

Arrow Bowen Pipeline

SOCIAL IMPACT ASSESSMENT

- Revision 0
- 11 November 2011



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Executive summary

The Arrow Bowen Pipeline project (the project) involves the construction of a 580 kilometre (km) pipeline from Red Hill, approximately 90 km north of Moranbah in Central Queensland to a proposed gas gathering station approximately 22 km southwest of Gladstone. The pipeline will convey coal seam gas (CSG) from the Bowen Basin for subsequent export as liquefied natural gas (LNG).

Social impacts associated with the project have been assessed for all stages of the project including the construction, operation and decommissioning. Overall, the project is expected to provide benefits to local and regional communities through direct and indirect employment opportunities. However, the project is likely to have some minor impacts for communities closest to the proposed pipeline route, due to temporary disruption to land uses during construction and changes to local traffic and access.

While some social impacts have been identified in the project area, they are generally minor and cumulative impacts associated with significant projects in the project area are negligible.



Glossary of Terms

Term	Definition
ABP	Arrow Bowen Pipeline
ABS	Australian Bureau of Statistics
CCD	Census Collector District
CSG	Coal seam gas
DEEDI	Department of Employment, Economic Development and Innovation
DERM	Department of Environment and Resource Management
DL	Dysart Lateral
EL	Elphinstone Lateral
GP	General Practitioner
HSD	Health Service District
LGA	Local Government Area
LNG	Liquefied natural gas
MIW	Mackay, Isaac and Whitsunday
PIFU	Planning Information and Forecasting Unit
REIQ	Real Estate Institute of Queensland
RFGM	Regional Framework for Growth Management
ROW	Right of way
TOR	Final Terms of Reference for the Arrow Bowen Pipeline Project EIS
The project	Arrow Bowen Pipeline Project
SCP	Stakeholder Consultation Plan
SEIFA	Socio Economic Indices for Areas
SIA	Social impact assessment
SL	Saraji Lateral
SLA	Statistical Local Area
WHAM	Whitsunday, Hinterland and Mackay Plan



1. Introduction

This report addresses Section 4.11 of the *Final Terms of Reference for the Arrow Bowen Pipeline Project EIS* issued by the Department of Environment and Resource Management (DERM). The Terms of Reference (TOR) requires an assessment of the Arrow Bowen Pipeline Project (the project) and its potential benefits and impacts on the social environment within the social assessment area. Arrow Bowen Pipeline Pty Ltd (Arrow) is the proponent for the Arrow Bowen Pipeline Project.

The report provides a description of the social and cultural values potentially impacted by the project and an assessment of the potential benefits and impacts on those values.

A Social Impact Management Plan (SIMP) (refer to **Appendix D**) has also been produced to further develop the identified mitigation measures and commitments into SIMP Action Plans.

This section provides a description of the project and defines the location of the proposed pipeline and scopes the project area for the purposes of this report.

1.1. Project description

The project involves the construction of a buried pipeline from Red Hill, approximately 90 kilometres (km) north of Moranbah in central Queensland to a proposed gas gathering station approximately 22 km southwest of Gladstone. The pipeline is 580 km in length and includes a mainline (AB) which is approximately 477 km long and three laterals (Dysart, Saraji and Elphinstone). The three laterals consist of: the Elphinstone Lateral (EL) approximately 52 km in length; the Saraji Lateral (SL) approximately 25.8 km in length; and the Dysart Lateral (DL) approximately 25.7 km in length. The pipeline will convey coal seam gas (CSG) from Arrow's gas fields in the Bowen Basin for eventual export as liquefied natural gas (LNG) from the proposed Arrow LNG Plant on Curtis Island with construction commencing in 2016 and the first gas being supplied 2017/2018.

1.2. Social Assessment Area

The proposed pipeline route will commence approximately 90 km north of Moranbah in central Queensland's Bowen Basin gas fields and terminate at a proposed gas gathering station west of the Bruce Highway at Mount Larcom for delivery into Arrow Surat Pipeline and conversion to LNG at the proposed Arrow LNG Plant near Gladstone.

The preferred pipeline route traverses four local government areas (LGAs), including:

- Whitsunday Regional Council;



- Isaac Regional Council;
- Rockhampton Regional Council; and
- Gladstone Regional Council.

These LGAs were established on 15 March 2008 following the amalgamation of a number of former LGAs as presented in **Table 1.2-1**.

Table 1.2-1: Mackay, Isaac and Whitsunday Regional Plan goals

Current LGAs	Amalgamated LGAs
Whitsunday Regional Council	Bowen Whitsunday Shire
Isaac Regional Council	Belyando Broadsound Nebo
Rockhampton Regional Council	Fitzroy Livingstone Mt Morgan Rockhampton City
Gladstone Regional Council	Calliope Gladstone City Miriam Vale

Source: Queensland Government, 2011b

The social assessment area for the purposes of this social impact assessment (SIA) includes the local and regional communities potentially directly and indirectly affected by the construction, operation and decommissioning of the project. In particular, it includes the statistical local areas (SLAs) of:

- Bowen
- Nebo
- Belyando
- Broadsound
- Livingstone (Part A and Part B)
- Fitzroy (Part A and Part B)
- Calliope (Part A and Part B).

The main centres and townships along the proposed pipeline route or near to project infrastructure include:

- Glenden
- Moranbah
- Dysart
- Middlemount
- Duaringa
- Marlborough
- Gracemere
- Mount Larcom
- Bouldercombe
- Raglan

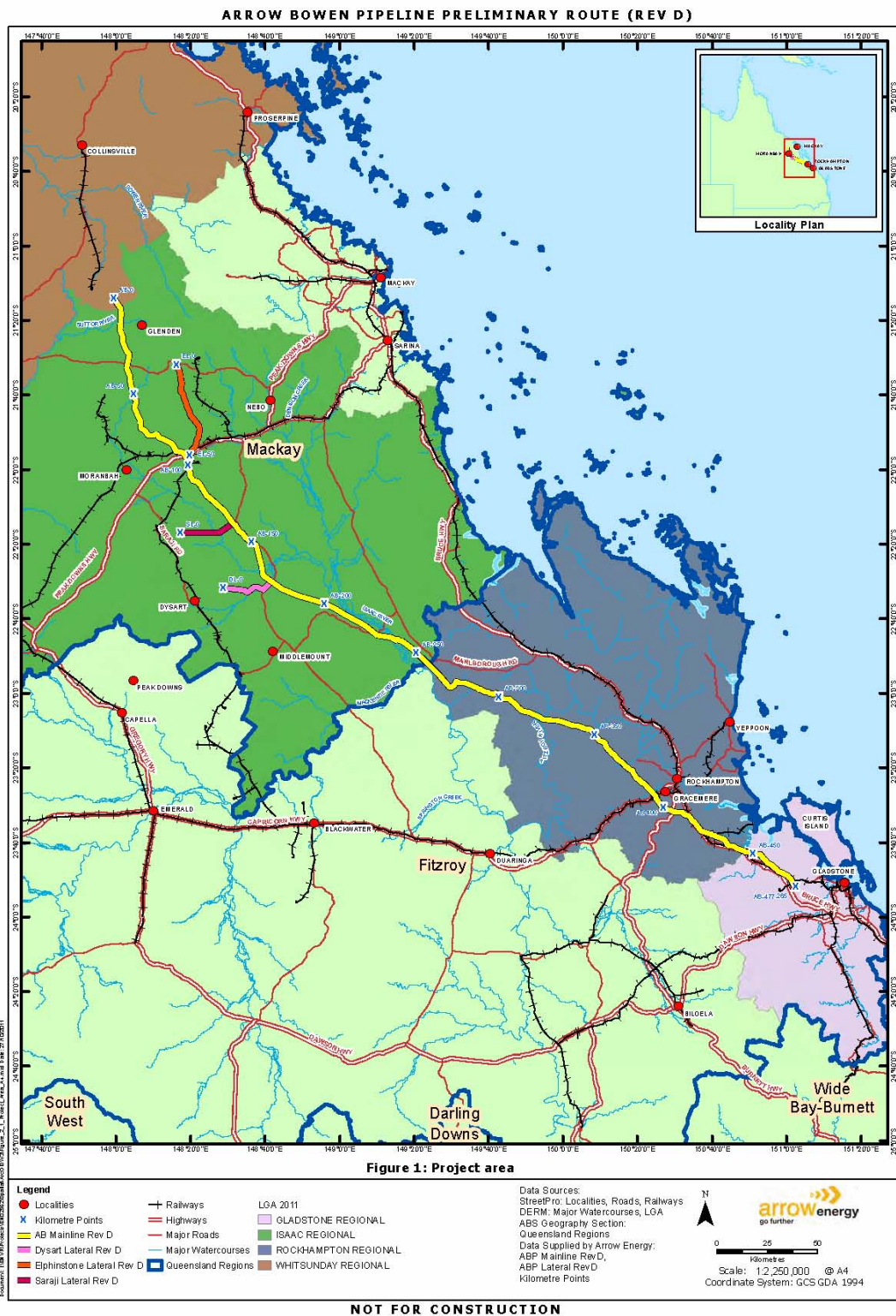


- Bajool
- Calliope.

Figure 1 shows the project area, along with the proposed pipeline route, LGAs and main centres and townships.



■ Figure 1 Project area





1.3. Methodology

Social impact assessment (SIA) “includes the process of analysing, monitoring and managing the intended and unintended social consequences, both positive and negative, of planned interventions [i.e. the project] and any social change processes invoked by those interventions. The primary purpose of SIA is to bring about a more sustainable and equitable biophysical and human environment” (IAIA, 2003).

Key stages of SIA include:

- Scoping of likely issues, including the nature of and extent of a project’s potential benefits and impacts and potentially affected groups or communities
- Describing the existing social environment and social values of the social assessment area, including the baseline conditions of potentially affected groups or communities
- Identifying and analysing the potential benefits and impacts for particular communities and assessing the magnitude, duration and likelihood of the identified benefits and impacts
- Identifying mitigation strategies to enhance benefits of the Project and avoid or minimise impacts.

The initial phase of the assessment process involved scoping the range of potential social impacts for local and regional communities affected by the pipeline and other associated infrastructure such as the accommodation camps and haulage routes. Scoping allows information collected for the existing environment to be tailored to support consultation and the analysis of the Project’s potential social impacts.

The description of the existing social environment provides an overview of key social characteristics and conditions in the social assessment area, including population and demography, social infrastructure and community values.

The demographic profile provides an analysis of key indicators of population size, diversity and socio-economic conditions. The analysis primarily draws on information from the Australian Bureau of Statistics (ABS) Census of Population and Housing 2006. Information from the 2011 Census is expected to be available from mid-2012.

The information from the 2006 Census is supplemented with data from:

- Related ABS publications;
- Population projections prepared by the Queensland Government’s Planning Information and Forecasting Unit (PIFU);
- The Queensland Department of Housing on housing affordability and public housing stock;



- The Commonwealth Department of Employment and Workplace Relations on unemployment rates;
- The Real Estate Institute of Queensland (REIQ) on property prices; and
- Community and stakeholder consultation undertaken by Arrow.

An overview of existing social infrastructure in those communities near the proposed pipeline and along the proposed pipeline route is also provided. This includes services, facilities and networks that support quality of life and wellbeing. The SIA focuses on facilities which provide the base for most services and networks and includes health facilities, schools, cultural facilities and community centres.

Community values in the social assessment area relate to factors such as access and connectivity, sense of place and community safety. The identification of community values has been informed by:

- Local government and Queensland government social policies, as part of the strategic context for the proposal;
- Outcomes of landholder consultation; and
- Literature reviews and data analysis.

Potential benefits and impacts on the social environment of local and regional communities in the social assessment area were identified and evaluated. This included an analysis of the potential benefits and impacts of the project's construction, operation and decommissioning, including on community values, population size and characteristics, housing and accommodation, access and connectivity, local business and industry, employment and social infrastructure.

This report provides an assessment of the potential direct, indirect and cumulative impacts of the project during construction and operation. Measures to enhance the project's benefits and avoid or reduce its impacts are also identified.

1.4. Stakeholder consultation

This assessment has been informed by the Stakeholder Consultation Plan (SCP) developed by Arrow and the outcomes of landholder consultation undertaken for the project by Arrow. The key outcomes of this consultation are described in **Section 3.1**.



2. Relevant policy, plans and projects

This section provides an overview of the social policies, plans and projects relevant to the project and the social assessment area.

2.1. Social policy framework

The following provides a description of the State and local government policies relevant to the social environment of the social assessment area and the project.

2.1.1. Sustainable Resource Communities Policy

In July 2008, the Queensland Government released the *Sustainable Resource Communities Policy: Social Impact Assessment* for the Mining and Petroleum Industries, which builds on the *Sustainable Futures Framework for Queensland Mining Towns* released by the Queensland Government in June 2007. The policy was developed in response to the rapid expansion of the mining industry in the Bowen Basin and the subsequent pressure this is placing on social infrastructure, such as housing and community services and quality of life through choice in education services and access to a range of health services.

The policy seeks to strengthen the SIA component of the EIS process to enable the delivery of positive community outcomes, including the consideration of cumulative and regional impacts in decision making and planning for communities.

A number of initiatives are proposed in the policy to strengthen the SIA, including a framework for managing identified potential impacts.

2.1.2. Mackay, Isaac and Whitsunday Regional Plan

The proposed pipeline traverses areas covered by the *Draft Mackay, Isaac and Whitsunday (MIW) Regional Plan*, which was released for public comment in May 2011 (Queensland Government, 2011). The draft MIW Regional Plan updates the non-statutory *Whitsunday, Hinterland and Mackay Plan (WHAM)* (2006).

The draft MIW Regional Plan identifies seven strategic directions to achieve the Regional Vision for the three Councils. The strategic directions relevant to the social environment of the Mackay, Isaac and Whitsunday Region are outlined in **Table 2.1-1**. Table 2.1-1

Table 2.1-1 Mackay, Isaac and Whitsunday Regional Plan goals

Goal Group	Goals
Strong communities	Provision of social infrastructure – planned to meet population growth and adaptable to changes in demographics. Social infrastructure – provided in locations accessible to public transport, residential areas and employment and activity centres Social Services – delivery will be critical in influencing the wellbeing of communities.
Settlement Pattern	Employment Centres – development and expansion will be close to residential areas to encourage containment of the urban footprint.
Infrastructure	Social and Community Infrastructure – Infrastructure must be coordinated across all types and sectors, including private industry to facilitate more efficient and sustainable use of infrastructure throughout the region. Development of a settlement pattern which takes into account location and capacity of existing services and efficient provision of new infrastructure.

Source: Queensland Government, 2011a

2.1.3. Central Queensland Regional Framework for Growth Management

The proposed pipeline passes the regional LGAs of Rockhampton and Gladstone. These areas are covered by the *Central Queensland Regional Framework for Growth Management (RFGM)* (2002), a non-statutory plan endorsed by Queensland Cabinet. The policy areas within the RFGM that are relevant to the project include social and cultural development, and planning and governance (refer to **Table 2.1-2**).

Table 2.1-2 Central Queensland RFGM guiding principles

Goal Group	Guiding Principle
Social and cultural development	Social and cultural fabric and vitality of the community are underpinned by sound, ethically based planning, institutional support and investment that recognise the past and embrace the present.
Planning and governance	Planning and governance systems in the region recognise the uniqueness and diversity of the individual communities of Central Queensland, and are underpinned by the principles of participation, collaboration, intergovernmental cooperation, equity, accountability, integrity, ethics and transparency.

Source: Queensland Government, 2002

2.1.4. Local planning schemes

The existing government planning frameworks relevant to the social assessment area have been selected from the former LGAs that the proposed pipeline traverses including Bowen Shire Council, Nebo Shire Council, Belyando Shire, Broadsound Shire, Livingstone Shire, Fitzroy Shire and Calliope Shire Council.

The desired environmental outcomes described within the planning schemes of the former LGAs relevant to the social assessment area are outlined in **Table 2.1-3**.

Table 2.1-3: Local planning schemes

Theme	Desired Environmental Outcome
Bowen Shire Planning Scheme (2006)	
Improving employment opportunities and strengthening the tourism industry	Improving employment resulting from advancements in information technology and emerging business/industry trends are maximised. The Shire's tourism industry is strengthened and expanded based on natural, cultural and man-made assets and the orderly provision of services and facilities.
Community development and development	Growth and community development within the Shire focussed on the existing Bowen and Collinsville urban areas to facilitate the efficient use, timely and orderly expansion and continued operation of infrastructure.
Diversity and affordability of housing	Development facilitates diverse housing choice, including affordable housing that is responsive to the change demographic structure of the Shire's population and promoted equity in access to goods and services.
Community health and safety, amenity and values	Development does not adversely affect community's health and safety, and amenity. Development reflects community's expectations and values of places and landscapes that reflect its history and identity.
Nebo Shire Plan (2008)	
Ecological Processes and Natural Systems	The open space network, including the Bicentennial Trail and Mackay Highlands Great Walk, provides a range of accessible and useable recreation opportunities.
Maintenance of cultural, economic, physical and social well-being of people and communities	The values or areas or places of cultural heritage significance are protected, maintained and enhanced. The provision and safe operation of necessary infrastructure, including water and sewerage systems, roads, electricity supply networks and transmission grid, telecommunications systems, can tramways and rail networks, in accordance with the differing needs of the urban localities of the Shire. The safety of the communities is maintained by ensuring development does not occur in areas prone to bushfires, flood and/or landslides.
Belyando Shire Planning Scheme (2008)	
Community and well-being	Moranbah and Clermont provide a wide range of government and community services and employment opportunities for their communities and those in surrounding areas. In addition Moranbah has a significant role as the primary service centre for the northern Bowne Basin mining industry. Moranbah and Clermont are characterised by a strong and growing permanent residential population (rather than providing temporary dormitories for the mines in the region). A wide range of affordable housing types is available and designed to contribute to the quality of the urban environment.
Broadsound Shire Planning Scheme (2005)	
Maintenance of cultural, economic, physical and social well-being of people and communities	High standard of public health and safety are maintained, avoiding or minimising adverse effects associated with the natural and built environments, including erosion, flood, storm tide inundation, fire and traffic hazards, together with safe domestic water supply and responsible waste disposal. Areas and places of special aesthetic, architectural, cultural, historic, scientific, social or spiritual significance and their values are conserved or enhanced. Residents have access to integrated networks of pleasant and safe public areas for aesthetic enjoyment and cultural, recreational and social interaction, including beaches and natural bushland.



Theme	Desired Environmental Outcome
	<p>Adverse effects for scenic values in coastal areas, bushland and the rural countryside are minimised.</p> <p>Local and neighbourhood amenity is maintained and enhanced, including by minimising effects from incompatible land uses.</p>
Livingstone Shire Planning Scheme (2005)	
Economic demand of residents	Development provides a benefit to and satisfies the economic demand of residents of the area in which it is located.
Community development and development	Growth and community development within the Shire focuses on the existing Bowen and Collinsville urban areas to facilitate the efficient use, timely and orderly expansion and continued operation of infrastructure.
Diversity and affordability of housing	Development facilitates diverse housing choice, including affordable housing that is responsive to the change demographic structure of the Shire's population and promoted equity in access to goods and services.
Community health and safety, amenity and values	<p>Development does not adversely affect community's health and safety, and amenity.</p> <p>Development reflects community's expectations and values of places and landscapes that reflect its history and identity.</p>
Fitzroy Shire Planning Scheme(2005)	
Preservation of residential communities character	The Shire's residential communities are preserved in character, well serviced, enjoy high levels of safety and amenity, able to accommodate growth and offer a range of housing options to meet the diverse needs of all community members.
Provision of services and community functions	<p>Gracemere is the main business centre, providing higher order services and a range of community and civic functions. Other communities in the Shire have access to facilities and services that meet local needs.</p> <p>The park and recreation opportunities for residents and visitors of the Shire are enhanced and expanded.</p>
Location of development	<p>Rural Residential areas are located and consolidated to provide suitably serviced, alternative rural living options that are close to townships.</p> <p>Development is located and managed where ever possible to ensure the long term protection and conservation of the significant cultural heritage values of the Shire.</p>
Natural Hazards Risk	The risks to persons and property due to flood, bushfire and landslide are minimised.
Calliope Shire Planning Scheme (2007)	
Environment and conservation	Sites of cultural heritage significance of indigenous and non indigenous origin including built forms, vegetation and landscape, for their cultural importance to the community, the Shire's past and its history of development.
Economic development	<p>Ensuring availability of a wide diversity of activities including primary, secondary and tertiary industries that are environmentally and socially sustainable within the local and wider community.</p> <p>The efficient use of existing transport and community infrastructure and the timely and equitable delivery of new infrastructure in step with the needs of continuing urban growth.</p> <p>Consolidation of urban development which maximises the sustainability of commercial educational, health and other community services and recreation and open space facilities.</p>



Theme	Desired Environmental Outcome
Community development	<p>A range of affordable housing choices are provided in accessible locations and suitable for the climate of the Shire.</p> <p>A wide range of satisfying and rewarding employment opportunities.</p> <p>Convenient access to a range of community services including health care, education, shopping and business services, cultural and entertainment facilities, and recreation and sporting facilities.</p>

Sources: Bowen Shire Council, 2006; Nebo Shire Council, 2008; Belyando Shire, 2008; Broadsound Shire, 2005; Livingstone Shire, 2005; Fitzroy Shire, 2005; Calliope Shire Council, 2007.

2.2. Other Projects

The Department of Employment, Economic Development and Innovation (DEEDI) publish a list of Bowen Basin coal mines and coal projects and Queensland’s mineral, petroleum and energy operations and resources. A number of these projects are currently operating or planned to be developed in the social assessment area and are listed in **Appendix C**. These projects have been considered as part of this assessment to assist in the consideration of cumulative impacts.



3. Summary of community consultation

This section provides a summary of outcomes from landholder consultation undertaken for the project by Arrow.

3.1. Affected landholders

125 landholders of 327 lots along the pipeline route had been consulted as at August 2011. The key issues raised by those landholders consulted related to:

- Time and inconvenience, interruption to operation of property and potential loss of income or reduction in income;
- Consultation fatigue – cumulative impact;
- Access protocols and potential damage to fences and concern gates will not be closed;
- Concerns that Arrow Energy have future plans for wells that they do not want and lack of trust due to inconsistent information and inaccurate maps;
- Lack of privacy regarding the distance of the pipeline from the house and the number of people accessing their property; and
- Potential for property to be devalued.

3.2. Stakeholder Consultation Plan

The development of a Stakeholder Consultation Plan (SCP) and the undertaking of appropriate and effective stakeholder consultation is an essential element of the project. The SCP clearly states the stakeholder and community engagement goals, processes and outcomes, and how these will be achieved in a timely and effective manner.

The key objectives of the SCP are to:

- Identify project stakeholders, their needs and their values;
- Identify the key stakeholder issues to be addressed during consultation;
- Facilitate involvement with the community through a two-way flow of information between the project team and the public;
- Develop consultation mechanisms to encourage and facilitate active public consultation;
- Actively encourage community input in an atmosphere of cooperation, support and encouragement;
- Provide information on the EIS process;
- Seek input on key issues and concerns and suggestions to mitigate these concerns;
- Provide information on the outcomes of studies undertaken;



- Demonstrate that possible issues of concern to the community have been identified and considered during the EIS process;
- Ensure the community is informed about the project's goals and economic benefits;
- Maintain open channels of communication with stakeholders; and
- Create an environment in which stakeholders and the public are more likely to support than oppose the project.

