

## INTRODUCTION

This volume documents the social impact assessment of the Queensland Curtis LNG (QCLNG) Project. The assessment was undertaken between August 2008 and June 2009 by QGC Limited, a subsidiary of BG Group plc.

The purpose of social impact assessment (SIA) is to predict and describe the social impacts and benefits of a project, to develop strategies to avoid or manage impacts, and to maximise benefits. SIA provides:

- a baseline of social and economic conditions in the area potentially affected by the Project
- an assessment which quantifies, describes and evaluates project impacts on social and economic conditions and values
- mitigation, monitoring and management strategies to ensure that negative impacts are minimised and positive impacts are maximised, for local and regional communities.

As described in *Volume 2*, the core components of the QCLNG Project are:

- a significant coal seam gas (CSG) field in the Surat Basin of southern Queensland (Gas Field Component)
- a network of underground pipelines linking the Gas Field to other nearby resources and to the LNG Facility (Pipeline Component)
- a natural gas liquefaction facility and associated infrastructure on Curtis Island, adjacent to Gladstone, (LNG Component) and Shipping Operations.

The SIA study area extends from around 30 km south of Tara in the Darling Downs north-east to Curtis Island, a distance of more than 500 km. As such, this study area contains a diverse range of Project elements and hosting communities.

This volume integrates assessment of each of the Project's core components, but deals separately with the three main areas: the Gas Field Component corresponding largely with the Western Downs Regional Local Government Area (LGA), the section of pipeline through Banana Shire and the LNG Facility and associated facilities (LNG Component) in the Gladstone Regional LGA. It includes specific assessment of impacts and benefits for the indigenous people and general communities located within the study area. This is documented in *Chapter 7* of this volume.

BG Group's social performance standard states that the goal of social impact assessment is to "document the potential positive and negative impacts of a project's activities, in order to identify mitigation measures for negative impacts and create or enhance socio-economic and broader sustainable development opportunities that flow from positive impacts." This is put into practice by ensuring social impacts and benefits are fully integrated in project planning, construction, and operation<sup>1</sup>.

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<sup>1</sup> International Association for Impact Assessment (2003) Social Impact Assessment International Principles

## 1.1 SCOPE OF ASSESSMENT

### 1.2 SCOPE OF THE PROJECT

QGC, a BG Group business, proposes to develop a world-scale integrated liquefied natural gas project in Queensland, known as the QCLNG Project. The Project's core components comprise Gas Fields, Pipeline, LNG and Shipping Operations.

Pending the relevant approvals, QGC expects to make a final investment decision on the Project in the first quarter of 2010. The main construction period is anticipated to begin soon after, and continue until late 2013. Commercial operations are anticipated to start in early 2014.

A second train could follow in 2014 with a third train commissioned in subsequent years subject to gas reserves. The ultimate capacity of the Project would be up to 12 million tonnes per annum (mtpa) of LNG.

At peak, the Project's construction labour force would include approximately 4,175 staff, including:

- 1,500 staff for the construction of the LNG Facility
- 500 staff for the construction of the main gas Export Pipeline
- 2,225 staff for gas collection and compression facilities and construction of water collection and treatment facilities.

Staff and contractors would also be required for dredging operations and construction of the bridge and road being contemplated by other parties.

