

Section 6

Coal Seam Gas Fields Environmental Values and Management of Impacts

6.14 Social and Community

Social assessment of the project was disaggregated by three separate project components (study areas):

- The (CSG) fields (Section 6.14);
- The gas transmission pipeline (Section 7.14); and
- The liquefied natural gas (LNG) facility (Section 8.14).

The assessment of social impacts was undertaken on the basis of local government areas (LGAs) and statistical local areas (SLAs). There was significant overlap between the project areas and the local government areas/statistical local areas. In order to minimise overlap throughout the report, the baseline information for the overlapping areas was recorded in the most relevant study area. The impacts were assessed in the study areas where they occurred, therefore some LGAs' potential impacts are assessed for one or two of the study area components (e.g. Gladstone Regional Council is assessed for gas transmission pipeline and LNG facility impacts but the baseline data is in Section 8.14).

6.14.1 Introduction

This section summarises the outcomes of the assessment undertaken and presented in the Social Impact Assessment (SIA) technical report for the CSG fields (refer Appendix Z). A separate consultation summary can be found in Section 9 of the EIS outlining the key stakeholders and consultation process undertaken for the EIS. Consultation information has been included in the SIA whenever possible to add qualitative data to the assessment, and capture the community perspectives and opinions.

Due to the extent of the CSG fields study area and the extended timeline for development, the Environmental Impact Statement (EIS) examined baseline parameters and potential impacts on two levels. The entire CSG fields study area (covering an area over 22,000 km²; see Figure 6.14.1) was examined at a high level to capture the general make-up and dynamics of the area. Following this, a more focussed baseline and impact assessment was conducted on the CSG fields scheduled for initial development.

The Local Government areas in the CSG fields of Roma, Fairview and Arcadia Valley are listed in Table 6.14.1. It is intended that a more detailed analysis of the social environment of other fields will be conducted closer to the time of their scheduled development.

Table 6.14.1 CSG Field Local Government Areas

Study Area	Statistical Division (SD)	New LGA (post – amalgamation)	Old LGA (pre – amalgamation)	Old LGA (not directly affected)
CSG fields	South West SD	Roma Regional Council	Bendemere Shire Council	-
			Booringa Shire Council	-
			Bungil Shire Council	-
			Warroo Shire Council	-
			Roma Town Council	-
	Darling Downs SD	Dalby Regional Council	Murilla Shire Council	Wambo Shire Council
			Tara Shire Council	Dalby Town Council
Taroom (Division 2) Shire Council*			Chinchilla Shire Council	

Section 6

Coal Seam Gas Fields Environmental Values and Management of Impacts

Study Area	Statistical Division (SD)	New LGA (post – amalgamation)	Old LGA (pre – amalgamation)	Old LGA (not directly affected)
		Banana Shire Council	Taroom (Division 1) Shire Council*	Banana Shire Council
	Fitzroy SD	Central Highlands Regional Council	Bauhinia Shire Council	-
			Duaranga Shire Council	-
			Emerald Shire Council	-
			Peak Downs Shire Council	-

* Note: Taroom Shire Council is not split between Division 1 and 2 in the old LGA data sets. Taroom Division 2 is no part of Dalby Regional Council

Roma will function as a central hub for the CSG fields due to the availability of services; its existing infrastructure (including the airport and road links); its population size and stability; its proximity to the CSG fields area and the ability to build on the existing Santos operational base. For these reasons, the social assessment focuses on the Roma Regional Council and Roma town area. Other communities within the regional council (like Injune) may also be used as satellite hubs at various stages of project development, and so are also included in the assessment.

The previous Taroom Shire Council information was also assessed, due to a portion of the Fairview and Arcadia Valley CSG fields being within its boundary (see Figure 6.14.1 and Figure 6.14.2). However, as the main population centres are located along the Leichhardt Highway, remote from the initial development CSG fields, the level of assessment was not as detailed as that for Roma, which is also on the main access route for the fields.

As seen in Figure 6.14.1 and Figure 6.14.2, the former Bauhinia and Duaringa Shires have sections of Arcadia Valley within their boundaries. However, as these areas are relatively small when compared to the size and population distribution of the area, they have not been examined for the CSG fields baseline. They are, however, assessed in the gas transmission pipeline section (see Section 7.14) due to the length of the proposed pipeline within their boundaries. The former Bungil Shire was assessed in the CSG fields section as part of Roma Regional Council.

For the purposes of the study, all individuals were assessed as part of the community. However a separate assessment of the potential Indigenous social effects of the project was also conducted. The summary of this study is included in Section 6.14.7.

6.14.2 Methodology

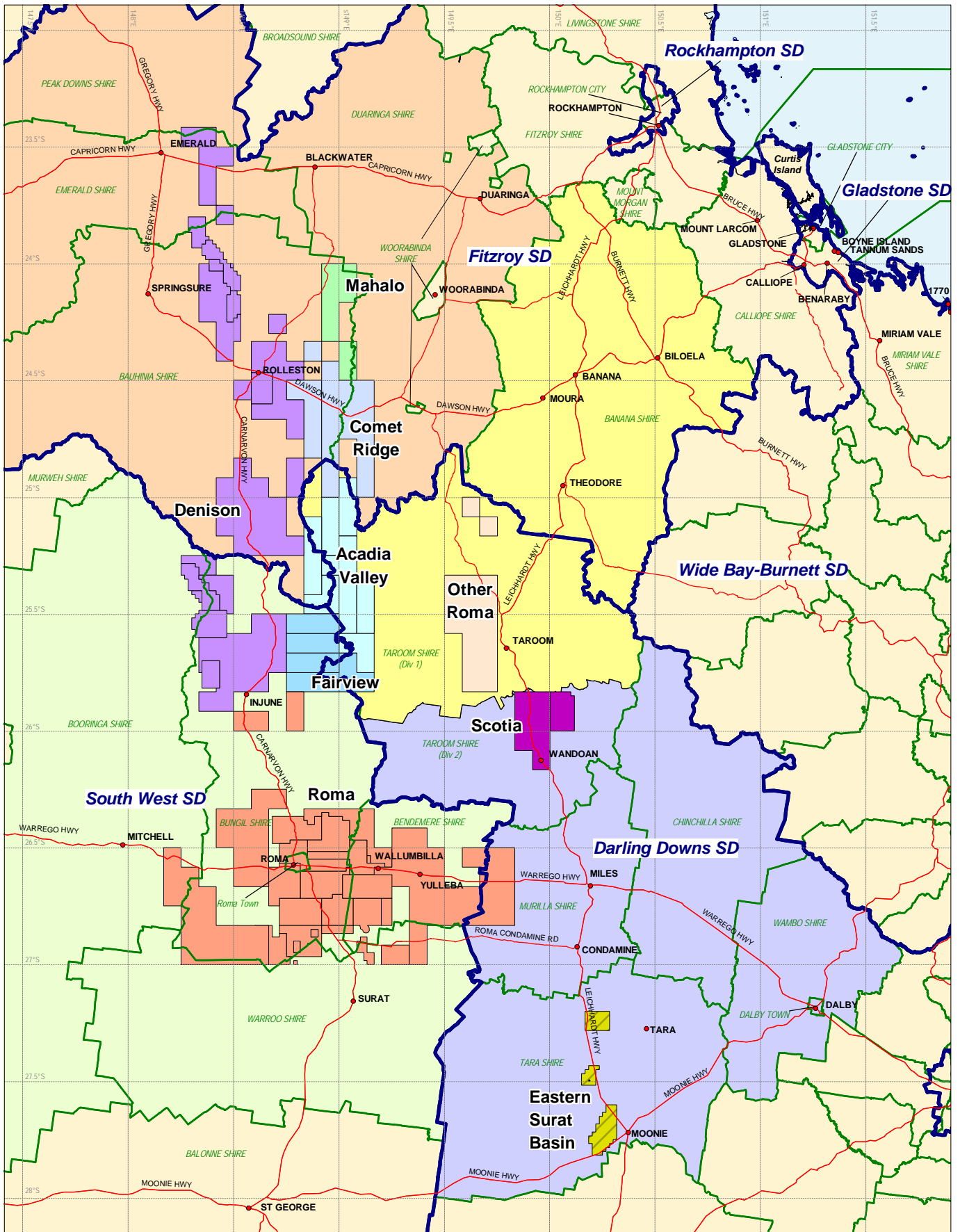
For details of the social assessment methodology, refer to Appendix Z. For an overview of the consultation activities and methodology see Section 9 of this EIS.

6.14.3 Regulatory Framework

The SIA has been developed based on the requirements of the Terms of Reference (ToR). The SIA framework has also been developed around the *Sustainable Resource Communities Policy (Queensland Government 2008)* and best practice guidelines and principles. See Appendix Z for a list of best practice guidelines and principles considered in the development of the assessment.

6.14.4 Existing Regional Social Context

This section outlines the key baseline data for the CSG fields assessment. More detailed information and analysis of the CSG fields can be found in Appendix Z.



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Datum : GDA 94

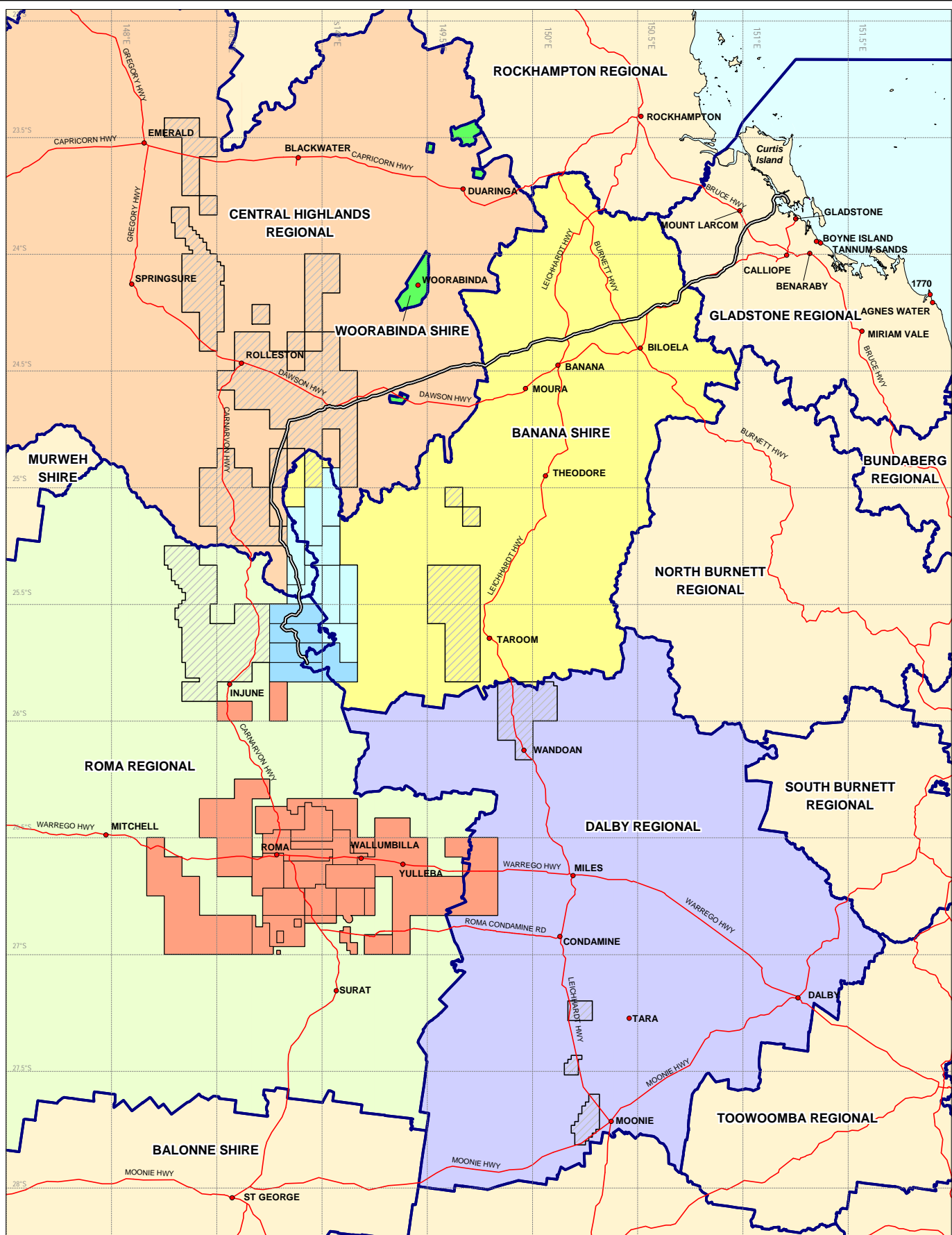
- Post March 2008 Dalby Regional Shire
- Post March 2008 Banana Shire
- Post March 2008 Central Highlands Regional Shire
- Post March 2008 Roma Regional Shire

