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17. SOCIAL

This Section describes the existing social environment in the areas surrounding the South Galilee Coal Project (SGCP) and provides an assessment of the potential impacts of the SGCP on the social environment. Where appropriate, measures to mitigate and manage these impacts have been proposed. A comprehensive Social Impact Assessment (SIA) and draft Social Impact Management Plan (SIMP) have been prepared for the SGCP and are provided in **Appendix Q—Social Impact Assessment** and **Appendix R—Social Impact Management Plan**, respectively. Unless otherwise referenced, the data presented in this Section is sourced from the SIA and/or draft SIMP.

The objectives of the SIA were to:

- collect and analyse information about the baseline (existing) social environment
- collect and analyse information about key social and cultural issues, population change and social changes with the potential to occur as a direct or indirect result of the SGCP
- develop strategies for mitigation, management, monitoring and review of the identified potential social impacts.

The Department of Environment and Heritage Protection (DEHP) recently presented a provisional collaborative framework for projects proposing operations within the Galilee Basin. The framework seeks to provide a practical mechanism for project proponents to collaborate with each other on issues typically related to the SIMP development process and management plan implementation.

Due to the variety and complexity of the identified cumulative social issues within the Galilee Basin, DEHP intends on implementing the collaborative framework following consultation with the relevant proponents. Implementation of the framework seeks to align the resources of signatories to the framework agreement which, in turn, better serves the impacted communities.

Central to the success of the collaborative framework is the implementation of a number of issue-specific collaborative committees with one overarching roundtable committee to coordinate the collaborative efforts of the proponents. Representatives from project proponents, local council, community and government will be invited to attend regular and ongoing committee meetings.

SGCP has developed a draft SIMP through deliberate consultation with the Social Impact Assessment Unit (SIAU) and will continue to consult with this unit as the collaborative framework is further developed and formally implemented. SGCP intends on updating the current version of the SIMP following the first meeting of the Galilee Basin SIA Roundtable Committee. Until this time, SGCP commits to the provisional framework presented, but understands that a comprehensive consultation process is to be led by, and conducted between, SIAU representatives and project proponents as part of overall framework development.

17.1. GUIDELINES

The SIA was developed as a requirement of the Environmental Impact Assessment (EIA) process under the Queensland *State Development and Public Works Organisation Act 1971*. The SGCP Environmental Impact Statement (EIS) will be assessed by the Office of the Coordinator-General, Department of State Development, Infrastructure and Planning (DSDIP). The SIA has been developed to meet the requirements of the Final Terms of Reference (ToR) for the EIS, released in November 2010 (Office of the Coordinator-General, 2010). The SIA considered the *Social Impact Assessment Factsheet* (DIP, undated), *Social Impact Assessment: Guideline to Preparing a Social Impact Management Plan* (SIMP), (DIP, 2010) and other relevant policies and publications, including:

- *Barcaldine Regional Council Community Plan 2009* (Cavaye Community Development, 2009)
- *Central West Regional Plan* (Queensland Government, 2009)
- *Local Industry Policy* (DEEDI, 2011a)
- *Major Resource Projects Housing Policy* (Queensland Government, 2011a)
- *Queensland Infrastructure Plan* (Queensland Government, 2011b)
- *Queensland Regionalisation Strategy* (Queensland Government, 2011c)
- *Skilling Queenslanders for Work* (DEEDI, 2010b)
- *Sustainable Resource Communities Policy* (Queensland Government, 2008a)
- *Sustainable Resource Communities Partnership Agreement* (Queensland Government, 2008b).

17.2. METHODOLOGY

As described in **Section 17.1**, the SIA was developed to address the requirements of the Final ToR, in consultation with the DSDIP's SIAU.

In order to describe the baseline social environment and assess potential impacts, social and cultural areas of interest (study areas) relevant to the SGCP were delineated. The study areas were determined in consideration of the following:

- the potential for social and cultural impacts to occur
- potential cumulative impacts of other relevant proposals or projects
- the location and types of physical and social infrastructure, settlement and land use patterns

- the social values that might be affected by the Project (e.g. including the integrity of social conditions, visual amenity and liveability, social harmony and wellbeing and sense of community)
- Indigenous social and cultural characteristics such as native title rights and interests and cultural heritage.

For the purpose of the SGCP EIS, two study areas were defined as follows:

1. a 'Local Study Area' (LSA), comprising the Barcaldine Regional Council (BRC) Local Government Area (LGA), (with particular focus on the township of Alpha and landholders within Mining Lease Application (MLA) 70453 or the infrastructure corridor).
2. a 'Regional Study Area' (RSA), made up of the following sub-groups:
 - Inland subgroup—Central Highlands Regional Council (CHRC) LGA, focussing on Emerald
 - Coastal subgroup—with a focus on the Bundaberg Regional Council, Cairns Regional Council, Fraser Coast Regional Council, Townsville City Council and Whitsunday Regional Council LGAs
 - South-east Queensland (SEQ) subgroup—with a focus on the Brisbane City Council, and Gold Coast City Council LGAs.

The LSA and RSA are illustrated in **Figure 17-1** and **Figure 17-2**. A detailed description of the study areas, including land use, land ownership and settlement patterns, is provided in **Appendix Q—Social Impact Assessment**.

The LSA is not included in the RSA. Given the scope and scale of the selected study areas, district and state level study areas were not considered necessary or meaningful.

17.2.1. Local Study Area

The objective of the LSA was to assess potential direct and indirect local impacts associated with the SGCP and cumulative impacts from nearby mining proposals.

17.2.2. Regional Study Area

The objective of the RSA was to assess potential regional social impacts. These impacts are typically associated with the workforce, service provision and transport.

The Proponent held a number of workforce planning and profiling meetings with relevant government agencies (e.g. DSDIP, SIAU, Office of Economic and Statistical Research [OESR] and Skills Queensland) to discuss potential workforce sources and government resourcing/regionalisation policy. In order to define the RSA, potential workforce source locations were assessed in consideration of:

- the availability of employees (e.g. unemployment and underutilised workforce numbers)