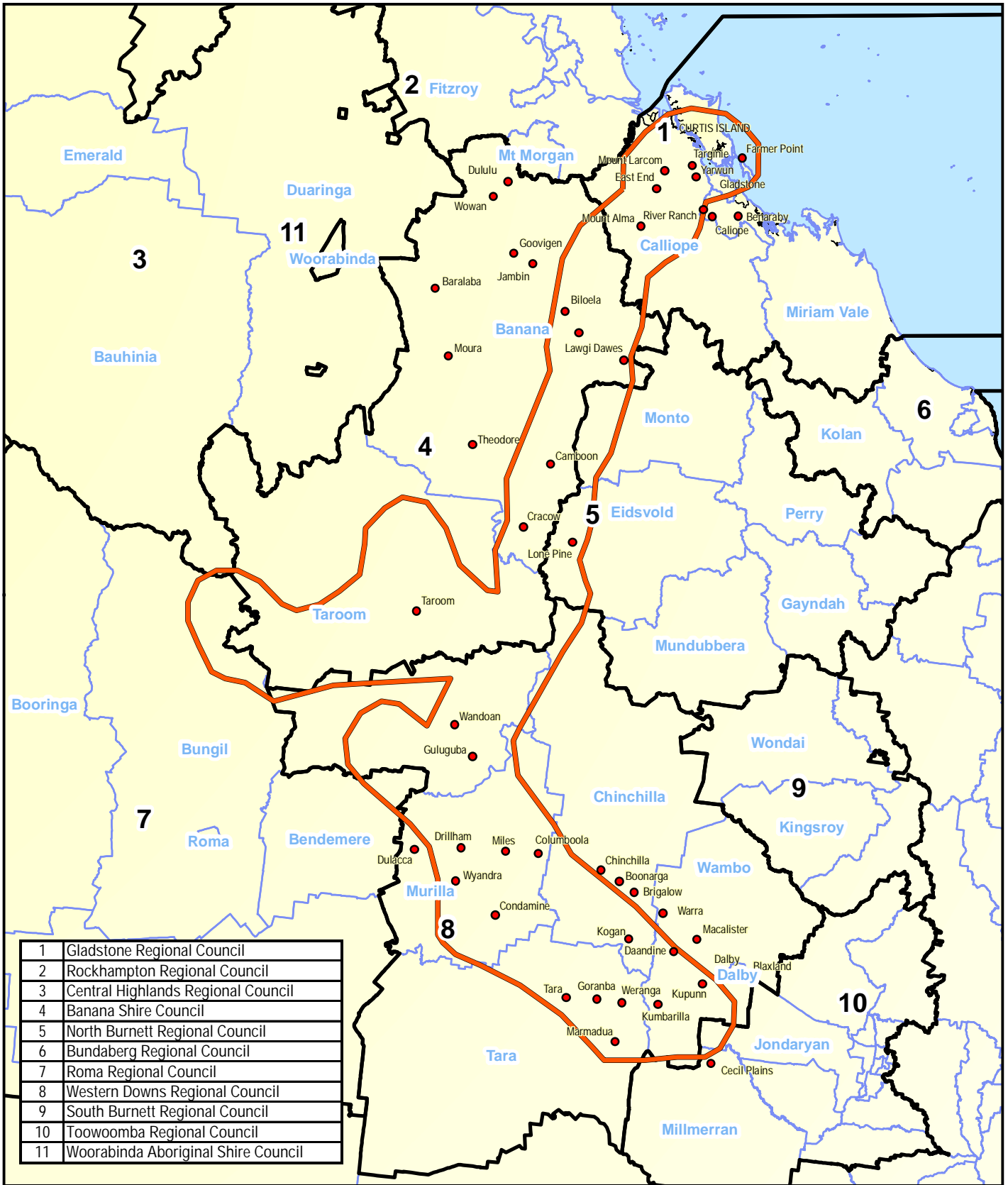
During the operational period of at least 20 years, the Project's total annual direct employment is likely to average 1,000 jobs, including almost 200 for the LNG Facility, approximately five for the pipeline, and approximately 800 for the Gas Field.

The location of the Project area is shown in *Figure 8.1.1* and its components are outlined in the relevant sections (*Chapters 4 – 6*).

### 1.3 OBJECTIVES OF SOCIAL IMPACT ASSESSMENT

The objectives of this SIA are to provide:

- a robust knowledge base (qualitative and quantitative) of the Project's area of impact and area of influence, with respect to both indigenous and general communities, including communities and social groups directly and indirectly affected by the Project
- a consultation process which facilitates community and stakeholder engagement in identifying existing conditions, potential impacts and benefits, and mitigation measures, and enables ongoing engagement throughout the life of the Project





**Legend**

- Towns
- Study Boundary
- Statistical Boundary
- LGA - Local Government Area

Source Note:  
ABS (Australian Bureau of Statistics) 2006

Projection: UTM MGA Zone 56 Datum: GDA 94  
0 12.5 25 50 km



 <b>QUEENSLAND CURTIS LNG</b> <small>A BG Group business</small>	Project	Queensland Curtis LNG Project	Title	QCLNG Project Area by LGA		
	Client	OGC - A BG Group business				
 <small>Environmental Resources Management Australia Pty Ltd</small>	Drawn	JB	Volume 8	Figure 8.1.1	Disclaimer: Maps and Figures contained in this Report may be based on Third Party Data, may not be to scale and are intended as Guides only. ERM does not warrant the accuracy of any such Maps and Figures.	
	Approved	PM				File No: 0086165b_EIS_SIA_GIS001_F8.1.1
	Date	08.07.09				Revision

- a detailed description of the key social, political, health, environmental and economic factors that characterise identified communities and social groups, including sustainable development priorities
- modelling of population growth and change, and the potential impacts on community values and social infrastructure
- modelling of housing impacts and mitigation
- an understanding of the potential positive and negative impacts of the Project's activities
- analysis of the significance of impacts and benefits for social conditions
- mitigation measures, including measures for creating or enhancing socio-economic and broader community development.