3.2.1. Engagement Process

Arrow will engage with stakeholders and potentially affected parties at the earliest practical stage to discuss and explain the project, and to identify and respond to issues and concerns regarding social impacts. The stakeholder engagement processes will continue throughout the EIS and contribute to the identification of social and cultural values and to the assessment of impacts.

The SCP is aimed at an open and honest approach to stakeholders so that they are kept informed about the project and encouraged to contribute ideas that can enhance its environmental and social acceptability. Arrow will be guided by following principles when implementing the SCP:

- Maintaining open and accessible channels of communication between the community and with project decision makers;
- Relaying information in a timely manner, in advance of any activities that may impact on the community;
- Listening carefully to any concerns, issues or points of view expressed;
- Providing a timely response to questions raised;
- Providing adequate information as requested;
- Ensuring realistic parameters are provided for all consultation in all areas of potential negotiations;
- Ensuring that messages relayed to the community are consistent;
- Reviewing and revising the consultation program as the project proceeds;
- Maintaining good consultation records and developing a consultation database
- Ensuring all communities, verbal or written, are delivered in a clear and unambiguous manner; and
- Instituting a monitoring process for consultation activities.

The consultation program will be maintained for the duration of the planning, construction and commissioning phases of the proposed pipeline. Arrow will maintain an active stakeholder liaison program during the operational phase.



As the project progresses, active consideration will be given to establishing community reference groups as a means of facilitating a structured and two-way flow of information between the project team and the community and to monitor community attitudes towards the project as it proceeds through different stages. A summary of the actions proposed is included in **Table 3.2-1**.

Table 3.2-1: Project stakeholder engagement activities

Action area	Action item	Responsibility
Initial information provision	Letter and project fact sheet distributed to various stakeholders including all landholders along the proposed pipeline route; and Material places in media e.g. advertisements and notices in newspapers.	Community and Corporate Affairs
Consultation process	Individual face-to-face consultations and negotiations with landholders; Discussions with the affected mining and petroleum tenement holders; One-on-one meetings with local councils, major government departments, elected representatives and key representative bodies; Initial Advice Statement (IAS) provided to DERM and distributed to various government departments; and Meetings with community organisations as and when required / requested.	Route Selection Team
Public displays of the project	EIS ToR advertised in newspapers; Display of draft ToR; and Draft EIS displayed at key locations for public comment and feedback.	Route Selection Team
Consultation material	Face-to-face meetings; Information sessions / briefings; Brochures, maps, fact sheets; Material placed in media; EIS – Executive Summary and Report; Consultation database; Electronic updates; Letter drops; Phone, fax, mail and email contacts.	Community and Corporate Affairs

3.2.2. Stakeholders

Key stakeholders already identified are outlined in **Table 3.2-1**.

Table 3.2-2: Stakeholders for the project

Category	Entity
State Government advisory agencies and elected representatives	Department of Environment and Resource Management Department of Infrastructure and Planning Department of Transport and Main Roads Department of Communities Department of Emergency Services Department of Mines and Energy Queensland Police Service



Category	Entity
	Department of Employment, Economic Development and Innovation Department of Community Safety State and Commonwealth Members of Parliament Whitsunday Regional Council Isaac Regional Council Rockhampton Regional Council Gladstone Regional Council
Community, associations and landcare groups	Queensland Conservation Council Fitzroy Basin Association Gladstone Economic and Industry Development Board Mackay Conservation Group Capricorn Conservation Council Inc
Registered Native Title parties	Birri People (QUD6244/98, QC98/12) Jangga People (QUD6230/98, QC98/10) Wiri People (QUD372/06, QC06/14) Barada Barna People (QUD380/08, QC08/11) Port Curtis Coral Coast People (QUD6026/01, QC01/29) Darumbul People (QUD6131/98, QC97/) Darumbal People 2 (QUD6001/99, QC99/1)
Other LNG proponents	Origin Energy / Conoco Philips Santos / PETRONAS and TOTAL Queensland Gas Company (QGC) / British Gas (BG)
Petroleum and mineral tenement holders	CH4 Pty Ltd (PL) Central Queensland Pipeline Pty Ltd (PPL) Stanwell Corporation Limited (PPL) Central Queensland Pipeline Pty Ltd (PPL) Jamena Queensland Gas Pipeline (1) Pty Ltd (PPL) QCLNG Pipeline Pty Ltd (PPL) Surat Gladstone Pipeline Pty Ltd (PPL) Macarthur Coal Pty Ltd (ML) Vale Australia (CQ) Pty Ltd (ML) Coppabella Coal Pty Ltd (ML) Peabody (Burton Coal) Pty Ltd (ML)
Operators of existing utilities and infrastructure	Optus Powerlink Ergon Energy

Other interested parties may be identified as discussed and project briefings with relevant stakeholders are progressed.

The Queensland Police Service (QPS), Gladstone Police District, is to be engaged as a consultation stakeholder during development of a Traffic Management Plan (TMP) for the social assessment area.



3.2.3. Consultation Activities

A range of consultation activities will be undertaken as appropriate during the project development. The activities will include:

- One-on-one meetings with local governments, relevant government departments and agencies (including regional offices), MPs representing the area (state and federal), landholders, residents, indigenous interests, community groups, business groups and special interest groups;
- Individual face-to-face consultations and negotiations with landholders and residents, which are ongoing for the life of the project;
- Preparation and wide distribution of printed and digital information, factsheets, project updates and special reports;
- Establishment of a database of key stakeholders to advise of progress, to note and monitor concerns and to open and maintain communication channels;
- Use of local newspapers and community announcements to disseminate information at key points in the project;
- Internet access to project information;
- Information sessions along the pipeline route as appropriate during planning and EIS public comment period; and
- Regular project group planning and information sharing meetings.



4. Existing social values within the social assessment area

This section describes the existing social environment of local and regional communities in the social assessment area. It includes an analysis of population and demographic characteristics, as well as key economic characteristics. A brief description of social infrastructure is also provided along with an overview of key community values.

4.1. Demographic profile

This section provides an overview of key demographic characteristics of the social assessment area and towns in the vicinity of the proposed pipeline route. Additional demographic information is also provided in **Appendix A**.

4.1.1. Population size and growth

Population size

In 2010, the social assessment area had an estimated residential population of 104,801 people. Livingstone Part B has the largest population, with approximately 29,572 people, followed by Calliope Part A (17,147 people) and Bowen (14,391 people). Nebo SLA had the smallest population with 2,994 people.

Between 2005 and 2010, population growth in the SLAs of Calliope Part A (4.1%), Fitzroy Part A (6.4%), Livingstone Part A (3.7%) and Nebo (3.4%) were relatively high compared to the social assessment area as a whole (2.9%) and Queensland (2.5%). Over the same period, population growth in Broadsound (1.1%), Fitzroy Part B (0.8%) and Calliope Part B (1.8%) was relatively slower than the project area and Queensland.

Between 2009 and 2010, the SLAs of Belyando and Livingstone Part B grew at a rate of 2.0%, which was the same as the rate of growth for Queensland as a whole over the same period. Population growth was relatively slow in all SLAs, with Broadsound (-0.4%) and Fitzroy Part B (-0.5%) both experiencing negative growth. The only SLA to continue to have a higher growth rate than Queensland between 2009 and 2010 was Fitzroy Part A (3.4%).

Population projections

Over the 20 years from 2011, the former LGAs of Nebo and Calliope are expected to grow at a relatively high rate of 3.2% per annum when compared to Queensland's 1.8%. Over the same period, the former Broadsound LGA is projected to have a growth rate comparable to Queensland while all other areas are expected to have a growth rate higher than Queensland.



Age profile

As at June 2010, Bowen and Livingstone Part B had the highest percentage of people aged 65 years or over, at 13.5% and 14.8% respectively, when compared to Queensland 12.6%. Bowen also had the lowest percentage of people aged 0-14 years (18.0%). All SLAs had lower proportions of people aged 15-24 years than Queensland. Nebo (37.8%), Belyando (37.6%), Broadsound (35.9%) and Livingstone Part A (30.7%) all had higher proportions of people aged 25-44 years than Queensland (28.3%).

In 2009, Bowen (41 years) and Livingstone (40 years) had the highest median age of all LGAs and were higher than Queensland (36 years). Belyando and Broadsound had the lowest median age, 30 years and 32 years respectively.

Between 2004 and 2009, a number of SLAs in the social assessment area have experienced a decrease in the median age, which was in contrast to Queensland as a whole which saw an increase in the median age over this time.

Population mobility

Overall, residents in the social assessment area were less likely to move from another SLA or overseas compared to Queensland indicating a relatively stable population. However, Nebo residents demonstrated higher levels of population mobility, with higher proportions of people living in another SLA or overseas either one year (18.6%) or five years (42.2%) prior to the 2006 Census compared to the social assessment area and Queensland. Broadsound also had higher levels of population mobility. This indicates a more transient population. Bowen had lower levels of people who had lived in another SLA or overseas either one year (9.0%) or five years (23.0%) prior to the 2006 Census, indicating a more stable population.

4.1.2. Cultural diversity

Indigenous population

Livingstone and Bowen had the largest Indigenous population at 975 people and 805 people respectively. While Bowen (6.5%) had the highest percentage of Indigenous people than all other SLAs in the social assessment area, double that for Queensland, 3.3%. Livingstone had the largest Indigenous population (975 people) but as a percentage was comparable to Queensland. Fitzroy had an Indigenous population that was proportionately larger than Queensland. The key Indigenous statistics as at 2006 for the LGAs that the pipeline traverses is presented in **Table A7, Appendix A**.

As a percentage of population, Fitzroy Part A, Bowen and Livingstone Part A had the largest Indigenous population, at 6.7%, 6.5% and 5.0% respectively. This is compared to the social assessment area (at 3.5%) and Queensland (at 3.3%). Belyando has the smallest Indigenous population, at 1.8%.



All LGAs had more males than females compared to Queensland where there were more females than males. The median age ranged from 15 years in Fitzroy to 24 years in Bowen, compared to Queensland's Indigenous where the median age was 20 years. The median age for the Indigenous population in all LGAs in the social assessment area and Queensland are significantly lower than for the non-Indigenous population which ranges from 30 years in Belyando to 41 years in Nebo with a median age of 36 years for all Queensland.

Broadsound is the only LGA with an Indigenous employment rate lower than Queensland as a whole, 4.2% and 4.8% respectively. All other LGAs had high rates of unemployment for Indigenous population ranging from 8.0% in Belyando to 15.4% in Nebo. Bowen and Fitzroy both have larger Indigenous populations and higher rates of unemployment compared to all of Queensland.

The Indigenous median individual income is generally higher in the social assessment area when compared to Queensland's Indigenous population (\$318) with the exception of Livingstone, \$280. Nebo, Belyando and Broadsound have significantly higher median individual weekly incomes, \$559, \$506 and \$683 compared to all of Queensland population, \$476. All other LGAs had median individual weekly incomes less than Queensland as a whole.

Overseas born and language

The social assessment area had relatively low levels of cultural diversity with all SLAs having a lower proportion of their population born overseas compared to Queensland. The total social assessment area had 9.1% of their population born overseas. Nebo (6.1%), Belyando (7.3%), Broadsound (8.1%), Livingstone Part A (5.7%), Fitzroy Part A (4.7%), and Fitzroy Part B (4.6%) had proportions less than half that for Queensland.

All SLAs in the social assessment area also had significantly lower proportions of people that spoke a language other than English (LOTE) compared to Queensland, 7.8%. Only 2.4% in the social assessment area as a whole spoke a LOTE with highest proportions located in Bowen (4.1%) and Calliope (3.5%).

4.1.3. Family type

In 2006, there were approximately 23,000 families in the social assessment area of which approximately 40% comprised couple only families. Nearly 59% of households comprised families with children, including couples with children and one parent families. Overall, one parent families comprised a relatively small proportion of total families in the social assessment area (at 11.4%) compared to Queensland (at 15.9%).

The social assessment area consists primarily of couple family with children (47.2%) and couple family with no children (40.6%), which is higher than Queensland, 43.3% and 39.1% respectively.



Bowen and Livingstone Part B have higher proportions of couple families with no children, 45.9% and 45.7% respectively, compared to couple families with children, 39.0% and 39.4% respectively. Livingstone Part A had the highest proportion of couple families with children (57.8%).

One parent families made up a small proportion of the population for the total social assessment area (11.4%) compared to Queensland (15.9%). Livingstone Part A (5.3%) and Nebo (7.5%) had the smallest proportions compared to both total social assessment area and Queensland. All SLAs in the social assessment area had lower proportions of other family types compared to Queensland.

All SLAs in the social assessment area, with the exception of Bowen (68.6%), have higher proportion of family households compared to Queensland, 72.7%. The total social assessment area also has a higher proportion of family households, 77.2%. Broadsound has the highest proportion of family household at 93.0 percent which is significantly higher than Queensland. Bowen had the highest proportion of non-family households, 31.4%, compared to the total social assessment area (22.8%) and Queensland (27.3%). Livingstone Part A had significantly lower proportion of non-family households making up on 7.0% of their population and the highest family households (93.0%).

4.1.4. Education, employment and income

Education

Overall, the social assessment area had lower levels of education attainment compared to Queensland with lower proportions of people who had completed Year 11 or 12 and higher proportions of people that had completed Year 8 only.

Bowen (12.2%), Fitzroy Part A (10.4%), Fitzroy Part B (12.6%) and Calliope Part B (13.0%) had significantly higher proportions of people aged 15 years or over that had completed Year 8 only compared to Queensland (7.4%). Calliope Part B and Bowen both had higher proportions of people aged 15 years or over that did not attend school compared to Queensland.

Compared to Queensland, all SLAs in the social assessment area had lower proportions of people aged 15 years or over that had a Bachelor Degree or higher. Bowen, Calliope Part B, Nebo, Fitzroy Part A and Fitzroy Part B had the significantly lower proportions of people with a Bachelor degree or higher compared to Queensland. All SLAs in the social assessment area also had lower levels of people who had achieved an Advanced Diploma or Diploma as their highest qualification compared to Queensland.

At the 2006 Census all SLAs in the social assessment area had higher proportions of people aged 15 years and over that had achieved Certificate as their highest level of qualification compared to Queensland. Calliope Part A (24.5%), Belyando (22.9%) and Broadsound (21.3%) had the highest Certificate qualified populations in the project area.



Employment

In 2006, the social assessment area had a total labour force of approximately 42,000 people, of which approximately 1,600 people (or 3.8%) were unemployed. This is compared to an unemployment rate of 4.7% for Queensland as a whole.

SLAs with unemployment rates higher than the social assessment area average included Calliope Part B (5.1%) and Livingstone Part B (4.9%).

Livingstone Part A (1.8%), Belyando (2.0%) and Broadsound (2.3%) had very low rates of unemployment.

Income

In 2006, households in the social assessment area had relatively high weekly incomes, with many of the assessment area SLAs recording median weekly household incomes equal to or above those for Queensland as a whole. In particular, Belyando, Broadsound and Nebo had very high median household incomes, which is likely to reflect the very high levels of mining workers in these SLAs.

The social assessment area as a whole also had relatively high individual incomes compared to Queensland as a whole. However, Bowen, Livingstone Part B, Fitzroy Part A, Fitzroy Part B, Calliope Part B and Calliope Part A all had median individual incomes less than the social assessment area average. Each of these SLAs, apart from Calliope Part A, also had median individual incomes less than Queensland as a whole.

In 2006, a number of SLAs in the social assessment area had higher proportions of people earning less than \$400 than Queensland as a whole. These included the SLAs of Calliope Part B, Fitzroy Part B, Livingstone Part B and Bowen. At the same time, Nebo, Belyando and Broadsound had very high proportions of people earning more than \$1,300 per week compared to Queensland. This is likely to reflect the high incomes for mining workers in these SLAs.

Mining is the largest employer in Nebo, Belyando, and Broadsound making up 49.8%, 59.2% and 68.0% respectively, of all industry in each SLA. In comparison, for Queensland mining comprises only 2.8%. The other three industries in the social assessment area are mining (22.0%), construction (15.3%) and manufacturing (13.6%) compared to Queensland where the top three industries are construction (15.0), manufacturing (14.5%), and retail trade (9.4%).

4.1.5. Housing

Dwelling structure

The majority of the dwellings in the social assessment area are separate houses (87.5%) compared to Queensland (79.5%). Belyando, Broadsound, Livingstone Part A, Fitzroy Part A, Fitzroy Part B and Calliope Part A all had over 90.0% of their dwellings as separate houses. Bowen (75.5%) was



the only SLA to have a lower number of separate houses than Queensland. Bowen was also the only SLA to have a higher rate of semi-detached dwellings compared to Queensland, 10.9% and 7.6% respectively.

Housing tenure

Nebo and Belyando and Broadsound have significantly lower proportions of their population that own or are purchasing their house, 26.2%, 50.8% and 42.5% respectively compared to Queensland, 65.4% and the social assessment area, 65.7%. Bowen (61.9%), Livingstone Part B (68.0%) and the social assessment area had rates comparable to Queensland. All other SLA's in the social assessment area had higher rates of residents owning or purchasing their won house compared to Queensland, ranging from 71.1% in Fitzroy Part A to 92.5% in Livingstone Part A.

Nebo, Belyando and Broadsound had the highest rates of rental, 68.4%, 45.2% and 52.8% that were significantly above that for Queensland 31.1% and the total social assessment area, 30.4%. Bowen (32.5%) was slightly higher than Queensland. All other SLA's had rental rates lower than Queensland. Livingstone had the lowest rate of rentals, 5.2% which was significantly lower compared to all other SLA's and Queensland 31.1%.

Housing costs

The median house sale price in Dysart has risen from \$389,500 to \$430,000 over the March 2009 to March 2011 period. In March 2009 Dysart was reported to have changed over the previous five years by 737.6%, and while the change is slowing (312.0% March 2010 and 109.2% March 2011), it remains the fastest changing location in the social assessment area and remains almost double that for Isaac Regional Council 53.6% as at March 2011. Moranbah, also part of Isaac Regional Council, has also experienced rapid change in the five years to March 2009 (216.0%) and has slowed to 51.3% as at March 2011. The sale price for a house in Moranbah and Dysart in 2011 despite the rapid growth, \$435,000 and \$430,000 are consistent with that for the whole Isaac Regional Council, at \$430,000.

Calliope has experience consistently higher house sale prices than Gladstone LGA. In March 2011 the sales price was \$405,000 and \$395,000 respectively. The gap of \$10,000 has remained consistent over the three years from March 2009 – March 2011. However Calliope does remain one of the locations in the social assessment area with the most rapid change, 92.2% over the previous five years.

Gracemere at 44.6% is the only location in the social assessment area where the change over the previous five years from March 2011 is slower than the LGA in which it is situated, Rockhampton 50.0%. However, Gracemere has consistently achieved higher sales prices over the period March 2009 to March 2011.



During the same period Bowen (161.8%, 94.4% and 63.7%) has consistently experience a faster rate of growth than Whitsunday Regional Council (148.4%, 87.0% and 44.6%). However, the house sales price in Bowen has remained lower than that for Whitsunday Regional Council as a whole.

As at 2006 Calliope Part A had monthly loan payments and median weekly rent, \$1,300 and \$200, the same as Queensland. All other SLA's in the social assessment area are lower. Nebo and Belyando had among the highest monthly loan repayments, \$1,196 and \$1,136 respectively, but the lowest weekly rent, \$30 and \$68 respectively compared to other SLA's in the social assessment area. Broadsound had the lowest monthly loan repayment, \$867 and amongst the lowest median weekly rent, \$42. While Livingstone Part A and Livingstone Part B have among the highest loan repayment, \$1,000 and \$1,004 respectively, and median weekly rent, both \$170, compared to all other SLA's.

Calliope Part A (43.1%) was the only SLA that had higher rates of loan repayments over \$1,400 per month compared to Queensland (39.2%). Broadsound (15.5%), Fitzroy Part A (21.3%), Fitzroy Part B (22.3%) and Calliope Part B (24.0%) had significantly lower rates of loan repayments over \$1,400 compared to Queensland.

Livingstone Part B (11.3%) and Fitzroy Part A (11.0%) had rates of loan repayments less than \$550 per month, comparable to Queensland (10.1%). In comparison Belyando (20.1%) has double the rate of loan payments less than \$550 compared to Queensland. Calliope Part A and Livingstone Part A have the lowest rate of loan repayments less than \$550 per month, 5.8% and 6.5% compared to Queensland.

In March 2011, the highest rental cost for a three bedroom house was in Isaac Regional Council (\$750 per week). Dysart had the highest rental cost (at \$1,200) followed by Moranbah (at \$800). Gracemere, located in Rockhampton LGA had the lowest rental cost for a three bedroom house at \$300 (REIQ, 2011).

Calliope had the largest increase in rental costs, with an increase of \$50 and \$40 for three bedroom houses and two bedroom flats/units respectively between March 2009 and March 2011. Over the same period, Bowen experienced a \$30 decrease in rent for both three bedroom houses and two bedroom flats/units. No rental data was available for March 2009 and March 2010 for the Isaac Regional Council.

When compared to the ABS median weekly data provided in for 2006 all locations that REIQ provide rental data for 2009 to 2011 are experiencing increased rental costs to varying degrees.



4.1.6. Socio-economic advantage and disadvantage

The ABS produces four Socio Economic Indices for Areas (SEIFA) that identifies areas of relative advantage and disadvantage based on Census data for local areas¹. This section presents data for two indices, including the Index of Relative Socio-Economic Advantage/Disadvantage and the Index of Economic Resources.

The Index of Relative Socio-Economic Advantage/Disadvantage is a continuum of advantage to disadvantage. It considers indicators relating to family income, education, occupation type, wealth and living conditions to determine the relative level of advantage or disadvantage an area may experience relative to all other areas in Australia. A higher percentile represents an area of relative advantage, and occurs when areas have higher proportions of people on high incomes, qualified people, and professionals.

The Index of Economic Resources reflects indicators such as income and expenditure and assets including wages and rental costs for families, and variables that reflect wealth (e.g., dwelling size). Income variables are also specified by family structure, as this affects disposable income. Higher percentiles indicate an area generally has a higher proportion of high-income families, a lower proportion of low-income families and more households living in large houses, while lower percentiles indicate communities that are considered to have less financial resources.

In 2006 Nebo (89.8%), Livingstone Part A (64.4%), Livingstone Part B (58.6%) and Calliope Part A (46.1%) had significantly higher proportions of their population in quintile 1 and 2 combined, most disadvantaged compared to Queensland 40.0%. Nebo in particular had extremely high levels of disadvantage, 59.0% and 30.8% quintile 1 and quintile 2 respectively, and only 0.6% of its population were in quintile 4 and 5 combined, most advantaged.

Bowen (65.3%), Belyando (63.8%), Broadsound (57.1%), Fitzroy Part B (83.2%) and Calliope Part B (51.8%) had significantly higher proportions of their population in quintile 4 and 5 combined, most advantaged compared to Queensland 40.0%. Fitzroy Part B in particular had extremely high levels of advantage, 28.4% and 54.8% quintile 4 and quintile 5 respectively, and none of its population in quintile 1 and 2 combined, most disadvantaged.