- Statistical Sub Division Boundary
- Pre March 2008 Shire Boundary

Source: This map may contain data which is sourced and Copyright. Refer to Section 18.2 of the EIS for Ownership and Copyright.

<p>Client</p>	<p>Project</p> <p style="text-align: center;">GLADSTONE LNG PROJECT ENVIRONMENTAL IMPACT STATEMENT</p>	<p>Title</p> <p style="text-align: center;">SIA STUDY AREAS CSG FIELD</p>
<p>Drawn: VH</p> <p>Job No: 4262 6220</p>	<p>Approved: JB</p> <p>File No: 42626220-g-849.wor</p>	<p>Date: 12-05-2009</p> <p>Figure: 6.14.1</p>
		<p>Rev:B</p> <p style="text-align: center;">A4</p>

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0 50 100km

Scale 1:2 500 000 (A4)
Datum: GDA94

- Arcadia Valley CSG Field
- Fairview CSG Field
- Roma CSG Field
- Future Development Areas

- Post March 2008 Shire Boundary
- Gas Transmission Pipeline

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<p>Client</p>	<p>Project</p> <p style="text-align: center;">GLADSTONE LNG PROJECT ENVIRONMENTAL IMPACT STATEMENT</p>	<p>Title</p> <p style="text-align: center;">COUNCIL AMALGAMATIONS MARCH 2008</p>						
	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 33%;">Drawn: LL</td> <td style="width: 33%;">Approved: JB</td> <td style="width: 33%;">Date: 12-05-2009</td> </tr> <tr> <td>Job No: 4262 6220</td> <td colspan="2">File No: 42626220-g-850b.wor</td> </tr> </table>	Drawn: LL	Approved: JB	Date: 12-05-2009	Job No: 4262 6220	File No: 42626220-g-850b.wor		<p>Figure: 6.14.2</p>
Drawn: LL	Approved: JB	Date: 12-05-2009						
Job No: 4262 6220	File No: 42626220-g-850b.wor							

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Section 6

Coal Seam Gas Fields Environmental
Values and Management of Impacts

6.14.4.1 Demographic Profile

CSG Fields

The majority of the area within the CSG fields is sparsely populated, as is seen in Figure 6.14.3. This is a rural region in central Queensland traditionally centred on agriculture and cattle. There are a number of built up areas throughout the region, with populations ranging from a few hundred to a few thousand, including:

- Surat (now Roma Regional Council);
- Yuleba and Wallumbilla (now Roma Regional Council);
- Roma (now Roma Regional Council);
- Injune (now Roma Regional Council);
- Miles (now Dalby Regional Council);
- Taroom (now Banana Shire Council);
- Rolleston and Springsure (now Central Highlands Regional Council);
- Emerald (now Central Highlands Regional Council); and
- Woorabinda in Woorabinda Aboriginal Shire Council.

The populations of key towns in the area highlight their rural nature. This is particularly evident when considering the size of the community in relation to the statistical local area (SLA) population, as seen in Table 6.14.2. Rolleston was included to highlight the distance between Arcadia Valley and the nearest community in Bauhinia Shire.

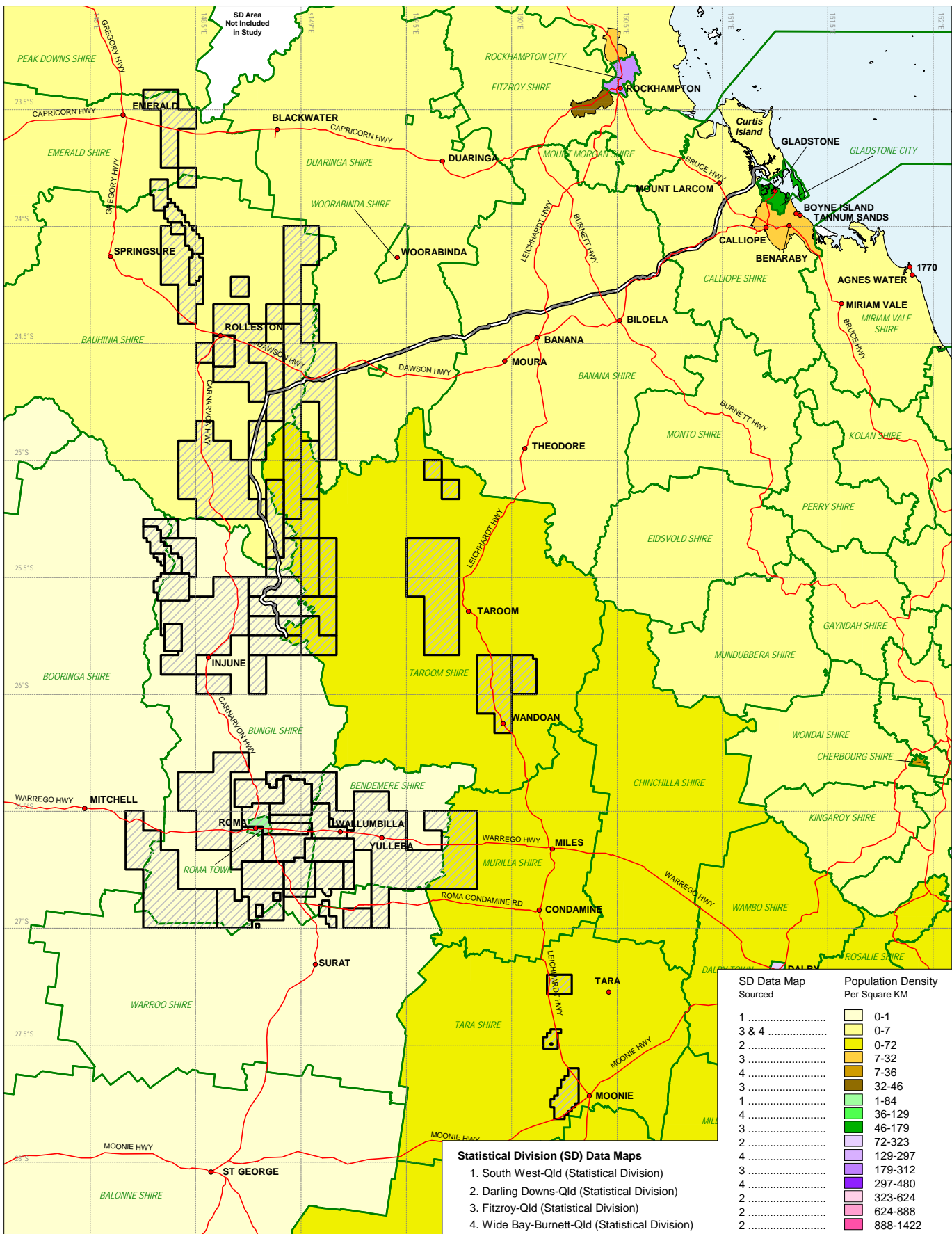
Table 6.14.2 Population of Key Towns within the CSG Field

Statistical Division	SLA	Town	Town Population (2006)	SLA Population	% of SLA
South West	Warroo	Surat	436	1,037	42.0
	Bendemere	Yuleba	183	987	18.5
		Wallumbilla	285	987	28.9
	Bungil	Injune	579	2,049	28.3
	Roma	Roma	6,504	6,504	100.0
Darling Downs	Taroom	Taroom	665	2,538	26.2
Fitzroy	Bauhinia	Rolleston	217	2,190	9.9

Note: SLAs match Local Government Area data. LGAs are old shire boundaries prior to amalgamation in April 2008.

Source: ABS Basic Community Profiles, 2006 census data.

At 30 June 2007, the estimated resident population of Roma Regional Council was 13,074 persons, representing 0.3 % of the State's population (see Table 6.14.3). The annual average rate of change in population in Roma Regional Council between 30 June 2002 and 30 June 2007 was 0.6 %, compared with 2.4 % for the State (OESR, 2008a). There was no real population change between 2006 and 2007. Taroom Shire experienced a population decline for the same periods, reflecting the general decline of rural communities in parts of Queensland. It is important to note that Taroom town is not readily accessible to the proposed CSG fields area, and is therefore not likely to experience project-related effects during the development of those fields.





SD Data Map Sourced	Population Density Per Square KM
1	0-1
3 & 4	0-7
2	0-72
3	7-32
4	7-36
3	32-46
1	1-84
4	36-129
3	46-179
2	72-323
4	129-297
3	179-312
4	297-480
2	323-624
2	624-888
2	888-1422

- Statistical Division (SD) Data Maps**
1. South West-Qld (Statistical Division)
 2. Darling Downs-Qld (Statistical Division)
 3. Fitzroy-Qld (Statistical Division)
 4. Wide Bay-Burnett-Qld (Statistical Division)

- Pre March 2008 Shire Boundary
- Gas Transmission Pipeline
- CSG Fields

Scale 1:2 500 000 (A4)
Datum: GDA94

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Client  	Project GLADSTONE LNG PROJECT ENVIRONMENTAL IMPACT STATEMENT	Title POPULATION DENSITY	
	Drawn: LL Approved: JB Date: 12-05-2009 Job No: 4262 6220 File No: 42626220-g-851.wor	Figure : 6.14.3	

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Section 6

Coal Seam Gas Fields Environmental
Values and Management of Impacts**Table 6.14.3** Estimated resident population by local government area, Roma Regional Council and Taroom Shire Council, 2002, 2006, and 2007^(a)

Local Government Area	Estimated Residential Population			Change	
	2002	2006	2007	2002 to 2007 ^(b) (%)	2006 to 2007 (%)
Roma Regional Council	12,666	13,070	13,074	0.6	0.0
Taroom Shire	2,619	2,538	2,473	-1.1	-2.6
Queensland	3,714,798	4,090,908	4,181,431	2.4	2.2

^(a) Figures may be different from those published in Australian Bureau of Statistics (ABS): *Population Estimates by Age and Sex, Australia and States* (Cat no. 3255.0.55.001).