## 1.4

### **STATUTORY REQUIREMENTS**

The Queensland Government has declared the QCLNG Project a project of state significance requiring an Environmental Impact Statement (EIS), under the *Queensland State Development and Public Works Organisation Act 1971* (Qld.) (SDPWO Act).

Terms of Reference (TOR) for the QCLNG Project EIS were provided by the Queensland Government (through the Office of the Coordinator General), in consultation with the Commonwealth Government. Draft TOR were exhibited for public comment from 2 November to 12 December 2008, and the Queensland Government considered public and agency submissions in finalising and issuing TOR.

Referrals have also been submitted under the Commonwealth *Environment Protection and Biodiversity Conservation Act 1999* (Cwth) (EPBC Act), and nine controlled actions notified.

*Section 5* of the QCLNG Project EIS TOR requires description, analysis, impact assessment and mitigation development in respect of:

- population and demographics of the affected communities
- availability and cost of housing
- workforce characteristics and labour force
- community infrastructure and services, health, emergency services and educational facilities, recreational, cultural, leisure and sporting facilities and activities
- social amenity and use of the Project areas and adjacent areas
- access and mobility
- local community values, vitality and lifestyles
- ability for community members to live in accordance with their own values and priorities
- community health and safety
- the need for any additional infrastructure provision by government

- properties, landowners and workers directly affected by the Project
- the integrity of social conditions.

*Volume 8 Chapter 10* outlines the economic impacts of the Project, including the character and basis of the local and regional economies, and the Project's significance in the local, regional and state economic context.

## **1.5 SUSTAINABLE RESOURCE COMMUNITIES**

The Queensland Government's Sustainable Resource Communities Policy was released in September 2008 and is focused on resource communities where rapid development is having significant impacts on housing affordability, community infrastructure, and social structures.

The policy defines resource communities as "those local or regional communities that depend on or are affected by mineral extraction and associated activities, including petroleum and gas proposals". It establishes initiatives of direct relevance to the QCLNG Project including:

- providing a coordinated whole-of-government response to selected new and expanded mining and petroleum developments
- establishing partnerships with local government and industry to share strategic information, and develop solutions to social issues and responses including regional planning and coordination, housing, health and education
- modifying the trigger criteria for the preparation of an EIS under the *Environment Protection Act 1994* (Qld) in consultation with industry
- developing guidelines for social impact assessment
- development of a Major Projects Housing Policy.

Major initiatives pursuant to the Sustainable Resources Communities Policy (such as the Housing Policy) are in development and will be considered as they become available.

## **1.6 BG GROUP AND IFC STANDARDS**

BG Group is guided in its interaction with neighbouring communities by its Business Principles which include:

- we work to ensure that neighbouring communities benefit from our presence on an enduring basis
- we listen to neighbouring communities and take account of their interests
- we support human rights within our area of influence.

In compliance with the business principles, the BG Group Social Performance Standard requires and as detailed in this volume:

- a scoping study defining project activities, potential impacts, the study area and community views on the project's potential impacts (*Chapter 2*)

- the development of a baseline socio-economic assessment which is updated regularly (informing the existing social environment section of *Chapters 4-7*)
- social impact assessment appropriate to the scale of potential impacts (*Chapters 4-7*)
- community consultation which respects existing community processes, ensures two-way communication and provides full and timely information about the project to communities (as documented in this report and in *Volume 12 EIS Consultation*)
- identification of indigenous people who may be affected by the project or reside within the area of project influence, including through the Project Ethnography (*Chapter 7*)
- identification of vulnerable community groups who may experience project impacts disproportionately (*Chapters 4-7*)
- identification and accommodation of cultural heritage (addressed in *Chapter 9*)
- development of management systems and processes for both impact management and social performance (*Chapter 8*)
- development of a social performance plan and social investment program (to be developed following the final investment decision)

The assessment has also been conducted in reference to the International Finance Corporation's (IFC) Performance Standards on Social and Environmental Sustainability. The IFC requires projects to develop management systems including:

- social and environmental assessment
- a Public Consultation and Disclosure Plan (PCDP)
- impact management programs
- organisational capacity
- training and community engagement
- monitoring and reporting.

## 1.7

### **IMPACT SCOPING**

The methodology for scoping the SIA is described in *Chapter 3* of this volume. The results of the scoping exercise – which indicates issues which should be assessed in the EIS and/or SIA – are summarised below. This is not an exhaustive list but rather an indication of issues that are of particular relevance to the Project.