Livingstone Part B (12.8%), Livingstone Part B (9.8%), Fitzroy Part A (9.7%) and Calliope Part A (18.2%) had significantly lower proportions of their population in quintile 4 and quintile 5, most advantaged compared to Queensland 40.0%. Fitzroy Part A had the majority of its population in quintile 3. None of the locations demonstrated an even spread across the quintiles indicating a lack

¹ An additional SEIFA Index is produced for Aboriginal communities.



of distribution of wealth in the social assessment area with clear pockets of disadvantage and advantage.

4.1.7. Localities

Population size and growth

Localities along the proposed pipeline route had consistently higher proportions of males (53.5%), and lower proportions of females (46.5%) compared to Queensland, 49.5% males and 50.5% females. The localities of Moranbah (7,132), Dysart (3,136) and Gracemere (5,061) had the largest populations.

Family type

Moranbah (59.9%), Dysart (57.6%), Middlemount (59.7%), Bajool (51.8%) and Calliope (53.7%) all had significantly higher proportions of couple families with children compared to Queensland (43.3%). Marlborough had the lowest proportion of couple families with children, 28.1% which is significantly lower than Queensland and all other localities along the pipeline route. Marlborough also had the highest proportion of couple families with no children, 59.4%.

With the exception of Gracemere (16.6%), all localities had lower proportions of one-parent families compared to Queensland (15.9%). All localities had smaller other family population than Queensland.

Duaringa (59.6%), Mount Larcom (69.4%) and Marlborough (70.9%) had smaller proportions of family households compared to the total social assessment area (83.2%) and Queensland (72.7%). All other localities had higher proportions of family household than Queensland. Duaringa, Mount Larcom and Marlborough all had higher proportions of non-family households, 40.4%, 30.6% and 29.1% respectively compared to Queensland, 27.3%. Bajool and Middlemount had the smallest proportions of non-family households, 14.1% and 14.4% respectively which is significantly lower than for Queensland, 27.3%.

Schools

In 2011, there were 16 schools in the key localities along the pipeline, consisting of 11 primary schools, two secondary schools and three combined primary/secondary schools. There is only one catholic primary school located in Gracemere. Duaringa and Raglan had no schools as at September 2011.

4.2. Social infrastructure

Social infrastructure as defined in the *South East Queensland Plan 2005-2026 Implementation Guideline No. 5* refers to “the community facilities, services and networks which help individuals, families, groups and communities meet their social needs, maximise their potential for development, and enhance community wellbeing”. They include:



- Education and training;
- Health, safety and emergency services;
- Art and cultural facilities, and community meeting places;
- Services and/or facilities targeting children, young people and older people; and
- Services and/or facilities targeting people with special needs, such as families, people with a disability and Indigenous and culturally diverse people.

4.2.1. Health, aged care and emergency services

This section provides a summary of currently available health, aged care and emergency services provided in the social assessment area. Additional information on social infrastructure in the social assessment area is also provided in **Appendix B**.

Hospitals and healthcare facilities

Queensland Health, Mackay Health Service District (HSD) and Central Queensland HSD provide a broad range of health services to residents in the social assessment area, although the capacity of health services in either HSD was not available at the time of this assessment. In addition, health services are available at two private hospitals located in Rockhampton; one has between 101 to 150 beds while the other is a day hospital with no admittance capacity.

Mackay HSD provides a range of health services that include accident and emergency service in Bowen, Clermont, Moranbah, Proserpine, and Sarina. This is a 24 hours 7 days a week service. In addition, eight Community Health Service providing a range of community health services including a child, youth and family health service. Mackay HSD provides a range of aged care and rehabilitation services across the social assessment area. Other services include mental health, intensive care, oncology, chemotherapy and palliative care, women, children and family health, specialist outpatients and surgery.

Central Queensland HSD has hospitals in Baralaba, Biloela, Blackwater, Emerald, Gladstone, Moura, Mount Morgan, Rockhampton and Yeppoon that provide specialist services across the district. In addition, there are three multipurpose health services and six community health services. The community health services provide primary health care, oral health, mental health and residential and aged care services across the district.

There are seven hospitals in the social assessment area located in Bowen, Belyando, Broadsound, and Livingstone Part B. There is no ambulance service in Livingstone Part A and Fitzroy Part B. Belyando (six ambulance stations) and Broadsound (six ambulance stations) have the most ambulance services.



General Practitioner (GP) services provided in the social assessment area are located primarily in Calliope (10 medical centres) or surrounding suburbs with the same postcode, with all services providing services Monday to Friday and six providing services on a Saturday. Only one offered services on a Sunday. Duinga has one family practice that offers services Monday to Friday and Saturday, an outpatient clinic with limited hours and the Royal Flying Doctor Service offers a monthly outpatient clinic. Moranbah, Dysart, Glenden and Middlemount all only had one medical centre offering services Monday to Friday, and only Moranbah had services available weekends.

Emergency services

As at June 2010, there were a range of emergency services in the social assessment area with a total of 20 police stations and 12 fire stations. Livingstone Part A does not have any emergency services and would need to access nearby services, assumedly located in Livingstone Part A.

Of all the emergency services located within the social assessment area there are three ambulance stations, two fire stations and three police stations located within a 10 km radius of the pipeline. Of those, one ambulance and a police station are located in Mount Larcom, while Gracemere has an ambulance, fire and police station. There is an ambulance station at Alexandra and a police station at Marmor.

4.2.2. Education facilities

Early childhood

The majority of early childhood facilities are located in Moranbah (five), Gracemere (four) and Calliope (three). Duinga Marlborough, Mount Larcom, Raglan and Bajool have no early childhood facilities available in their immediate area. This would mean residents requiring early childhood care would need to access facilities in surrounding locations that would likely require some form of transportation.

Schools

In June 2010 there were a total of 68 schools in the social assessment area. The majority of schools were located in Livingstone Part B (15 schools) and Bowen (10 schools), while Livingstone Part A had only one school. Of the 68 schools in the social assessment area there are 11 schools located 10 km or less from the pipeline. These are listed in **Appendix B**.

4.2.3. Open space and recreation

Each of the individual towns has a number of parks, reserves and sporting facilities. Some centres also have other social infrastructure facilities such as libraries, swimming pools, cultural and arts centres etc. Callide Dam and some of the weirs in the social assessment area also provide a number of recreational pursuits including fishing, picnic areas, and boat ramps. A racecourse and two sportsgrounds are located within a 10 km radius of the pipeline.



Each of the four local government areas in the social assessment area has a number of specific attractions and organised events that contribute to tourism in the area. Examples include:

- **Banana Shire** – Glebe Weir, Expedition National Park, Lake Murphy, Kroombit and Mt Scoria Conservations Parks, Isla and Cania Gorges, Dawson River and Callide Dam;
- **Dalby Regional** – Australian Cotton Week Festival, Dalby Show, Horse racing, Pioneer Park Museum, Heritage trails, Lake Broadwater, Jondaryan Woolshed and Bunya Mountains;
- **Gladstone Regional** – Boyne Tannum Hookup Fishing Competition, Old Station Flying and Airshow, Gladstone Harbour Festival, Garden Island Conservation Park, Great Barrier Reef Marine Park, Brisbane to Gladstone Yacht Race;
- **North Burnett Regional** – fishing competitions, race days Kirar Weir, Coongarra Rock and Falls.

In March 2010, the total park and forest estate in terms of national park, state forest, timber reserve and forest reserve in the social assessment area was 5,043.8 square kilometres, 4.2 per cent of the total protected area in Queensland. State forests were the major component for the social assessment area accounting for 52.3 per cent of the total protected area within the social assessment area.

Belyando had the largest total protected area in terms of national park, state forest, timber reserve and forest reserve in the region (1,102.1 square kilometres), followed by Calliope Part B with 1,066.9 square kilometres.

4.3. Local community values

A number of significant social facilities that are likely to be accessed frequently by community members and which are likely to be important to local communities are located within a 10 km radius of the pipeline. They include two cemeteries (one in Gracemere), two libraries and four churches.

Volunteering is a good indicator of a community's sense of cohesiveness and harmony. Volunteering in the social assessment area was higher in the social assessment area (21.0%) compared to Queensland (18.3%) indicating a slightly higher level of social cohesion. However, Nebo (15.2%) and Bowen (17.6%) residents were less likely to volunteer compared to other SLAs in the social assessment area and Queensland. Belyando (24.4%) and Broadsound (22.9%) had the highest levels of volunteering in the social assessment area. Overall the communities within the social assessment area participate more frequently in volunteering activities than Queensland as a whole.



4.4. Crime

The QPS provides policing to the social assessment area through their Central Queensland region. The reported offences in Central Queensland and Queensland respectively over the period 2005 to 2006 are provided in **Appendix A**. Reported offences in Central Queensland during this period were generally consistent with Queensland. However, Central Queensland had a slightly higher rate of reported assault (4.84%), offences against the person (8.86%) and other property damage (9.70%) compared to Queensland, 3.72%, 6.28% and 8.55% respectively. For each of these offences, Central Queensland had a higher rate of reported offences compared to Queensland. The top 5 reported offences for both Central Queensland and Queensland for 2005 to 2006 were offences against property, other theft (excluding unlawful entry), other property damage, offences against the person and unlawful entry.

Central Queensland experience the highest rate of change between 2004-05 and 2005-06 in the offences of homicide (75.00%), other homicide (-50.00%) and Arson (34.00%) compared to Queensland sexual assault (21.00%), other homicide (-16.00%) and unlawful use of motor vehicle (-11.00%). However, sexual assault (12.00%) had also experienced an increased rate of change in Central Queensland.

4.5. Community needing assistance

There were 2,812 people or 3.1% of people in the social assessment area in 2006 that needed assistance compared to 154,707 people or 4.0% of people in Queensland. Bowen was the only SLA in the social assessment area that had a higher proportion of their population that needed assistance, 5.1% compared to Queensland. All other SLA's in the social assessment area had low proportions of their population that needed assistance, ranging from 0.8% in Nebo to 3.9% in Livingstone Part B. Searches undertaken for this assessment did not find identify services specifically targeting people with a disability in the social assessment area.



5. Potential impacts and mitigation measures

The following provides an overview of potential benefits and impacts on the social environment of the social assessment area, from the construction and operation of the proposed pipeline. Mitigation measures are also identified to manage potential adverse impacts on the project's construction and operation for local and regional communities.

The SIMP (refer to **Appendix D**) provides an overview of the potential impacts documented within this SIA, and also further develops the identified mitigation measures into commitments and SIMP Action Plans.

5.1. Property

The proposed pipeline route crosses a total of 232 lots (Table 5.1-1). The Bowen Basin has been subject to recent growth and major developments as a result of coal and gas exploration, CSG developments, underground coal gasification proposals and the establishment of new gas-fired power stations with associated pipelines.

Table 5.1-1: Land tenure

Type of tenure	Lots / Land Parcels	% of total
Mainline		
Freehold	205	88.4%
Land Lease	23	9.9%
Reserves	4	1.7%
Total	232	100%

Source: Arrow Energy, 2011 Landholders Database

An easement will be acquired to allow the construction, operation and maintenance of the gas pipeline. The proposed pipeline crosses a total of 90 easements as shown in **Table 5.1-2**. The easement for the proposed pipeline will be 30 metre (m) wide and will extend the length of the pipeline. During construction, a construction right of way (ROW) will be established along the length of the proposed pipeline to allow the safe construction of the buried pipeline.

Table 5.1-2: Easements

Type of tenure	Lots / Land Parcels	% of total area
Mainline easement (road/rail/water)	87	97%



Laterals easement (road/ rail/water)	3	3%
TOTAL	90	100

Source: Arrow Energy, 2011 Landholders Database

Potential impacts of the project on property would generally relate to the temporary disruption to the use of land within the ROW during construction after which the land use reverts to its former use. The final alignment for the pipeline will be determined in conjunction with landholders, which will help to minimise impacts on the use of land and other activities.

During construction, there will be a short term disruption to access across the ROW for the movement of vehicles and cattle. However, suitable alternative access for vehicles and cattle movement will be provided in consultation with the landholder. Trench breaks are typically provided every 1,000 m to facilitate movement across the ROW.

During operation, land within the pipeline easement can continue to be used for its former use, although restrictions will be placed on building directly over the easement. Access to the proposed pipeline will also be required for maintenance inspections during operation. This will be provided along the length of the pipeline easement which will be accessed where the pipeline crosses existing roads.

Arrow has commenced consultation and notification of landholders directly affected by the proposed pipeline route and compensation will be paid to directly affected landholders in accordance with relevant legislation. Ongoing communication and consultation with landholders about construction activities, land access protocols and environmental management measures will help to reduce uncertainty for property owners about the use of land and help to ensure that construction of the pipeline minimises impacts on farming activities and operations. Consultation and communication with property owners during the operation phase will also help to minimise potential property impacts associated with access by maintenance vehicles.

Consultation with property owners undertaken by Arrow identified a number of concerns of property owners about potential property impacts and disruption to existing farming operations from the proposed pipeline's construction and operation. These included impacts resulting from the potential spread of weeds between properties and land access issues such as the number of people accessing the property and potential for gates to be left open or fences damaged. The implementation of appropriate environmental management measures (i.e. vehicle wash down procedures) and land access protocols (i.e. relating to such things as leaving gates in the condition which found, etc) will be important in minimising potential impacts on property and farming operations during the construction and operation of the proposed pipeline.



Concerns were also raised by property owners about potential impact on property values and temporary loss of income due to the construction of the proposed pipeline. Given the short term nature of the project and its limited impacts on properties, the project is not likely to change property values or marketability of properties in areas near the project.

5.2. Population and demography

The project is expected to require a peak workforce of approximately 693 people for about a 15 month period during the construction phase. Workers would generally be accommodated in temporary worker accommodation camps located along the pipeline route.

The influx of non-resident workers during the construction phase may result in small temporary changes to population and demography in those areas in which the accommodation camps are located. For example, given the range of employment opportunities offered by the project, it is expected that the majority of construction workers would be male and that many of these would be a younger working age (i.e. mid-20s to mid-40s). This is generally consistent with the existing demographic profile in the social assessment area. The distribution of workers across each of the five accommodation camps would minimise potential impacts on population and demography at any one locality and overall, potential impacts are expected to be minor.

Potential impacts of the project on demand for community services and facilities are discussed in **Section 5.8**.

5.3. Housing and accommodation

During construction, workers will be accommodated in five temporary workers accommodation camps which are located progressively along the proposed pipeline route, the location of which are anticipated to be in the vicinity of Bajool, Foresthome, Hillcrest, Daunia and Red Hill.

The exact location of the temporary worker accommodation camps will be determined during the detailed planning phase of the project and would consider the following aspects:

- **Access:** the temporary worker accommodation camp will require all weather road access (for transport, food and water supplied, personnel access/egress etc).
- **Proximity to the ROW:** the temporary worker accommodation camp will need to be located as close to the ROW as possible.
- **Separation from flood prone areas:** the temporary worker accommodation camp will need to be located outside of flood prone areas.
- **Separation from habitation:** the temporary camps will be located a minimum of approximately 30 km from towns and typically a minimum of 3 km from residences.



Each accommodation camp will be provided with a range of services and facilities to cater for the day-to-day needs for workers, including sleeping areas, showers and toilets, laundry, rest area, kitchen/ dining areas and limited recreation facilities as well as first aid facilities. Protocols would also be established for each accommodation camp around worker behaviour and conduct. The provision of on-site services and implementation of worker protocols, along with the location of the temporary accommodation camps away from towns and residential uses will minimise potential impacts associated with demand for community services and facilities in the social assessment area and local amenity.

Specialist contractors would also be required to undertake a range of specialist activities such as Horizontal Directional Drilling (HDD). These would generally involve about 6-12 contractors for short periods (ie a few weeks), although multiple teams could be working at locations along the pipeline route at any one time. It is expected that these contractors would be accommodated in the temporary workers accommodation camps. However, in particular instances, some contractors may be required to be accommodated in short-term or tourist accommodation. Given the small number of workers and the relatively short duration of the proposed activities, this is not expected to impact on the availability of short-term accommodation in the social assessment area.

The use of temporary workers accommodation camps and short-term accommodation (where required) would minimise demand for housing and accommodation in the social assessment area and avoid impacts such increased housing costs. Possible cumulative impacts on housing and accommodation with other projects in the social assessment area are discussed in **Section 5.11**.

Impacts associated with the dislocation of workers from their families during the construction period are discussed in **Section 5.10**. These would be managed by the Principal Construction Contractor through ongoing communication and consultation with employees and the provision of good communication facilities within the camps (such as phone and internet).

5.4. Employment and training

The project is anticipated to directly employ approximately 728 people over the life of the project, including construction, operation and decommissioning. A breakdown of anticipated workforce requirements at each phase of the project is provided in **Table 5.4-1**.

During construction, the project is expected to generate direct employment for management and professional staff (i.e., engineers, project managers, etc) as well as labourers, plant and machine operators, and transport workers. The peak construction workforce is expected to be approximately 693 people for about a 15 month period during the construction phase, of which approximately 296 jobs would be for plant operators and labourers.



The construction workers will be employed on a fly-in fly-out (FIFO) basis, with the majority of workers coming from major centres elsewhere in Queensland or interstate. While this may limit the number of employment opportunities locally, some locations of the social assessment area have relatively low rates of unemployment and sourcing suitable qualified local workers locally is expected to be difficult. However, where appropriate, opportunities could be considered to source workers locally, either directly for the project or indirectly through goods and services providers. This would especially benefit locations within the social assessment area with high unemployment rates as well as marginal groups such as youth and Indigenous people and would maximise the economic benefits of the project for local communities.

Table 5.4-1: Workforce numbers by phase of project

Workforce	Construction	Commissioning	Operation	De-commissioning
Administration	14	1	3	1
Automatic ultrasonic operator	10	0	0	0
Catering / janitorial	34	0	0	0
Chainmen	7	0	0	0
Clients engineers	10	0	0	0
Cultural heritage monitor	10	0	0	0
Diesel mechanic	23	0	0	0
Electrician	4	0	0	0
Engineers / surveyors	14	0	0	0
Environmentalist	4	0	0	0
Foremen	22	0	0	0
Hydrotesting personnel	20	0	0	0
Joint coater	14	0	0	0
Labourer	168	2	0	2
Land liaison	4	0	1	0
Paramedics	3	0	0	0
Pipeline welder	35	0	0	0
Plant operator	128	0	0	0
Professional	0	2	3	2
QA inspector	26	0	0	0
Safety inspector	6	1	0	1
Sub-contractor	0	0	0	0
Technical	0	4	8	4
Trades assistant	39	0	0	0
Traffic control	10	0	0	0
Truck driver	58	0	0	0
Welding technician	5	0	0	0
HO visitors	5	0	0	0
JV (Shell/PetroChina)	10	0	0	0



personnel				
Pipe transport personnel	10	0	0	0
TOTAL	693	10	15	10

Source: Arrow Energy, 2011

Skills shortages

Some locations in the study area currently experience relatively low levels of unemployment and a shortage of some skills. Increased demand for local workers during construction, either directly on the project or in local businesses that support construction activities, may impact on existing skills shortages in some industries as skilled and semi skilled workers seek employment either directly on the project or indirectly through suppliers of goods and services. This may potentially disadvantage local businesses and affect service provision for communities within the social assessment area, either increasing the cost of access to services or the ability to provide these services.

Training opportunities

The level of benefit for local communities from local employment would be dependent on access to appropriate skilling and employment programs. The Principal Contractor will programme timely training and qualification for all workers where relevant to meet the needs of skills development for all phases of the project. Contractors and subcontractors must also comply with the Building and Construction Contracts Structured Training Policy (10% Training Policy). This policy requires a minimum of 10% of total labour hours to be undertaken by Indigenous workers, apprentices, trainees or cadets, or used to up-skill existing employees. The plan articulates methods to achieve this, such as identifying skills required, arranging timely training, and ensuring all training and qualifications meeting national requirements.

5.5. Local business and industry

The project would provide opportunities for local and regional businesses through demand for goods and services during construction, such as:

- Catering/ food services;
- Transportation;
- Sub-contract construction skills (including electrical, plumbing, fencing etc); and
- Accommodation services.

This is likely to create indirect employment opportunities, which would have positive benefits for local residents, including increased workforce participation and income levels.

The impacts of the project in isolation will be exacerbated when considered in the context of the broad range of major projects currently being undertaken or planned in the region. There are currently more than 40 mines operating or planned in the social assessment area as well as



32 future planned projects. Should the construction of these projects coincide with the construction phase of this project, the cumulative impact on the local economy will be increased. The concurrent construction of these projects will put pressure on already scarce resources in the region such as skilled workers, accommodation, health services and transport services, and may result in a situation where there is insufficient capacity in the local economy to effectively meet the demands of each project, further increasing the need for sourcing of employees outside of the social assessment area. In turn, this competition for resources may also impact the costs of project supply.

5.6. Economic impacts of the project

Specifically, the project is expected to provide a number of economic benefits to the social assessment area as well as Queensland and Australia including:

- Contribution to output;
- Contribution to household income;
- Contribution to employment; and
- An indirect contribution to energy self sufficiency and security of supply, and the continued prosperity of the Australian economy.

While some economic risks have been identified in the social assessment area, they are generally low and cumulative impacts are negligible.

5.7. Transport and access

During construction, the project would require haulage of materials and equipment to various locations across the social assessment area as well as transport of workers between the accommodation camps and the work areas. The primary transport route for construction workers and equipment would be via the ROW minimising the need for travel on local roads. However, some haulage activities (i.e. delivery of the line pipe) would be required to occur on local roads.

A Traffic Impact Assessment (TIA) prepared by GHD (2011) identified that there will be a temporary increase in traffic on the road network throughout construction but any associated traffic delays to the community are deemed to be within acceptable timeframes. It is expected that these impacts would be satisfactorily managed through the implementation of a Traffic Management Plan (TMP). During operation of the project, traffic impacts will be negligible (GHD, 2011).

The TIA also identified that a number of haulage routes for the project (primarily associated with delivery of line pipe) may overlap with school bus routes. However, given the relatively low number of school bus services and the relatively short time of operation within the day, it is expected that there would be a negligible impact on the operation of the school bus routes. In addition, it is anticipated that construction access routes that coincide with bus routes will be



identified and special TMPs will be prepared to mitigate any potential impact on the public transport operation (GHD, 2011).

Where possible, limiting major haulage tasks during school drop-off and pick up times on key school bus routes would help to mitigate potential impacts on these routes. Early and ongoing communication with local communities, including school communities, about haulage routes and potential changes in road conditions, and the implementation of road safety education and awareness programs for workers about the importance of safe driving would also assist in minimising potential impacts for students and road users.

5.8. Community services and social infrastructure

The project does not directly impact on existing community services or social infrastructure in the social assessment area.

Each accommodation camp will be provided with a range of services and facilities to cater for the day-to-day needs for workers, including sleeping areas, showers and toilets, laundry, rest area, kitchen/ dining areas and limited recreation facilities. A nurse or paramedic will also be located at each temporary worker accommodation camp.

The provision of on-site services will minimise the need for workers to access community services and facilities, including local health services in local towns. However, in very limited cases, some workers may need to access health and medical services in nearby towns, such as in the event of an emergency or for diagnosis and/or prescriptions. Overall, given that the likely demand for external health and medical services is expected to be a rare occurrence and for a relatively short period only, this is not expected to impact on the availability of health and medical services across the social assessment area as a whole. However, some localities in the social assessment area have limited health services and regionally, some health services are known to be severely constrained. As such, any increase would put limited demand on health services. Where possible, avoiding the use of services in these towns would mitigate potential impacts on these services.