^(b) Average annual growth rate. Note: Based on ASGC 2006. Data for Reformed Local Government Area(s) are based on concordant Statistical Local Area data (ASGC 2006). The concordance is population-based and has been derived from Planning Information and Forecasting Unit within the Department of Infrastructure and Planning.

Source: Australian Bureau of Statistics, Regional Population Growth (Cat no. 3218.0) and unpublished data.

Population growth for Roma Town has been relatively small, with the annual growth rate from 2003–2007 ranging from 0.1 % to 1.3 %. This five year period has an annual growth rate mean of 0.7 %, which is less than the Queensland growth rate of 2.4 % for the same period.

Table 6.14.3 and Table 6.14.4 give an indication of the regional population growth trend, which is slightly negative as people leave the rural areas. There are likely to be many contributing factors to the observed population decline, including adverse economic conditions due to drought, technological advancements in agriculture reducing the number of farming staff required and children leaving for higher education and not returning.

Population increase in Roma town, on the other hand, is helping to offset the decrease in the regional population. From 1997 - 2007, the population of Roma increased by 421 persons, or 6.4 %. That is an average of approximately 38 people a year over the 11 year period (see Table 6.14.4). Roma is a stable community due to its services base for health, government, education and commerce. Increased opportunities in Roma are assisting in the marginal population growth. However, attraction and retention of skilled people to Roma is viewed by many as a serious concern based on several interviews during site assessments. Much of Roma's stability comes from its diversified economy, particularly its oil and gas sector activity, which has helped to ameliorate the effects of the drought on agricultural production by providing alternative employment and business opportunities. Some of the landholders in the area are employed in the oil and gas industry to supplement their income.

The projected population growth for Roma over 20 years (from 2006, based on known development proposals) is a 5.3 % increase (see Table 6.14.5), compared to a 36.5 % increase for Queensland in the same period. This population projection for Roma could increase if additional activity in the oil and gas sector, and particularly CSG, is factored into PIFU assessments. The realisation of these projections will depend on a number of factors, including recruitment policies of the various companies operating in the area, retention initiatives to attract and retain people to the area, and services available in the community.

In Table 6.14.5, Roma's growth rate is projected to minor decline from 2006 to 2011, with there being a net loss of 11 people. This is already evident in the 2007 data (see Table 6.14.4), where the population growth rate has declined from that observed for 2002 - 2006. Annual population changes for Roma were disaggregated by natural increase and assumed net migration to better understand the trends.

The effect on Roma could be significant if the rural population continues to decline, since Roma is a service centre for the rural area. As identified above, this is not likely to occur at the current rate for a long time, though unforeseen variables in the future could potentially slow or speed the decline in rural population.

With the exception of 2001, assumed net migration has been negative from 1997 – 2004. The years 2005 and 2006 saw an increase in assumed net migration which equated to a population increase of > 1.0%

Section 6**Coal Seam Gas Fields Environmental Values and Management of Impacts**

overall, which are the 5 year highs. Data on natural increase and assumed net migration for 2007 was not available at the time of this report to explain the sudden drop in population increase from 1.3% (2006) to 0.1% (2007) (PIFU, 2008d).

Informal field research found that the retention of staff, particularly in the government services, teachers, and health practitioners, was a significant contributor to the assumed net migration. Occasionally, large numbers of work rotation ends will coincide (generally three years for most government and teaching contracts) and Roma will experience a noticeable decrease in the number of residents. Many people interviewed in Roma for the SIA noted that attracting and retaining professionals to work and live in Roma is an on-going struggle every business and organisation has to deal with (pers. comm., D. Goddard, 2008) (pers. comm., J. Lines, 2008) (pers. comm., L Waldron and P Bacon, 2008) (pers. comm., M. Weathered, 2008).

Table 6.14.6 shows that the populations in the CSG fields study area are relatively small, with the majority of the population residing throughout the area on farm holdings. The majority of communities have populations of less than 500 residents.

Table 6.14.6 also shows the predominance of males in the rural areas. Of the areas in question, only Roma, Darling Downs (SD) and Queensland as a whole had more females than males, which reflect their more urban composition.

The number of residents in the area born overseas is further evidence of the rural environment, as immigrants tend to move to the major cities throughout Australia. Roma has recently witnessed the arrival of some 457 visa holders (temporary working visa) to the area to help with labour shortages. These individuals are mainly from Asia, and are employed in services and restaurant businesses based on discussions during site assessments with local service providers and business owners.

Table 6.14.7 shows the age distribution for the population of Roma Regional Council, Taroom Shire and Queensland. In Roma Regional Council in June 2007, 23.2 % of persons were aged 0 to 14 years, 65.0 % were aged 15 to 64 years and 11.8 % were aged 65 years and over (OESR, 2008a). The regional council has a higher percentage of children (0 to 14 years) than Queensland, which could reflect the attractiveness of Roma as a place for raising younger children; however, the reduced number of children and young adults aged 15 to 24 years highlights the pressures to leave the area to attend private school, or pursue higher education or work opportunities available elsewhere. Regional schools outside of Roma predominantly offer P-10 curriculum contributing to outmigration of young people to seek further education. While a certain percentage will attend secondary schools in Roma, some parents send their children to boarding schools in Toowoomba and Brisbane. While precise numbers could not be determined, it is a commonly expressed view that many people in the area send their children away to private schools outside the study area. This is common in rural regions where the main centre does not have the same opportunities as the larger centres in the state. Retention of more of the age group 15 to 24 years through the provision of better and broader education and work opportunities was identified as a goal for the community by many people interviewed in Roma throughout the 2008 site assessments.

Section 6

Coal Seam Gas Fields Environmental Values and Management of Impacts

Table 6.14.4 Roma Town and Queensland Population and Average Annual Population Change (%)

Area	Year															
	1997		2001		2002pr		2003pr		2004pr		2005pr		2006pr		2007p	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Roma	6,541	-0.4	6,704	1.3	6,723	0.3	6,754	0.5	6,795	0.6	6,864	1.0	6,955	1.3	6,962	0.1
Queensland	3,394,671	1.7	3,628,946	1.9	3,714,937	2.4	3,809,564	2.5	3,901,811	2.4	3,996,564	2.4	4,091,546	2.4	4,182,062	2.2

Source: PIFU, Population and Housing Fact Sheet 2008 a, d. Note: p = preliminary; pr = preliminary rebased.

Table 6.14.5 Roma Town and Queensland Population Projections 2006–2026¹

Area	Year									
	2006		2011		2016		2021		2026	
	No.	%	No.	%	No.	%	No.	%	No.	%
Roma	6,955	0.7	6,944	0.0	7,013	0.2	7,116	0.3	7,326	0.6
Queensland	4,091,546	2.4	4,428,138	1.6	4,823,408	1.7	5,211,995	1.6	5,583,956	1.4

¹ Note: Average Annual Change over 5 years to 30 June; based on median series projections.

Source: PIFU, Population and Housing Fact Sheet 2008 a, d.

Section 6

Coal Seam Gas Fields Environmental Values and Management of Impacts

Table 6.14.6 General Demographics Profile of Local Government Areas

Area*	2006 Population	% of Queensland	% of Statistical Division	Males		Females		Born overseas	
				No.	%	No.	%	No.	%
South West SD	24,779	< 1.0	100.0	12,646	51.0	12,133	49.0	993	4.0
Warroo (S)	1,037	< 1.0	4.2	545	52.6	492	47.4	25	2.4
Bendemere (S)	987	< 1.0	4.0	530	53.7	457	46.3	28	2.8
Roma (C)	6,504	< 1.0	26.2	3,213	49.4	3,291	50.6	274	4.2
Booringa (S)	1,706	< 1.0	6.9	866	50.8	840	49.2	65	3.8
Bungil (S)	2,049	< 1.0	8.3	1,090	53.2	959	46.8	60	2.9
Darling Downs SD	213,754	5.5	100.0	105,182	49.2	108,572	50.8	17,616	8.2
Taroom (S)	2,388	< 1.0	1.1	1,203	50.4	1,185	49.6	50	2.1
Queensland	3,904,534	100.0	N/A	1,935,381	49.6	1,969,153	50.4	699,448	17.9

* Note: SD = statistical division; S = shire; C = community. Source: ABS Basic Community Profiles, 2006 census data.

Section 6

Coal Seam Gas Fields Environmental
Values and Management of Impacts

Table 6.14.7 Estimated resident population by age groups (years) by local government area, Roma Regional Council, 30 June 2007

Local government area	Population by age									
	0–14		15–24		25–44		45–64		65+	
	No.	%	No.	%	No.	%	No.	%	No.	%
Roma Regional Council	3,035	23.2	1,610	12.3	3,740	28.6	3,142	24.0	1,547	11.8
Taroom Shire	515	20.8	231	9.3	653	26.4	731	29.6	343	13.9
Queensland	844,941	20.2	592,761	14.2	1,188,308	28.4	1,043,912	25.0	511,509	12.2

Based on ASGC 2006. Data for Reformed Local Government Area(s) is based on concordant Statistical Local Area data (ASGC, 2006). The concordance is population based and has been derived from Planning Information and Forecasting Unit within the Department of Infrastructure and Planning.

Source: Australian Bureau of Statistics, Population Estimates by Age and Sex, Australia and States (Cat. no. 3235.0.55.001).

Table 6.14.8 also indicates that as people age they tend to leave the Roma area to retire. Roma has aged care facilities (Westhaven Nursing Care Unit and the proposed aged care unit at the Roma Hospital), but still experiences some loss as people move to the larger centres for medical services in retirement, or closer to the coast for a lifestyle choice. Taroom Shire is experiencing an ageing of the workforce as the younger generations are leaving the area for increased opportunities and many are not returning. As a result, Taroom's population distribution has shifted toward the 45 + cohort when compared to the Roma Regional Council population.

Table 6.14.8 Population by Age Group, Roma Town

Year	Age Group										Median Age
	0–14		15–24		25–44		45–64		65+		
	No.	%	No.	%	No.	%	No.	%	No.	%	Years
2006	1,669	24.0	1,048	15.1	2,072	29.8	1,425	20.5	741	10.7	32
2026 (medium series)	1,585	21.6	1,161	15.8	2,296	31.3	1,312	17.9	972	13.3	32

Source: PIFU, 2008d

The median age for Roma Town residents is 32. This is not anticipated to change with the inclusion of the project, as this is the median age of workers in the oil and gas sector.