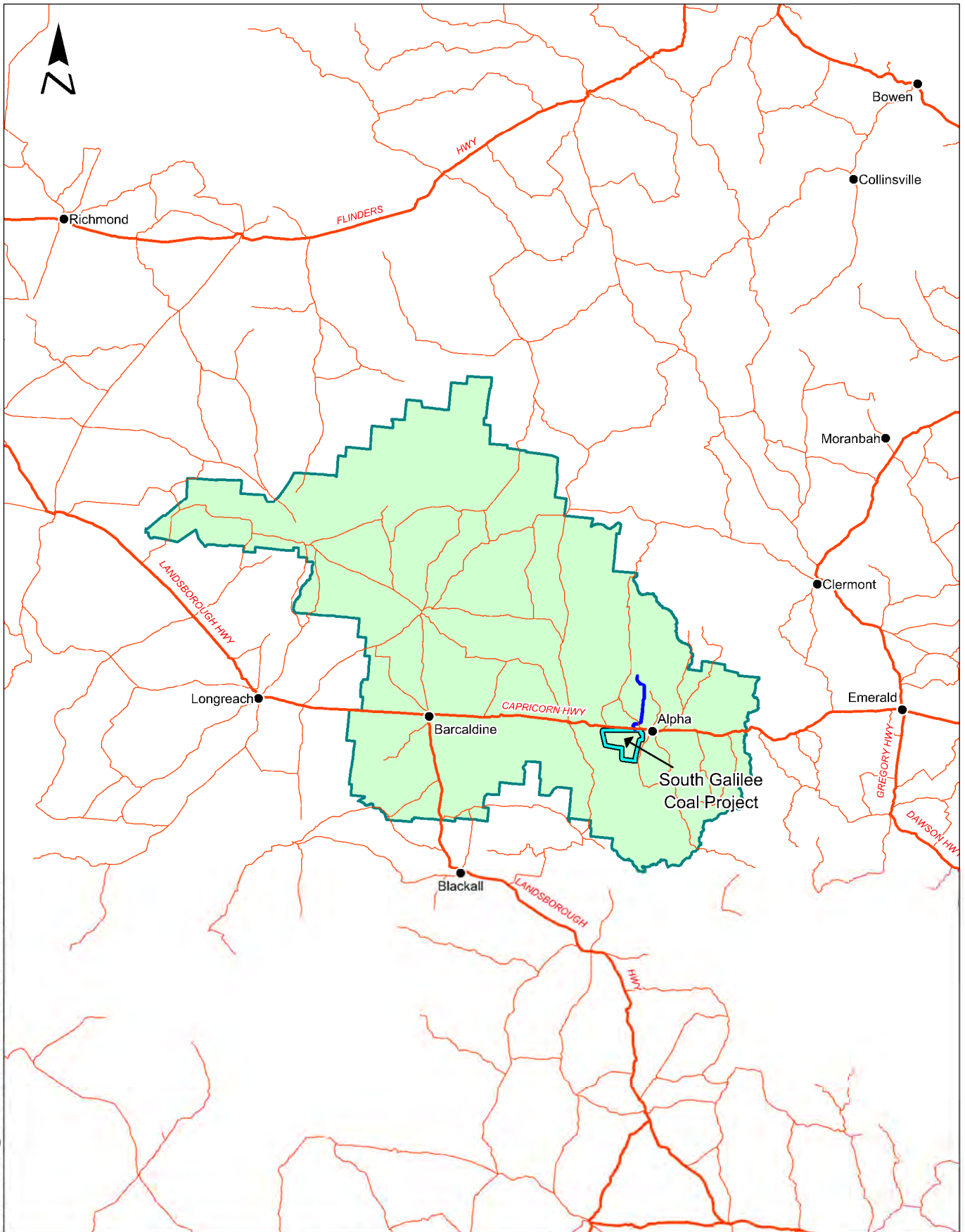
- existing population
- existing social infrastructure, including availability of training and recruitment resources
- readiness for fly-in/fly-out (FIFO), (e.g. availability of existing airport)
- existing workforce pressures and trends (e.g. types of industries, other workforce demands, etc.).

By considering these factors early in the workforce planning process, the Proponent aimed to minimise the social impacts associated with the SGCP workforce. Although ultimately the source, composition and employee numbers will be dictated by availability, FIFO contracts and the Project execution strategy, for the purposes of this Section, an estimation of the potential sources of the SGCP workforce is provided below as a percentage:



- SEQ (60 %)
- Townsville (15 %)
- Cairns (9.5 %)
- Bundaberg (5 %)
- Maryborough (5 %)
- Proserpine/Whitsunday/Bowen (5 %)
- Alpha (0.5 %).

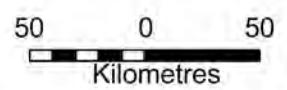
These workforce sources were used as the basis for delineating the RSA. For the purpose of this Section, the RSA was divided into three sub-groups with broadly similar characteristics, in consultation with the SIAU and the OESR. These sub-groups included:

- inland sub-group (CHRC LGA, focussing on Emerald)
- coastal sub-group (Bundaberg Regional Council, Cairns Regional Council, Fraser Coast Regional Council, Townsville City Council and Whitsunday Regional Council LGAs)
- SEQ sub-group (Brisbane City Council and Gold Coast City Council LGAs).