**Table 8.1.1 Preliminary Issues and Impacts for Assessment**

Category	Issues and Impacts
<i>Social, economic and cultural profile</i>	<ul style="list-style-type: none"> <li>• change in characteristics such as age profile</li> <li>• potential for better incomes</li> <li>• potential for increased demand for business and supply services</li> <li>• potential to redress high unemployment in young people and indigenous people</li> <li>• potential to provide longer-term employment for construction workers (and result in cohesion and quality of life)</li> <li>• permanent jobs in Gladstone and the area of the Gas Field Component</li> </ul>
<i>Indigenous communities</i>	<ul style="list-style-type: none"> <li>• indigenous communities within the study area</li> <li>• consultative approach to native title and cultural heritage</li> <li>• potential effects on indigenous cultural heritage</li> <li>• life of project engagement</li> <li>• existing social conditions</li> <li>• social impacts</li> <li>• economic impacts</li> <li>• mitigation and management</li> </ul>
<i>Community health and safety</i>	<ul style="list-style-type: none"> <li>• safety or health risks</li> <li>• potential for conflicts with recreational craft</li> <li>• shipping and boating safety</li> <li>• social effects of the introduction of construction workers</li> <li>• potential for traffic impacts</li> <li>• level of hazard or risk, and physical safety</li> <li>• dust and noise exposure</li> </ul>
<i>Community strength and sustainability</i>	<ul style="list-style-type: none"> <li>• impacts on community cohesion and sense of place</li> <li>• impacts on how people live, work, and interact</li> <li>• effects on local connectivity</li> <li>• non-indigenous landholder agreements</li> <li>• priorities and aspirations for family and community development</li> <li>• effect on labour supply for other industries</li> <li>• impacts on culture, including shared beliefs, customs, and values</li> </ul>
<i>Social infrastructure and housing</i>	<ul style="list-style-type: none"> <li>• effect of additional population on social and health infrastructure</li> <li>• demand on childcare, health and other facilities</li> <li>• cumulative impacts on social infrastructure</li> <li>• workforce accommodation</li> <li>• sustainable (longer-term) housing solutions</li> <li>• impacts on the availability and affordability of housing stock</li> <li>• operational workforce and housing</li> <li>• workforce origin</li> </ul>
<i>Amenity and lifestyle –</i>	<ul style="list-style-type: none"> <li>• effects on recreational access to Gladstone Harbour</li> </ul>

Category	Issues and Impacts
<i>Gladstone</i>	<ul style="list-style-type: none"> <li>• shipping impacts</li> <li>• effects on the scenic, recreational, security and environmental values of Curtis Island</li> <li>• potential for noise impacts from gas extraction infrastructure or the LNG Facility</li> <li>• potential value or detriment attached to the bridge to Curtis Island if this is constituted</li> </ul>
<i>Amenity and lifestyle – gas fields</i>	<ul style="list-style-type: none"> <li>• agricultural livelihoods, water extraction and viability of farms</li> <li>• intensification of gas extraction as a land use, competing with rural uses</li> <li>• changes to community values such as rural amenity, coastal amenity and cohesive communities</li> <li>• impact on local amenity and values due to construction camps</li> </ul>
<i>Environmental values</i>	<ul style="list-style-type: none"> <li>• dredging and its effects on environmental and recreational values</li> <li>• air quality issues</li> <li>• environmental protection on/around the site</li> <li>• oil pollution response</li> <li>• salination, and salt residue</li> <li>• coal seam water use</li> </ul>
<i>Community engagement</i>	<ul style="list-style-type: none"> <li>• willingness for engagement</li> <li>• expectation of information and involvement from the community</li> <li>• impacts of multiple new projects in the study area</li> <li>• “consultation fatigue”</li> <li>• indigenous community involvement in important decisions about country, the environment, and community</li> </ul>



## 2 STUDY AREA

### 2.1 AREAS OF IMPACT

The SIA study area, showing the LGAs, (indigenous Native Title claim areas), towns and Project footprint is shown in *Figure 8.1.1*.

This assessment considers areas of direct impact, including:

- rural localities where infrastructure for CSG and water would be located, within Western Downs Regional Council Local Government Area (LGA)
- rural areas within which the main gas pipeline, the Export Pipeline, would be located
- rural, state development, urban, and port areas in Gladstone Regional Council LGA
- Gladstone Harbour including The Narrows
- Curtis Island, off the coast of Gladstone
- land throughout the Project study area which has indigenous cultural heritage or Native Title significance.

The assessment also considers areas of indirect impact, including:

- communities within the Western Downs Regional Council LGA, including Dalby Statistical Local Area (SLA), Tara SLA, Wambo SLA, Murilla SLA, Chinchilla SLA, and Division 2 of Taroom SLA
- Banana Sire Council main population centres including Biloela, Moura and Taroom
- Gladstone Regional Council communities, including the South End community on Curtis Island
- communities within Roma Regional Council (adjacent to the Gas Field communities), and Toowoomba Regional Council and Rockhampton Regional Council which are adjacent to the Project area LGAs and serve as regional centres.