6.14.4.2 Employment

At the time of the 2006 Census, in the Roma Regional Council area there were 159 unemployed persons (see Table 6.14.9). With a labour force consisting of 6,675 persons, this corresponded to an unemployment rate of 2.4%. In Taroom Shire, there were 21 unemployed persons and a labour force of 1,357 persons, resulting in an unemployment rate of 1.5%. The unemployment rate in Queensland at the time of the 2006 Census was 4.7% (OESR, 2008a).

Section 6

Coal Seam Gas Fields Environmental
Values and Management of Impacts**Table 6.14.9 Number of unemployed persons, persons in the labour force and unemployment rate^(a), Roma Regional Council and Taroom Shire Council, 2006**

Local Government Area	Unemployed	Labour Force	Unemployment Rate (%)
Roma Regional Council	159	6,675	2.4
Taroom Shire Council	21	1,357	1.5
Queensland	90,950	1,915,947	4.7

^(a) Based on place of usual residence. Note: Based on ASGC 2006. Data for Reformed Local Government Area(s) is based on concordant Statistical Local Area data (ASGC 2006). The concordance is population based and has been derived from Planning Information and Forecasting Unit within the Department of Infrastructure and Planning.

Source: Australian Bureau of Statistics, Census of Population and Housing, 2006, Basic Community Profile – B41.

Unemployment is low in the CSG fields study area and is not seen as a major concern for the communities. The lower than average wages are generally compensated by the lower cost of living in the study area compared to the rest of Queensland (refer to Figure 6.14.10). Roma has a slightly increased cost of living, generally associated with the subsidised services workforce, whose living expense allowances have resulted in some prices (like real estate and rental properties) being higher than surrounding areas. While unemployment is low, underemployment and the percentage of the community from low incomes experiencing higher cost of living (i.e. groceries, etc.) expressed financial hardship.

Table 6.14.10 Roma Regional Council and Taroom Shire Council Median Weekly Income

Area	Individuals 15+	Household
Warroo (S)	\$413	\$747
Bendemere (S)	\$377	\$731
Roma (S)	\$545	\$1,047
Booringa (S)	\$380	\$666
Bungil (S)	\$546	\$1,062
Taroom (S)	\$442	\$810
Queensland	\$476	\$1,033

S = Shire

Source: ABS basic community profiles, 2006 census data. Based on place of normal residence.

The following two tables provide an indication of employment in the CSG fields area by industry sector. The percentages indicate that agriculture is the dominant industry in the rural areas, with Roma being a major service centre. Key areas of interest are in bold to highlight the values within the tables.

The CSG fields study area is an agricultural region that has not experienced significant rural decline compared to other inland shires affected by the recent drought. Based on baseline data discussions with key local stakeholders and field assessments, Roma has remained relatively buoyant as a result of the oil and gas industry, and its positioning as a service centre for the outlying area, which has diversified the local economy. Furthermore, Taroom's separation from the oil and gas industry around Roma is evident in its rural decline due to the effects of drought. It should be noted that in the tables above, the mining category includes oil and gas activity, which is felt to be predominant, although there is mining activity in the area as well.

A more detailed assessment of employment can be found in the economics section of the EIS and in Appendix Z.

Section 6

Coal Seam Gas Fields Environmental Values and Management of Impacts

Table 6.14.11 CSG Field Employment by Industry 2006 – Part 1

Area	Total employment	Agriculture, forestry & fishing	Mining	Manufacturing	Electricity, gas, water & waste services	Construction	Wholesale trade	Retail trade	Accommodation and food services	Transport, postal & warehousing
	No.	%*	%*	%*	%*	%*	%*	%*	%*	%*
South West SD	13,345	24.3	3.7	5.8	1.2	5.9	2.7	9.4	5.1	4.7
Warroo (S)	610	53.3	4.9	3.6	0.0	2.6	1.1	2.8	3.0	3.6
Bendemere (S)	456	43.9	3.3	3.3	0.7	8.1	0.7	4.4	3.1	4.8
Roma (S)	3,417	3.3	4.1	6.8	1.8	7.0	3.7	13.7	7.2	5.6
Booringa (S)	871	39.6	1.1	6.1	0.5	5.5	2.6	7.0	3.7	3.4
Bungil (S)	1,396	36.2	6.4	6.2	1.5	6.4	2.8	6.1	3.2	4.7
Darling Downs SD	96,153	12.0	0.8	10.6	1.0	7.6	3.7	11.7	5.4	4.5
Taroom (S)	1,304	54.2	1.2	2.1	0.8	3.1	2.5	4.7	3.2	3.4
Queensland	1,840,887	3.4	1.7	9.9	1.0	9.0	3.9	11.6	7.0	5.1

SD = Statistical Division, S = Shire

* Percentage of total area employment, based on place of enumeration. Rows do not add up to 100 % because 'Not stated' was not included.

Source: ABS time series profiles, 2006 census data.

Section 6

Coal Seam Gas Fields Environmental Values and Management of Impacts

Table 6.14.12 CSG Field Employment by Industry 2006 – Part 2

Area	Information media & telecommunications	Financial & insurance services	Rental, hiring & real estate services	Professional, scientific & technical services	Administrative & support services	Public administration & safety	Education & training	Health care & social assistance	Arts & recreation services	Other services
	%*	%*	%*	%*	%*	%*	%*	%*	%*	%*
South West SD	0.7	1.2	0.7	2.4	1.3	8.5	6.8	8.9	0.5	2.9
Warroo (S)	0.0	0.0	0.0	0.8	0.0	9.3	5.9	5.6	0.0	1.5
Bendemere (S)	0.9	0.0	0.0	2.2	0.0	9.9	5.0	4.2	0.0	1.3
Roma (S)	1.3	2.1	1.0	3.7	1.9	9.7	7.4	11.8	0.7	4.7
Booringa (S)	0.7	0.9	0.3	0.6	0.7	9.8	6.3	6.9	0.7	2.0
Bungil (S)	0.3	0.9	1.8	1.4	0.4	3.9	4.4	6.2	0.9	2.0
Darling Downs SD	0.9	2.5	1.3	3.4	1.8	6.4	8.9	10.7	0.8	3.8
Taroom (S)	0.0	0.6	0.0	0.9	0.7	7.6	5.5	5.6	0.0	1.7
Queensland	1.4	2.9	2.1	5.6	3.0	6.7	7.6	10.2	1.4	3.7

DS = Statistical Division, S = Shire

* Percentage of total area employment, based on place of enumeration. Rows do not add up to 100 % because 'Not stated' was not included.

Source: ABS time series profiles, 2006 census data.

Section 6

Coal Seam Gas Fields Environmental Values and Management of Impacts

6.14.4.3 Health, Emergency Services and Education

The following provides a brief overview of the local services and their relationship to the project area.

Health

There are four main referral medical and health facilities servicing the CSG fields area (refer to Table 6.14.13).

Table 6.14.13 Local Hospitals

Hospital Name	Location to closest hospital
Roma Hospital	The Royal Brisbane and Women's Hospital (479 km)
Surat Hospital	Roma Hospital (78 km)
Injune Hospital	Roma Hospital (90 km)
Wallumbilla Hospital	Roma Hospital (40 km)

The major hospital in the CSG fields study area is the Roma hospital. It has a total of 40 beds, with current utilisation of about 50 – 60 % as of October 2008. There are 65 nurses and 4 doctors; however, there are some staff shortages and a need for accommodation, especially for visiting specialists. In a case of emergency, the surrounding hospitals may be called to send staff to the Roma hospital to assist (pers. comm., Roma Hospital, 2008) (THI, 2008). Roma Hospital's main referral hospital is the Royal Brisbane and Women's Hospital, which is 479 km away (Queensland Health, 2008).

In addition to the Roma hospital, there are 39 other health care services and providers in the area, ranging from dentists and medical centres to aged care and community care services. There are four mental health service providers; however, a gap was identified in the level of service for individuals under the age of 18, and the methods for transporting them to other service providers (mainly Toowoomba) (pers. comm., THI, 2008). There are also health facilities for Indigenous health, counselling, physiotherapy, chemists, disability support and alternative medicines to name a few. As Roma is the area service centre, the community has a fairly broad array of health practitioners and service providers; however, staff attraction and retention were identified by many as an ongoing issue (pers. comm., L. Christie, 2008) (pers. comm., L. Waldron and P Bacon, 2008) (pers. comm., M. Weathered, 2008). Queensland Health indicated that Roma was lacking a strategy to make it a more attractive destination for health care workers. This is mainly because there is not a regional incentive for people to work in the rural areas since the pay is the same as in the urban areas (pers. comm., L. Christie, 2008).

Although Roma has experienced some growth in population, with the exception of real estate prices, there have not been many changes - the real estate changes were attributed to a national phenomena as well as the effects of subsidised rents for some contract staff with government services (pers. comm., A. Cleland, 2008) (pers. comm., D. Newman, 2008). There were no noticeable changes in rates of substance abuse, sexual assaults or other violence, and no indication that oil & gas employee's fly-in/fly-out (FIFO) had a negative effect on community health (pers. comm., L. Christie, 2008).

In the Surat hospital, one doctor and approximately 25 nurses are employed, with generally four of the 13 beds used for long stay patients. There are three nurses on duty during a day shift. In the case of an emergency, the hospital may call doctors from the Roma hospital or transfer the patients to Roma (pers. comm., Surat Hospital, 2008).

In addition, there are 3 health care services and providers in the area, as well as 16 additional services offered from the Surat hospital. Services include a retirement village, community health centre, dentist, chemist, 3 therapy specialists, social worker, women's health, drug and alcohol services and young people at risk services. There is also a podiatry service and child and maternity health.

The Injune hospital currently has ten beds; however, three to four are generally used for long term patients. During a normal shift, 2 nurses are on duty, and there are a total of 11 nurses on staff. In the

Section 6

Coal Seam Gas Fields Environmental Values and Management of Impacts

case of an emergency, one doctor is available and one to two ambulance attendants. If the hospital could not handle the emergency, they will send the patients to the next hospital (Roma) by ambulance or flying doctors. The Injune hospital indicated that they have a minimal emergency handling capacity (pers. comm., Injune Hospital, 2008).

Injune also has 5 health care services and providers, as well as 11 additional services through the hospital. Services range from aged care to community care, as well as dentists, therapy specialists, dieticians, mental health services, women's health, social worker and alternative medicine. There is an emergency chemist available at the hospital. Some residents were not happy with some services, or did not like the lack of options in the community, and subsequently travelled to Roma for some medical services. This was seen as normal for many rural communities with limited services or options for services.

As the Wallumbilla Hospital only provides outpatient services, all emergency patients would be transferred to Roma (pers. comm., Wallumbilla Hospital, 2008).

Mental health, domestic violence and alcohol abuse were all identified by many social service providers in the community as health concerns, with limited programs currently in place to deal with the effects on individuals and families.

