housing and community infrastructure, facilities and services in Glenden. Impact on traffic and transport in Glenden with health and safety issues associated with use of roads.	High
Newlands Coal Extension Project	Xstrata	Applications for three additional mining leases which will extend the life of the Newlands mine have been made. The proposed extensions would enable the existing workforce and equipment to move into new areas as coal reserves in exiting parts of Newlands are depleted.	0	Continuation of the project's impact on housing and community infrastructure, facilities and services in Glenden. Impact on traffic and transport in Glenden with health and safety issues associated with use of roads.	Low
Hail Creek Mine	Rio Tinto	The existing Rio Tinto operated Hail Creek coal mine is located approximately 45km to the south east of Glenden.	850 personnel consisting of 650 employees and 200 contractors	Increase in heavy vehicle and personnel traffic on the Suttor Development Road.	High
Burton Coal Project	Peabody Energy	The existing mine is located approximately 55km to the south of Glenden off the Suttor Development Road.	400 employees	Increase in heavy vehicle and personnel traffic on the Suttor Development Road.	High
North Goonyella Mine and Eagle Field Mine	Peabody Energy	The mines are located off the Suttor Development Road approximately 35km in a direct line to the south west of Glenden.	Current operations support a workforce of 220 employees at the Eaglefield mine and 500 employees at the North Goonyella mine	Increase in housing demand in Glenden, if accommodation options are not available in Moranbah. Increase in heavy vehicle and personnel traffic on the Suttor Development Road.	High

As outlined in Table 11-1, the key cumulative impacts on the social environment relate to:

- Increased demand on regional social and community infrastructure and accommodation resulting from higher numbers of people working in the region.
- Traffic- related impacts associated with heavy vehicles and higher cumulative traffic volumes.

Each of these impact themes are discussed in more detail below.

### **11.3.1 Housing and Community Infrastructure**

Construction and operation of the Byerwen Coal Project in conjunction with the other planned developments in the region will increase net demand for housing and impacts on community infrastructure. Such potential cumulative negative effects need to be addressed through collaborative efforts led by relevant State and Commonwealth government departments.

A cumulative effect of multiple projects in the region is higher population and subsequently increased demand for a range of community services and facilities, including child care, education, health and medical services, family support services and cultural, recreational and entertainment facilities. Existing facilities and services have limited capacity and increased in patronage may result in limitations as to the ability of local residents to continue to access such facilities and services.

Cumulative effects on social infrastructure need to be closely monitored and collaboratively addressed before effects become unmanageable and result in the exposure of vulnerable sectors of the community. Management initiatives need to be led by relevant governmental bodies.

### **11.3.2 Traffic and Transport**

A cumulative effect of multiple projects in the region is higher usage of roads in the region for commuting and heavy vehicular movements. Cumulative effects on municipal infrastructure need to be closely monitored and collaboratively addressed. Management initiatives need to be led by relevant governmental bodies.

## 12. CONCLUSION

This SIA has sought to identify the nature and extent to which project related effects may directly, indirectly or cumulatively impact on the defined social environment. Central to the assessment method has been the characterization of intrinsic social values and the assessment of project effects against these values. The intrinsic social values examined as part of the social impact assessment were the following:

- Demographics and Demographic Change.
- History and Heritage, Non-Indigenous.
- Indigenous Community.
- Housing and Accommodation.
- Residential Amenity.
- Employment, Education and Training.
- Local Economic Conditions.
- Health and Safety.
- Community Infrastructure and Social Services.
- Social Identity and Cohesion.

Project related impacts on these values were identified through direct engagement with potentially affected stakeholders and the analysis of project effects against the attributes of the existing social environment. The assessment of identified impacts was completed using an impact significance assessment methodology. In this approach, the significance of an impact is assessed by considering the sensitivity of a particular social value and the magnitude of a predicted impact.

Mitigation and management measures were derived following the assessment of the level of significance attributed to respective identified impacts. Such measures were identified through direct consultation with the community, examination of project effects and negotiations with the project proponent and stakeholders from both governmental and non-governmental stakeholders.

An assessment of residual impacts has then been completed. The residual impact assessment assumes that mitigation and management measures are effectively implemented and provides an assessment as to how the proposed mitigation affects either the sensitivity of the value or the magnitude of the impact. The final level of significance of each impact is then understood.

The SIA has found that the project is likely to have a range of positive and negative social impacts within the study area. The most highly significant positive impacts are:

- Provision of employment opportunities.
- Increased demand on education services.
- Injection of wealth into local and regional economy.

The most highly significant negative impacts relate to increased demand on health, and emergency services. On the balance it is assessed that following the application of applicable mitigation and management measures, the project will have a generally positive social effect on the local and regional area.

To address direct and cumulative impacts, the SIMP has been developed in parallel with this assessment. It will assist Byerwen Coal, its contractors, Queensland state and local government as well as other project partners in managing any adverse impacts while maximising the benefits associated with the project.

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## **14. LIMITATIONS**

Coffey Environments has prepared this report in accordance with the usual care and thoroughness of the consulting profession for the use of Byerwen Coal. It is based on generally accepted practices and standards at the time it was prepared. No other warranty, expressed or implied, is made as to the professional advice included in this report. It is prepared in accordance with the scope of work and for the purpose outlined in the Proposal dated June 2012.

The methodology adopted and sources of information used by Coffey Environments are outlined in this report. Coffey Environments has made no independent verification of this information beyond the agreed scope of works and Coffey Environments assumes no responsibility for any inaccuracies or omissions. No indications were found during our investigations that information contained in this report as provided to Coffey Environments was false.

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