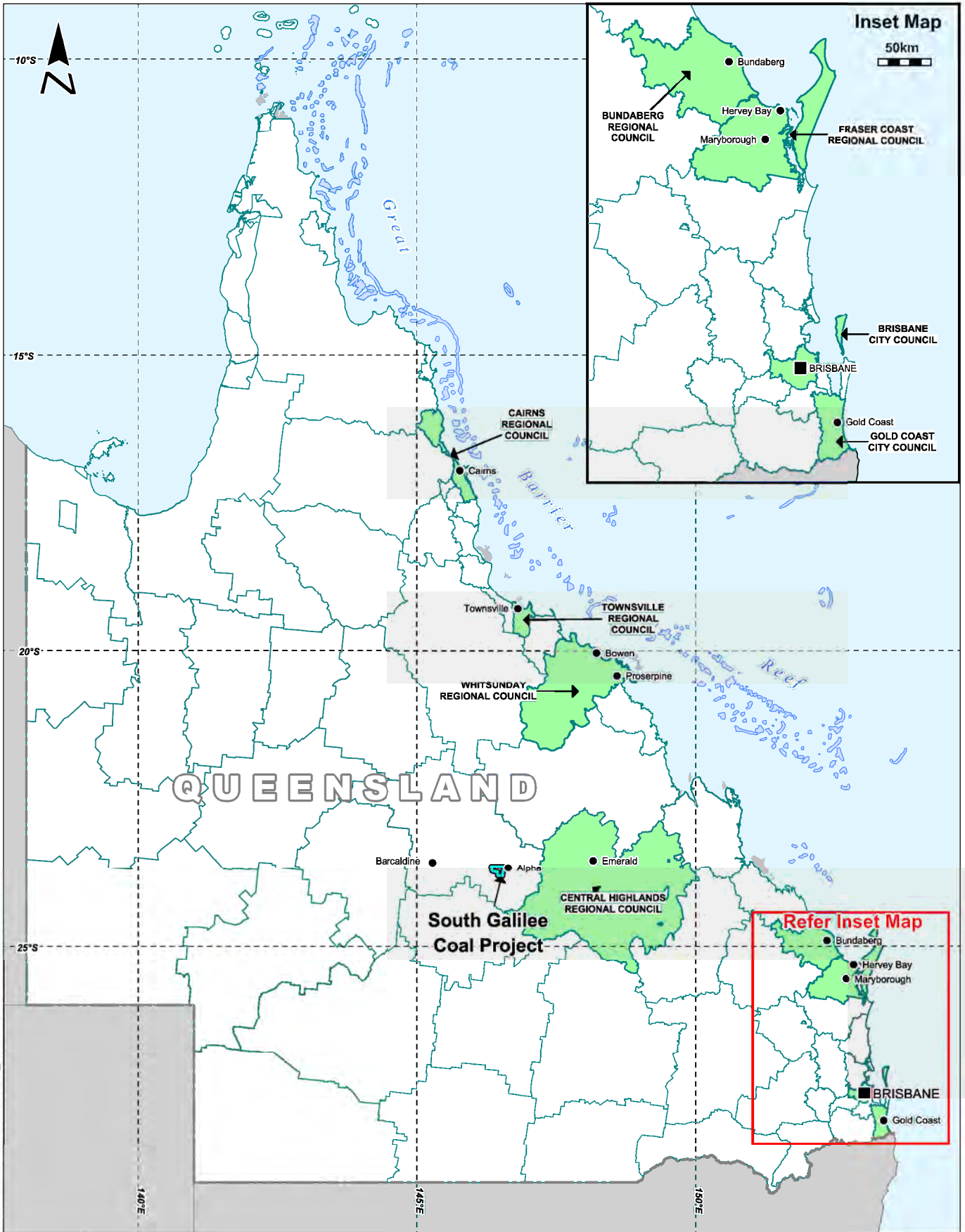


S:\PROJECTS\AM001\5TH GALLIEE EIS\MAPINFO\WORKSPACES\2012_WSP\SPACE\AM001 FIG 17-1 LOCAL STUDY AREA.WOR.WOR

 	<p>LEGEND</p> <ul style="list-style-type: none"> MLA70453 SGCPC infrastructure corridor Principal road Road (sealed) Road (unsealed) Population centre 	<p>Local Study Area</p> <ul style="list-style-type: none"> Barcaldine Regional Council LGA 	<p>Alpha Coal Pty Ltd</p> <h2 style="margin: 0;">South Galilee Coal Project</h2> <h3 style="margin: 0;">Local Study Area (LSA)</h3>
<p>Data Source: LGA - Queensland Government, Topography (250k) - Geoscience Australia.</p>			<p style="text-align: center;">30/07/2012</p> <p style="text-align: center;">Proj. : MGA Z55 Datum: GDA 1994</p> <p style="text-align: center;">FIGURE 17-1</p>



Scale: 1:3000,000 (A4)



S:\PROJECTS\AM001 5TH GALILEE E & S\MAPS\TOWNSHIP\WORKSPACES\2012 MSP\AC\AM001.FIG 17-2 REGIONAL STUDY AREA.WOR



LEGEND

- Regional study area
- Local Government Area (post 2008 amalgamation)
- MLA70453
- Population centre
- South Galilee Coal Project

Data Source:
LGA - Queensland Government. Topography - Geoscience Australia.

Alpha Coal Pty Ltd

South Galilee Coal Project

Regional Study Area (RSA)

250 0 250

Kilometres

Scale: 1:10,000,000 (A4)

30/07/2012

Proj. : MGA Z55
Datum: GDA 1994

FIGURE 17-2

Although the CHRC LGA is not considered to be a likely source of employees, it has been included in the RSA due to the likelihood of Emerald being used as a service provision/training centre.

It is acknowledged that some employees may be sourced from the western Queensland region (e.g. from Longreach, Blackall and other locations west of the SGCP) and that people from this area may be accustomed to driving long distances to work (e.g. to Bowen Basin mining operations). The drive time to the SGCP has been limited to 20 minutes for road safety and fatigue management.

Similarly, although Rockhampton has not been included in the RSA due to its proximity to Gladstone and the likelihood of workers being employed in the liquefied natural gas (LNG) industry, the city is considered to have good potential from a planning perspective and has relatively high unemployment. It is considered possible that some employees may be sourced from Rockhampton and surrounding areas (e.g. Woorabinda and Mt. Morgan).

17.2.3. Baseline Assessment

A baseline assessment was undertaken to characterise the study areas in order to meet the requirements of the Final ToR. A combination of quantitative and qualitative information was collected, focusing primarily on any aspects of the social environment that may be affected by the development of the SGCP.

Quantitative data used included statistical data from the Australian Bureau of Statistics (ABS) 2001 and 2006 *Census of Population and Housing (Census)*, the Queensland OESR as well as other government statistics and regional reports. Due to the amalgamation of a number of LGAs within the study areas, information for the LSA and RSA has been collated by combining individual shire council datasets.

The quantitative data was supplemented with qualitative information obtained from local governments, extensive community engagement, relevant publications, documents, websites and observation. A description of the community engagement undertaken is provided in **Section 17.2.4**.

17.2.4. Community Engagement

A comprehensive Community Engagement Plan (CEP) was developed in consultation with the SIAU to provide a framework for the SGCP community engagement process. The objectives of community engagement are to:

- identify stakeholders and their values, concerns and issues
- develop a consultation process that can be integrated into the community with minimal disturbance and which provides a foundation for long-term relationships between the SGCP and the community that is based on trust and mutual respect
- promote stakeholder confidence by ensuring open and transparent two-way communication

- develop a range of communication activities and tools that deliver regular, consistent and accurate information
- provide factual information about the SGCP and ensure all stakeholders understand any potential benefits and/or impacts
- acknowledge and manage the expectations of stakeholders
- ensure community feedback mechanisms are in place to maximise opportunities for input into the EIA process and actively seek opinions from stakeholders on matters of relevance to the SGCP
- work with stakeholders to develop agreed outcomes and solutions to issues where practicable
- meet the statutory requirements for community involvement in the formal approvals process and ensure stakeholder issues are appropriately addressed as part of the EIA process
- continually improve the acceptance and reputation of the SGCP on a local, regional and state level and monitor and evaluate community acceptance of the SGCP.

Community engagement commenced early in the EIA process and activities undertaken to date include the following:

- establishment and maintenance of a dedicated SGCP website, email and freecall phone number
- Community Reference Group (CRG) meetings
- Technical Reference Group (TRG) meetings
- face-to-face meetings
- community information sessions
- a SGCP community survey
- publication of fact sheets, information updates and media releases.

The Consultation Report detailing the community engagement activities undertaken to date and how the outcomes of community engagement have been considered and/or addressed in the planning and assessment of the SGCP is provided in **Appendix D—Consultation Report**. The draft SIMP (refer to **Appendix R—Social Impact Management Plan**) describes the community engagement proposed to be undertaken over the life of the Project.

17.3. EXISTING SOCIAL ENVIRONMENT AND VALUES

As determined in consultation with the SIAU (L. Hopewell, pers. comm., 22 August 2011), the approach for describing the baseline social environment was to provide detailed statistics for the LSA and a broad discussion and trend analysis for the RSA.

A summary of the existing social environment and community values in the LSA is presented below.

The broad spectrum of potential social conditions and impacts has been described and assessed in the context of a number of 'key aspects' (i.e. demographics, education and training, economy, employment and income, housing and accommodation, community health and safety and culture and community).

As the RSA is a broad and complex study area, the description of the existing social environment is provided in **Appendix Q—Social Impact Assessment**.