5.9. Community values

This section outlines potential impacts on community values, local amenity and community cohesion. Amenity plays a large part in determining community liveability and well-being, and is a term given to the attributes and appeal of a place. This can be negatively affected by loss of access to facilities and locations of significance or places where people gather for social interaction.

There are several recreation facilities and social infrastructure such as sports grounds, racecourses, schools and churches that are located within a 10 km radius from the proposed pipeline. Noise, and dust nuisance from construction activities, construction traffic, and temporary worker



accommodation camps may potentially impact on the amenity and use of a small number of residences, schools and recreational features/facilities located close to the proposed works. However, these impacts are anticipated to be minor as they will be short-term and temporary in nature as the construction site travels along the proposed pipeline route and the temporary workers accommodation camps are relocated.

Environmental management measures will be implemented, together with a TMP throughout the project, and the proposed pipeline will be constructed in a manner that causes no detriment to the long term ambient air and noise quality of the local area. These measures will include:

- Delivery of pipe transport traffic primarily during daylight hours;
- Use of water carts for dust suppression as required;
- Inspection and maintenance schedule for plant and equipment used at construction worksites (i.e. diesel motors will be fitted with emission control measures which would be regularly maintained to manufacturers' specifications. Equipment would be regularly maintained to ensure that plant and equipment remains in good working order. All vehicle, machinery and equipment operators would be trained and carry relevant licences, where required);
- Locating temporary worker accommodation camps away from residential dwellings in order to reduce the likelihood of disturbance.

Ongoing stakeholder consultation, community information and education during construction will assist in mitigation. Stakeholder engagement will take place with the residents in proximity to potentially noisy activities in advance of any works taking place.

5.10. Project workforce

During construction, employees will commute from their permanent homes, either interstate or from around Queensland, and reside in the temporary worker accommodation camps for their shift roster. While this arrangement helps to mitigate potential social impacts locally such as those relating to employment, housing and accommodation, and demand for community services and facilities, the proposed FIFO working arrangements may impact on some workers and their families in the following ways:

- Isolation from family and friends and existing social and support networks in other areas;
- Increased stress for workers and their families due to changes to family functioning where employees are away from their permanent homes for extended periods during the roster; and
- Stress related to shift work and commuting potentially impacting on the general health and well-being of affected workers and their families.



These impacts would be managed by the contractors through ongoing communication and consultation with employees, and the implementation of transition programmes, that include access to specialist services such as GPs, and counselling/family support.

The provision of good communication services within the construction camps, including phone and internet access, would also assist workers in maintaining contact with their families during their shift roster and reduce feelings of isolation for some workers.

5.11. Cumulative impacts

In 2008, the Queensland Government released the Sustainable Resource Communities Policy in response to the need to manage growth in the resource development areas that includes the Bowen Basin. The resource boom has led to a range of impacts on the local communities in the Bowen Basin related to the cumulative effect of a wide range of major projects. These impacts include:

- Increased rental and housing costs;
- Increased working age population, primarily male causing an imbalance in the population mix;
- Strained local government and non-government services and recreational facilities;
- Skills shortages that are driving the increased use of FIFO workforce;
- Increased wages in the resource sector that cannot be matched by other industries;
- Strain on local infrastructure such as roads and transport; and
- Consultation fatigue.

The use of a FIFO workforce located in temporary worker accommodation camps for the duration of the construction phase would assist in managing potential demand on housing and community services in the social assessment area. However, it is expected that small specialised project teams (e.g. HDD crew) may be housed in a motel in the local community.

While the project impacts will be minor and time constrained, it will contribute in a small way to the cumulative impacts that stem from the resource boom. It is not possible to ascertain the degree of that impact other than to say it partially contributes to a short term, temporary increase in traffic through the transportation and delivery of local services such as fresh produce, fuel and other camp-related services.

5.12. Summary of potential social impacts

Accommodation for the construction workers will be in temporary worker accommodation camps near the ROW. In addition, there may be requirements for small specialist work crews (poor boy crews) which may require accommodation for a few weeks in a local motel. Recreational facilities will be provided in the temporary worker accommodation camps to avoid impacts on facilities in



existing townships. Temporary workers accommodation camps will also be provided with a range of services and facilities to cater for the day-to-day needs of workers, including sleeping areas, showers and toilets, laundry, rest and recreation area, kitchen/dining areas and first aid facilities.

Some local workers will be required for unskilled jobs such as fuel suppliers and fencing contractors. This provides an opportunity to populations in areas where the unemployment is high, for youth and Indigenous people. Although the work is short term, the skills acquired will assist in obtaining future employment. The use of temporary worker accommodation camps and a FIFO workforce will not impact on housing prices or rental prices in the existing townships.

Demand on local hospital based services are not anticipated as the temporary accommodation camps have a nurse and/or paramedic who can attend most cases. In the instance of major trauma cases workers be transported to a major regional health facility for specialist care. In rare instances, there may be a minor short-term impact on GP services in the projects area when a paramedic is unable to treat a worker and the case is not suitable for transportation to a major regional hospital. Identification of GP services that have the capacity will be provided to workers to ensure GPs are still able to service the local community.

Arrow has consulted with all landholders affected by the proposed pipeline. Environmental issues will be addressed in the Environmental Management Plan (EMP). A SCP will ensure ongoing community and government consultation, and any social impacts will be mitigated and managed in accordance with these plans. This will ensure that any social and community impacts on existing communities as a result of the proposed pipeline are negligible.

The project will have a benefit within the social assessment area through:

- Short-term employment opportunities, either directly or indirectly, and where possible, for local community members during the construction phase; and
- Limited employment creation in the longer term from the ongoing operation of the pipeline.

However, the project may have a number of limited minor impacts for those communities closest to the proposed pipeline route, including:

- Temporary partial disruption to some existing land use activities for individual properties along the proposed pipeline route during construction;
- Limited short term temporary traffic during construction due to the delivery of line pipe and services to temporary accommodation camps
- Limited short term increased demand on GP service; and



5.13. Social impact management plan

Social impacts identified will be managed through the development of a Social Impact Management Plan that will include the following mechanisms:

- Ongoing consultation with landholders;
- Limiting interruption to farming land to the construction ROW and ensuring appropriate access is provided across the pipeline ROW during construction;
- Compensation will be provide in accordance with relevant legislation;
- FIFO workforce will be housed in temporary worker accommodation camps;
- Temporary worker accommodation camps will be provided with a range of services and facilities to cater for the day-to-day needs of workers, including sleeping areas, showers and toilets, laundry, rest and recreation area, kitchen/dining areas and first aid facilities;
- Temporary worker accommodation camps will have a nurse or paramedic employed on a contractual basis;
- Worker behaviour protocols will be developed and adhered to throughout construction;
- Workers will be provided with opportunities and the facilities to enable regular contact with family and friends;
- Workers will be provided access to counselling and advisory services as required;
- Locating temporary workers accommodation camps away from residential dwellings in order to reduce the likelihood of disturbance;
- Provided that the net benefit of the project is not undermined, locally sourced inputs (labour and materials) will be examined to enhance the economic benefit to the social assessment area;
- All temporary workers accommodation camps will be rehabilitated upon their cessation;
- A TMP to mitigate and traffic impacts will be developed in consultation with the DTMR and QP and implemented;
- Delivery of pipe transport traffic primarily to daylight hours;
- Use of water carts to provide dust suppression on the ROW as required; and
- Inspection and maintenance schedule for plant and equipment used at construction worksites. Diesel motors would be fitted with emission control measures which would be regularly maintained to manufacturers' specifications. Equipment would be regularly maintained to ensure that plant and equipment remains in good working order. All vehicle, machinery and equipment operators would be trained and carry relevant licences, where required.

6. Conclusions and recommendations

Key project commitments aligned with each of the potential impacts is discussed in **Section 5.12** and summarised in **Table 5.13-1**. Key commitments are also developed further in Appendix D of this SIA into .

Table 5.13-1: Summary of key project commitments

Potential impact	Commitment
Land use	Provision of appropriate access for landholders across the ROW during construction. ROW returned to its previous use following completion of construction and rehabilitation activities.
Stakeholder consultation	Provision of compensation in accordance with relevant legislation. Ongoing communication and consultation with landholders to reduce uncertainty for property owners about the use of the ROW and easement (including acquisition) during construction and operation respectively.
Population and demography	Provision of fully self-contained temporary workers accommodation camps for FIFO workers with a range of services and facilities to cater for the day-to-day needs for workers, including sleeping areas, showers and toilets, laundry, rest and recreation area, kitchen/ dining areas and first aid facilities. Implementation of worker behaviour protocols throughout construction.
Community services and social infrastructure	Provision of fully self-contained temporary workers accommodation camps for FIFO workers with a range of services and facilities. The capacity of health services, in particular GP services, will be identified to minimise impact to local health services
Community values and amenity	Location of temporary worker accommodation camps away from residential dwellings in order to reduce the likelihood of disturbance. land utilised for these temporary construction camps reverts to its previous landuse following completion of construction and rehabilitation. Implementation of a TMP to manage any traffic impacts. Delivery of pipe transport traffic primarily limited to daylight hours. Implementation of dust suppression measures as required. Inspection and maintenance schedule for plant and equipment used at construction worksites.
Transport and access	Implementation of a TMP to manage any traffic impacts.
Health and safety risks	Implementation of appropriate safety and health policies and the presence of a Health and Safety Officer/s during construction
Increased chances of criminal activity	Implementation of appropriate security measures and arrangements to secure camp sites and equipment during construction.
Project workforce	Provision of adequate communications for workers to contact family and friends. Provision of counseling and advice services for workers as required.



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Appendix A Demographic data

A.1 Social assessment area demographic data

Population size and growth

Table A1 Average annual growth rate, estimated resident population, 2005-2010

SLA	2005	2009	2010*	Average Annual Growth Rate	
				2005 – 2010*	2009 – 2010*
Bowen	12,952	14,175	14,391	2.1	1.5
Nebo	2,529	2,989	2,994	3.4	0.2
Belyando	10,771	11,876	12,113	2.4	2.0
Broadsound	7,111	7,552	7,522	1.1	-0.4
Livingstone Part A	3,911	4,635	4,689	3.7	1.2
Livingstone Part B	25,754	28,985	29,572	2.8	2.0
Fitzroy Part A	6,153	8,135	8,408	6.4	3.4
Fitzroy Part B	4,682	4,897	4,874	0.8	-0.5
Calliope Part A	14,049	16,813	17,147	4.1	2.0
Calliope Part B	2,830	3,069	3,091	1.8	0.7
Social Assessment Area	90,742	103,126	104,801	2.9	1.2
Queensland	3,994,858	4,424,767	4,513,850	2.5	2.0

Source: ABS, *Regional Population Growth, Australia*, 2009-10, cat. no. 3218.0 and unpublished data cited in OESR, *Queensland Regional Profiles* 2011.

* Preliminary estimated resident population figures

Table A2 Projected estimated resident population by LGA, 2011 – 2031

LGA	2011	2016	2021	2026	2031	Average annual growth rate
						%
Nebo	3,223	4,266	4,911	5,489	5,489	3.2
Belyando	12,245	15,233	16,839	18,284	19,613	2.4
Broadsound	7,808	8,767	9,668	10,497	11,321	1.9
Livingstone	35,422	40,759	46,318	52,346	59,101	2.6
Fitzroy	13,512	15,411	17,601	19,794	21,917	2.4
Calliope	21,205	25,535	29,840	34,668	40,140	3.2
Queensland	4,611,491	5,092,858	5,588,618	6,090,618	6,592,858	1.8

Source: ABS, Queensland Government Population Projections, 2011 edition cited in OESR, Queensland Regional Profiles 2011. Data based on medium series Projections based on ABS 2006 Census data

**Table A3 Median age by SLA**

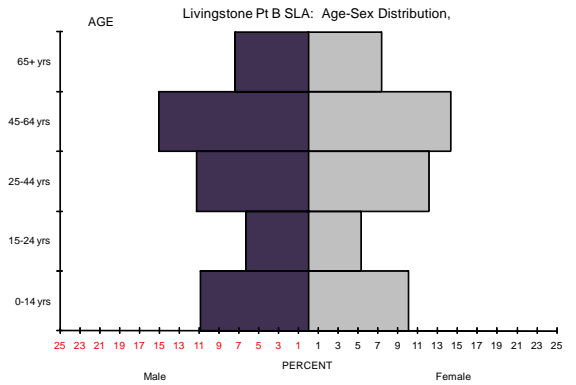
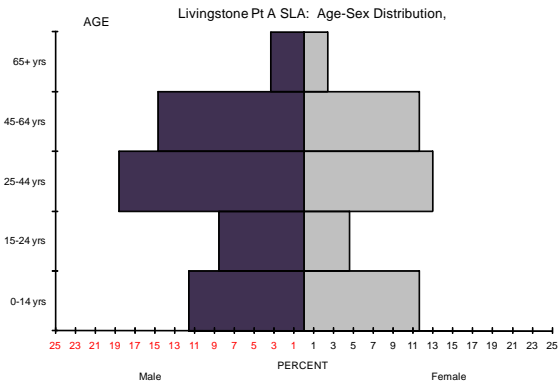
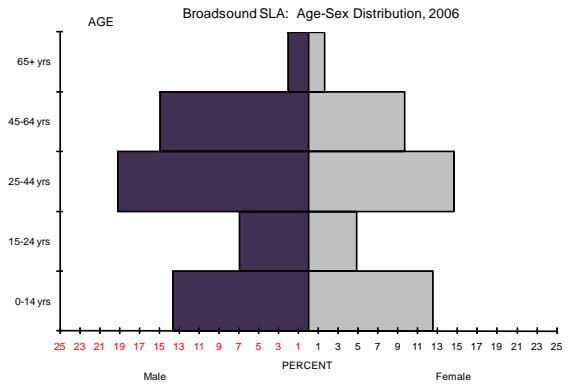
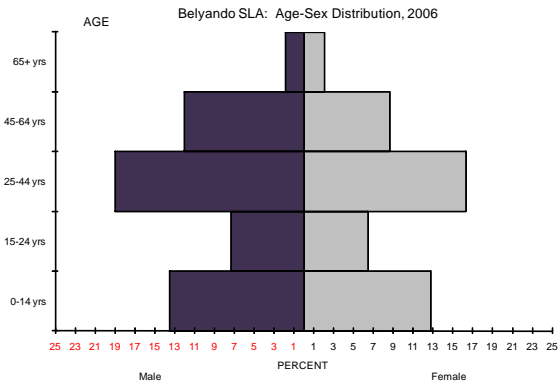
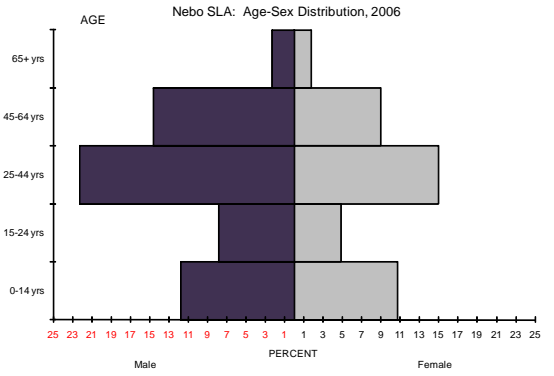
SLA	2004	2009	Change 2004 – 2009
Bowen	30.8	30.2	-0.6
Nebo	40.2	39.1	-1.1
Belyando	32.7	31.9	-0.8
Broadsound	34.8	35.3	0.5
Livingstone Part A	38.4	39.0	0.6
Livingstone Part B	32.9	31.9	-1
Fitzroy Part A	38.3	39.2	0.9
Fitzroy Part B	34.4	37.2	2.8
Calliope Part A	40.2	40.4	0.2
Calliope Part B	32.5	32.0	-0.5
Queensland	35.7	36.1	0.4

Source: ABS, Queensland Government Population Projections, 2011 edition cited in OESR, Queensland Regional Profiles 2011.

Table A4 Age by SLA, June 2010

SLA	0-14 yrs		15-24 yrs		25-44 yrs		45-64 yrs		65 yrs +		Total				
	No.	%	No.	%	No.	%	No.	%	No.	%					
Bowen	2,59	3	18	1,893	12.8	3,908	27.2	4,106	28.5	1,945	13.5	14,391			
Nebo	631	21.1	406	1,132	37.8	707	23.6	118	3.9	2,994					
Belyando	3,07	3	25.4	1,666	13.8	4,557	37.6	2,348	19.4	469	3.9	12,113			
Broadsound	1,92	4	25.6	872	11.6	2,698	35.9	1,685	22.4	343	4.6	7,522			
Livingstone Part A	871	18.6	645	1,440	30.7	1,355	28.9	378	8.1	4,689					
Livingstone Part B	5,89	2	19.9	4,052	13.6	6,615	22.4	8,655	29.3	4,385	14.8	29,572			
Fitzroy Part A	1,04	0	21.3	577	11.8	1,207	24.7	1,445	29.6	607	12.5	4,874			
Fitzroy Part B	1,04	0	21.3	577	11.8	1,207	24.7	1,445	29.6	607	12.5	4,874			
Calliope Part A	4,20	1	24.5	2,221	13	4,893	28.5	4,328	25.2	1,504	8.8	17,147			
Calliope Part B	719	23.3	326	781	25.3	941	30.4	324	10.5	3091					
Social Assessment Area	21,9	84	23.3	13,23	5	10.5	28,43	8	25.3	27,01	5	30.4	10,68	0	101,267
Queensland	901,542	20	644,985	14.3	1,278,876	28.3	1,121,066	24.6	567,381	12.6	4,513,850				

Source: ABS, Queensland Government Population Projections, 2011 edition cited in OESR, Queensland Regional Profiles 2011



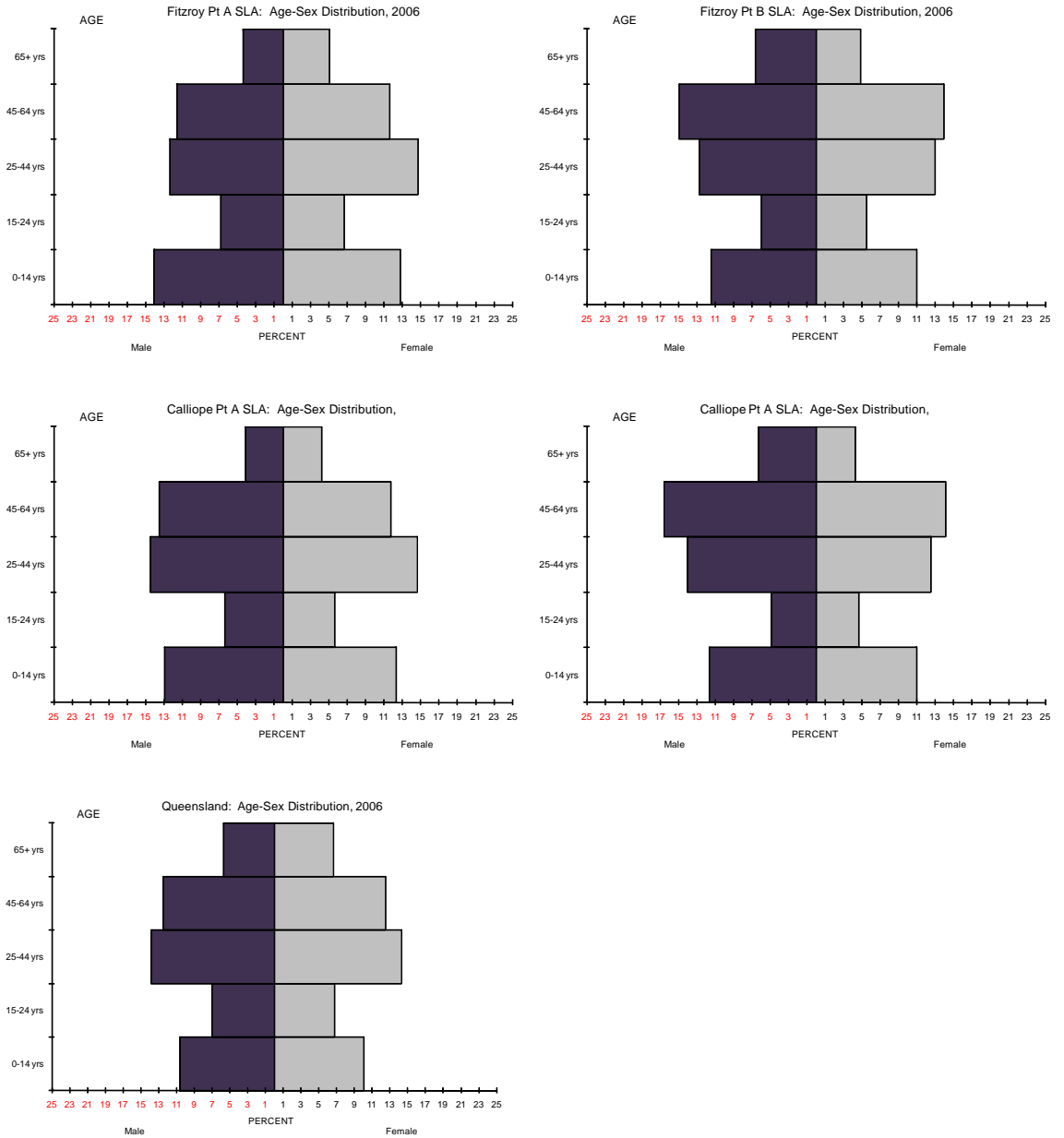


Figure A1 Age and Sex distribution by SLA

Source: ABS, 2006 Census of Population and Housing, cat. no. 2001.0, Community Profile Series

Table A5 Previous address 1 year ago and 5 years ago by SLA, 2006

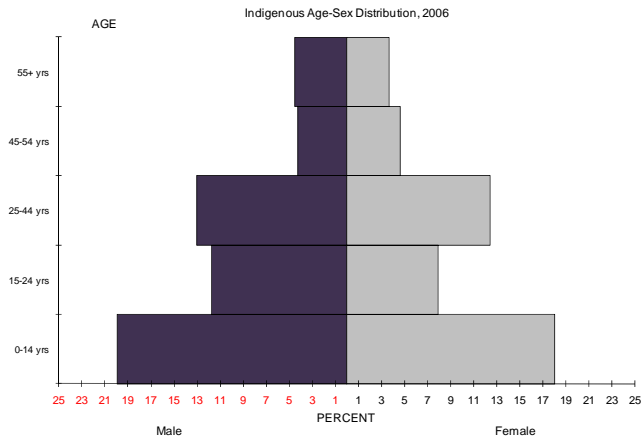
Localities	1 Year ago			Total 1 year ago	5 Years ago			Total 5 years ago
	Same address or same SLA	Moved to another SLA or overseas	Not stated		Same address or same SLA	Moved to another SLA / overseas	Not stated	
Bowen	9,815	1,100	1,306	12,221	7,532	2,684	1,443	11,659
Nebo	1,548	461	469	2,478	855	970	475	2,300
Belyando	7,924	1,629	701	10,254	5,210	3,491	759	9,460
Broadsound	4,828	1,074	814	6,716	2,887	2,480	807	6,174
Livingstone Part A	2,801	441	627	3,869	1,872	1,202	624	3,698
Livingstone Part B	20,359	2,828	1,502	24,689	14,427	7,442	1,683	23,552
Fitzroy Part A	4,827	880	380	6,087	3,127	2,148	430	5,705
Fitzroy Part B	3,404	511	415	4,330	2,466	1,228	420	4,114
Calliope Part A	11,221	1,811	596	13,628	7,438	4,661	703	12,802
Calliope Part B	2,203	382	107	2,692	1,525	885	135	2,545
Social Assessment Area	68,930	11,117	6,917	86,964	47,339	27,191	7,479	82,009
Queensland	3,041,774	573,096	236,652	3,851,522	1,978,673	1,400,970	267,812	3,647,455