State Emergency Services

The State Emergency Services (SES) is tasked with assisting people and communities in times of natural disasters and other emergency situations that affect portions or all of the community. The South Western Region Roma Downs Area is located in Roma. This regional office covers Balonne SES Unit, Bendemere SES Unit, Booringa SES Unit, Bulloo SES Unit, Murweh SES Unit, Paroo SES Unit, Quilpie SES Unit, Roma/Bungil SES Unit, Tambo SES Unit, Taroom SES Unit and Waroo SES Unit.

Royal Flying Doctor Service

The services of the Royal Flying Doctor Service (RFDS) are also available to remote communities and locations in the area. There are eight bases throughout Queensland, with the closest being Brisbane, Bundaberg, Charleville and Rockhampton. Flying doctors and emergency evacuations are determined by the emergency dispatch, which then coordinates regional resources to deal with the situation.

Queensland Ambulance Service (QAS)

The regional office for the South Western Region's ambulance service is located in Toowoomba. The South Western Region services an area of approximately 414,000 km², serving an estimated population of 265,487. The Region operates through 29 full time ambulance stations and 5 honorary facilities. The South Western Region's area encompasses Gatton in the east to Quilpie and Thargomindah in the West, and from Injune, Taroom and Crows Nest in the North to the New South Wales border. There are local ambulance committees in Roma, Injune, Oakey, Mitchell, Dalby, Charleville and Chinchilla; all of which are in or adjacent to the CSG fields study area (Department of Emergency Services, 2008).

Fire and Police Services

The Roma Regional Council area is covered by both the Rural Operations Roma Area Office and the Rural Operations Miles Area Office for rural fire services, whereas the Taroom Shire Council area is covered by the Rural Operations Miles Area Office and the Rural Operations Rockhampton Area Office. Fire services are integrated throughout Queensland to provide overlapping layers of protection throughout the CSG fields study area and the State as a whole (Department of Emergency Services, 2008).

There is police cover throughout the CSG fields study area, with a police station in all the communities assessed. The area police district communication centre is located in Roma, and dispatches police as required throughout the study area. Police have an internal process for assessing additional requirements for policing based on a number of factors, including work load and population. Most police activity in the

Section 6

Coal Seam Gas Fields Environmental Values and Management of Impacts

area deals with road violations along the highways. All the main communities in the CSG fields study area are situated along or adjacent to the major highways.

Education

In the 12 months ending 31 December 2006, 72 % of students attending a school in Roma Regional Council attended Government schools and 28 % attended non-government schools. In Taroom, 91 % of school students attended Government schools and 9 % attended non-government schools. The corresponding figures for Queensland were that 70 % of school students attended government schools and 30 % attended non-government schools (OESR, 2008a).

Table 6.14.14 provides a breakdown of primary (Years 1 - 7) and secondary (Years 8 - 12) attendees.

Table 6.14.14 School students by local government area^(a), Roma Regional Council, 12 months ending 31 December 2006

Local government area	Government school students			Non-government school students			Total school students
	Primary (Years 1–7)	Secondary (Years 8–12)	Total ^(b)	Primary (Years 1–7)	Secondary (Years 8–12)	Total ^(b)	
Roma Regional Council	986	436	1,598	414	206	620	2,218
Taroom Shire Council	217	83	331	28	-	33	364
Queensland	284,726	165,285	489,295	104,861	96,115	211,132	700,427

– = nil or rounded to zero.

^(a) Based on school location instead of students' place of usual residence.

^(b) Includes prep year and pre-school students, and ungraded and special school students. Note: Based on ASGC 2006. Data for Reformed Local Government Area(s) is based on concordant Statistical Local Area data (ASGC 2006). The concordance is population based and has been derived from the Planning Information and Forecasting Unit within the Department of Infrastructure and Planning.

Source: Queensland Department of Education, Schools Census, Unpublished data.

The Roma junior, middle and senior campuses were recently combined into the Roma State College. There were a number of factors which contributed to this decision, including centralizing the services, reducing the number of school buildings, and making the school more attractive to new arrivals to the community. As a result, St. John's School expanded their services in order to meet the services of the State school (pers. comm., Education Queensland - Roma, 2008).

Over the period 2003 – 2008 there has been a decrease in enrolment in local schools as a result of many issues including drought; however, Roma generally has consistently solid levels of enrolment. Teacher retention has always been an issue in the area, with turn-over occurring every two to three years on average (pers. comm., Education Queensland - Roma, 2008).

There are many schools in the area that are susceptible to closure as a result of size and location. This has been an issue for these areas for many years, and has been further complicated by the ongoing drought occurring throughout most of the region. There is an internal mechanism to address this issue outlined below.

Table 6.14.15 outlines the education levels of persons over the age of 15. For the most part, the educational profile of the area is lower than Queensland as a whole, but is indicative of the mainstream employment available in the area. Many local jobs do not require advanced education or undergraduate degrees and this is reflected in Table 6.14.15. Most higher education in the CSG fields study area was achieved at diploma and certificate level. It should also be noted that in rural areas, some people never receive formal training or education in a specific field but rather obtain on-the-job training. They may be skilled in their field, but they are not necessarily accredited. For employment in the CSG fields, experience in skills like welding, electrical, mechanical and drilling are all assets. Many positions will

Section 6

Coal Seam Gas Fields Environmental Values and Management of Impacts

receive on-the-job training and therefore will not require specific skills or prior training. Some specific positions such as drill operators, welders and electricians will require accreditation.

In the town of Roma, there are several positions available, including clerical, administration, warehouse operators, drivers, and technical/professional roles for OH&S, Training, Environmental Support and Landholder Support. Once again, previous experience or similar skills are an asset, but for most positions they are not a requirement.

6.14.4.4 Housing

A separate accommodation study (refer to Appendix Z) was conducted for the GLNG Project. The accommodation study assembled relevant information about the existing accommodation characteristics, conducted an assessment of housing demand created by the GLNG Project, proposed accommodation measures and the ensuing potential impacts are discussed. An accommodation strategy has been developed providing options on managing impacts associated with accommodation for the GLNG Project.

Roma (within Roma Regional Council) is a focus for the CSG fields component of the study, as project related accommodation requirements will be most pronounced in this town. Roma (population 6,000) is the largest of the towns in Roma Regional Council and the CSG fields study area. The town has experienced moderate population growth, in part attributed to the developing CSG industry which has established regional offices in Roma.

The town has had an active property market, with a strong growth in median house prices and sales up to late 2008. The rental market is tight, with limited rental properties available and rents increasing steadily over the last five years. Roma's short term accommodation (hotels, motels, caravan parks) are regularly booked out.

6.14.4.5 Recreation, Sport and Leisure

Recreational facilities and activities

Green areas are important to give people the opportunity to relax without travelling out of town. In Roma, there are nine parks and gardens. People have access to four parks in Injune and in Surat, whereas in Mitchell there are two parks used for recreation activities.

Section 6

Coal Seam Gas Fields Environmental Values and Management of Impacts

Table 6.14.15 Roma Regional Council Education Levels of Persons 15+

Area	Postgraduate Degree		Graduate Diploma and Graduate Certificate		Bachelor Degree		Advanced Diploma and Diploma		Certificate not further defined		Certificate III & IV		Certificate I & II		Total		Level of education inadequately described/not stated		Total
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	
Warroo (S)	0	0.0	3	1.0	62	21.1	54	18.4	17	5.8	80	27.2	7	2.4	104	35.4	71	24.1	294
Bendemere (S)	7	2.6	0	0.0	31	11.6	28	10.4	9	3.4	81	30.2	12	4.5	102	38.1	100	37.3	268
Roma (S)	45	2.2	34	1.6	391	18.8	240	11.5	50	2.4	731	35.1	87	4.2	868	41.7	505	24.2	2,083
Booringa (S)	9	1.9	6	1.3	66	13.8	59	12.3	18	3.8	160	33.3	25	5.2	203	42.3	137	28.5	480
Bungil (S)	12	2.1	17	2.9	104	18.0	91	15.7	20	3.5	189	32.7	19	3.3	228	39.4	126	21.8	578
Taroom (S)	3	0.5	7	1.3	103	18.7	79	14.3	19	3.4	173	31.4	18	3.3	210	38.1	149	27.0	551
Queensland	-	3.9	-	2.3	-	19.8	-	13.1	-	3.0	-	30.2	-	2.3	-	35.5	-	25.4	-

Based on place of usual residence

Source: ABS basic community profiles, 2006 census data

Section 6

Coal Seam Gas Fields Environmental Values and Management of Impacts

Cultural facilities

As Roma is the main town in the area, most of the cultural activities and facilities are concentrated there. There are five theatre/performing art venues, two museums, an art gallery, a library and a cinema. A wide approach to culture can be found in the community, as it is an important characteristic, as well as an identified method for attracting people to the community (pers. comm., Roma Neighbourhood Centre, 2008). Surat and Mitchell have local cinemas, museums, art galleries and libraries. Injune has a library and a theatre/performance art venue.

The local calendar of events shows 10 main events throughout the year in Roma, 24 events in Surat and 18 events in Mitchell, ranging from rodeo to sport events and morning teas (THI, 2008).

Sporting facilities

There are 22 sporting facilities in Roma, including Bowls Ward Park, skate park, BMX track, aquatic centre, walking and cycle tracks, indoor and outdoor sport grounds and a Gym. There are also 13 sport clubs active in Roma. Injune has 8 sporting facilities, Surat has 9 and Mitchell has 11 (THI, 2008).

Shopping facilities

There is one major shopping centre in Roma which supplies the area; however, people travel frequently to Dalby and Toowoomba to "stock-up" (pers. comm. THI, 2008). Most businesses are located along the main street (McDowall), which forms the CBD. Supermarkets can also be found in Mitchell and Surat.

6.14.4.6 Community Facilities and Services

A brief summary of the facilities and services available in the CSG fields study area is presented in this section. For more information on the types and numbers of services, refer to Appendix Z.

Roma has experienced an increase in demand on local facilities. This has been attributed to a few factors including marginal growth from trades people coming to the area (mostly servicing the oil & gas industry) and a limited number of venues (pers. comm., L. Waldron and P. Bacon, 2008).

Child Care

There are eight child care facilities in Roma, Injune and Surat within the CSG fields study area. These facilities have a combined capacity of 302, including 10 after school spots. Many facilities in Roma and Injune stated they did not have waiting lists, suggesting there is currently sufficient child care space in those communities. Surat, however, is currently full and unable to accommodate additional demand at present.

Places of Worship

There are 17 places of worship and associated organisations in Roma, Surat and Injune. All of these are of Christian denomination.

Government Services

There are a range of governmental services in the CSG fields study area, with the majority centred in Roma. All major State services have representation in Roma as part of the Southwest Queensland services. Many outlying communities have government offices or agents who represent all State government services and act as a contact point for the public.

Recreational Areas and Facilities

The number of facilities and their diversity reflect the size and role of the various communities. Roma is the central services centre in the area, and this is reflected in the community facilities there. Surat and Injune's community facilities are centred on meeting halls. Surat also has an RSL community centre.

Section 6

Coal Seam Gas Fields Environmental Values and Management of Impacts

Roma has many facilities associated with the various churches and social groups. With all the government departments and other service providers, use of the community facilities is good, though increased use would be welcomed.