17.3.1. Demographics

The SIA (refer to **Appendix Q—Social Impact Assessment**) presents a detailed demographic profile of the LSA and RSA.

At the time of the 2006 Census, the resident population of the Barcaldine LGA was 3,468 people, comprising 1,803 (approximately 52 %) males and 1,695 (approximately 48 %) females. Population projections predict an approximate 10 % increase over the next five years. Between 2016 and 2031, the population is predicted to continue to increase, albeit at quite a modest rate (OESR, 2011).

Age distribution is detailed in **Appendix Q—Social Impact Assessment**. The low number of people in the 15–29 year old age group, suggests that younger people leave the region to study or seek employment. Ninety-one percent of the population in the LSA was born in Australia or New Zealand, with smaller numbers of people from the United Kingdom, Germany, Netherlands, Malaysia, Italy, Papua New Guinea, Philippines, Thailand, south-eastern Europe and the United States of America (refer to **Appendix Q—Social Impact Assessment**). Within the LSA, 6 % of people identified as being Indigenous.

The most common family unit in the LSA was couples with no children, followed by couples with children under 15 years old (refer to **Appendix Q—Social Impact Assessment**).

17.3.2. Education and Training

There are six early childhood education and care services and six primary and/or secondary schools in the LSA. The capacity of education services is currently limited by staffing and the Alpha State School only provides schooling up to Year 10.

The highest level of schooling most commonly attained by people in the LSA was Year 10, typical of an area where most employment is in the agriculture sector. However, non-school qualifications were held by almost one third of the population, the most common of which were Certificates I to IV.

The Socio-Economic Index for Areas (SEIFA) is a demographic profiling tool developed by the ABS to allow geographic areas across Australia to be assessed and ranked relative to their socio-economic conditions. SEIFA deciles divide the distribution of scores into ten equal groups. The lowest scoring 10 % of areas is given a decile number of one, the second lowest scoring 10 % of areas is given a decile number of two and so on, up to the highest 10 % of areas which are given a decile number of 10 (DEEWR, 2008). Based on 2006 Census data, the LSA was given a decile number of 6 (ranking within Australia) and nine (ranking within Queensland) for the Index of Education and Occupation.

17.3.3. Economy, Employment and Income

A detailed breakdown of the labour force by occupation and industry is provided in **Appendix Q—Social Impact Assessment**.

The main industries within the LSA were 'agriculture, forestry and fishing' (32 %), 'public administration/safety' (11 %), 'health care and social assistance' (10 %) and 'retail trade' (7 %), (ABS, 2006o; 2006p; 2006q). Beef and wool production were the primary agricultural industries in the area.

Approximately 97 % of people in the LSA had full-time or part-time employment. The average weekly individual income was \$672 and the average weekly household income fell into the \$1,000–\$1,199 bracket.

17.3.4. Infrastructure and Services

The LSA is serviced by a range of road, rail and air transport infrastructure. Alpha's power supply is regarded as unreliable and a reliable power supply is considered a high priority for residents and to support business and industry investment (Cavaye Community Development, 2009).

At the time of the 2006 Census, approximately one third of dwellings within the LSA had an internet connection, most of which were broadband connections, with the remainder being dial-up connections.

There are a number of commercial, local government and community newspapers available in the LSA, as well as digital television, digital radio and FM radio. Social infrastructure is described in **Section 17.3.2**, **Section 17.3.6** and **Section 17.3.7**.

In the SGCP Community Survey, all respondents indicated that the quality and accessibility of services in the local area could be improved.

17.3.5. Housing and Accommodation

The most common type of dwelling in the LSA was 'separate houses'. Of the 144 dwellings in Alpha in 2006, 57 separate dwellings were fully owned, 26 were being purchased (i.e. owned with mortgage) and 51 dwellings were being rented.

Weekly rental payments in the LSA were relatively low, with approximately 87 % of indicated rent payments in the \$0–\$139 bracket. In Alpha, 37 % of weekly rental payments were in the \$0–\$49 bracket.

Consultation undertaken by URS (2010) indicates that there were very few vacant houses in Alpha.

House and land prices have increased substantially over recent years due to speculation related to mining development. The median house price in Alpha in October 2011 was \$230,000 (Property Data Solutions, 2011a). Consultation with local real estate agents indicated that land availability in Alpha was very restrictive.

There were 14 social housing dwellings in Alpha (Waratah Coal Pty Ltd, 2011), social housing dwellings may include housing managed by the Department of Communities (Housing and Homelessness Services), long term community housing or Indigenous Council Community housing.

17.3.6. Community Health and Safety

A summary of the health care services available in the LSA is provided in **Appendix Q—Social Impact Assessment**. The local community has raised a number of issues in relation to health services in Alpha, either through the SGCP Community Survey undertaken 2010–2011 or recorded by Cavaye Community Development (2009). These issues include:

- the lack of a permanent doctor
- the lack of a public dental service
- limited nursing staff
- need for an improved ambulance service
- need for improved access to children's health services
- need for increased health promotion and illness/accident prevention
- need for improved access to day respite care in the district.

There are four aged-care providers in the LSA, with a total of 41 places available (OESR, 2010j).

At the time of the 2006 Census, there were 96 people (or 2.9 % of the total population) in the LSA who were in need of assistance due to a profound or severe disability (OESR, 2010j).

Crime rates in the LSA were generally low, with the most commonly reported offences being offences against property, followed by traffic and related offences (Queensland Police Service (QPS), 2011).

A summary of community safety services within the LSA is provided in **Appendix Q—Social Impact Assessment**. Although the Alpha community has access to an ambulance, it is staffed by hospital staff and driven by volunteers. Many people felt that there was justification for a full time Queensland Ambulance Service position and ambulance vehicle.

17.3.7. Culture and Community

Community identity in the LSA is strong and people are committed to maintaining and enhancing the district (Cavaye Community Development, 2009). The Alpha community considers that the town offers a lifestyle that is safe, comfortable and ideally suited to families and raising children. The following values have been identified as being particularly important (Cavaye Community Development, 2009):

- an easy-going small community lifestyle with basic services and facilities
- children can be brought up in a safe and secure environment
- people know each other and support the community strongly
- it is a friendly community where people have relatives living nearby and where people care for each other
- there is strong support for small community organisations
- the town is clean and well maintained.

There are many community groups and associations in the wider LSA and in Alpha (refer to **Appendix Q—Social Impact Assessment**). Local people actively support the community through a culture of volunteering, which is perceived to foster a self-reliant, cooperative community.

The majority of SGCP community survey respondents felt that their quality of life in the area in which they lived was either 'very good' or 'good'.

17.4. WORKFORCE PROFILE

The construction phase of the SGCP is expected to commence in 2013 and will require up to approximately 1,600 personnel.

As described in **Section 4—Project Description**, the operations stage will involve a staged ramp-up to the maximum production level of 17 million tonnes per annum. The anticipated workforce required for the operational phase of the SGCP is up to 1,288 personnel. Up to 300 personnel are expected to be required for the decommissioning stage. The life of the Project is expected to be 35 years.