Source: ABS, 2006 Census of Population and Housing, cat. no. 2001.0, Community Profile Series

Cultural diversity**Table A6 Indigenous population by SLA, 2006**

SLA	Indigenous	% Indigenous	Non- Indigenous	% Non- Indigenous	Not Stated	% Not stated	Total persons
Bowen	805	6.5	10,373	83.8	1,200	9.7	12,378
Nebo	68	2.7	1,956	77.5	500	19.8	2,524
Belyando	193	1.8	9,539	91.2	724	6.9	10,456
Broadsound	163	2.4	5,834	85.3	846	12.4	6,843
Livingstone Part A	194	5.0	3,547	90.8	164	4.2	3,905
Livingstone Part B	785	3.1	22,703	90.9	1,477	5.9	24,965
Fitzroy Part A	416	6.7	5,445	88.1	322	5.2	6,183
Fitzroy Part B	99	2.3	3,876	88.3	413	9.4	4,388
Calliope Part A	329	2.4	12,955	93.8	532	3.9	13,816
Calliope Part B	74	2.7	2,509	92.1	141	5.2	2,724
Total ABP Area	3,126	3.5	78,737	89.3	6,319	7.2	88,182
Queensland	127,580	3.3	3,552,041	91.0	224,910	5.8	3,904,531

Source: ABS, 2006 Census of Population and Housing, cat. no. 2001.0, Community Profile Series



■ **Figure A2 Indigenous population by Age and Sex**

Source: ABS, 2006 Census of Population and Housing, cat. no. 2001.0, Community Profile Series

**Table A7 Key Indigenous statistics by LGA, 2006**

Characteristic	Key Indigenous statistics by LGA								All
	Bowen	Nebo	Belyando	Broadsound	Livingstone	Fitzroy	Calliope	Queensland	Queensland*
Population	805	67	192	165	975	514	402	127,581	3,552,041
% whole population	6.5	2.7	1.8	2.4	3.4	4.9	2.4	3.3	91.0
Male (no.)	422	38	98	93	579	324	211	62,689	1,752,413
Female (no.)	383	29	94	72	396	280	191	64,892	49.3
Male (%)	52.4	56.7	51.0	56.4	59.4	63.0	52.5	49.1	50.7
Female (%)	47.6	43.3	49.0	43.6	40.6	54.5	47.5	50.9	3.6
Median Age	24	23	21	17	21	15	17	20	0.6
Employment (%)	49.9	71.7	62.3	69.4	33.8	47.9	54.1	48.9	0.6
Unemployment (%)	12.8	15.4	8.0	4.2	9.8	14.3	8.8	13.1	0.0
Median Individual income	351	559	506	683	280	367	318	318	476
Median household income	774	1,831	1,599	1,985	848	884	1,257	899	1,033
Median weekly rent	135	52	60	51	165	140	170	150	200

Source: ABS, 2006 Census of Population and Housing, cat. no. 2001.0, Community Profile Series

* Population, % whole population and Male and Female figures are for non-Indigenous only

Table A8 Language spoken at home by SLA

SLA	Speaks English only		LOTE		Not Stated		Total
	Number	%	Number	%	Number	%	
Bowen	10,560	85.3	508	4.1	13,310	10.6	12,379
Nebo	1,993	79.0	51	2.0	479	19.0	2,523
Belyando	9,540	91.2	222	2.1	693	6.6	10,455
Broadsound	5,880	85.9	168	2.5	796	11.6	6,844
Livingstone Part A	3,239	83.0	49	1.3	615	15.8	3,903
Livingstone Part B	22,969	92.0	554	2.2	1,441	5.8	24,964
Fitzroy Part A	5,752	93.0	67	1.1	366	5.9	6,184
Fitzroy Part B	3,970	90.5	30	0.7	388	8.8	4,388
Calliope Part A	12,950	93.7	330	2.4	535	3.9	13,815
Calliope Part B	2,537	93.1	96	3.5	93	3.4	2,724
Social Assessment Area	79,390	90.0	2,075	2.4	6,716	7.6	88,179
Queensland	3,371,684	86.4	303,096	7.8	229,754	5.9	3,904,533

Source: ABS, 2006 Census of Population and Housing, cat. no. 2001.0, Community Profile Series

Table A9 Country of birth by SLA, 2006

SLA	Born Australia		Born Overseas		Not Stated		Total
	Number	%	Number	%	Number	%	
Bowen	9,527	77.0	1,345	10.9	1,507	12.2	12,379
Nebo	1,854	73.5	153	6.1	516	20.5	2,523
Belyando	8,892	85.1	764	7.3	799	7.6	10,455
Broadsound	5,399	78.9	553	8.1	892	13.0	6,844
Livingstone Part A	3,471	88.9	222	5.7	210	5.4	3,903
Livingstone Part B	20,598	82.5	2,579	10.3	1,787	7.2	24,964
Fitzroy Part A	5,417	87.6	290	4.7	477	7.7	6,184
Fitzroy Part B	3,739	85.2	202	4.6	447	10.2	4,388
Calliope Part A	11,431	82.7	1,651	12.0	733	5.3	13,815
Calliope Part B	2,341	85.9	239	8.8	144	5.3	2,724
Project Area	72,669	82.4	7,998	9.1	7,512	8.5	88,179
Queensland	2,935,260	75.2	699,444	17.9	269,829	6.9	3,904,533

Source: ABS, 2006 Census of Population and Housing, cat. no. 2001.0, Community Profile Series

Family and household**Table A10 Household composition by SLA, 2006**

SLA	Family household		Non-family household		Total Households
	Number	%	Number	%	
Bowen	3,047	68.6	1,393	31.4	4,440
Nebo	495	76.5	152	23.5	647
Belyando	2,539	77.4	742	22.6	3,281
Broadsound	1,614	78.6	439	21.4	2,053
Livingstone Part A	975	93.0	73	7.0	1,048
Livingstone Part B	6,620	74.2	2,296	25.8	8,916
Fitzroy Part A	1,632	83.2	330	16.8	1,962
Fitzroy Part B	1,140	81.1	265	18.9	1,405
Calliope Part A	3,760	83.1	764	16.9	4,524



SLA	Family household		Non-family household		Total Households
	Number	%	Number	%	
Calliope Pt	738	78.9	197	21.1	935
Social Assessment Area	22,560	77.2	6,651	22.8	29,211
Queensland	1,011,979	72.7	379,655	27.3	1,391,634

Source: ABS, 2006 Census of Population and Housing, cat. no. 2001.0, Community Profile Series

Table A11 Family composition by SLA, 2006

SLA	Couple family with no children		Couple family with children		One-parent family		Other Family		Total
	Number	%	Number	%	Number	%	Number	%	
Bowen	1,421	45.9	1,206	39.0	422	13.6	45	1.5	3,094
Nebo	186	36.8	275	54.5	38	7.5	6	1.2	505
Belyando	879	34.2	1,458	56.7	208	8.1	25	1.0	2,570
Broadsound	596	36.5	893	54.7	130	8.0	14	0.9	1,633
Livingstone Part A	361	36.3	575	57.8	53	5.3	5	0.5	994
Livingstone Part B	3,077	45.7	2,653	39.4	945	14.0	58	0.9	6,733
Fitzroy Part A	559	33.7	835	50.4	255	15.4	8	0.5	1,657
Fitzroy Part B	500	43.0	543	46.6	113	9.7	8	0.7	1,164
Calliope Part A	1,380	36.1	2,048	53.6	377	9.9	19	0.5	3,824
Calliope Pt Social Assessment Area	350	46.5	332	44.1	71	9.4	0	0.0	753
Queensland	403,854	39.1	446,740	43.3	164,219	15.9	17,221	1.7	1,032,034

Source: ABS, 2006 Census of Population and Housing, cat. no. 2001.0, Community Profile Series



Education, employment and income

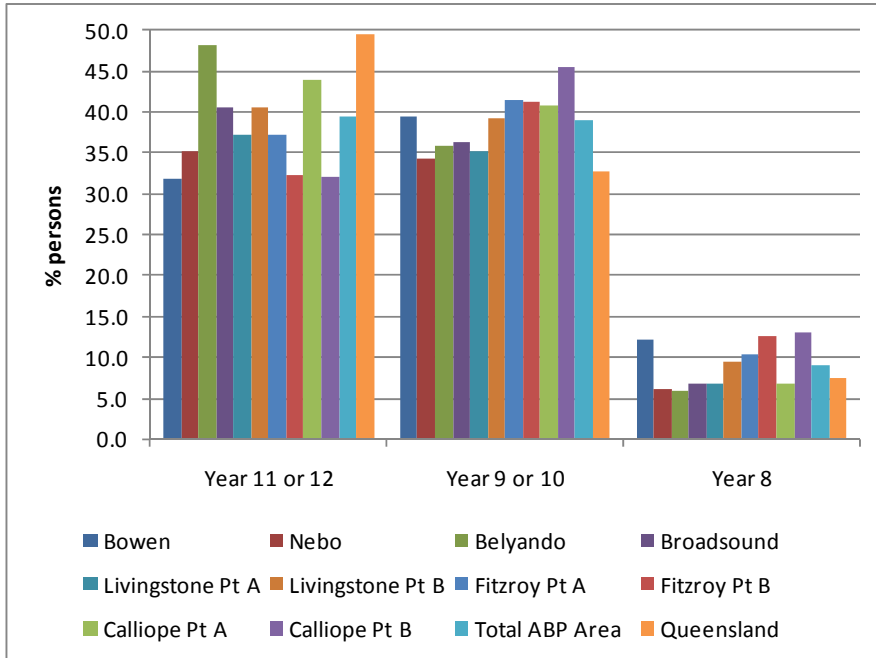


Figure A3 Highest level of school completion by SLA, 2006

Source: ABS, 2006 Census of Population and Housing, cat. no. 2001.0, Community Profile Series

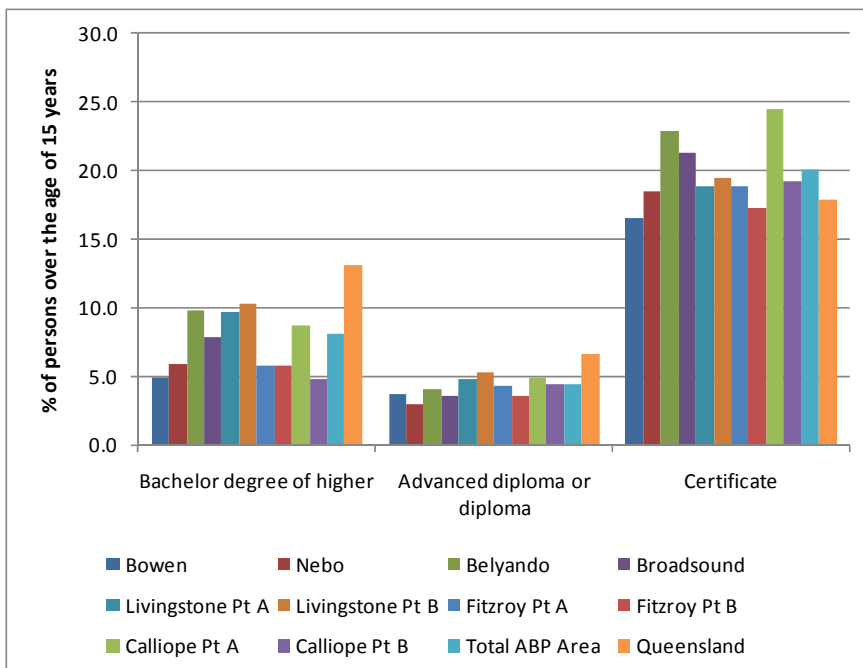


Figure A4 Highest level of qualification obtained by SLA, 2006

Source: ABS, 2006 Census of Population and Housing, cat. no. 2001.0, Community Profile Series



Table A12 Labour force participation by SLA, 2006

SLA	Labour Force Participation		
	Total labour force	Total Unemployed	Unemployment (%)
Bowen	5,624	260	4.6
Nebo	1,284	31	2.4
Belyando	5,738	112	2.0
Broadsound	3,384	77	2.3
Livingstone Part A	1,849	34	1.8
Livingstone Part B	11,031	538	4.9
Fitzroy Part A	2,877	120	4.2
Fitzroy Part B	2,103	73	3.5
Calliope Part A	6,868	287	4.2
Calliope Part B	1,310	67	5.1
Total ABP Area	42,068	1,599	3.8
Queensland	1,915,947	90,950	4.7

Source: ABS, 2006 Census of Population and Housing, cat. no. 2001.0, Community Profile Series

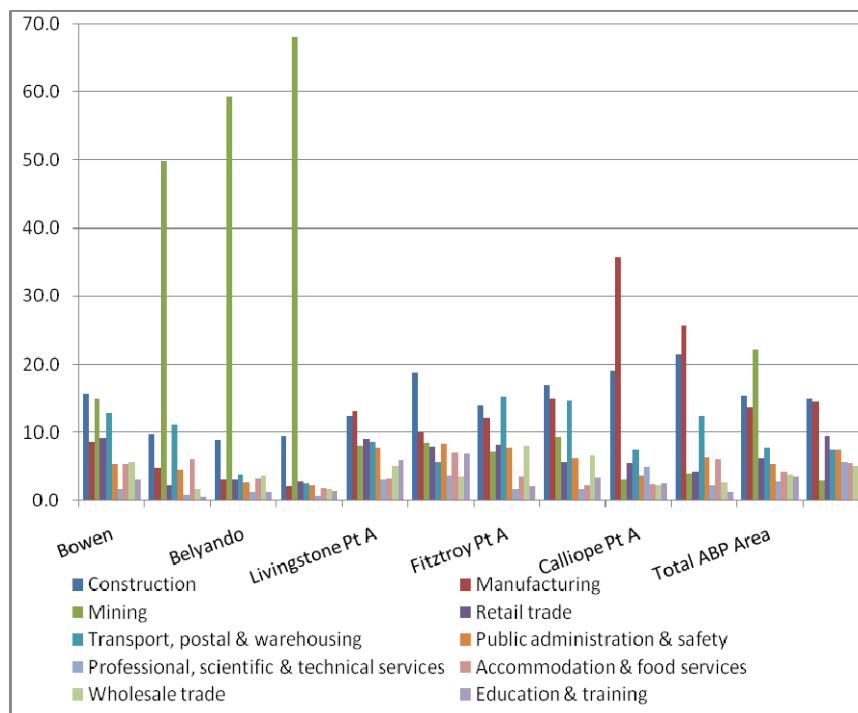


Figure A5 Top 10 Industries by SLA, 2006

Source: ABS, 2006 Census of Population and Housing, cat. no. 2001.0, Community Profile Series



Table A13 Volunteering, 2006

SLA	Volunteers (%)	Does not volunteer (%)	Not stated
Bowen	17.6	66.7	15.7
Nebo	15.2	61.2	23.6
Belyando	24.4	66.1	9.5
Broadsound	22.9	61.5	15.7
Livingstone (Part A)	18.7	60.4	20.9
Livingstone (Part B)	21.5	68.6	9.9
Fitzroy (Part A)	19.2	71.0	9.7
Fitzroy (Part B)	20.6	66.3	13.1
Calliope (Part A)	22.5	69.4	8.1
Calliope (Part B)	22.6	69.9	7.5
Social Assessment Area	21.0	67.1	11.8
Queensland	18.3	72.1	9.6

Source: ABS, 2006 Census of Population and Housing, cat. no. 2001.0, Community Profile Series

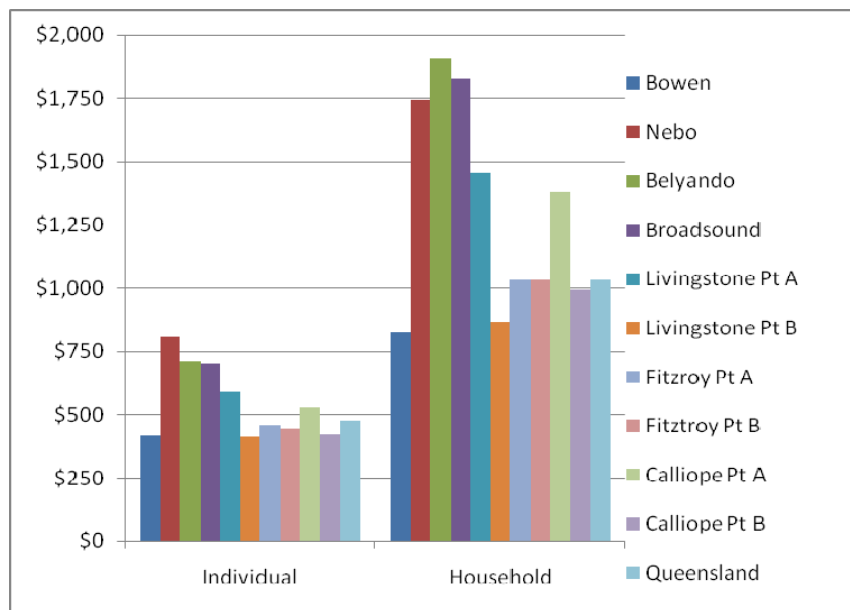


Figure A6 Median individual and weekly household income, 2006

Source: ABS, 2006 Census of Population and Housing, cat. no. 2001.0, Community Profile Series

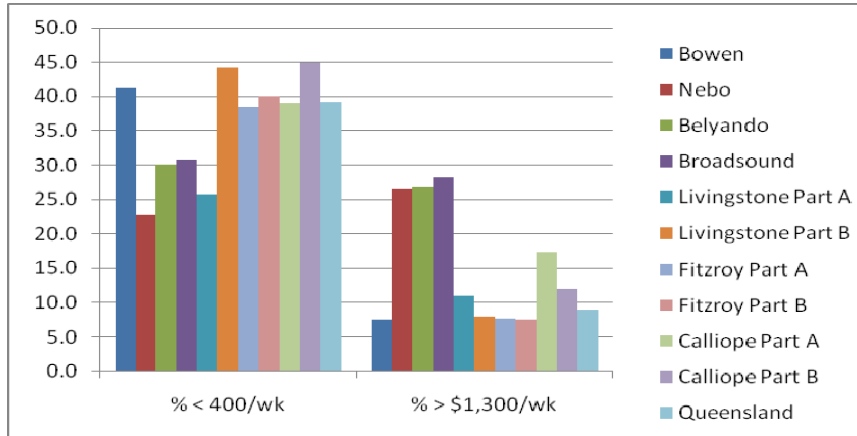


Figure A7 Gross weekly individual income less than \$400 and greater than \$1,300 by SLA, 2006

Source: ABS, 2006 Census of Population and Housing, cat. no. 2001.0, Community Profile Series

Housing and accommodation

Table A14 Dwelling type by SLA, 2006

SLA	Dwelling type								Total dwellings
	Separate house		Semi-Detached		Flat, Unit, Apt		Other dwelling		
	Number	%	Number	%	Number	%	Number	%	
Bowen	3,351	75.5	482	10.9	310	7.0	297	6.7	4,440
Nebo	559	86.5	0	0.0	13	2.0	74	11.5	646
Belyando	2,949	90.0	61	1.9	125	3.8	143	4.4	3,278
Broadsound	1,895	92.3	8	0.4	70	3.4	76	3.7	2,053
Livingstone Part A	1,033	98.7	4	0.4	0	0.0	10	1.0	1,047
Livingstone Part B	7,628	85.6	500	5.6	396	4.4	391	4.4	8,915
Fitzroy Part A	1,857	94.9	0	0.0	51	2.6	49	2.5	1,957
Fitzroy Part B	1,355	96.6	0	0.0	3	0.2	30	2.1	1,402
Calliope Part A	4,050	89.5	37	0.8	191	4.2	246	5.4	4,524
Calliope Pt	875	94.0	12	1.3	5	0.5	39	4.2	931
Social Assessment Area	25,552	87.5	1,104	3.8	1,164	4.0	1,355	4.6	29,193
Queensland	1,106,874	79.5	105,916	7.6	156,298	11.2	21,502	1.5	1,391,632

Source: ABS, 2006 Census of Population and Housing, cat. no. 2001.0, Community Profile Series

Table A15 Housing tenure by SLA, 2006

SLA	Owned / purchasing		Total Owned / Being purchased		Total Rental		Total Dwellings
	Fully owned	Being Purchased	Number	% Owned / being purchased	Number	% Rental	
	Bowen	1,698	1,053	2,751	61.9	1,446	
Nebo	106	64	170	26.2	444	68.4	649
Belyando	938	729	1,667	50.8	1,482	45.2	3,279
Broadsound	697	175	872	42.5	1,084	52.8	2,052
Livingstone Part A	351	619	970	92.5	55	5.2	1,049
Livingstone Part B	3,343	2,718	6,061	68.0	2,480	27.8	8,914
Fitzroy Part A	571	821	1,392	71.1	524	26.8	1,958
Fitzroy Part B	615	562	1,177	84.0	183	13.1	1,401
Calliope Part A	1,335	2,072	3,407	75.3	1,018	22.5	4,522
Calliope Pt	391	337	728	78.1	173	18.6	932
Total ABP Area	10,045	9,150	19,195	65.7	8,889	30.4	29,199
Queensland	439,677	470,114	909,791	65.4	432,296	31.1	1,391,632

Source: ABS, 2006 Census of Population and Housing, cat. no. 2001.0, Community Profile Series

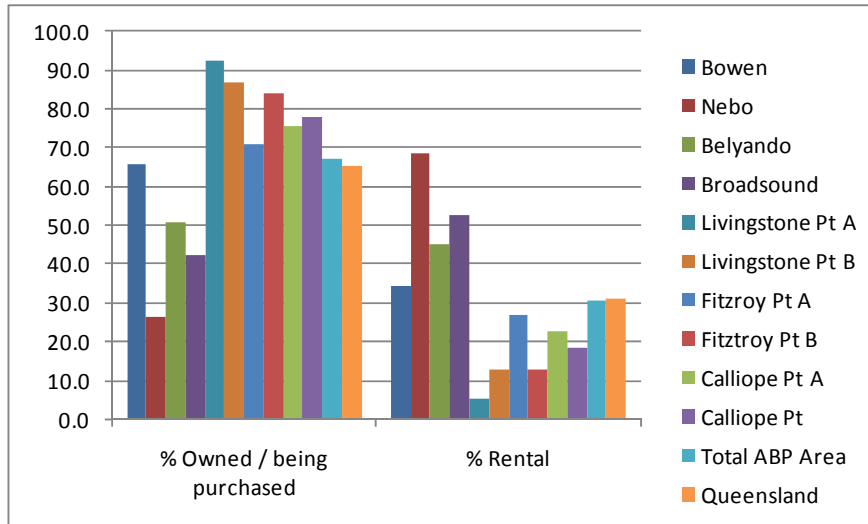


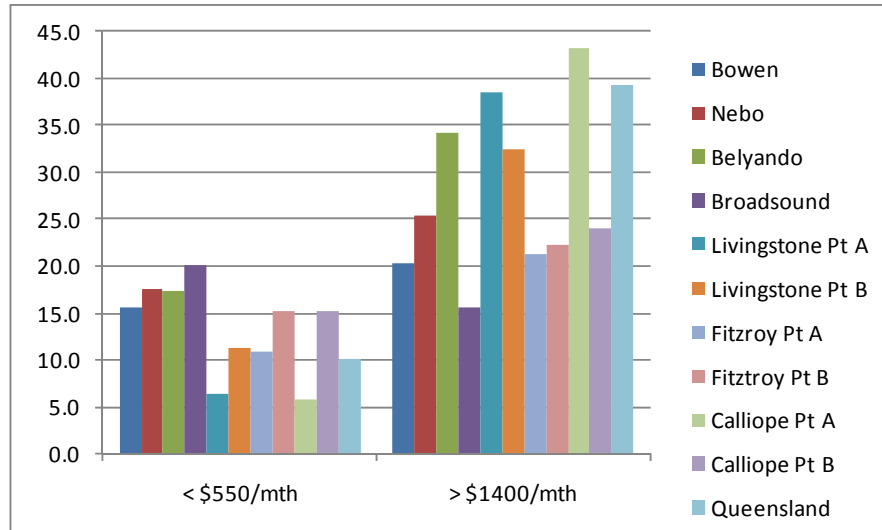
Figure A8 Housing ownership and rental by SLA, 2006