6.14.4.7 Social Services Capabilities

The Roma Neighbourhood Centre and associated service providers provided the following list of social services considerations and an assessment of them in Roma. The list was compiled by the group as their assessment of services in Roma, with no input from Santos (for the complete list and assessment see Appendix Z). The following is a summary of those issues or areas of concern for area service providers:

- Shortage of professionals;
- Child care and family day care availability;
- Child/youth assault and abuse counselling/services;
- Youth services;
- Foster families;
- Family carer support/aged care support;
- School class sizes;
- Teaching staff;
- Vacation/holiday care; and
- Transport – area cover.

6.14.4.8 Community Values, Vitality and Lifestyles

Rural Areas

The CSG fields is predominantly made up of individual homesteads and farms, with small scattered communities along the major highways that run generally east-west (Warrego Highway) and north-south (Carnarvon Highway, Leichhardt Highway). Many communities are quite small, consisting of a number of houses, a shop, and school or government office. This reflects the rural make-up of the area, and the relatively sparse population in terms of total land area.

Lifestyles outside of town areas are generally a mix between rural farm activity and attending local centre events that act to bring people together and create a sense of community. In some areas, the pattern of settlement is more dispersed, as is the case with Arcadia Valley, where the local population may not have an actual town site, but still considers itself as a community.

Roma

Various famous explorers travelled through the Roma District in search of new lands in the mid 19th century. The explorer perhaps most credited with the initial exploration of the district is Sir Thomas Mitchell. It is Mitchell who, in 1846, described the land to the south west of present day Roma as 'a champagne region'.

With the coming of the railway, Roma was firmly established as a service centre for the surrounding district and as a premier inland town in the State (Roma Town Web Page, 2008). Near the turn of the previous century, oil was discovered beneath Roma's Hospital Hill, making it the first oil strike in Australia. This history of oil and gas has also contributed to the development of Roma. In addition to oil and gas, Roma has a strong agricultural history, predominantly cattle with opportunistic cropping during good seasonal conditions, and is host to one of the largest cattle sale yards in Australia.

Roma is now a service hub for the South West SD, as well as the principal centre for the newly formed Roma Regional Council (March, 2008). Many government agencies and services have been established

Section 6

Coal Seam Gas Fields Environmental Values and Management of Impacts

in Roma to service the entire South West Queensland area. This has helped Roma become the most stable and largest community in the area.

Much like the rest of the CSG fields, Roma prides itself on family values and the community spirit. This is evident in the social events for the community, and the participation in sports and recreational activities. Most people interviewed as part of the EIS study felt Roma was best described as a family-orientated community. People also indicated that contracting and public service staffing arrangements encourage the formation of two sub-communities in Roma:

- Longer-term residents, who tend to have more family connections within the town and region; and
- Shorter-term residents, with no family connections, who stay from two to five years.

A consequence of this is a perceived reduced level of social interaction between these groups. Comments were sometimes made that new arrivals to the community found it difficult to integrate, which often leads to a feeling of not belonging. This is said to contribute to many people not choosing to remain in Roma for a lengthier period. The perspective of the long-term residents is, "Why make friends with people who are just going to leave in a few years?", which is an understandable and logical reaction to the trend, but likely inhibits the ability of government agencies and service providers to attract and retain staff. An alternative explanation is that many people who move to the town for work view it as a temporary posting, a step along the path to promotion, and that it is this which inhibits their ability to integrate within the community.

The increase in skilled professionals in the area may also help to attract people to the area, and help retain them through increased opportunities and services. The staff attraction and retention issue is not just to fill employment vacancies in the area but also the issue of employment opportunities for spouses. Due to Roma's size, there are limited economic and employment opportunities in the community. As a result, many contract employees' spouses are not easily able to find employment, which results in social and family stress. This can lead to employees not extending their contracts. This problem was frequently mentioned during the community assessment, indicating its importance in the community, particularly in the government services and departments during the 2008 site assessments.

As a consequence, Roma is a very liveable community for the long-term residents, while at the same time there can be adjustment issues for the short-term residents, especially if they have come from a large city environment. Recently, local businesses have been recruiting staff from outside the region, including several foreign national 457 Visa holders and their families (pers. comm., B. Garvie, 2008) (pers. comm., D. Roche, 2008). This group also has some issues with integration, as many speak English as a second language, and are in a visible minority. Still, there is a strong sense of community in Roma, with the long-term residents making up the majority of the population.

As a regional services centre, Roma has a fairly well-established services sector, particularly in proportion to the town population, as well as that of the surrounding area. In this sense, Roma could be regarded as overrepresented in terms of services compared to other similar-sized communities in Queensland.

Social service providers and key stakeholders indicated that there is a lack of services in some key areas, including counselling (teen/youth, drug and alcohol, domestic violence, mental health), migrant integration, disabled/disadvantaged/elderly persons support and general youth services. The misuse of drugs and alcohol was raised as a serious concern (THI site assessment, 2008) and seen as the root cause of other incidences of social dysfunction (pers. comm., Roma Neighbourhood Centre, 2008). The 2002 - 03 small area crime profile for Roma Town published by the Office of Economic and Statistical Research (which is the latest data available publicly) indicates that the incidence of liquor offences in Roma is approximately four times the rate for Queensland, which lends some weight to the assertions of the service providers.

6.14.5 CSG Field Workforce

The workforce numbers for all aspects of the CSG fields, timelines and schedules are based on best available estimates. As more detailed development plans and operational strategies are prepared, more accurate assessments of the workforce requirements will be possible. Given the nature of oil and gas

Section 6

Coal Seam Gas Fields Environmental Values and Management of Impacts

development, the details will be known when exploration wells identify productive areas, a field development plan is drafted and negotiations with landholders are conducted.

6.14.5.1 Assumptions

Table 6.14.16 presents the anticipated breakdown of the workforce between locals and non-local workers for the construction and operational phases of the project in the CSG fields. 'Local' refers to individuals living in the CSG fields or within reasonable distance from the project. As part of the social assessment, it was found that individuals living in Dalby and Roma Regional Councils tend not to differentiate if they live anywhere in that area. For that reason, 'local in the study area' has been defined in that area as individuals living from Toowoomba west. Toowoomba was selected because it is the geographical divide between the coastal communities and the inland communities associated with the CSG fields. For the Roma Centre workforce, 'local' has been defined as an individual living within 5 km of the town of Roma (i.e. within reasonable distance to commute to work daily).

Non-local workers will be housed in temporary accommodation facilities (TAFs) on or near the CSG fields work site while on shift. In many instances, locals will also be housed in TAFs because of the logistics and safety considerations of moving them to and from the work sites daily. This will be assessed (based on distance to site and accessibility) once TAF locations are determined. TAF locations will be within reasonable distance to work sites to reduce travel to and from the work site as well as subsequent fatigue.

Table 6.14.16 Percentage of Workforce Local and Non-Local for Construction and Operations

Worker Location	Const ¹		Oper ²	
	%	% Range	%	% Range
Local	10	5 - 15	50	45 - 55
Non-Local	90	85 - 95	50	45 - 55

Note: ¹ = Construction. ² = Operations. The number is the anticipated percentage of local or imported (FIFO) workforce in that phase at that location. Number in brackets is anticipated range. The percentage of local employees will depend upon workforce availability.

The construction phase will require more non-local workers due to the size of the workforce required, the specialty skills required, as well as the ability of the local workforce to meet labour demand. A higher percentage of locals are expected to be employed during operations, as the number of workers required is less and the duration of operations is longer term.

Santos would prefer to hire 100 % local for all areas and phases of the project but is aware that this is unlikely due to labour market supply, individual preferences and local skills availability. The assumptions in Table 6.14.16 are based on predicted workforce availability in the various CSG fields, and the likely sourcing of some contractor workforces undertaking certain aspects of the project.

6.14.5.2 Construction and Operation Workforce

Table 6.14.17 presents an estimate of the total construction and operation workforce in the CSG fields study area three CSG fields and Roma Centre from 2010 to 2034 (the life of the GLNG Project) required for the well numbers described in Section 3 of the EIS. Estimates are provided on a five year basis beyond 2014 due to the uncertainty of development plans and the associated workforce numbers. Note that this does not represent the total workforce who will be in the CSG fields study area at any given time, as the workers will be on different schedules and work rotations. In the CSG fields area, it is likely that approximately 50 % of the workforce will be on site at any one time, with slightly more on weekdays, and slightly less on weekends.

Section 6

Coal Seam Gas Fields Environmental Values and Management of Impacts

Table 6.14.17 Total CSG Field Study Area Workforce Numbers 2010 to 2034

Area	2010	2011	2012	2013	2014	2019	2024	2029	2034
Construction									
Compressor Construction	20	50	60	20	15	0	0	0	0
Drilling	266	180	200	80	130	153	153	153	153
General Field Construction	500	700	700	700	600	31	31	31	31
Operations									
Roma Centre	29	39	45	53	57	59	60	62	62
Roma CSG field	62	123	185	245	245	252	260	266	270
Fairview CSG field	137	198	258	320	320	335	344	339	339
Arcadia Valley CSG field	20	27	19	62	62	82	99	99	99
Total	1,034	1,317	1,467	1,480	1,429	912	947	950	954

Note: Due to the inaccuracies of estimating workforce numbers beyond 2014, estimates every five years are provided for that timeframe.

Based on the workforce numbers and estimates presented above, there will be a peak workforce of approximately 1,500 workers employed in the CSG fields study area and Roma Centre in 2013, before the workforce drops down to approximately 940 for the remainder of the project. Although the numbers provided appear to be exact numbers, they are approximations and are subject to change.

6.14.6 Potential Impacts and Mitigation Measures

Within the CSG fields the assessment of impacts on potentially directly affected people cannot be accurately defined as the location of CSG wells and their associated infrastructure is not known at this stage. The CSG fields study area is made up of small communities spread out across a vast agricultural area. Section 6.1 of the EIS outlines the tasks to be undertaken during Phases 1 and 2 of the project. During Phase 2, when more information will be known about the project footprint, Santos will in accordance with the protocols identify the landholders who will be specifically affected by the development of wells and associated infrastructure. Santos will liaise with them and those residing on the land whether they are tenants or family members.

The general farm activities in the CSG tables include mainly cultivation in some areas and grazing throughout most other areas. Roma is a mix of cultivation and grazing, predominantly grazing. Fairview is almost exclusively grazing, and Arcadia Valley is a similar mix to the Roma area. Part of the negotiations with landholders is discussing the placement of project infrastructure and this process will be ongoing as the project evolves.

At December 2008, Santos had agreements with 122 landholders (deed holders) across the entire CSG fields.

Santos currently is consulting and negotiating with other likely affected landholders in the CSG fields. This process will continue during the process of well planning. Once CSG fields plans and design details have been determined, Santos will negotiate land access and compensation agreements with those private landholders within the area of the petroleum authority directly impacted by the CSG fields activities in accordance with the *Petroleum Act 1923* (Petroleum Act) and *Petroleum and Gas (Safety and Production) Act 2004* (PG (S&P) Act).