Although the actual composition of the SGCP workforce will be determined during the Definitive Feasibility Study, **Table 17-1** provides an indication of the anticipated workforce breakdown for the operational stage of the SGCP.

Table 17-1 Projected SGCP Operational Workforce

Position	Stage 1 (2015)	Stage 2 (2017)	Stage 3 (2019)
Management	11	12	12
Technical Services	25	35	49
Underground Operation	0	310	619
Open Cut Operation	214	214	214
Coal Handling and Preparation Plant & Maintenance	174	194	214
Safety Department	20	23	28
Human Resources Department	18	18	18
Commercial	23	26	28
Full-time Equivalent Contractors	0	21	21
Miscellaneous	22	33	85
Total	507	886	1,288

Source: AMCI and Bandanna Energy (2011)

SGCP rosters are anticipated to be 21 days on/seven days off during construction and seven days on/seven days off during operations.

The SGCP will use a FIFO workforce for the following reasons:

- the region has limited capacity to supply an appropriately skilled workforce, particularly when considered in the broader context of mining development in the Galilee Basin
- given the remote location of the SGCP, attracting workers to live permanently in the region is anticipated to be extremely difficult and not economically viable
- this approach is consistent with that adopted by other Galilee Basin Proponents
- this approach is consistent with existing operations in the adjacent Bowen Basin and broader industry trends
- the region in general and the township of Alpha in particular, has significant infrastructure constraints which limit its capacity to house the SGCP workforce
- minimal housing and land availability in Alpha limits its capacity to house the SGCP workforce
- the use of an on-site accommodation village to house the SGCP employees will minimise potential social impacts.

The workforce will be FIFO between the Alpha Aerodrome and the proposed source locations in regional, coastal and south-east Queensland. To minimise the volume of road transport, the FIFO workforce will travel between the Alpha Aerodrome and the SGCP by bus.

The workforce will be housed at an on-site accommodation village located within MLA 70453. Following the construction phase, the village will be modified to form a permanent accommodation village. The village will include ensuite accommodation, laundry facilities, multi-purpose sports courts, gymnasium, swimming pool, restaurant and stores.

More detailed information regarding the Project workforce and recruitment policies is available in **Appendix Q—Social Impact Assessment**.

17.5. POTENTIAL IMPACTS

Social impacts are identified as changes to the way people live, work, relate to each other, organise to meet their needs and cope with the challenges presented by greater society.

Impacts may be positive or negative, minor or significant and short or long-term. An assessment of the potential social impacts of the SGCP is provided below. This assessment has been undertaken in consultation with stakeholders and the community, as described in **Section 17.2.4**. No computational models were used in the preparation of the SIA.

17.5.1. Demographics

The most significant demographic impact associated with the SGCP is the growth in the resident population of Alpha. Many of the other potential impacts of the SGCP are a consequence of this growth.

The forecasted resident population increase in the LSA is comprised of the following components:

- natural population increase unrelated to the development of the SGCP
- direct population growth associated with SGCP employees who relocate to Alpha (i.e. up to eight people during construction and up to six people during operations), (refer to **Table 17-2**)
- cumulative direct population growth associated with employees of multiple Galilee Basin mining Proponents who relocate to Alpha (up to 66 people during construction and up to 100 people during operations), (refer to **Table 17-2**)
- secondary population growth associated with the relocation of employees from the SGCP and other mining proposals (e.g. employee's partners or families)

indirect population growth as a result of mining in the region (e.g. business relocation, development or expansion, additional service providers etc.).

Table 17-2 Breakdown of Direct Population Growth in Alpha Associated with Galilee Basin Mining

Project	Proponent	Construction Workforce		Operations		Life of Mine
		Total	No. to Reside in Alpha	Total	No. to Reside in Alpha	
SGCP	AMCI	1,600	8	1,288	6	35 years
Alpha Coal Project	GVK Group	1,400	8 ¹	2,400	24 ²	33 years
Kevin's Corner	GVK Group	2,500	25 ³	2,000	20 ³	30+ years
Galilee Coal Project (Northern Export Facility), (also known as the China First Coal Project)	Waratah Coal Pty Ltd	4,750 (2,500 for the mine, 1,000 for rail and 2,500 for port facilities)	25 ⁴	1,710 (1,500 for the mine, 60 for rail and 150 for port facilities)	50 ⁴	30 years
Carmichael Coal Mine & Rail Project	Adani Mining Pty Ltd	4,000	0 ⁵	5,000	0 ⁵	150 years
Total	-	-	66	-	100	-

Source: Hancock Prospecting Pty Ltd (2009); GHD (2010); SIA & Development Pty Ltd (2010); URS (2010)

- 1 Based on 1 % of the mine construction workforce (URS, 2011). An additional 50 people will be sourced from the greater BRC LGA.
- 2 Number of employees to reside in Alpha not provided by URS (2011) – 1 % operational workforce assumed to reside in Alpha.
- 3 Although Hancock Prospecting Pty Ltd (2009) indicates that Kevin's Corner staff will primarily be accommodated at an on-site accommodation village, 1 % of the workforce was assumed to reside in Alpha. This conservative assumption was made for the purposes of this section only and was based on the proportion of employees at the Alpha Coal Project to reside in Alpha (URS, 2011).
- 4 M. Finlayson, pers. comm., 9 December 2011.
- 5 The Carmichael Coal Mine and Rail Project is expected to heavily rely on a FIFO workforce and any residential component of the workforce would be based in existing towns in the Isaac Regional Council, Mackay Regional Council or Whitsunday Regional Council LGAs (GHD, 2010).

Although direct population growth is relatively straightforward to quantify, the level of secondary and indirect population growth is difficult to accurately predict. Population growth will have both positive and negative impacts. Although population growth may counteract existing demographic trends (e.g. ageing and declining populations), provide increased revenue to BRC in the form of rates and increase the allocation of State Government funding, it may also result in flow-on social impacts (refer to **Section 17.5.2** to **Section 17.5.7**).

Although individually, the SGCP is unlikely to result in significant direct demographic impacts, cumulative growth may significantly impact on the LSA.

The SGCP is expected to result in minor population increases in regional centres within the RSA.

17.5.2. Education and Training

The secondary and indirect population growth associated with the SGCP is anticipated to result in increased pressure on local childcare and primary/secondary schooling facilities. This would occur in Alpha and possibly in Barcaldine, unless secondary schooling in Alpha is extended to include Years 11 and 12. Conversely, education facilities have been identified by the community as a key area for improvement, and population growth may justify additional resources/services.

The development of mining in the region is likely to increase the demand for mining related vocational training and qualifications, which is likely to be serviced by facilities in the RSA. The local community is likely to benefit from some forms of training provided to mine personnel such as first aid training.

When considered in a cumulative context, impacts on education providers in terms of capacity are likely to be high.