Source: ABS, 2006 Census of Population and Housing, cat. no. 2001.0, Community Profile Series

Table A16 Housing cost by SLA, 2006

SLA	Housing Costs	
	Loan Repayment (\$/monthly)	Median Rent (\$/weekly)
Bowen	953	135
Nebo	1,196	30
Belyando	1,136	68
Broadsound	867	42
Livingstone Part A	1,241	140
Livingstone Part B	1,108	170
Fitzroy Part A	1,000	170
Fitzroy Part B	1,004	100
Calliope Part A	1,300	200
Calliope Part B	997	100
Social Assessment Area	1,080	116
Queensland	1,300	200

Source: ABS, 2006 Census of Population and Housing, cat. no. 2001.0, Community Profile Series



■ **Figure A9 Monthly loan repayment by SLA, 2006**

Source: ABS, 2006 Census of Population and Housing, cat. no. 2001.0, Community Profile Series

Table A17 Median weekly rents in social assessment area, March 2009 – March 2011

LGA / Suburb / Locality	March quarter 2009		March quarter 2010		March quarter 2011	
	3 bedroom house	2 bedroom flat / unit	3 bedroom house	2 bedroom flat / unit	3 bedroom house	2 bedroom flat / unit
Isaac Regional Council	n/a	n/a	n/a	n/a	\$750.00	n/a
Belyando*	n/a	n/a	n/a	n/a	\$375.00	n/a
Nebo*	n/a	n/a	n/a	n/a	\$400.00	n/a
Moranbah*	n/a	n/a	n/a	n/a	\$800.00	n/a
Dysart*	n/a	n/a	n/a	n/a	\$1,200.00	n/a
Gladstone LGA	\$300.00	\$240.00	\$280.00	\$230.00	\$360.00	\$275.00
Calliope*	\$310.00	\$340.00	\$285.00	\$2,230.00	\$360.00	\$280.00
Rockhampton LGA	\$280.00	\$220.00	\$290.00	\$225.00	\$300.00	\$235.00
Gracemere*	\$290.00	\$200.00	\$285.00	\$225.00	\$300.00	\$215.00
Livingstone region	n/a	n/a	n/a	n/a	\$300.00	\$280.00
Whitsunday Regional Council	\$370.00	\$300.00	\$350.00	\$290.00	\$330.00	\$250.00
Bowen	\$350.00	\$280.00	\$340.00	\$230.00	\$320.00	\$250.00

Source: REIQ, 2011 Queensland Market Monitor, Issue 10; REIQ, 2010 Queensland Market Monitor, Issue 6; REIQ, 2009 Queensland Market Monitor, Issue 2

* Includes surrounding area



Table A18 Median housing sales prices in social assessment area, March 2009 – March 2011

LGA / Suburb / Locality	March quarter 2009			March quarter 2010			March quarter 2011		
	Number of sales	Median sales price \$*	Change over 5yrs	Number of sales	Median sales price \$*	Change over 5yrs	Number of sales	Median sales price \$*	Change over 5yrs %
<i>Isaac Regional</i>	28	380,000	309.7	52	405,000	138.2	n/a	430,000	53.6
Dysart	6	389,500	737.6	6	412,000	312.0	8	430,000	109.2
Moranbah	18	395,000	216.0	36	435,000	102.3	24	435,000	51.3
<i>Gladstone LGA</i>	143	380,000	96.9	175	366,000	70.2	205	395,000	66.0
Calliope	21	386,500	127.4	16	376,500	125.4	24	405,000	92.2
<i>Rockhampton LGA</i>	338	309,000	154.2	327	313,000	96.9	215	320,000	56.1
Gracemere	26	342,000	154.2	30	317,500	100.9	22	330,000	50.0
<i>Whitsunday Regional</i>	55	385,000	148.4	65	389,500	87.0	32	369,500	44.6
Bowen	23	360,000	161.8	23	350,000	94.4	7	365,000	63.7

Source: Real Estate Institute of Queensland (REIQ), 2011 Queensland Marker Monitor, Issue 10; Real Estate Institute of Queensland (REIQ), 2010 Queensland Marker Monitor, Issue 6; Real Estate Institute of Queensland (REIQ), 2009 Queensland Marker Monitor, Issue 2



Socio-economic advantage and disadvantage
Table A19 Socio economic index of disadvantage by SLA, 2006

SLA	Socio economic index of disadvantage				
	Most disadvantaged			Least disadvantaged	
	Quintile 1	Quintile 2	Quintile 3	Quintile 4	Quintile 5
Bowen	4.7	2.5	27.5	36.6	28.7
Nebo	59.0	30.8	9.6	0.6	0.0
Belyando	7.2	4.8	24.1	58.6	5.2
Broadsound	3.7	13.5	25.6	38.5	18.6
Livingstone Part A	49.0	15.4	22.8	12.8	0.0
Livingstone Part B	11.5	47.1	31.5	9.8	0.0
Fitzroy Part A	23.1	0.0	67.2	9.7	0.0
Fitzroy Part B	0.0	0.0	16.8	28.4	54.8
Calliope Part A	17.7	28.4	35.6	13.2	5.0
Calliope Part B	0.0	36.3	35.6	51.8	0.0
Total ABP Area	18.6	20.0	28.0	22.9	10.4
Queensland	20.0	20.0	20.0	20.0	20.0

Source: Australian Bureau of Statistics, Census of Population and Housing: Socio-Economic Indexes for Areas (SEIFA), Australia – Data only, 2006, cat. no. 2033.0.55.001 (OESR derived), cited in OESR, *Queensland Regional Profiles 2011*.

Table A20 Needs assistance by SLA, 2006

SLA	Need assistance		Do not need assistance	Total
	Number	%		
Bowen	633	5.1	10,353	12,379
Nebo	19	0.8	2,004	2,523
Belyando	148	1.4	9,533	10,455
Broadsound	100	1.5	5,870	6,845
Livingstone Part A	79	2.0	3,193	3,903
Livingstone Part B	1,043	3.9	22,243	26,965
Fitzroy Part A	199	3.2	5,575	6,183
Fitzroy Part B	111	2.5	3,839	4,389
Calliope Part A	393	2.8	12,808	13,817
Calliope Part B	87	3.2	2,495	2,725
Social Assessment Area	2,812	3.1	77,913	90,184
Queensland	154,707	4.0	3,491,383	3,904,533

Source: ABS, 2006 Census of Population and Housing, cat. no. 2001.0, Community Profile Series



A.2 Locality demographic data
Table A21 Characteristics by locality, 2006

Characteristic	Key statistics by locality											
	Glenden	Moranbah	Dysart	Duaringa	Middlemount	Marlborough	Gracemere	Mount Larcom	Bouldercombe	Raglan (SS)*	Bajool (SS)*	Calliope
Estimated Resident Population	1,114	7,132	3,136	248	2,038	356	5,061	256	710	264	292	1,550
Male (no.)	615	3,940	1,820	131	1,151	190	2,463	122	346	141	148	796
Female (no.)	499	3,192	1,316	117	887	166	2,598	134	364	123	144	754
Male	55.2%	55.2%	58.0%	52.8%	56.5%	53.4%	48.7%	47.7%	48.7%	53.4%	50.7%	51.4%
Female	44.8%	44.8%	42.0%	47.2%	43.5%	46.6%	51.3%	52.3%	51.3%	46.6%	49.3%	48.6%
Aged 14 yrs and younger	27.5%	26.9%	26.9%	22.6%	28.5%	16.3%	27.2%	21.8%	22.1%	23.1%	20.2%	27.3%
Aged 15 yrs to 64 yrs	70.6%	71.9%	71.7%	66.5%	70.8%	68.0%	64.3%	64.1%	66.3%	65.5%	66.8%	65.3%
Aged 65 yrs and older	2.0%	1.2%	1.3%	10.1%	0.7%	15.7%	9.5%	14.1%	11.6%	11.4%	13.0%	7.4%
Median Age	30	29	31	36	30	44	33	42	41	41	41	33
Indigenous status	2.5%	1.9%	3.4%	26.5%	1.9%	1.7%	7.5%	4.0%	0.4%	2.6%	2.7%	1.9%
Speaks LOTE	1.8%	2.4%	2.2%	2.4%	3.4%	0.0%	1.1%	2.4%	0.0%	1.1%	0.0%	1.4%
Unemployment	2.1%	1.8%	1.9%	2.9%	1.9%	1.8%	4.5%	3.3%	4.2%	14.3%	4.0%	3.6%
Employed in mining**	29.5%	31.1%	32.4%	0.0%	33.5%	4.1%	2.7%	2.4%	3.2%	0.0%	6.2%	1.2%
Median Individual income	\$1,007	\$948	\$932	\$512	\$1,076	\$439	\$456	\$42	\$437	\$294	\$460	\$500
Median household income	\$1,908	\$2,479	\$2,226	\$910	\$2,113	\$778	\$1,017	\$351	\$1,050	\$871	\$979	\$1,195
Median weekly rent	\$30	\$70	\$56	\$44	\$34	\$0	\$170	\$113	\$135	\$0	\$80	\$190



Characteristic	Key statistics by locality											
	Glenden	Moranbah	Dysart	Duaringa	Middlemount	Marlborough	Gracemere	Mount Larcom	Bouldercombe	Raglan (SS)*	Bajool (SS)*	Calliope
Same address 5 yrs ago	18.0%	34.8%	39.8%	53.7%	22.5%	54.7%	42.4%	49.8%	47.2%	52.3%	54.1%	42.0%
Average household size	2.9	3.0	2.9	2.4	3.1	2.2	2.9	2.4	2.7	2.7	2.7	3.0

Source: ABS, 2006 Census of Population and Housing, cat. no. 2001.0, Community Profile Series

** % of aged 15yrs to 64 yrs

Table A22 Resident population for the pipeline area, 2006

Localities	Usual place of residence by sex				Total
	Male	% Male	Female	% Female	
Glenden	615	55.2	499	44.8	1,114
Moranbah	3,940	55.2	3,192	44.8	7,132
Dysart	1,820	58.0	1,316	42.0	3,136
Middlemount	1,151	56.5	887	43.5	2,038
Duaringa	131	52.8	117	47.2	248
Marlborough	190	53.4	166	46.6	356
Gracemere	2,463	48.7	2,598	51.3	5,061
Mount Larcom	122	47.7	134	52.3	256
Bouldercomb	346	48.7	364	51.3	710
Raglan (SS)*	141	53.4	123	46.6	264
Bajool (SS)*	148	50.7	144	49.3	292
Calliope	796	51.4	754	48.6	1,550
Total Pipeline Route	11,863	53.5	10,294	46.5	22,157
Queensland	1,775,554	49.5	1,810,085	50.5	3,585,639

Source: ABS, 2006 Census of Population and Housing, cat. no. 2001.0, Community Profile Series

* State Suburb

Table A23 Family composition by locality, 2006

Localities	Couple family with no children		Couple family with children		One parent family		Other family		Total
	Number	%	Number	%	Number	%	Number	%	
Glenden	164	50.0	143	43.6	18	5.5	3	0.9	328
Moranbah	541	31.2	1,037	59.9	137	7.9	17	1.0	1,732
Dysart	241	32.4	428	57.6	66	8.9	8	1.1	743
Middlemount	151	33.6	268	59.7	30	6.7	0	0.0	449
Duaringa	25	41.7	28	46.7	7	11.7	0	0.0	60
Marlborough	57	59.4	27	28.1	7	7.3	5	5.2	96
Gracemere	450	32.9	680	49.8	227	16.6	9	0.7	1,366
Mount Larcom	34	48.6	29	41.4	7	10.0	0	0.0	70
Bouldercombe	78	43.1	86	47.5	14	7.7	3	1.7	181
Raglan (SS)*	37	46.8	33	41.8	9	11.4	0	0.0	79
Bajool (SS)	41	48.2	44	51.8	0	0.0	0	0.0	85
Calliope	149	34.8	230	53.7	49	11.4	0	0.0	428
Queensland	349,697	39.1	417,806	43.3	149,858	15.9	16,567	1.7	1,032,034

Source: ABS, 2006 Census of Population and Housing, cat. no. 2001.0, Community Profile Series

* State Suburb

**Table A24 Household composition by locality, 2006**

Localities	Family household		Non-family household		Total
	Number	%	Number	%	
Glenden	237	79.5	61	20.5%	298
Moranbah	1,699	80.4	414	19.6%	2,113
Dysart	731	78.5	200	21.5%	931
Middlemount	446	85.6	75	14.4%	521
Duaringa	59	59.6	40	40.4%	99
Marlborough	95	70.9	39	29.1%	134
Gracemere	1,348	82.7	282	17.3%	1,630
Mount Larcom	68	69.4	30	30.6%	98
Bouldercomb	180	82.2	39	17.8%	219
Raglan (SS)*	79	83.2	16	16.8%	95
Bajool (SS)*	85	85.9	14	14.1%	99
Calliope	417	83.2	84	16.8%	501
Queensland	1,011,979	72.7	379,655	27.3%	1,391,634

Source: ABS, 2006 Census of Population and Housing, cat. no. 2001.0, Community Profile Series

* State Suburb

Appendix B Social infrastructure

B.1 Education

Table B1 Early childhood and care services by locality

Localities	Early childhood education and care services							Total facilities
	Family daycare	Kindergarten	Long day care	School aged care	Before school care	After school care	Vacation care	
Glenden	0	1	1	0	0	0	0	1
Moranbah	1	1	2	0	1	1	1	5
Dysart	0	1	1		1	1	1	2
Middlemount	0	1	1	0	0	0	0	1
Duaranga	0	0	0	0	0	0	0	0
Marlborough	0	0	0	0	0	0	0	0
Gracemere	1	0	2	0	1	2	2	4
Mount Larcom	0	0	0	0	0	0	0	0
Bouldercombe	1	0	0	0	0	0	0	1
Raglan (SS)*	0	0	0	0	0	0	0	0
Bajool (SS)*	0	0	0	0	0	0	0	0
Calliope	1	1	1	0	0	0	0	3

Source: Department of Education and Training, Early Childhood and Care Services search

<http://deta.qld.gov.au/earlychildhood/families/Search.html/> and <http://ifp.mychild.gov.au/ChildCareService/Results.aspx>



Table B2 Schools by locality, 2011

Localities	Primary School (years 1-7)				Secondary School (years 8-12)				Combined Primary / Secondary				Total all Schools			
	Government		Catholic		Total	Government		Catholic		Total	Government			Catholic		Total
	#	%	#	%		#	%	#	%		#	%		#	%	
Glenden	0		0		0		0		0		1		0		1	1
Moranbah	2		0		1		0		1		0		0		0	3
Dysart	1		0		1		0		1		0		0		0	2
Middlemount	0		0		0		0		0		1		0		1	1
Duaringa	n.a		n.a		n.a		n.a		n.a		n.a		n.a		n.a	n.a
Marlborough	2		0		0		0		0		0		0		0	2
Gracemere	2		1		0		0		0		0		0		0	3
Mount Larcom	0		0		0		0		0		1		0		1	1
Bouldercombe	1		0		0		0		0		0		0		0	1
Raglan (SS)*	n.a		n.a		n.a		n.a		n.a		n.a		n.a		n.a	n.a
Bajool (SS)*	1		0		0		0		0		0		0		0	1
Calliope	1		0		0		0		0		0		0		0	1
Total	10		1		2		0		2		3		0		3	16

Source: Australian Schools Directory. On line: www.australianchoolsdirectory.com.au/. Accessed September 2011

NB: Search conducted by localities, data not available for Duaringa and Raglan

* Data is for State Suburb

B.2 Health and Emergency Services

Health Service District Maps

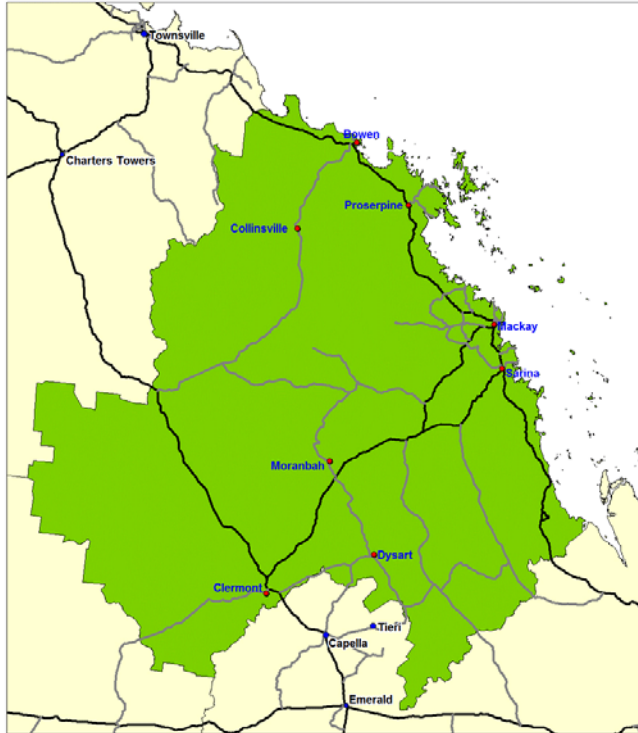


Figure B1 Mackay Health Service District, July 2011

Source: Queensland Health, 2011 <http://www.health.qld.gov.au/maps/mapto/mackay.asp> Accessed 29 September, 2011

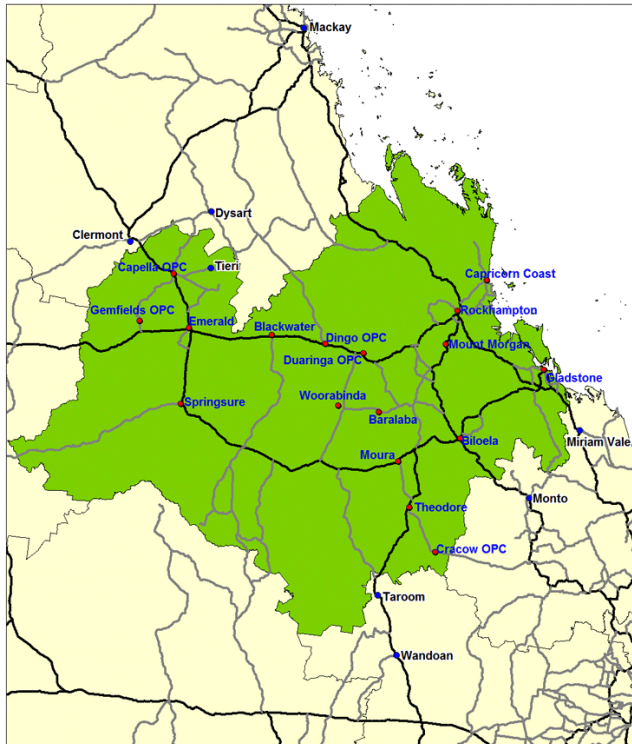


Figure B2 Central Queensland Health Service District, July 2011

Source: Queensland Health, 2011 <http://www.health.qld.gov.au/maps/mapto/mackay.asp> Accessed 29 September, 2011

Table B3 Emergency services and hospitals by SLA, Social Assessment Area, June 2010

SLA	Police station	Ambulance station	Fire station	Hospitals
Bowen	2	3	2	2
Nebo	2	3	1	0
Belyando	2	6	2	2
Broadsound	4	6	2	1
Livingstone Part A	0	0	0	0
Livingstone Part B	3	3	2	2
Fitzroy Part A	1	1	1	0
Fitzroy Part B	2	0	0	0
Calliope Part A	2	2	2	0
Calliope Part B	2	1	0	0
Social Assessment Area	20	25	12	7
Queensland	340	262	243	271
ABP Area as % Qld	5.9	9.5	4.9	2.6

Source: ABS, *Regional Population Growth, Australia, 2009-10*, cat. no. 3218.0 and unpublished data cited in OESR, *Queensland Regional Profiles 2011*.