Those landholders not impacted directly will receive further information through general public consultation.

Section 6

Coal Seam Gas Fields Environmental Values and Management of Impacts

There are several variables that have an on-going impact upon the socio-economic fabric of Roma and the CSG fields areas. These include climate variability and change (which influence the viability of the agricultural sector); the historical difficulties for rural centres in attracting and retaining staff in the service, education, health and government sectors; the movement of workers to higher paying jobs in other industry sectors, such as mining; and net migration from rural to urban environments.

Due to the current economic uncertainty, a prediction of the number of non-local employees who may move to the CSG fields over time will require too many unknown variables. This is because future markets (as well as individual choices and preferences) may move away from FIFO employment, or may gravitate further towards it. In order to address this issue with area communities, Santos will work closely with local governments to monitor the numbers of Santos employees and contractors' employees who decide to move to the CSG fields. This will allow both Santos and the various communities to respond to their changing needs and service requirements as the project evolves. As a result, the impact assessment only assesses the Roma field office against the community baseline and assumes that in other areas Santos will perform the continued monitoring mentioned above.

Santos will develop a social management plan with the SIA as a foundation. Santos will monitor social impacts associated with the project and work with local services and stakeholders to develop practical solutions. Unforeseen impacts will be identified through Santos' established consultation network and mitigated. This social management plan will allow Santos to mitigate negative social impacts, enhance positive impacts and update the management strategy as the project evolves.

6.14.6.1 Impact on Demographic Profile

As Roma town is proposed as a regional hub for Santos field activities, providing an increase of approximately 50 - 60 long-term positions to the local workforce, the major impacts will occur through demographic change in the town.

Table 6.14.18 lists some key medians and averages that characterise Roma's demographic profile.

Table 6.14.18 Selected Medians and Averages for Roma

Selected Medians and Averages	Values
Median age of persons (years) ¹	32
Median individual income (weekly) ²	\$545
Median family income (weekly) ³	\$1,188
Median household income (weekly) ⁴	\$1,047
Average household size (persons) ⁵	2.6

¹ excludes overseas visitors.

² are applicable to persons aged 15 years and over.

³ are applicable to occupied private dwellings. It excludes families where at least one member aged 15 years and over did not state an income and families where at least one member aged 15 years and over was temporarily absent on Census Night.

⁴ are applicable to occupied private dwellings being purchased and include dwellings being purchased under a rent/buy scheme. It excludes 'Visitors only' and 'Other not classifiable' households.

⁵ are applicable to the number of persons usually resident in occupied private dwellings. It includes partners, children, and co-tenants (in group households) who were temporarily absent on Census Night. A maximum of three temporary absentees can be counted in each household. It excludes 'Visitors only' and 'Other not classifiable' households.

Source: ABS, 2006

An examination of age cohorts indicates that Roma Regional Council has a young population, reflected in the median age of 32, with the town area having a younger age profile than the surrounding rural area. Since Roma is the regional service centre, the median incomes are reflective of the services sectors established in town (see Table 6.14.18). As such, this median age is not expected to be impacted significantly as it is anticipated that the project workforce will fit the same demographic.

In order to better assess the potential impact of the additional residential workforce on the community, two scenarios have been developed:

Section 6

Coal Seam Gas Fields Environmental Values and Management of Impacts

- Scenario 1 - 100 % hiring from outside the community; and
- Scenario 2 - 100 % hiring from inside the community.

It is worth noting that since Roma's median incomes are the highest in the area and similar to those throughout the State, a substantial increase in median incomes is not anticipated because of the relatively small percentage increase (1.5 %) in the number of workers, notwithstanding that they will generally receive higher wages. Santos is proposing 54 positions in a regional council with 6,675 people in the labour force and an unemployment rate of 2.4 % based on 2006 census data.

In Scenario 1, the population of Roma will increase each year by the following amount from 2010 to 2014, assuming each new hire had a family size of 2.6 as is currently the case in Roma (rounding all numbers up to nearest whole number):

- 2010: 23 people;
- 2011: 26 people;
- 2012: 16 people;
- 2013: 20 people; and
- 2014: 11 people.

Over seven years of hiring, Roma will experience a population increase of 141 people (including the 45 from 2008 and 2009), if all Roma office staff were hired from outside the community and were accompanied by an average size family of 2.6 people. Given that from 1997 to 2007 Roma grew annually by 38 people on average, this increase in population from the Santos workforce is approximately 50 % of the normal community growth rate; however, this is not anticipated to be a significant impact since it will increase the six year annual growth rate in Roma from 0.7 % to approximately 1.0 %, which is still within a manageable growth range for the community.

The growth for 2010 was calculated assuming Santos' hiring targets for 2008 and 2009 were met prior to project approval for other Santos activities underway in the area. This scenario puts in perspective the scale of a population increase in Roma as a result of the project. It is unlikely that Santos will hire only non-local workers, particularly with those skills already present in the community, and given Santos' commitment to employ locally first. This scenario could therefore only occur if nobody with suitable skills in Roma applied for a position with Santos at their Roma office.

In Scenario 2, there could be two extremes. In one instance, the movement of employees within the community could create new vacancies for other employees to be promoted or gain new skills. As people move, the gaps need to be filled. These vacancies could be filled by personnel from other regions. In this situation, Santos' use of local labour actually results in a net increase in the population as new employees take up roles in the Roma community. However, the negative aspect to this scenario is where those businesses losing staff to Santos cannot find adequate skills replacements, which may affect their ability to survive. The social impact under this scenario is a decrease in services available to the community.

6.14.6.2 Impact on Employment

Santos' policy aim is to employ locals wherever possible, and it will implement a five days on, two days off roster where practicable to provide opportunities for locals, while monitoring any impact that this may have on existing local employers. The GLNG Project expects to create 54 positions in Roma in the first five years. Santos has approximately ten employees in their Roma field office currently and intends to increase that number to 17 by the end of 2009. Based on anticipated workforce requirements for the Roma office, Santos will require additional staff of approximately eight people per year from January 2009 to December 2013, as well as an additional four in 2014, assuming the project is approved and starts by 2010. The employment opportunities and their required skills match those already available in the Roma community and surrounding area as follows (percentage of Roma workforce employed by industry with total number of individuals in brackets):

- Transport, postal and warehousing: 5.6 % (190);

Section 6

Coal Seam Gas Fields Environmental Values and Management of Impacts

- Administrative and support services: 1.9 % (66);
- Public administration and safety: 9.7 % (332);
- Education and training: 7.4 % (252); and
- Professional, scientific and technical services: 3.7 % (128).

Based on the employment opportunities, it is possible that local businesses and government agencies may lose employees to Santos. The mobility of the local workforce was identified by numerous individuals and organisations interviewed in the site assessments (pers. comm., Garvie, 2008) (pers. comm., Hosking, 2008). Many government departments, local businesses and service providers identified the difficulty in attracting employees to Roma, as well as the difficulty in retaining them at the end of their contract. Additionally, it is normal to lose employees to other businesses and industry in Roma, which has prompted some employers to sponsor 457 visa workers to fill positions. Some concern has been expressed by Roma stakeholders that Santos may also sponsor 457 visa workers rather than employing locally. However, Santos policy will only countenance this for engaging people with skills not available locally.

It should be noted that if Roma services and businesses lost employees to Santos but were successful in recruiting people from outside the area to fill their vacancies, the population would actually increase by a similar amount to Scenario 1. Area unemployment figures suggest that local businesses and services will likely have to recruit employees from outside the area to fill vacancies. For more information on the impact on the regional labour market and impacts by occupational groupings see Section 6.15 of this EIS.

6.14.6.3 Impact on Income and Cost of Living

Overall, the cost of living in Roma, as indicated by the May 2006 Index of Retail Prices published by the Queensland Office of Economic and Statistical Research (OESR, 2006), is approximately 4.6 % lower than Brisbane. This is influenced significantly by the cost of housing, which is 23 % lower than Brisbane, while the index for groceries and tobacco is 1.6 % higher than Brisbane. The project is not expected to alter this relativity, as there will be a modest increase in families, building up over a number of years. While living expenses are not expected to reduce the expanded size of the local market, both from locals and supply to TAFs, may mean an enhanced selection of goods to purchase.

6.14.6.4 Impact on Housing and Accommodation

The GLNG Project is expected to have minimal impact on the existing and forecast accommodation requirements of Roma and the surrounding region. The majority of the construction workforce (90 %) is expected to be sourced from outside of the local area. These workers will stay in TAFs in the CSG fields during their roster and then leave the area to return home after their roster.

Local construction workers are assumed to have existing accommodation arrangements.

During operations, Santos estimates that 50 % of the workforce will already reside in communities within the region. Non-local workers will stay in TAFs during their roster therefore not affecting residential accommodation in the local area.

Santos intends that the non-local CSG fields workforce housed in TAFs will remain isolated from the area communities, with limited interaction. This will reduce the potential for negative social impacts, as well as potential positive economic impacts. Santos will adopt local procurement policies in order to enhance economic benefit to the area businesses. Santos will maintain ongoing dialogue with businesses and key stakeholders as to the level of interaction between the CSG fields workforce housed in TAFs and the communities as the project evolves and all parties become more accustomed to each other's presence.

6.14.6.5 Impact on Health, Emergency Services and Education

As the non-local construction and operations workforces will be housed in TAFs located in the CSG fields, the potential of this workforce to impact upon local health services is expected to be low, since first aid

Section 6

Coal Seam Gas Fields Environmental Values and Management of Impacts

services on site will be provided. In cases of emergency, workers may require the use of local services, but medical services at the TAF should be sufficient for most minor injuries and accidents. These emergency situations are anticipated to be rare as a result of Santos' health and safety policies promoting workplace safety as a priority. In the case of an emergency incident beyond the capabilities of the onsite first aid services, Santos will implement an emergency response plan that may call on local services if appropriate to the situation, but that will rely substantially on outside service providers. More information on SES, Royal Flying Doctor Service and ambulance is provided below.

In Roma, construction and operations workers moving into the area with school age children could increase demand for school places; however, the number of new students is likely to be minimal and manageable. An increase in local skills has been identified as a project benefit to the area (pers. comm., D. Roche, 2008). Santos will maintain contact with local educational institutions to monitor student enrolment patterns. Early notification for locals of business and employment opportunities was identified in consultation. This will also allow time for service providers to train locals for certain skill requirements, either in partnership with Santos or independently. Particular attention to children recently graduating from school, business owners and entry level / unemployed people being targeted for training, especially business training was encouraged by regional council staff (pers. comm., T. Klein and N. Ward, 2008).

Santos has designed an apprenticeship program which is focused on recruiting and retaining local potential human capital from a diverse talent pool and subsequently providing regional and corporate benefits. The successful program is proposed to be implemented in Queensland, specifically in the Roma and Fairview districts with the continued primary goal of providing permanent jobs for fully-trained apprentices.