The Project's potential area of influence includes:

- three Queensland Statistical Divisions (SDs): the Fitzroy, Darling Downs and South West SDs, with data provided for these Statistical Divisions to support regional comparisons and ensure all areas of influence are considered (see *Figure 8.1.1*)
- the state of Queensland, with respect to potential impacts on the labour force, infrastructure requirements and economic benefits
- the biophysical and economic sectors, the Commonwealth of Australia, with respect to matters of national environmental, cultural, and economic significance as discussed in the QCLNG Project EIS.

## 2.2 LOCAL GOVERNMENTS RELEVANT TO THE PROJECT AREA

Planning and administration at the community level is carried out by local governments. In March 2008, the Local Government Reform Commission of the Queensland Government introduced legislative reforms to amalgamate some local government areas, excluding the Aboriginal Councils.

The local governments relevant to the Project area are Gladstone Regional Council, Western Downs Regional Council (formally known as Dalby Regional Council, name changed with effect to 28<sup>th</sup> June 2009), and Banana Shire Council. Toowoomba Regional Council, Roma Regional Council and Rockhampton Regional Council LGAs are adjacent to the study area. These LGAs have been considered as regional comparators and with regard to indirect impacts where relevant.

Amalgamation into regional councils is very recent and most information and data is still based on the previous council boundaries. *Table 8.2.1* below lists the new council names along with the corresponding previous councils which have been merged to form the new regional councils.

**Table 8.2.1 Regional Councils with Corresponding Previous Council Names<sup>2</sup>**

New Council Name	Previous Council Names
Banana Shire Council	<ul style="list-style-type: none"> <li>Banana Shire Council, includes part of Taroom Shire</li> </ul>
Western Downs Regional Council	<ul style="list-style-type: none"> <li>Tara, Murilla, Chinchilla, Wambo and part of Taroom Shire and Dalby Town Council</li> </ul>
Gladstone Regional Council	<ul style="list-style-type: none"> <li>Miriam Vale Shire Council, Calliope Shire Council, Gladstone City Council and Gladstone Aerodrome Board</li> </ul>
Rockhampton Regional Council	<ul style="list-style-type: none"> <li>Fitzroy Shire Council, Livingstone Shire Council, Mount Morgan Shire Council and Rockhampton Town Council</li> </ul>
Roma Regional Council	<ul style="list-style-type: none"> <li>Bendemere, Booringa, Bungil and Warroo Shires and Roma Town Council</li> </ul>
Toowoomba Regional Council	<ul style="list-style-type: none"> <li>Shires of Cambooya, Clifton, Crow's Nest, Jondaryan, Millmerran, Pittsworth, Rosalie and Toowoomba City</li> </ul>

## 2.3 POPULATION DENSITY

The proposed Project covers a large area extending from the Surat Basin in southern Queensland to the Gladstone area in Central Queensland. Population density changes dramatically across the region.

Only the cities within the region - Rockhampton, Toowoomba and Gladstone - reach population densities of more than 200 people per square kilometre. The towns of Dalby and Roma in the Gas Fields community study area are the

<sup>2</sup> <http://www.lgp.qld.gov.au/Default.aspx?ID=48> accessed on 3 September, 2008; <http://www.dip.qld.gov.au/resources/plan/maranoa/maranoa-districts-regional-plan.pdf> accessed on 11 September, 2008 and <http://www.rrc.qld.gov.au/common/Pages/Display/Homepage.aspx> accessed on 12 September, 2008)

only urban centres outside these major cities with comparatively high population densities of between 101 and 200 people per square kilometre. The coastal areas to the south of Gladstone have population densities between one and 50 people per square kilometre. Banana Shire's density is particularly low at around 0.85 people per square kilometre.

In the south of the study area populations gradually decline as they spread west from Toowoomba to Booringa. Warroo and Booringa both have population densities of less than 0.15 people per square kilometre as does Taroom at the centre of the study area.

## 2.4

### SEIFA VALUES IN THE STUDY AREA

The Socio-Economic Indices for Areas (SEIFA) were developed by the Australian Bureau of Statistics (ABS) to allow ranking of regions or areas, providing a method of determining the level of social and economic wellbeing in each region. There are four indices which summarise different aspects of the socio-economic conditions of people living in an area, with each based upon a different set of social and economic information from the 2006 Census. The indices provide more general measures of socio-economic status than is given by measuring, for example, income or unemployment alone.