**Table B4 General Practice and outpatient clinics, 2011**

General Practices	
Location	Opening hours
Calliope	
Gladstone Medical Centre Shop 2, 6 Ballantine St, Gladstone 4680	Mon-Fri 7:30am to 5pm
BITS Medical Centre 1 Curtis Avenue, Boyne Island 4680	Mon-Fri 8am to 5pm Sat 8:30am to 12pm
Seaview Health Care Centre Airport Shopping Village, 281 J Hickey Avenue, Gladstone 4680	Mon-Fri 8:30am to 5pm Sat 8:30am to 12pm
Calliope Medical Centre Shop 10 2041 Dawson Hwy, Calliope 4680	Mon-Fri 8:30am to 5:30pm Sat 8:30am to 12pm
Tara Place Family Practice 1 Gilbert Court, Boyne Island 4680	Mon-Fri 7am to 5pm Sat 8am to 10pm
Gladstone GP super clinic 216 Phillip Street, Gladstone 4680	Mon 7am to 7pm, Tue 7am to 6pm, Wed 7am to 7pm, Thu-Fri 7am to 6pm
Gladstone Central Medical Centre Suite 22, Nightowl Centre, Dawson Highway, Gladstone 4680	Mon-Fri 8am to 5pm Sat 9am to 11:30pm
The Bulk Billing Surgery 67 Goondoon Street, Gladstone 4680	Mon-Fri 8:30am to 5pm Sat 8:30am to 12pm
Port Curtis Medical Centre 8 Tank Street, Gladstone 4680	Mon-Fri 8am to 5pm
Tannum Family Practice Tannum Central, 101 Hampton Dr, Tannum Sands 4680	Mon-Fri 8am to 7pm Sat 8am to 12pm, Sun 9am to 12pm
Middlemount	
Family Practice in Middleton Shop 1 Leichhardt Drive, Middlemount 4746	Mon-Fri 8:30am to 5pm
Glenden	
Glenden Medical Practice Shop 19 Town Square, Glenden 4743	Mon-Fri 9am to 5pm
Moranbah	
Moranbah Medical Services Leichhardt House, St Francis Drive, Moranbah 4744	Mon-Fri 7:30am to 6pm Sat 8am to 1pm, Sun 9am to 12pm
Dysart	
General Practice Outpatients, Dysart Hospital Dysart hospital, Queen Elizabeth Drive, Dysart 4745	Mon, Tue, Thu, Fri 1pm – 2pm

General Practices	
Location	Opening hours
Duaringa	
Yaraka RFDS General Practice Yaraka Outpatients Clinic, Yaraka 4702	Monthly service
The Family Practice 28 coconut Drive, Zilzie 4702	Mon-Fri 8:30am to 5pm Sat 9am to 12pm
Capella outpatient Clinic 5 Slider, Capella 4732	Mon, Thu 8:30 to 11am, 1pm to 4pm

Source: Queensland Health, July 2011, QFinder

<https://access.health.qld.gov.au/QFinder/Views/DirectorySearch/DirectorySearch.aspx?Ticket=vZpSPPpOLr2BgzRygFkEvT7rUTAF2Ps67PFNy7hY0M1Vih2NqqtHM9JelhRUO9L> Accessed September 2011

Table B5 Aged care places by SLA, June 2009

SLA	Aged care service providers	Aged care places						Total Places	Australian funding \$m
		Community Care		Residential Care		Transition Care			
		Number	%	Number	%	Number	%		
Bowen	6	19	12.6	132	87.4	0	0.0	151	5.6
Nebo	0	0	0.0	0	0.0	0	0.0	0	0.0
Belyando	1	18	29.5	43	70.5	0	0.0	61	1.6
Broadsound	2	10	100.0	0	0.0	0	0.0	10	0.1
Livingstone Part A	0	0	0.0	0	0.0	0	0.0	0	0.0
Livingstone Part B	5	26	9.8	238	90.2	0	0.0	264	6.2
Fitzroy Part A	2	0	0.0	81	100.0	0	0.0	81	2.5
Fitzroy Part B	0	0	0.0	0	0.0	0	0.0	0	0.0
Calliope Part A	2	0	0.0	110	100.0	0	0.0	110	4.8
Calliope Part B	0	0	0.0	0	0.0	0	0.0	0	0.0
Social Assessment Area	18	73	10.8	604	89.2	0	0.0	677	20.8
Queensland	857	8,017	20.0	31,755	79.1	389	1.0	40,161	1,259.9
Social Assessment Area as % Qld	2.1	0.9		1.9		0.0		1.7	1.6

Source: ABS, *Regional Population Growth, Australia, 2009-10*, cat. no. 3218.0 and unpublished data sited in OESR, *Queensland Regional Profiles 2011*.



Table B6 Reported offences Central Queensland region, 2005 – 2006

Offences	Reported in 2005/06		Reported per 100,000		Reported & cleared in 2005/06		Cleared in 2005/06 Reported Previously		Change 2004/05-2005/06
	Number	% total reported offences	Number	% total reported offences	Number	% total reported & cleared	Number	% per offence	%
Homicide (Murder)	7	0.02	2	0.02	6	0.04	1	86.00	75.00
Other Homicide	8	0.02	2	0.02	8	0.05	1	100.00	-50.00
Assault	1,789	4.84	517	4.84	1,519	9.66	149	85.00	-2.00
Sexual Assault	710	1.92	205	1.92	57	0.36	64	80.00	12.00
Robbery	74	0.20	21	0.20	51	0.32	7	69.00	-5.00
Other Offences Against the Person	686	1.86	198	1.85	486	3.09	59	71.00	26.00
Offences Against the Person	3,274	8.86	946	8.86	2,640	16.79	271	81.00	6.00
Unlawful Entry	3,014	8.15	871	8.16	810	5.15	166	27.00	-4.00
Arson	95	0.26	27	0.25	37	0.24	2	39.00	34.00
Other Property Damage	3,585	9.70	1,035	9.69	1,173	7.46	137	33.00	7.00
Unlawful Use of Motor Vehicle	472	1.28	136	1.27	237	1.51	35	50.00	0.00
Other Theft (excl. Unlawful Entry)	5,959	16.12	1,721	16.12	1,797	11.43	238	30.00	-4.00
Fraud	1,766	4.78	510	4.78	1,113	7.08	337	63.00	0.00
Handling Stolen Goods	320	0.87	92	0.86	310	1.97	6	97.00	-9.00
Offences Against Property	15,211	41.14	4,393	41.15	5,477	34.84	922	36.00	-1.00
Total Offences	36,970	100.00	10,676	100.00	15,721	100.00	2,395	n/a	n.a

Source: Queensland Police Service, 2006 Annual Report http://www.police.qld.gov.au/Resources/Internet/services/reportsPublications/annualReport/2006/documents/08_crimeStatistics.pdf



Table B7 Reported offences Queensland, 2005 – 2006

Offences	Reported in 2005/06		Reported per 100,000		Reported & cleared in 2005/06		Cleared in 2005/06 Reported Previously		Change 2004/05-2005/06
	Number	% total reported offences	Number	% total reported offences	Number	% total reported & cleared	Number	% per offence	%
Homicide (Murder)	55	0.01	1	0.01	52	0.03	4	95.00	6.00
Other Homicide	122	0.02	3	0.02	113	0.06	16	93.00	-16.00
Assault	19,835	3.72	491	3.73	15,583	7.99	2,022	79.00	4.00
Sexual Assault	6,558	1.23	162	1.23	4,820	2.47	867	73.00	21.00
Robbery	1,980	0.37	49	0.37	981	0.50	121	50.00	9.00
Other Offences Against the Person	4,920	0.92	122	0.93	3,179	1.63	618	65.00	-8.00
Offences Against the Person	33,470	6.28	828	6.28	24,728	12.68	3,650	74.00	5.00
Unlawful Entry	50,159	9.42	1,241	9.42	9,496	4.87	2,464	19.00	-5.00
Arson	1,506	0.28	37	0.28	270	0.14	34	18.00	2.00
Other Property Damage	45,521	8.55	1,126	8.54	12,305	6.31	1,664	27.00	4.00
Unlawful Use of Motor Vehicle	11,905	2.24	295	2.24	3,331	1.71	648	28.00	-11.00
Other Theft (excl. Unlawful Entry)	93,101	17.48	2,305	17.49	25,515	13.09	3,467	27.00	-2.00
Fraud	25,015	4.70	619	4.70	16,408	8.42	3,975	66.00	-3.00
Handling Stolen Goods	5,631	1.06	139	1.05	5,436	2.79	98	97.00	-8.00
Offences Against Property	232,839	43.72	5,761	43.71	72,760	37.32	12,353	31.00	-2.00
Total offences	532,617	100.00	13,179	100.00	194,977	100.00	32,001	n/a	n/a

Reference: Queensland Police Service, Annual Report http://www.police.qld.gov.au/Resources/Internet/services/reportsPublications/annualReport/2006/documents/08_crimeStatistics.pdf

B.3 Open space and recreation

Table B8 Protected area – parks and forest (square kilometres) by SLA, March 2010

SLA	Protected areas – parks and forest estates								Total km2
	National park		State forest		Timber reserve		Forest reserve		
	km2	%	km2	%	km2	%	km2	%	
Bowen	143.3	53.3	125.5	46.7	0.0	0.0	0.0	0.0	368.8
Nebo	463.3	66.9	229.3	33.1	0.0	0.0	0.0	0.0	792.6
Belyando	404.5	36.7	697.6	63.3	0.0	0.0	0.0	0.0	1,202.1
Broadsound	107.6	14.0	663.4	86.0	0.0	0.0	0.0	0.0	871.0
Livingstone Part A	5.4	100.0	0.0	0.0	0.0	0.0	0.0	0.0	105.4
Livingstone Part B	286.2	38.1	465.5	61.9	0.0	0.0	0.0	0.0	851.7
Fitzroy Part A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Fitzroy Part B	297.0	84.2	55.8	15.8	0.0	0.0	0.0	0.0	452.8
Calliope Part A	5.8	17.8	26.8	82.2	0.0	0.0	0.0	0.0	132.6
Calliope Part B	694.5	65.1	372.3	34.9	0.0	0.0	0.0	0.0	1,166.8
Social Assessment Area	2,047.5	47.7	2,636.2	52.3	0.0	0.0	0.0	0.0	4,783.7
Queensland	85,937.6	71.6	30,842.6	25.7	1,812.0	1.5	1,447.1	1.2	120,139.3

Source: ABS, Queensland Government Population Projections, 2011 edition cited in OESR, Queensland Regional Profiles 2011

B.4 Social infrastructure along the pipeline route

Table B9 Schools located 10km or closer to pipeline

School	Address
St Paul's Primary School	Breakspear Street, Gracemere
Coppabella State School	Mathieson Street Coppabella
Ridgeland State School	Dalma-Ridgeland Road, Ridgeland
Stanwell State School	Teakle Street, Stanwell
Waraburra State School	Johnson Road, Gracemere
Marmor State School	Rogers Street, Marmor
Gracemere State School	O'Shanesy Street, Gracemere
Bouldercombe State School	Burnett Highway, Bouldercombe
Yarwun Primary School	Butler Street, Yarwun
Ambrose State School	Gentle Annie Road, Ambrose
Mount Larcom State School	Raglan Street, Mount Larcom
Bajool State School	Toonda Street, Bajool

Source: MapInfo StreetPro 2011 version 4

**Table B10 Community facilities within 10km of pipeline, 2011**

Facilities	Address
Ambulance	
Coppabella Ambulance Station	Alexandra, QLD 4740
Gracemere Ambulance Station	n.a
Mount Larcom Ambulance Station	Mount Larcom, QLD 4695
Aged Care	
Retirement village	n.a
Police and Fire Stations	
Gracemere Fire Station	Fisher St Gracemere, QLD 4702
Fire Station	n.a
Marmor Police Station	27 Rogers St, Marmor, QLD 4698
Gracemere Police Station	1 Ranger St, Gracemere, QLD 4702
Mount Larcom Police Station	Gladstone St, Mount Larcom, QLD 4695
Recreation facilities	
Racecourse	n.a
Sportsground	n.a
Sportsground	n.a
Other Facilities	
Cemetery	n.a
Gracemere Cemetery	Bland & Fishers Streets, Gracemere 4702 QLD
Gracemere Retirement Village	Conaghan St, Gracemere, QLD 4702
Library	n.a
Library	n.a
Church	n.a
Church	n.a
Church	n.a
Anglican Church	n.a

Source: MapInfo StreetPro 2011 version 4



Appendix C Other projects in the social assessment area

Table C1 Existing projects within the social assessment area, 2011

Locality	Project	Company	Employees
Glenden	Newlands, Coal Mine	Newlands Coal	240
	Eastern Creek, Coal Mine	Newlands Coal	No data
	Wollombi, Coal Mine	Newlands Coal	580
	Suttor Creek, Coal Mine	Newlands Coal	No data
	Sellheim, Gold Mine	Maximums Resource	No data
	Mount Coolon, Gold Mine	Drummond Gold	No data
Moranbah	Burton, Coal Mine	Peabody Energy Australia Coal	540
	Plumtree Pit, Coal Mine	Peabody Energy Australia Coal	No data
	North Goonyella, Coal Mine	Peabody Energy Australia Coal	550
	Eaglefield, Coal Mine	Peabody Energy Australia Coal	225
	Goonyella – Riverside	BHP Mitsui Coal	1840
	Broadmeadow, Coal Mine	BHP Mitsui Coal	360
	Moranbah North, Coal Mine	Anglo American Coal	490
	Moorvale, Coal Mine	Macarthur Coal	235
	Isaac Plains, Coal Mine	Aquila Resources	300
	Carborough Downs, Coal Mine	Ausenco Minerals and Metals	420
	Millennium, Coal Mine	Peabody Energy Australia Coal	250
	Poitrel, Coal Mine	BHP Mitsui Coal	210
	Twin Hills, Gold Mine	North Queensland Metals	9
	Belyando, Gold Mine	Invictus Metals	No data
	Anthony, Molybdenum Mine	Zamia Metals	No data
Nebo	South Walker Creek, Coal Mine	BHP Mitsui Coal	365
	Coppabella, Coal Mine	Macarthur Coal	480
	Hail Creek, Coal Mine	Rio Tinto Coal Australia	750
Dysart	Saraji	BHP Mitsui Coal	1145
	Peak Downs, Coal Mine	BHP Mitsui Coal	1415
	Lake Vermont, Coal Mine	Lake Vermont Resources	320
	Norwich Park, Coal Mine	BHP Mitsui Coal	750
	German Creek, Coal Mine	Capricorn Coal Management	390



Locality	Project	Company	Employees
	Oak Park, Coal Mine	Capricorn Coal Management	430
	Oaky Creek, Coal Mine	Xstrata Coal	640
	Lake Lindsay	Anglo American Coal	300
	Middlemount	Macarthur Coal	140
Gracemere	Port Alma, Salt Mine	Omya Australia	49
	Stanwell, Sandstone Mine	Capricorn Sandstone Quarries	9
	Marmor, Limestone	No Data	30
	Olsson's, Salt Mine	Olsson's Salt Mine	20
Calliope	Ulam, Limestone	No Data	12
	East End, Limestone Mine	No Data	45
	Yarwun Aluminium Refinery	Rio Tinto Alcan	

Sources: Queensland Government, 2010a; and Queensland Government 2010b

Table C2 Planned projects within the social assessment area, 2011

Locality	Project	Company	Employees
Glenden	Byerwen, Coal Mine	Byerwen Coal	
	Hillalong, Coal Mine	Pacific Environmin	
	Wardswell, Coal Mine	BHP Mitsui Coal	No data
	Lenton, Coal Mine	New Hope Coal	90
Moranbah	Wards Well, Coal Mine	BHP Mitsui Coal	
	Red Hill, Coal Mine	BHP Mitsui Coal	1840
	Red Hill, Coal Mine	Aquila Resources	No Data
	Ellensfield, Coal Mine	Ellensfield Coal Management	340
	Moranbah South, Coal Mine	Anglo Coal Australia	300
	Diamond Creek, Coal Mine		200
	Grosvenor, Coal Mine	Anglo Coal Australia	300
	Caval Ridge, Coal Mine	BHP Mitsui Coal	500
	Isaac Plains South, Coal Mine	Aquila Resources	80
Eagle Downs, Coal Mine	BHP Mitsui Coal	410	
Moranbah	Olive Downs, Coal Mine	Macarthur Coal	70
continued	Codrilla, Coal Mine	Bowen Basin Coal Joint Venture	240
	Winchester South, Coal Mine	Rio Tinto Coal Australia	250



Locality	Project	Company	Employees
	Moorvale West, Coal Mine	Macarthur Coal	150
Nebo	Broughton, Coal Mine	Broughton Coal Mining	No Data
	Bee Creek, Coal Mine	New Hope Coal	No Data
	Nebo West, Coal Mine	Queensland Gas Corporation	No Data
	Harrybrandt, Coal Mine	Yanzhou Coal Mining	No Data
Dysart	Saraji East, Coal Mine	BHP Mitsui Coal	300
	Wilunga, Coal Mine	Macarthur Coal	No Data
	Sienna, Coal Mine		
Gracemere	Marlborough, Nickel Cobalt Mine	Marlborough Nickel	200
	Mount Morgan, Gold Mine	Norton Gold Fields	50
Calliope	Australia Pacific, LNG Plant	Australia Pacific LNG Pty Ltd	35
	Fisherman's Landing LNG Plant	LNG Pty Ltd	175
	Queensland Curtis, LNG Plant	Queensland Gas Corporation Pty Ltd	200
	Gladstone, LNG Plant	Santos	200
	Arrow Energy, LNG Plant	Arrow Energy Pty Ltd	240

Source: Queensland Government, 2010a; and Queensland Government 2010b



Appendix D Social Impact Management Plan



ARROW BOWEN PIPELINE

Social Impact Management Plan

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8. Introduction

This document is the social impact management plan (SIMP) for the Arrow Bowen Pipeline Project ('the project'). The SIMP guides the management of social impacts identified through the environmental impact statement (EIS) process.

A social impact assessment (SIA) has been completed as part of the Environmental Impact Statement (EIS) process for the project. It identifies social impacts for the construction of the pipeline. This SIMP provides an overview of the key findings and recommendations of the SIA, and further develops mitigation measures, which will become commitments by Arrow Energy Holdings Pty Ltd (Arrow Energy) into the future.

The scope of this document includes activities to be carried out during the construction of the project. The SIMP has been strategically aligned with Arrow Energy's existing community relations processes and procedures.

8.1. The Requirement for a Plan

The Queensland Government's *Sustainable Resource Communities Policy 2008* requires proponents of new or expanded major resource development projects to develop a SIMP.

This SIMP has been compiled in accordance with the guidelines issued by the Queensland Government, i.e. *Social Impact Assessment: Preparing a Social Impact Management Plan (September 2010)*.

The SIMP is a living document, which will be updated on an annual basis, and modified in line with future updates to the guidelines by the Queensland Government.

8.2. Objectives of the Plan

The purpose of this SIMP is to identify and define the roles of Arrow Energy (including the wholly-owned subsidiary, Arrow Bowen Pipeline Pty Ltd (Arrow)), government and the community in the mitigation and management of social impacts throughout construction of the project. The SIMP also aims to:

- Present a summary of the potential social impacts of the project, as well as proposed mitigation and management actions.
- Reflect the key findings and recommendations of the SIA.
- Protect and promote the social values of the community.
- Help build a sustainable relationship between Arrow Energy and all stakeholders in the region.

8.3. Summary

Arrow is the proponent for the project which consists of a 580 km pipeline (including a mainline and three lateral lines). The purpose of the project is to deliver coal seam gas

(CSG) from Arrow Energy's gas fields in the Bowen Basin (Central Queensland) to a proposed gas hub near Mt Larcom for further transmission to Arrow Energy's proposed Arrow LNG Plant on Curtis Island.

The project will commence approximately 90 km north of Moranbah in central Queensland and terminate at the proposed Gladstone Gas Hub approximately 22 km west of Gladstone where it will join the Arrow Surat Pipeline (ASP) for further transmission to the proposed LNG Plant on Curtis Island.

As illustrated in Figure 2, the proposed pipeline route will commence in the southern part of the Whitsunday Regional Council local government area (LGA), traverse the Isaac and Rockhampton Regional Council's LGAs in a southerly direction and terminate in the Gladstone Regional Council LGA. The proposed pipeline route also traverses land included within two State Development Areas (SDAs), namely the Stanwell-Gladstone Infrastructure Corridor (SGIC) SDA and the Gladstone SDA (GSDA).

Much of the pipeline traverses the Bowen Basin, which has been the subject of recent growth and major development as a result of coal exploration and coal seam gas development. Consequently, the pipeline route passes through a number of petroleum production and exploration tenements.

The pipeline route passes almost entirely through rural land, much of which has been cleared for agricultural purposes, particularly grazing and cropping. The countryside is generally flat or undulating, crossed by waterways and marked occasionally by mountain ranges, hills, rocky outcrops, gullies and steep slopes, and other geological features.

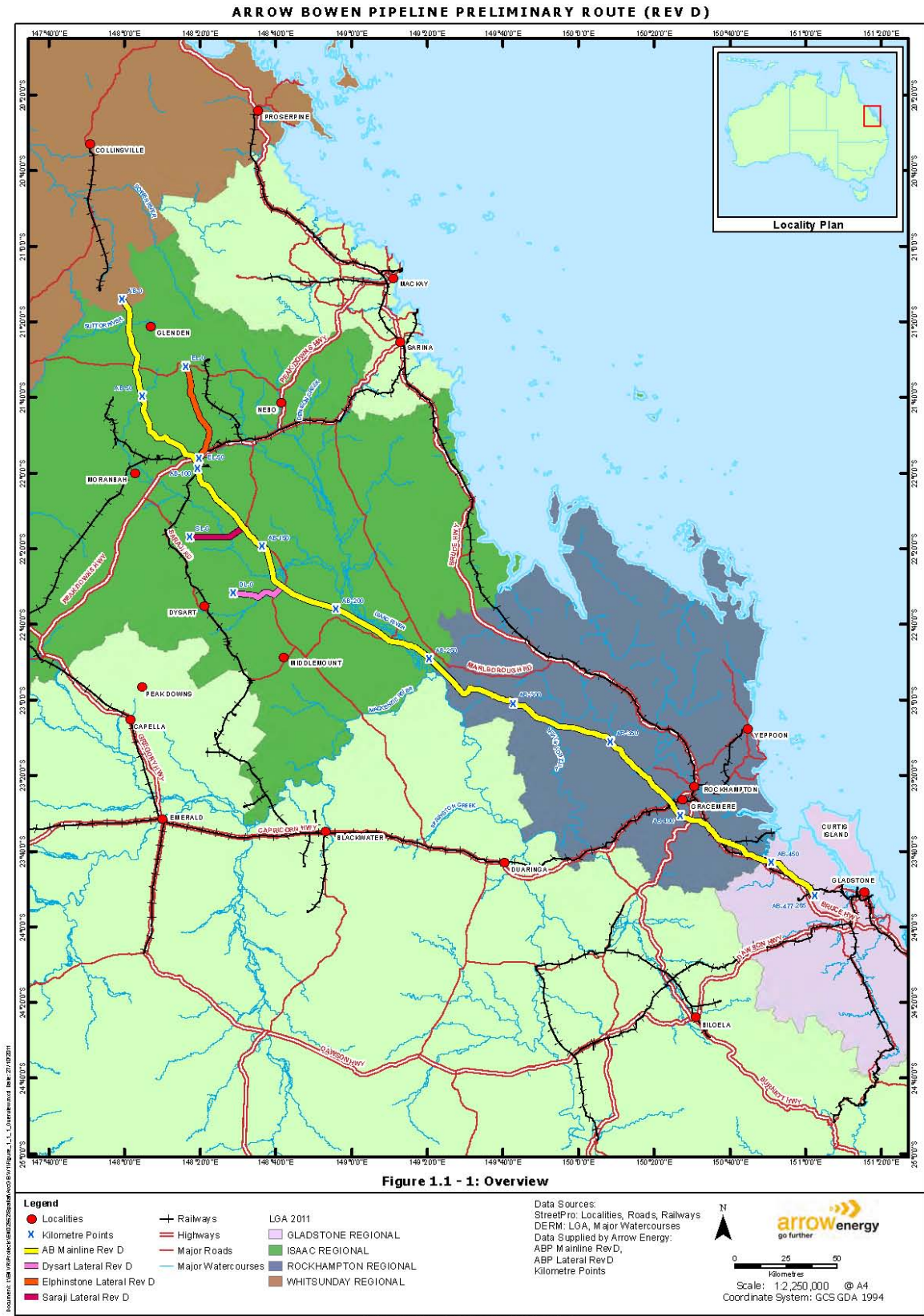


Figure 2: Overview

Construction is anticipated to be completed over 15 months and is currently forecast to commence in 2016. The construction of the buried gas pipeline requires a highly skilled and experienced workforce who will work a 28-day on / 9-day off fly-in fly-out (FIFO) roster. Approximately 700 people will be involved in the construction phase. It is anticipated that a large percentage of the construction workforce will be engaged nationally. Accommodation for the construction workers will be in temporary worker accommodation camps located near to the pipeline right-of-way (ROW). A total of five temporary worker accommodation camps are expected to be required over the life of the project, however it is expected that generally two camps will be operational at any one time. Each camp will typically accommodate up to 400 workers at any time. Each camp would include a range of services and facilities to cater for the day-to-day needs of workers, including sleeping areas, showers and toilets, laundry, rest and recreation area, kitchen/dining areas and first aid facilities. In addition, there may be a requirement for small specialist work crews (e.g. horizontal directional drill crew) to be accommodated in local short-term accommodation for a few weeks at a time.