Mitigation and management measures to address potential impacts on education and training are detailed in **Section 17.7**.

17.5.3. Economics, Employment and Income

A comprehensive economic assessment is provided in **Section 18—Economic Environment** and **Appendix S—Economic Technical Report**. The key potential economic benefits of the SGCP for the LSA include:

- increase in personal income levels due to direct employment at the SGCP (up to eight people during construction and up to six people during operations)
- flow-on economic impacts (e.g. increased spending, opportunities for local business development/expansion)
- diversification of the local economy.

Although there is some opportunity for business development in the service/support industries, this impact is of low overall significance due to the proposed use of Emerald as the major regional service centre.

The SGCP also has the potential to result in negative economic impacts in the LSA, including the following:

- income disparity between mining and non-mining employees
- increased cost of living due to inflationary pressure from higher disposable incomes (particular impact on low income groups)
- loss of skilled local labour from other industries which generally cannot afford to pay the same salaries as mining companies

- difficulty in attracting non-mining employees to the area
- heavy economic reliance on the mining industry.

When considered cumulatively with other projects, these impacts are anticipated to be highly significant.

The SGCP will directly affect a number of landholders. It is anticipated that the surface rights will be required over most of the properties of the Creek Farm and Sapling Creek properties and part of the Chesalon and Betanga properties. Where a substantial portion of land will be required for mining operations (e.g. the Creek Farm and Sapling Creek properties), the Proponent proposes to acquire land by negotiation, where possible.

Employment opportunities will be generated within the RSA, as the majority of the SGCP workforce will be sourced from this region. The SGCP will also facilitate business development/opportunities, predominantly in Emerald which will act as the major service centre.

The RSA will experience significant flow-on economic impacts, predominantly due to it being the source of SGCP workers, but also due to increased spending in the service and support industries.

Mitigation and management measures to address potential impacts on economics, employment and income are detailed in **Section 17.7**.

17.5.4. Infrastructure and Services

Given that the majority of the SGCP workforce will be housed in an on-site accommodation village, the direct population growth associated with the SGCP is unlikely to impact on local infrastructure or services or affect community members' access to these facilities.

However, cumulative direct population growth and the indirect and secondary population growth associated with the SGCP will impact on infrastructure and services in the following ways:

- affect road transport (e.g. disruptions associated with the transport of construction materials, bus services between the Alpha Aerodrome and the SGCP, delivery vehicles, etc.)
- increased traffic leading to accelerated degradation of roads
- increase the potential for traffic accidents
- increase the demand for emergency services, impacting on capacity and staffing
- increase demand on community infrastructure (e.g. electricity, water, sewerage, waste infrastructure).

The SGCP is also expected to have some positive impacts on infrastructure. The Alpha Aerodrome will be upgraded as required with upgrades expected to be undertaken by the air service provider. The flight schedule will be increased, resulting in increased accessibility for the local community.

In the RSA, the SGCP may also result in minor impacts on infrastructure at workforce source locations as a result of minor population increase.

Mitigation and management measures to address potential impacts on infrastructure and services are detailed in **Section 17.7**.

17.5.5. Housing and Accommodation

The majority of the SGCP workforce (99.5 %) will reside in the on-site accommodation village and as such are not anticipated to significantly impact on housing and accommodation in the LSA.

Notwithstanding, the SGCP will result in increased demand for housing in the LSA due to direct, indirect and secondary population growth. Although the impact of the SGCP in isolation is relatively minor, the cumulative demand for housing will be highly significant. This demand for housing will result in reduced availability, suitability and affordability of housing, both for purchase and rent.

Inflation in the cost of housing and accommodation can result in a significant number of people being forced to live in sub-standard accommodation or spending an unusually high proportion of their income on accommodation. This will impact most on those not employed in the mining industry (particularly low income earners that are renting) and may increase the level of social housing required.

The SGCP and other proposed Galilee Basin mining projects will also increase the number of people seeking short-term accommodation. Short-term accommodation in Alpha is currently extremely limited and limited availability may reduce the number of tourists that overnight in Alpha and Jericho (SIA & Development Pty Ltd, 2010). The Alpha Caravan Park has already expanded the number of on-site vans to take advantage of this business opportunity with plans for more in 2012.

Compounding these issues is the limited availability of land in Alpha for new housing development and the capacity of the BRC to process large numbers of Development Applications quickly.

Given the complex, variable nature of the RSA, any increase in housing prices or reductions in the availability or suitability of housing is predicted to be minor in the context of wider housing trends.

Mitigation and management measures to address potential impacts on housing and accommodation are detailed in **Section 17.7**.

17.5.6. Community Health and Safety

The potential impact of the SGCP on existing health services can be broken down into three key areas, as described below.

- Impacts on local health services (e.g. Alpha and Barcardine Hospitals, ambulance service and Royal Flying Doctor Service (RFDS)) associated with population growth. Current health care services in the region are limited and appear to be insufficient to cater for future population growth.
- Impacts on health services associated with servicing non-emergency health needs of the SGCP FIFO workforce. Given the existing constraints at the Alpha Hospital and the absence of a permanent General Practitioner, non-emergency health needs of the SGCP workforce would be either addressed by the on-site emergency services personnel or personnel would be flown to health centres at their source location for treatment.
- Impacts on health services at regional hospitals associated with treating emergency health needs of the SGCP FIFO workforce.

As the SGCP will have on-site emergency services personnel, impacts on the operations of the Queensland Fire and Rescue Service and ambulance service as a result of the on-site workforce are anticipated to be minor. SGCP emergency services facilities and personnel will be available to support local emergency service providers in the event of an incident, if required.

The Proponent has consulted with the QPS regarding potential impacts of the SGCP on policing issues. Potential impacts include the following:

- police resourcing to facilitate wide load transport
- increase in general policing demand due to population growth (e.g. crime, domestic violence, drink driving, drug and alcohol use etc.)
- increase in general policing demand to address any potential issues at the SGCP accommodation village
- road safety, including fatigue.

The SGCP will increase the potential for transport incidents by increasing the volume of traffic on local roads. Potential transport impacts are assessed in detail in the Transport Assessment prepared for the SGCP EIS. As discussed with the QPS and Department of Transport and Main Roads, the potential road safety impacts associated with fatigue (Queensland Courts, 2009) will be managed utilising a FIFO workforce and setting a maximum of 20 minutes drive time to work for locally based employees.

Numerous studies have been conducted to examine the impact of FIFO workforces on local communities. The outcomes of these studies are varied and at times contradictory, which suggests the impacts are likely to be subjective and context specific. However, potential impacts reported include (Carrington *et al.*, 2010; RSDC, 2011):

- real or perceived increase in anti-social behaviour (e.g. violence, prostitution, sexual harassment, etc.)
- real or perceived increase in crime
- real or perceived increase in drug and alcohol abuse, often associated with gender imbalance and masculinisation of the workforce.

Potential safety impacts associated with the SGCP workforce have been given a low overall significance, primarily because the direct FIFO workforce will be housed on-site and mostly isolated from local communities, but also due to the policies and codes of conduct that SGCP employees would be contractually bound to comply with.