The SEIFA index used in this section is the Index of Relative Socio-Economic Disadvantage, a comparative tool derived from Census variables such as low income, low educational attainment, unemployment, and dwellings without motor vehicles.

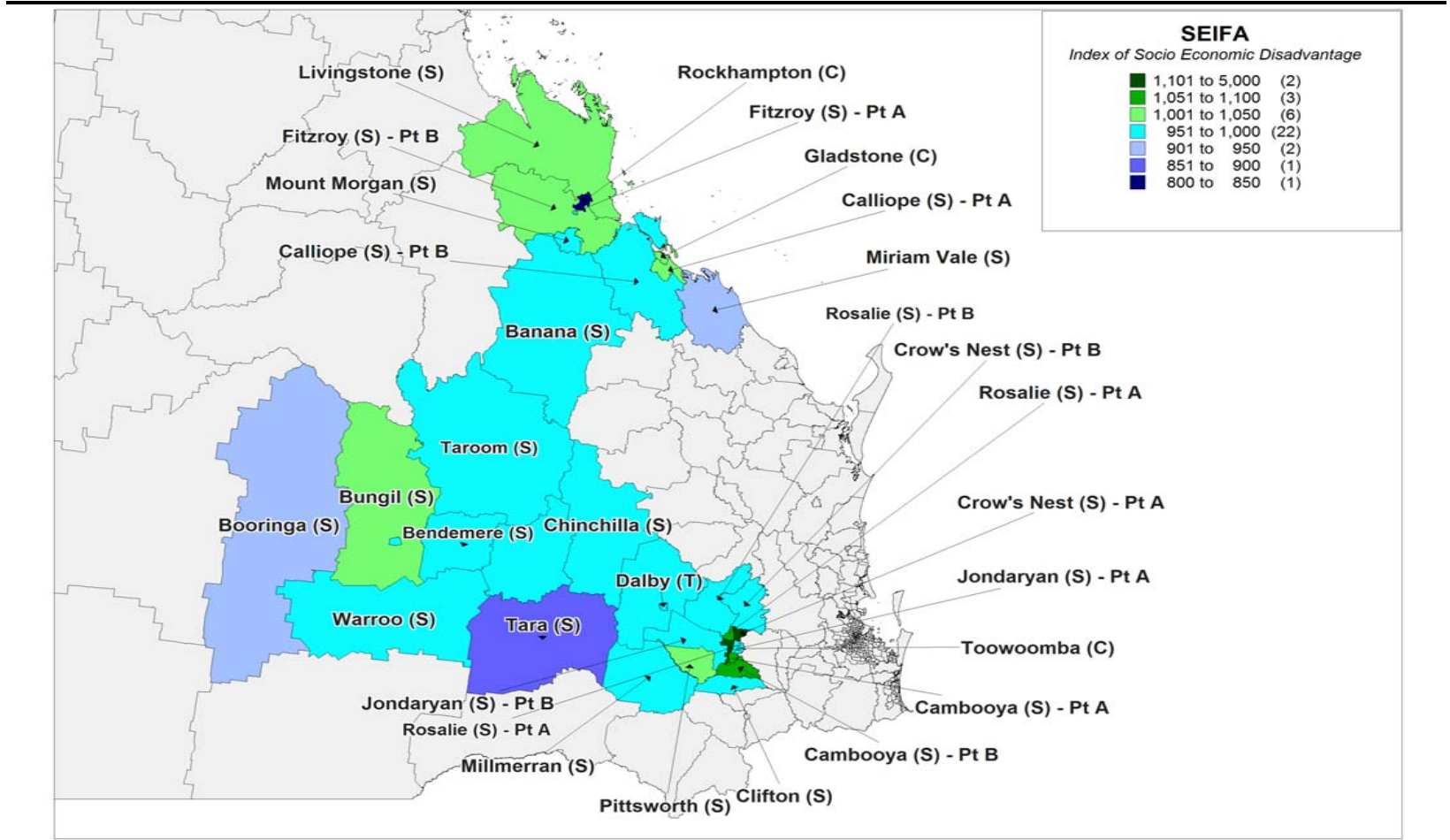
Lower SEIFA scores indicate a higher level of socio-economic disadvantage and vice versa. A SEIFA score below 1,000 indicates a higher level of disadvantage than the Queensland benchmark.<sup>3</sup> A score above 1,000 indicates a lower level of disadvantage than the Queensland benchmark.