The use of temporary worker accommodation camps and a FIFO workforce is expected to mitigate impacts on housing or rental prices in the existing townships along the pipeline route.

Some local workers will be required for semi-skilled jobs for support services such as truck drivers, fuel suppliers, fencing contractors, cleaning and grounds people. This provides an opportunity for those in high unemployment areas, to gain employment on the project. Although the work is short term, the skills acquired will assist individuals in obtaining future employment. Arrow is exploring options to engage local contractors to facilitate rehabilitation, the project offset program and to assist with other non-critical support services. The company is also considering training and up-skilling opportunities for these roles.

Demand on local hospital-based services is expected to be minor as the temporary worker accommodation camps would have a nurse and/or paramedic who can attend most cases. In the instance of major trauma cases workers will be transported to a major regional health facility for specialist care. In rare instances, there may be a minor short-term impact on General Practitioner (GP) services in the project's area when a paramedic is unable to treat a worker and the case is not suitable for transportation to a major regional hospital. GP services that have the capacity to support workers without impacting their service to the local community will be identified. Arrow Energy is exploring options to co-fund, or otherwise support, an emergency evacuation service (e.g. CareFlight) with other CSG proponents in the Bowen Basin.

Construction traffic will create short-term increases in traffic volumes on the road network during construction. The traffic impact assessment undertaken to support the EIS has determined that there is sufficient spare roadway capacity to accommodate the expected traffic increases. Access to the work site from the camps will generally be by existing roads. It is expected that intermediate travel will occur along the ROW.



The pipeline will be commissioned at the end of 2017 with commercial operation commencing soon after this. A 15-strong workforce will be involved with the operation of the pipeline with an operational expectancy in excess of 40 years.

Arrow has consulted with all landholders affected by the proposed pipeline. Environmental issues will be addressed in the Environmental Management Plan (EMP).

9. Stakeholder Consultation Plan

The Stakeholder Consultation Plan (SCP) will provide for ongoing community and stakeholder consultation. Social impacts will be mitigated and managed in accordance with these plans.

The development of a SCP and the undertaking of appropriate and effective stakeholder consultation is an essential element of the project. The SCP clearly states the stakeholder and community engagement goals, processes and outcomes, and how these will be achieved in a timely and effective manner.

The key objectives of the SCP are to:

- Identify project stakeholders, their needs and their values;
- Identify the key stakeholder issues to be addressed during consultation;
- Facilitate involvement with the community through a two-way flow of information between the project team and the public;
- Develop consultation mechanisms to encourage and facilitate active public consultation;
- Actively encourage community input in an atmosphere of cooperation, support and encouragement;
- Provide information on the EIS process;
- Seek input on key social issues and concerns and suggestions to mitigate these concerns;
- Provide information on the outcomes of studies undertaken;
- Demonstrate that possible issues of concern to the community have been identified and considered during the EIS process;
- Ensure the community is informed about the project's goals and economic benefits;
- Maintain open channels of communication with stakeholders; and
- Create an environment in which stakeholders and the public are more likely to support the project.

9.1. Engagement Process

Arrow will engage with stakeholders and potentially affected parties at the earliest practical stage to discuss and explain the project, and to identify and respond to issues and concerns regarding social impacts. The stakeholder engagement processes will contribute to the identification of social and cultural values and to the assessment of impacts.

The SCP is aimed at an open and honest approach to stakeholders so that they are kept informed about the project and encouraged to contribute ideas that can enhance its environmental and social acceptability. Arrow will be guided by following principles when implementing the SCP:

- Maintaining open and accessible channels of communication between the community and with project decision makers;
- Relaying information in a timely manner, in advance of any activities that may impact on the community;
- Listening carefully to any concerns, issues or points of view expressed;
- Providing a timely response to questions raised;
- Providing adequate information as requested;
- Ensuring realistic parameters are provided for all consultation in all areas of potential negotiations;
- Ensuring that messages relayed to the community are consistent;
- Reviewing and revising the consultation program as the project proceeds;
- Maintaining good consultation records and developing a consultation database
- Ensuring all communities, verbal or written, are delivered in a clear and unambiguous manner; and
- Instituting a monitoring process for consultation activities.

The consultation program will be maintained for the duration of the planning, construction and commissioning phases of the proposed pipeline. Arrow will maintain an active stakeholder liaison program during the operational phase.

A summary of the actions proposed is included in **Table 3.2-1**.

Table 2: Project stakeholder engagement activities

Action area	Action item	Responsibility
Initial information provision	Letter and project fact sheet distributed to various stakeholders including all landholders along the proposed pipeline route; and Material placed in media e.g. advertisements and notices in newspapers.	Community Sustainable Development
Consultation process	Individual face-to-face consultations and negotiations with landholders; Discussions with the affected mining and petroleum tenement holders; One-on-one meetings with local councils, major government departments, elected representatives and key representative bodies; Initial Advice Statement (IAS) provided to DERM and distributed to various government departments; and Meetings with community organisations as and when required / requested.	Route Selection Team
Public displays of the project	EIS ToR advertised in newspapers; Display of draft ToR; and Draft EIS displayed at key locations for public comment and feedback.	Route Selection Team
Communication material	Face-to-face meetings; Information sessions / briefings; Brochures, maps, fact sheets; Material placed in media;	Community and Sustainable Development

Action area	Action item	Responsibility
	EIS – Executive Summary and Report; Consultation Manager database; Electronic updates; Letter drops; Phone, fax, mail and email contacts.	

9.2. Stakeholders

Key stakeholders already identified are outlined in **Table 3.2-1**.

Table 3: Stakeholders for the project

Category	Entity
State Government advisory agencies and elected representatives	Department of Environment and Resource Management Department of Infrastructure and Planning Department of Transport and Main Roads Department of Communities Department of Emergency Services Department of Mines and Energy Queensland Police Service Department of Employment, Economic Development and Innovation Department of Community Safety State and Commonwealth Members of Parliament Whitsunday Regional Council Isaac Regional Council Rockhampton Regional Council Gladstone Regional Council
Community, associations and landcare groups	Queensland Conservation Council Fitzroy Basin Association Gladstone Economic and Industry Development Board Mackay Conservation Group Capricorn Conservation Council Inc
Registered Native Title parties	Birri People (QUD6244/98, QC98/12) Jangga People (QUD6230/98, QC98/10) Wiri People (QUD372/06, QC06/14) Barada Barna People (QUD380/08, QC08/11) Port Curtis Coral Coast People (QUD6026/01, QC01/29) Darumbul People (QUD6131/98, QC97/) Darumbal People 2 (QUD6001/99, QC99/1)
Other LNG proponents	Origin Energy / Conoco Phillips Santos / PETRONAS and TOTAL Queensland Gas Company (QGC) / British Gas (BG)
Petroleum and mineral tenement holders	CH4 Pty Ltd (PL) Central Queensland Pipeline Pty Ltd (PPL) Stanwell Corporation Limited (PPL) Central Queensland Pipeline Pty Ltd (PPL) Jamena Queensland Gas Pipeline (1) Pty Ltd (PPL) QCLNG Pipeline Pty Ltd (PPL) Surat Gladstone Pipeline Pty Ltd (PPL) Macarthur Coal Pty Ltd (ML) Vale Australia (CQ) Pty Ltd (ML) Coppabella Coal Pty Ltd (ML)

Category	Entity
	Peabody (Burton Coal) Pty Ltd (ML)
Operators of existing utilities and infrastructure	Optus Powerlink Ergon Energy

Other interested parties may be identified as discussed and project briefings with relevant stakeholders are progressed.

The Queensland Police Service (QPS), Gladstone Police District, is to be engaged as a consultation stakeholder during development of a Traffic Management Plan (TMP) for the social assessment area.

9.3. Communication and Engagement Activities

A range of communication and engagement activities will be undertaken as appropriate during the project development and implementation. The activities will include:

- One-on-one meetings with local governments, relevant government departments and agencies (including regional offices), MPs representing the area (state and federal), landholders, residents, indigenous interests, community groups, business groups and special interest groups;
- Individual face-to-face consultations and negotiations with landholders and residents, which are ongoing for the life of the project;
- Preparation and wide distribution of printed and digital information, factsheets, project updates and special reports;
- Establishment of a database of key stakeholders to advise of progress, to note and monitor concerns and to open and maintain communication channels;
- Use of local newspapers and community announcements to disseminate information at key points in the project;
- Internet access to project information;
- Information sessions along the pipeline route as appropriate during planning and EIS public comment period; and
- Regular project group planning and information sharing meetings.

10. Key Project Commitments

Social impacts associated with the project have been assessed for all stages of the project including construction, operation and decommissioning. Overall, the project is expected to provide minor benefits to local and regional communities through direct and indirect employment opportunities. The project is also likely to have some minor impacts for communities closest to the proposed pipeline route, due to temporary disruption to land uses during construction and temporary changes to local traffic and access.

While some social impacts have been identified in the project area, they are generally minor and cumulative impacts associated with significant projects in the project area are negligible.

A summary of key project commitments against each of the potential impacts is discussed in **Table 4**.

Table 4: Key project commitments

Issue	Commitment
Stakeholder engagement	<ul style="list-style-type: none"> ■ Payment of compensation to directly affected landholders in accordance with relevant legislation. ■ Ongoing communication and consultation with landholders to reduce uncertainty for property owners about the use of the ROW and easement (including acquisition) during construction and operation respectively.
Population and demography	<ul style="list-style-type: none"> ■ Provision of fully self-contained temporary workers accommodation camps for FIFO workers with a range of services and facilities to cater for the day-to-day needs for workers, including sleeping areas, showers and toilets, laundry, rest and recreation area, kitchen/ dining areas and first aid facilities. ■ Implementation of worker behaviour protocols throughout construction.
Community services and social infrastructure	<ul style="list-style-type: none"> ■ Provision of fully self-contained temporary workers accommodation camps for FIFO workers with a range of services and facilities. ■ The capacity of health services, in particular GP services, will be identified to minimise impact to local health services
Community values and amenity	<ul style="list-style-type: none"> ■ Location of temporary worker accommodation camps away from residential dwellings in order to reduce the likelihood of disturbance. ■ Implementation of a Traffic Management Plan (TMP) to mitigate any traffic impacts.
Project workforce	<ul style="list-style-type: none"> ■ Provision of facilities for workers to contact family and friends. ■ Provision of counselling and advice services for workers as required.

11. Impact Mitigation and Management

Based on the results of consultation, Arrow has developed action plans and mitigation strategies according to a number of themes for the project.

Recognising the value of collaboration and the cumulative nature of many of the impacts, Arrow Energy seeks to promote an active and ongoing role for the community, and all levels of government throughout construction, operation and decommissioning phases of the project.

As such each of these action plans identifies activities that will seek involvement from key stakeholders and other proponents in the region to ensure that resources can be pooled and efforts coordinated to address impacts and maximise the benefits of the project for the community.

Each action plan below contains three sections:

- Introduction;
- Impacts; and
- Mitigation actions.

Introduction The introduction explains the purpose of each plan, the underlying objectives and key stakeholders involved.

Impacts This section describes the impacts addressed by each action plan. It contains information on the nature, phase, extent, duration, severity, probability and significance of each identified impact.

Mitigation actions This section details the mitigation actions that will be undertaken as part of the project, responsible stakeholders for each and indicative timeframes.

These plans represent measures to be taken to establish appropriate systems and protocols for initiating and commissioning the project. Once a contractor has been selected to undertake construction and operational activities, more detailed actions will be established in consultation with these parties. The method by which to measure progress against each target may also be altered.

These action plans will be revised for the operation phase of the project prior to the completion of construction.

11.1. SIMP ACTION PLAN: INDIGENOUS ENGAGEMENT



Introduction							
Purpose	The purpose of this plan is to identify actions that: <ul style="list-style-type: none"> • Explore employment opportunities for Indigenous people. • Facilitate the creation of a workplace in which Indigenous people are respected. 						
Objectives	Indigenous people are provided with opportunities in gaining employment on the project. Indigenous values are respected and Indigenous people feel supported.						
Stakeholders	Arrow Energy. Arrow Energy employees and its contractors. EPC contractor. Indigenous communities and stakeholders						
Impacts							
Impact	Nature	Phase	Extent	Duration	Severity	Probability	Significance
Employment opportunities.	Positive	Construction	Regional	Medium term	Medium	Possible	Moderate
Construction workforce not respecting Indigenous values.	Negative	Construction operation	Local	Medium term	Low	Possible	Moderate
Mitigation							
Mitigation Actions	Responsibility					Timeframe	
Identify the most appropriate methods to recruit and retain Indigenous Australians. This will be done in consultation with APIA, EPC contractor and indigenous community representatives.	<ul style="list-style-type: none"> • Arrow Energy • EPC contractor • APIA • Indigenous community representatives 					Prior to FID	
Identify the most appropriate opportunities for Indigenous businesses to competitively tender to provide goods or services to the project based on known existing and potential Indigenous business capability. Send information about these opportunities to the relevant businesses, or business groups	<ul style="list-style-type: none"> • Arrow Energy • EPC contractor • Indigenous community representatives 					Prior to construction.	



and advertise these on the project website.				
An Arrow Energy officer will be made responsible for Indigenous engagement to encourage participation and integration of Indigenous employees and track their welfare.		<ul style="list-style-type: none"> • Arrow Energy 		Upon FID
In consultation with the traditional owners, Arrow Energy will implement a cultural awareness program for construction and operation staff and contractors. The workforce will be exposed to the program during induction.		<ul style="list-style-type: none"> • Arrow Energy • EPC contractor • Traditional Owners 		The cultural awareness program will be ongoing for the construction of the project.
Arrow Energy will support programs that contribute to the health and well-being of Indigenous employees.		<ul style="list-style-type: none"> • Arrow Energy • Traditional Owners • Other Indigenous community representatives 		Ongoing
Monitoring Framework				
Objective	Target	Evidence Requirements	Data Collection Source	Frequency
Indigenous people are provided with opportunities and support in gaining employment on the project.	Indigenous persons are provided the opportunity to gain employment on the project subject to attainment of relevant qualifications relevant to the position.	Employment records	Internal	Prior to construction
Indigenous values are respected and Indigenous people feel supported.	Zero discrimination complaints received on site. All employees receive cultural awareness training during induction.	Complaints management system	Internal	Prior to construction

11.2. SIMP ACTION PLAN: WORKFORCE AND TRAINING



Introduction							
Purpose	The purpose of this plan is to identify actions that: <ul style="list-style-type: none"> • Allow for the maximum amount of local employment. • Provide local training opportunities. 						
Objectives	To provide opportunities for local employment for the construction of the pipeline and associated activities. Training opportunities are provided by the project. The overall skills base of the region is enhanced.						
Stakeholders	Arrow Energy. DET. Education Queensland. Employment agencies and training providers. Energy Skills Queensland – CSG/LNG taskforce.			EPC contractor. TAFE and University. Training Providers.			
Impacts							
Impact	Nature	Phase	Extent	Duration	Severity	Probability	Significance
Increased local employment opportunities.	Positive	Construction	Regional	Medium term	High	Probable	Moderate
Increased local training opportunities.	Positive	Construction operation	Regional	Medium term	Medium	Probable	Moderate
Mitigation							
Mitigation Actions				Responsibility			Timeframe
Identify the range of skills required for the labour force and undertake a gap analysis against existing skills availability. Where gaps exist in consultation with the Department of Education and Training identify the method or strategy through which these skills will be filled, e.g. FIFO or training.				<ul style="list-style-type: none"> • DET • CSG/LNG Skills Taskforce • CSG/LNG Steering Committee 			Prior to construction
Develop a local employment strategy in consultation with APPEA and APIA.				<ul style="list-style-type: none"> • Arrow Energy • APPEA 			Prior to construction



		<ul style="list-style-type: none"> • APIA • CSG/LNG Skills Taskforce • CSG/LNG Steering Committee 		
Where appropriate, identify opportunities where training provided by the project or other training providers will be able to meet skills gaps for the project to assist securing local employment.		<ul style="list-style-type: none"> • Arrow Energy • APPEA • APIA • CSG/LNG Skills Taskforce • CSG/LNG Steering Committee • DET 	Prior to FID	
Undertake reviews of labour requirements and current skills sets to ensure that training strategies meet these needs.		<ul style="list-style-type: none"> • Arrow Energy • Energy Skills Queensland – CSG/LNG taskforce • LNG Industry Training Program Construction Skills Queensland – CSG/LNG • APPEA / APIA 	Prior to construction	
Arrow Energy will identify available workplace traineeships and apprenticeships and encourage contractors to recruit and retain apprentices or trainees.		<ul style="list-style-type: none"> • Arrow Energy • EPCM contractor 	Ongoing	
Monitoring Framework				
Objective	Target	Evidence Requirements	Data Collection Source	Frequency
To achieve local employment for the construction of the pipeline.	Majority of the construction workforce are sourced from the regional and national area.	Employment data	Internal	Prior to construction
Training opportunities are provided by the project.	Training positions identified and made available.	External training numbers.	Internal EPCM contractor records	Prior to construction

11.3. SIMP ACTION PLAN: LOCAL CONTENT AND INVESTMENT



Introduction							
Purpose	The purpose of this plan is to identify actions that: <ul style="list-style-type: none"> • Help local businesses to provide goods and services to the project. • Make it easier for existing businesses to retain and recruit employees in the face of increased competition. 						
Objectives	Identify the opportunities for local businesses to provide goods and services to the project. Provide guidance to local businesses to better enable them to tender to provide goods and services to the project.						
Stakeholders	Arrow Energy. EPC contractor.			Local businesses. APIA / APPEA			
Impacts							
Impact	Nature	Phase	Extent	Duration	Severity	Probability	Significance
Ability for local business to benefit from the additional trade.	Positive	Construction	Regional	Short term	Low	Probable	Moderate
Difficulties retaining and recruiting staff outside the pipeline sector.	Negative	Construction	Regional	Long term	Medium	Probable	Moderate
Mitigation							
Mitigation Actions					Responsibility		Timeframe
Develop a Local Industry Participation Plan (LIPP) in consultation with EPC Contractor, APPEA and APIA consistent with the Australian Government Australian Industry Participation Plan.					<ul style="list-style-type: none"> • Arrow Energy • APIA / APPEA • EPC contractor 		Prior to construction
Develop processes to ensure local business opportunities are considered in project procurement practises. These processes will allow competitive local business be given fair and reasonable opportunities to provide goods or services to the project.					<ul style="list-style-type: none"> • Arrow Energy • EPC contractor 		Prior to construction
Where appropriate, select packages of work will be broken into components that will be able to be managed by existing businesses in the region.					<ul style="list-style-type: none"> • Arrow Energy • EPC contractor 		Prior to construction
Encourage contractors to source local goods and services where possible.					<ul style="list-style-type: none"> • Arrow Energy 		Prior to construction



		<ul style="list-style-type: none"> • EPC contractor 		
Arrow Energy will engage with key business bodies regarding appropriate opportunities for local businesses to supply goods and services to the project.		<ul style="list-style-type: none"> • Arrow Energy • EPC Contractor 		Prior to construction
Arrow Energy will communicate the local procurement policy to local service providers. This will involve ongoing communication of project procurement requirements, regular project updates during construction, overview of goods and services packages and supply chain.		<ul style="list-style-type: none"> • Arrow Energy • EPC contractor 		Prior to construction
Monitoring Framework				
Objective	Target	Evidence Requirements	Data Collection Source	Frequency
Identify the opportunities for local businesses to provide goods and services to the project.	Identify % of project spend that can be spent on goods and services from local suppliers.	Expenditure with registered local suppliers.	Procurement spend reports.	Annual reporting.

12. Monitoring and Reporting

This section summarises the monitoring and reporting processes for each of the action plans described above. The purpose of these processes is to determine whether the actions contained in the action plans are meeting the identified targets. In particular, robust monitoring and evaluation of activities will allow the project to:

- Identify and respond to issues or challenges at an early stage;
- Conduct more effective forward planning;
- Record program inputs, outputs, outcomes and impacts;
- Understand and justify whether a program is meeting initial objectives;
- Increase accountability within project staff and teams; and
- Increase levels of project transparency.

Targets will be further refined to include metrics, standards and quantitative criteria as the project progresses and further details become available. Monitoring plans have also been designed to allow flexibility, so that they can be responsive to changes in project needs and priorities, or emerging industry trends.

12.1. Monitoring

A summary of the key monitoring mechanisms that are proposed in the project's action plans are summarised in **Table 5**.

Table 5: Summary of Key Monitoring Mechanisms

Monitoring Mechanism	Data Type	Information being collected
Complaints management system	Quantitative and qualitative	<ul style="list-style-type: none"> • Complaints received. • Whether complaints are being resolved appropriately and in a timely manner.
Procurement spend reports	Quantitative	<ul style="list-style-type: none"> • Project spend on goods and services with local and regional providers.
Local business survey	Qualitative	<ul style="list-style-type: none"> • Perceptions around access to supply chain opportunities, and relevant tender programs. • Level of satisfaction with communication.
Community survey	Qualitative	<ul style="list-style-type: none"> • Perceptions on company reputation, responsiveness of the engagement strategy, workforce integration, access to services and infrastructure and other general project impacts (e.g. noise, dust).
Training records	Quantitative	<ul style="list-style-type: none"> • Amount and type of training provided to employees on the project. • Amount and type of training provided through third parties to up skill local residents.
Stakeholder engagement reports	Quantitative and qualitative	<ul style="list-style-type: none"> • Number and type of engagement activities undertaken.

Monitoring Mechanism	Data Type	Information being collected
Job service records	Quantitative	<ul style="list-style-type: none"> Number of employees the combined jobs service has successfully sourced for local businesses.

12.2. Reporting

Communicating the findings of the monitoring process is important in providing key stakeholders with information on how social management activities are progressing. Internally, for Arrow Energy, it shows how project funds are being used to achieve key objectives. Additionally, the findings generate knowledge of what works, what does not work and why; helping the project team to appropriately manage impacts throughout the project life.

External reporting during construction will take place through publishing an annual report. Arrow Energy will also distribute a newsletter to provide the community and other stakeholders with updated information about the project.

13. Dispute Resolution

Arrow is committed to providing both external and internal stakeholders with a transparent Complaints Management System (CMS) through which they can resolve disputes and lodge complaints.

The CMS is consistent with the Australian Standard ISO 10002-2006 'Customer satisfaction – Guidelines for complaints handling in organisations'.

Details of the CMS, such as the process for handling grievances, will be made public. However, while detailed records will be kept of the grievances or complaints, as well as the process undertaken in order to resolve them, personally identifiable complainant information will be actively protected from disclosure.

Responsibility for managing issues identified through the CMS lies with Arrow Energy's Community and Sustainable Development Department.

Current avenues open to stakeholders to raise issues include:

- Phone: TBA (free call)
- Arrow Energy's website: <http://www.arrowenergy.com.au/>
- Email: [TBA](#)

Upon FID, a project shop front will also be established by Arrow Energy as another point of contact for stakeholders to raise issues.



14. References

SKM 2011, Arrow Bowen Pipeline Social Impact Assessment. Unpublished Final Revision

SKM 2011, Arrow LNG Plant Social Impact Management Plan. Unpublished Final Draft