Mitigation and management measures to address potential impacts on community health and safety are detailed in **Section 17.7**.

17.5.7. Culture and Community

Alpha is a small rural town with a strong identity and sense of community. It is likely that some changes to or dilution of local culture may occur as a result of direct, indirect or secondary population growth and a shift in the profile of the LSA from a predominantly agricultural area to a mix of agriculture and mining. However, existing social networks observed in the LSA are considered to be resilient and the change in community identity is anticipated to be greatest in the early stages of the SGCP. In addition to concerns expressed by the community about a “changing sense of place”, there was also positive sentiment attributed to mining, relating to potential employment opportunities and service improvement.

The economic impacts on the study areas associated with the SGCP (refer to **Section 18—Economic Environment** and **Appendix S—Economic Technical Report**) are expected to contribute positively to the sense of community.

Social impacts associated with FIFO workforces have recently been the subject of significant media scrutiny. The outcomes of studies into FIFO impacts suggest that FIFO workforces may be associated with a lack of social integration, real or perceived increases in anti-social behaviour, crime and drug and alcohol abuse (Carrington *et al.*, Carrington and Pereira, 2011; Central Queensland News, 2011; RSDC, 2011).

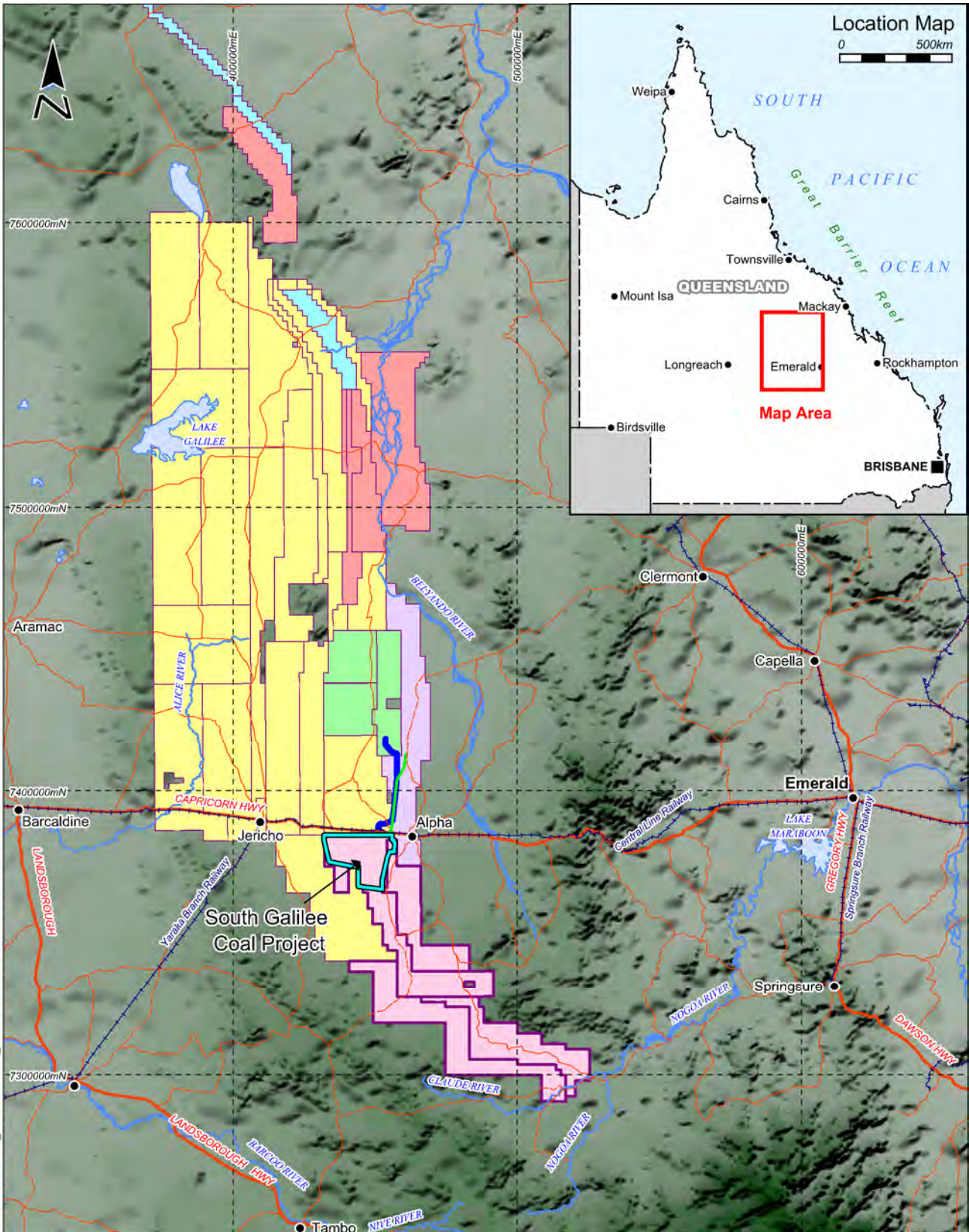
Overall, the SGCP is predicted to have a slight to moderate impact on culture and community values of the region. Mitigation and management measures to address potential impacts on culture and community are detailed in **Section 17.7**.

17.6. CUMULATIVE IMPACTS

A number of mining projects are proposed in the Galilee Basin as shown on **Figure 17-3**.

Cumulative impacts are described in **Section 17.5.1** to **Section 17.5.7**, where relevant.

Mitigation and management measures to address potential cumulative impacts are detailed in **Section 17.7**.



S:\PROJECTS\AM001_STH_GALILEE EIS_MAPINFO\WORKSPACES\2012_WSP\SPACE\AM001_FIG 1-4 SURROUNDING TENEMENTS.WOR



LEGEND	
	MLA70453
	SGCP infrastructure corridor
	SGCP power line
	Principal road
	Road (sealed)
	Road (unsealed)
	Railway
	River
	Population centre
Principal Tenement Holder	
	Alpha Coal Pty Ltd
	Adani Mining Pty Ltd
	Hancock Coal Pty Ltd
	Old Thermal Coal Pty Ltd
	Waratah Coal Pty Ltd
	Vale Exploration Pty Ltd

Data Source : Cambell Higginson Town Planning (2006)

Alpha Coal Pty Ltd

South Galilee Coal Project

Surrounding Tenements

<p>Kilometres</p>	<p>05/09/2012</p> <p>Proj. : MGA Z55</p> <p>Datum: GDA 1994</p>
<p>Scale: 1:2,000,000 (A4)</p>	<p>FIGURE 17-3</p>

17.7. MITIGATION AND MANAGEMENT

Mitigation and management measures have been developed to minimise potential negative impacts and maximise positive impacts. These measures have been developed in consultation with stakeholders in the CRG, TRG and SIA Cross-agency Reference Group (CAR) forums, as well as the SIAU. Where practicable, mitigation measures have been built on or linked to existing programs/initiatives established by governments and service providers.