*Figure 8.2.1* shows the Index of Relative Socio-Economic Disadvantage, 2006 for the study area. With the exception of Gladstone, Calliope – Pt A and Bungil SLAs, all areas within the study demonstrated a lower score of disadvantage than the Queensland benchmark of 1,000. The score for Gladstone LGA is 1,002.7, just above the benchmark. The scores for most SLAs within the study area were in the late 900s (demonstrating a level of disadvantage approaching the average). Tara and Miriam Vale SLAs have comparatively low rankings. Additional information including the SEIFA Economic Resources Index is included in *Chapters 4, 5 and 6*.

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<sup>3</sup> The index scores can be used to rank areas in terms of disadvantage, however other arithmetic relationships may not be meaningful. For example, an area with a score of 500 is not half as advantaged as an area with a score of 1,000. Similarly, it is incorrect to use the size of the gap between the scores to compare levels of disadvantage. For example, the difference in disadvantage between two areas with scores of 500 and 600 is not the same as the difference between two areas with scores of 800 and 900. SEIFAs are therefore most useful when used to compare the relative advantage or disadvantage between areas and rank them.

Figure 8.2.1 SEIFA Index of Socio-Economic Disadvantage



Source: Australian Bureau of Statistics (2007a), 2006 Census of Population and Housing. Cat No. 2068.0, ABS, Canberra. Taken from Queensland Curtis LNG Baseline Communities Assessment prepared by AEC Group

**3****METHODOLOGY**

The social and economic impact assessment methodology is outlined in *Figure 8.3.1*, and described below. Documents produced as part of the Project which inform this assessment include:

- Initial Advice Statement and Project description
- Baseline Communities Data Report (*Appendix 8.1*)
- UMR Communities Survey Summary (*Annex A*)
- Social Infrastructure Analysis (*Appendix 8.3*)
- Economic Impact Assessment (*Volume 8, Chapter 10*).

**3.1****PRE-EIS CONSULTATION**

Prior to the TOR being received, QGC consulted community representatives in the Project area to identify issues to be considered in the assessment. This consultation included:

- Traditional Owners
- Councillors and council representatives in Banana Shire, and Gladstone and Western Downs Regional Councils
- Dalby and Chinchilla state high schools
- the Gladstone Port Corporation, Community Advisory Service, Economic and Industry Development Bureau, Area Promotion and Development Limited, Chamber of Commerce and state high school
- community and recreational organisations
- Curtis Island residents
- environmental groups including the Boyne Island Environment Education Centre, Greenpeace, and World Wildlife Fund
- government agencies including Department of Environment, Water, Heritage and the Arts (Cth) Department of Infrastructure and Planning (Qld), and the former Environmental Protection Agency (Qld)
- maritime safety and security stakeholders.

Pre-EIS stakeholder engagement informed the scoping exercise, which is outlined in *Section 3.4*.

Figure 8.3.1 Social Impact Assessment Methodology



**3.2****RESEARCH**

The research process included:

- analysis of reports, regional plans and government and council policies pertaining to the study area, and to communities accommodating resource development activities
- analysis of the findings of preceding EIS publications for the study area
- an inventory of social infrastructure in the study area
- reviewing websites and publications
- review of local media stories and letters to the editor identifying issues of community concern in the study area
- analysis of the study area's geographical areas and population catchments
- demographic and economic analysis
- development of a thematic history for the area (as part of the Baseline Communities Assessment)
- development of an indigenous ethnography for the study area and related communities.

This information provided the basis for the existing environment sections of this Volume.

**3.3****BASELINE COMMUNITIES ASSESSMENT**

The Baseline Communities Assessment built on early engagement and research, to provide an overview of existing social and economic conditions in the study area. It is attached as Appendix 8.1 to this report, and addresses the following topics:

- population trends and projections
- socio-cultural and socio-economic characteristics and historical trends
- identification and characterisation of vulnerable groups
- health and social infrastructure
- education and training
- community infrastructure provision
- nature of the local economy
- governance, including local government and community institutions, decision-making and leadership
- community values, such as community cohesion, sense of place, liveability, access to places of social and cultural importance, movement patterns and connections between communities
- cultural connectivity to particular places.

This information provided the baseline for *Chapters 4 - 7* of this volume.



### 3.4 SCOPING

The process of scoping impacts included:

- review of the TOR
- review of the BG Group standards and IFC requirements (as described *Section 1.6 of this volume*)
- conduct of the Project Ethnography, to ensure all relevant Traditional Owners were consulted
- identification of consultation required for the cultural heritage assessment, as described in *Volume 8 Chapter 9*
- understanding the physical and social “footprint” of the Project elements
- consultation with key stakeholders (as outlined in *Volume 12*)
- analysis of existing social conditions, through development of the Baseline Communities Assessment (as outlined above and attached in *Appendix 8.1*)
- review of previous EIS findings in the Gladstone and Surat Basin areas
- analysis of research and policy pertaining to the study area and to resource communities
- review of public and agency submissions made during the statutory exhibition period for the EIS TOR.

The results of the scoping exercise, which indicates issues which should be assessed in the EIS or SIA, are summarised *Section 1.7* of this volume.

### 3.5 CONSULTATION

The SIA team participated in a range of consultation activities as part of the EIS consultation program, as outlined in *Volume 12* of the EIS. In addition, consultation for the SIA included:

- meetings with property owners in the Gas Field, along the pipeline route and on Curtis Island
- 10 focus groups throughout the study area to identify community values and issues (discussed in *Volume 8, Chapters 4 and 6*)
- a survey of 2,000 people to identify community values, potential impacts and benefits, and attitudes and perceptions (also discussed in *Volume 8, Chapters 4 and 6*)
- extensive consultation and negotiation with Traditional Owners and communities within the Project area (as detailed in *Volume 8, Chapter 7*)
- meetings with community and economic organisations across the Project area (also detailed in *Volume 8, Volume 12*)
- interviews with council and community agencies providing housing, youth, family and indigenous community services
- meetings with the (former) Queensland Departments of Housing,



Education, Emergency Services Health and Communities, and Queensland Police Service, in Brisbane and in the Gladstone and Dalby areas.

The results of consultation informed the impact assessment. Following assessment and evaluation of significance, further consultation with key stakeholders and agencies assisted in the development of mitigation strategies.

### **3.6** *MODELLING IMPACTS ON POPULATION, HOUSING AND THE LABOUR FORCE*

The following process was used to model impacts on the population, housing and workforce in the study area:

- identification of the number, type and distribution of jobs in project construction and operation
- development of a histogram showing the trend in labour force requirements over time
- checking the assumptions of the labour force availability for application to social data modelling
- summarising the availability of regional labour and requirements for workers to be drawn from other regions
- analysis of the likely accommodation supply and type provided as part of the Project
- estimating the number of family members who would settle in the Gladstone and Dalby regions
- identifying the total population increase expected over time, including indirect population growth
- estimating the housing requirements of new workers and families, and of the indirect population increase
- identifying the current capacity of the study area's housing stock to house the population increase due to the Project
- predicting changes to the supply or affordability of housing stock and short-stay accommodation as a result of the Project
- predicting changes to the availability of labour in the region as a result of Project demands.

The population modelling also informed the social infrastructure demand analysis.

### **3.7** *SOCIAL INFRASTRUCTURE DEMAND ANALYSIS*

An analysis of social infrastructure was undertaken to determine the existing level of social infrastructure provision and social infrastructure deficits in the Gladstone, Banana Shire and Western Downs Regional Council areas. The analysis process included:

- reviewing the social infrastructure inventory and socio-demographic analysis prepared as part of the BCA

- reviewing population projections, age profile trends, and demographic and provision indicators
- drawing on consultation data, qualitative assessment of service provision using consultation data provided by the Project
- developing desired standards of service for community facilities
- benchmark analysis for facilities for 2008, 2011, 2016, 2021 to identify gaps in community facility provision
- extending the benchmark analysis to “with Project” scenario
- prediction of impacts on social infrastructure associated with the construction and operational phases of the LNG Facility in the local and regional setting.

### **3.8** *INTEGRATED IMPACT ASSESSMENT*

An assessment of social and economic impacts was prepared against the TOR provided by the Coordinator-General, and incorporating specific reference to indigenous people. The assessment was based on the outputs of:

- consultation and engagement
- the focus groups and survey of community values and perceptions
- existing conditions and issues identified in the BCA
- social infrastructure analysis
- population, housing and workforce analysis
- assessment of impacts and benefits for indigenous communities (documented in the *Volume 8, Chapter 7*)
- economic impact assessment.

The SIA included consideration of relevant economic modelling, including assessment of labour force participation, skills, capacity, and distribution, and assessment of economic impacts and benefits.

The assessment includes a cumulative impact assessment, addressing the corollary and synergistic impacts of several other projects.

### **3.9** *SIGNIFICANCE ANALYSIS*

This required:

- summarising the impacts and benefits
- describing their effect, magnitude, duration and severity
- describing the likely effect on social indicators.

This provided the basis for development of mitigation strategies.

**3.10**      ***MITIGATION AND SOCIAL PERFORMANCE***

Mitigation strategies were developed to avoid or reduce impacts, and maximise Project benefits for local and regional communities in the study area, with respect to the general and indigenous communities.

Key stakeholders and government agencies were consulted to assist in the refinement of mitigation strategies. These are documented in *Volume 8, Chapter 8*.