As described in **Appendix R—Social Impact Management Plan**, the SIMP will adopt a phased approach, involving establishment of and consultation with action plan working groups, development of action plans, finalisation of the SIMP and implementation and review.

The social impact mitigation and management measures proposed for the SGCP are described in detail in the draft SIMP (refer to **Appendix R—Social Impact Management Plan**) and include the development and implementation of the following:

- CEP
- a number of action plans addressing key impact areas (e.g. workforce recruitment and training, local industry participation, housing and accommodation and landholder impacts)
- collaboration with other mining proponents and development of a cooperative agreement to facilitate this process
- a number of working groups to inform the development of action plans and the proposed Community Partnership Program (CPP)
- Grievance and Dispute Resolution Process.

These measures are discussed in further detail in **Section 17.7.1** to **Section 17.7.10**.

17.7.1. Community Engagement Program

The Proponent will continue to implement the CEP throughout the life of the SGCP. The annual CEP review will include an assessment of the effectiveness of engagement activities.

17.7.2. Workforce Management Plan

A Workforce Management Plan (WMP) will be developed to maximise fair and reasonable employment opportunities for local, regional and Queensland workforces. The WMP will be developed in consultation with the WMP Working Group, including representatives from Skills Queensland, the Department of Communities (DoC) and the BRC. An initial meeting with the WMP Working Group was held on 25 November 2011.

A draft WMP is provided in **Appendix R—Social Impact Management Plan**.

17.7.3. Local Industry Participation Plan

The establishment of a Local Industry Participation Plan (LIPP) was discussed at the Galilee Basin TRG forum in October 2011. The objective of the LIPP will be to give local industry full, fair and reasonable opportunity to be considered for SGCP contracts. The LIPP will be developed in consultation with the LIPP Working Group, including representatives from the Industry Capability Network, LNG Industry Development: Strategic Economic Projects, Office of Advanced Manufacturing, DSDIP and BRC.

Although the Proponent is not currently in a position to provide detailed procurement and contractual information or commitments, initial discussions have been held with DSDIP – Strategic Economics Projects and the Office of Advanced Manufacturing to discuss the LIPP process and timing.

The LIPP is required to be registered with DSDIP at least 30 days prior to going to tender for construction or acquisition of capital assets. The establishment of the LIPP Working Group and the development of the LIPP will occur in 2012, following the completion of the Definitive Feasibility Study and the Final Investment Decision.

17.7.4. Housing and Accommodation Plan

The Housing and Accommodation Plan (HAP) will be developed in consultation with the HAP Working Group, including representatives from the BRC, DoC, DSDIP and OESR. An initial meeting with the HAP Working Group was held on 25 November 2011.

A draft HAP is provided in **Appendix R—Social Impact Management Plan**.

17.7.5. Cooperation and Regional Development Agreement for the Galilee Basin

The Proponent is a signatory to the Cooperation and Regional Development Agreement for the Galilee Basin. This voluntary agreement established the Galilee Basin Cooperation and Development Working Group to facilitate efficient and timely development of infrastructure and services and access to a skilled workforce in order to successfully develop the Galilee Basin. Other signatories to the agreement include Adani Mining Pty Ltd, Waratah Coal Pty Ltd and Vale.

17.7.6. Collaboration with Other Mining Proponents

The Proponent has actively advocated for collaborative approaches between mining proponents. In mid-2011, the Proponent entered into discussions with representatives from Waratah regarding their possible involvement in some of the consultation forums established by the Proponent. The Proponent considered that effective collaboration between Waratah and the Proponent would allow mining proponents to present project information and provide reassurance to regulators and the local community that cumulative impacts will be addressed comprehensively and transparently. This approach was considered to offer significant advantages for the local community and mining proponents, and reduce the risk of 'consultation fatigue'. The scope of the existing CRG and TRG forums has been broadened to include other mining proponents and the first Galilee Basin CRG and Galilee Basin TRG meetings using this approach were held in October 2011.

17.7.7. Community Partnership Program

As many potential impacts are cumulative in nature or are exacerbated by the number of projects in the region, there is a need for collaboration between mining Proponents and other external agencies to improve the outcomes of social impact management. The Proponent supports the development of a CPP to manage, allocate and monitor the allocation of community funding. The establishment of a CPP (or similar) was discussed at the Galilee Basin CRG and TRG forums in October 2011 and the SIA CAR forum.

The CPP would provide a framework for addressing cumulative social impacts according to a transparent, equitable process. It is envisaged that the CPP would be initiated and facilitated by the State Government, with involvement of Galilee Basin Proponents, the BRC and local community representatives. The CPP would enable mining Proponents to contribute funds to proposals which are aligned with identified social impacts in order to achieve meaningful, long-term community outcomes.

The CPP would involve the establishment of a Community Partnership Committee. The establishment of a Community Partnership Committee and a Community Partnership Trust will serve to give local councils and communities a greater role in determining priorities and allocating funds for development activities.

Case studies of similar programs adopted at other mining operations in Australia are provided in **Appendix R—Social Impact Management Plan**.

17.7.8. Social Infrastructure Working Group

The establishment of a Social Infrastructure Working Group (SIWG) was discussed at the Galilee Basin CRG and TRG forums in October 2011.

The SIWG will discuss issues relating to health, education, community safety and hard infrastructure. The SIWG will provide advice and recommendations to the CPP.

This working group is proposed to be established in line with the delivery schedule for the Project and will comprise representatives from the following:

- the local community
- BRC
- DSDIP
- Queensland Health
- Queensland Ambulance Service
- QPS
- Department of Education and Training
- Education Queensland
- Alpha State School

- Department of Community Safety
- infrastructure providers.

17.7.9. Landholder Management Plan

The objective of the Landholder Management Plan (LMP) is to develop good working relationships between the SGCP and the affected landholders. The LMP sets out procedures for landholder communications, compensation, property access, complaints and dispute resolution etc. A draft LMP is provided in **Appendix R—Social Impact Management Plan**.

17.7.10. Grievance and Dispute Resolution Procedure

Appendix R—Social Impact Management Plan provides a Grievance and Dispute Resolution Procedure to enable stakeholders to raise grievances or disputes with the Proponent and provide a framework for addressing and resolving issues in an appropriate and timely manner.

17.8. MONITORING AND REPORTING

As a component of the SIMP monitoring process, SIMP reports will be prepared annually during construction and three-yearly during the operations phase. SIMP reports will include:

- a summary of stakeholder engagement undertaken during the preceding period and its effectiveness
- a summary and analysis of all grievances/disputes reported during the preceding period
- an assessment of progress in implementing proposed management and mitigation strategies and achieving KPIs stipulated in the following:
 - CEP
 - WMP
 - LIPP
 - HAP
 - CPP
 - LMP.
- a description of any proposed updates/revisions to the SIMP document.

A copy of the SIMP reports will be provided to the SIAU and made available to key stakeholders upon request.