Benefits of the current program initiated in 2006 are considerable and include:

- Significant cost savings on HR recruitment and induction processes and, work lost to contractors due to human capital constraints;
- Greater utilisation of resources as staff turnover decreases; and
- Enhanced professional reputation and competitive advantage resulting from public award associated recognition.

The apprenticeship will encompass nationally recognised and accredited training and on-the-job work over a period of up to four years via full-time, part-time or school-based means. Roma based and regionally established GoldenWest Employment Solutions (GW) has been sourced as a potential provider to oversee and manage the regional Program which will include providing hands-on and relevant ongoing support to apprentices, conducting standard administrative and HR business in relation to management of apprentices, coordinating training through a supervised registered training organisation and providing regular workplace visits among other defined services. An internal Apprentice Manager has been appointed by Santos to support apprentices in their role and further develop relations with GW.

Santos has recognised the vast talent pool for sourcing apprentices and intends to employ high school students (school based apprentices), school leavers, mature age (mid career apprentices) and/or apprentices who have been unable to complete their trade. Apprentices training in key industries experiencing skill shortages will be given access to the Fast-Track apprenticeship program. It is intended that apprenticeship salaries are based at the same level as the Santos award. Santos proposes to extend this training/recruitment philosophy to Traineeships as the company becomes the preferred employer within the Eastern Queensland region.

Where government rebates are applicable, Santos has recommended that the funds be reinvested in the region through either (i) a local community fund, (ii) the high schools from which apprentices are sourced or (iii) other apprenticeships/traineeships with a regional focus e.g. agriculture or horticulture.

Regional, community and business benefits include:

- Customer focus by quality staff reflecting the Santos work ethos;
- Enabling Production North to grow without human capital constraints;

Section 6

Coal Seam Gas Fields Environmental Values and Management of Impacts

- Increased business growth and profits; and
- Positive impact on local community through employment from abovementioned talent pool.

Santos is also considering:

- Extending the Santos Apprenticeship program to Eastern Queensland;
- Targeting school leavers in the first instance to source initial apprentices;
- Option (iii) is utilised with regard to reinvesting government rebates are reinvested into local apprenticeships/traineeships; and
- Support is given to propose the introduction of Traineeships utilising a similar approach.

Roma Regional Council indicated that training opportunities in Roma will be a bonus, and programs targeting Indigenous people in particular because there is a higher propensity to want to remain in the community amongst the Indigenous population (pers. comm., T. Klein and N. Ward, 2008). For Indigenous training opportunities see Section 6.14.7.2.

6.14.6.6 Impact on Community Facilities and Services

As Roma is relatively well provided with community facilities, the addition of approximately 150 locals is not expected to impose any unmanageable strain on the existing facilities. As the major base for Santos CSG operations, it is in Santos' interests to make a contribution to facility development to ensure that the quality of services and facilities is maintained, as it is a factor in attracting and retaining a skilled workforce to a regional location. Since the majority of the workforce will be housed in TAFs throughout the CSG fields, they are not anticipated to add increased strain on the local services. TAFs will be constructed with their own facilities and services for the workers to reduce reliance on existing community facilities and services. There may be occasions when the use of local facilities or services is required by workers, but this is not expected to be very often or have a significant impact.

6.14.6.7 Impact on Community Values and Lifestyles

From a demographic perspective, the development of the CSG fields will enhance the socio-economic stability of the region by providing long term, remunerated employment in the immediate area. Without additional non-agricultural development in the area, current trends suggest Roma Regional Council and other rural councils in the project area may eventually experience the rural decline that is evident in much of central Queensland.

The introduction of several TAFs to the area could establish another sub-community; FIFO workers. The dynamics of this sub-community and its relation to the other sub-communities in the CSG fields will be monitored by Santos and the regional councils as the project evolves. Since the FIFO workers are not housed in the communities in the area and will be provided with on site facilities and services, these workers will not have a significant negative impact on the community values and lifestyle. Given the history of the oil and gas industry in the area, and the current activities already underway in the area, the project is likely to maintain the current status quo in the area. Furthermore, Roma has displayed resilience to changes as evident in the constant inflow and outflow of temporary contract workers, mainly in government and services, as well as oil and gas. The project workforce is to be situated primarily in TAFs, which would result in some interaction in the community, but not significant impacts due to the separation. Most interaction would be through transit through the communities to the TAFs or incidental works requiring passage through or to communities. This sort of interaction is already occurring in the area, and will potentially be an increase in frequency rather than a new occurrence, thus not negatively affecting the local culture.

The project may have a beneficial effect on this culture by better integrating the project workforce into the community, as they will tend to be more specialised and CSG industry focussed and could be expected to have a longer-term employment perspective and to have a lower turnover rate. This could occur because the project will employ people locally, as well as non-locally. Since they share common employment and will work together, there is a higher degree of likelihood they could socialise together. Therefore the

Section 6

Coal Seam Gas Fields Environmental Values and Management of Impacts

project workforce could in effect act as a bridge between the two sub-communities (local permanent residents and local temporary residents as identified through site assessments), thus potentially allowing for greater interaction.

The proximity of the communities in the CSG fields and their access to Roma via main roads enhances the services available to those in rural areas. These factors indicate that there will be capacity in the community to meet the demands generated by any project-induced population increase.

The changing national employment situation, as a result of the global financial crisis and the consequent downturn in the resources sector, may result in an increase in the number of potential employees from outside the CSG fields who may be prepared to stay longer if there is a high level of job security in the CSG sector.

The majority of potential effects from the field activities themselves will be experienced by directly effected landholders with farms and homesteads throughout the area. Since Santos is negotiating directly with these landholders, and the details of these negotiations are confidential, they are not included in the social impact assessment (SIA). Santos has ongoing dialogue and negotiations with likely affected landholders in the CSG fields. This dialogue will continue until the location of project infrastructure and associated impacts are better defined. Once CSG fields plans and design details have been determined (based on exploration results), those not impacted will become part of the general public consultation, while those directly or indirectly impacted will be negotiated with to reach a settlement.

In order to maximise local gains, Santos prefers to employ locally first when possible and will encourage their employees to move to (or stay in) the Roma Regional Council area if employed in the CSG field. Further dialogue between Santos, the Roma Regional Council and local service providers will help the community identify and monitor their ability to attract and retain skilled persons for the area, which was seen by many Roma residents and opinion leaders as the key to strengthening their community (pers. comm., M. Weathered, 2008) (pers. comm., L Waldron and P Bacon, 2008) (pers. comm., D Goddard, 2008).

6.14.7 Indigenous Social Component

The baseline profile for the Indigenous population was assessed differently to the rest of the SIA to better depict the traditional settlement patterns and to capture the diversity of circumstances across the CSG fields. Indigenous people are represented in the area population at approximately twice the level of Indigenous representation in the Queensland population, and the population exhibits a significantly younger age profile. In relation to economic security, the income of Indigenous individuals was slightly less than the Queensland median income level for Indigenous individuals. Indigenous household median incomes indicated a higher proportion in the mid-income ranges than non-indigenous households in the area. Indigenous employment was higher in the service industry sectors, and dominated by the labouring occupational category. Indigenous unemployment is generally three to four times higher than non-indigenous unemployment. Indigenous people are significantly more likely to rent housing and to depend on the State housing authority.

Education and health status combine to give an indication of the level of vulnerability to which the population is subject. Indigenous people are moderately less likely to have completed Year 12 than the non-indigenous population. In relation to health, Indigenous people in all areas are disproportionately over-represented in the high socio-economic disadvantage cohort, with major causes of death and illness being stroke, chronic heart disease, diabetes and suicide.

6.14.7.1 Potential Impacts

The following tables summarise the potential social impacts to the Indigenous communities from the CSG development. The impacts are discussed for each phase of the project, including a pre-construction phase encompassing the EIS process.

Section 6

Coal Seam Gas Fields Environmental Values and Management of Impacts

Table 6.14.19 Potential Indigenous Impacts for CSG Fields

Pre-construction	Construction	Operations
<ul style="list-style-type: none"> Inter-family and inter-group stress induced by negotiations for Indigenous Land Use Agreements (ILUAs) over the pipeline route and Cultural Heritage Management Plan (CHMPs) over the CSG fields, pipeline and LNG facility areas Concerns regarding the protection of significant sites, even where these are not known with certainty 	<ul style="list-style-type: none"> Potential impacts on cultural heritage to be managed through the CHMP negotiated Social friction due to the presence of a large number of construction workers, some of whom could have potential attitudes that are less tolerant of Indigenous people Inability to secure employment opportunities due to lack of job readiness (addressed through Santos Aboriginal Engagement policy (AEP)) Impaired ability to access private rental and home ownership market 	<ul style="list-style-type: none"> Potential impacts on cultural heritage to be managed through the CHMP negotiated Inability to secure employment opportunities due to lack of job readiness (addressed through Santos AEP) Impaired ability to access private rental and home ownership market

6.14.7.2 Impact Mitigation Measures

Potential social impacts on Indigenous persons in the GLNG Project area will be minimised by the Santos Aboriginal Engagement Plan (AEP). Under this plan, Santos envisages that by 2010 its engagement with Aboriginal peoples will be regarded as representing 'leading practice', characterised by:

- Effective integration of Aboriginal issues within all aspects of the Santos organisation;
- An established dialogue process with Aboriginal people that reduces risk to both the company and Aboriginal people; and
- Operations contributing to economic opportunity for Aboriginal peoples.

Within the AEP, the approach to cultural heritage impact management is based on a process of prior survey clearance, rather than continual intensive monitoring which is expensive and which has been found to not necessarily deliver effective protection of cultural heritage. In relation to Native Title, under the AEP Santos aims to engage and negotiate with the native title parties with the aim of creating innovative solutions that account for Aboriginal priorities while preserving commercial objectives.

With regard to employment and training, the AEP strategy indicates that Santos will:

- Use its funds to partner with government to achieve significant employment outcomes, and to link with the Aboriginal employment covenant (AEC) program;
- Work in collaboration with contractors through the Santos contractor Aboriginal training and employment scheme (SCATES) which is being developed and which will apply nationally, and which is expected to be operational in Queensland by mid 2009;
- Support vocational and work readiness training linking to mainstream job vacancies with Santos and SCATES partners; and
- Provide on-going mentoring and other support to facilitate high levels of retention among the Aboriginal workforce.

Pre-Construction

During the pre-construction stage of the project, Santos will manage any concerns amongst Indigenous people through the provision of information on a timely basis and in an appropriate format. It will do this by implementing the following measures to address the identified potential impacts on Aboriginal people:

- Provide adequate resources to undertake negotiation for the ILUAs and CHMPs effectively and in an inclusive manner; and

Section 6

Coal Seam Gas Fields Environmental Values and Management of Impacts

- Establish a dialogue with Indigenous groups covering potential issues of concern and development opportunities. This will be done through the implementation of a comprehensive and professional consultation program during the EIS process and which will continue on an on-going basis.

Construction and operations

During the construction and operations stages, Santos will manage the potential impacts through implementation of the following measures:

- Maintenance of consultation on issues of importance with Indigenous people, centred on the effective implementation of the Santos AEP;
- Through its employee induction program, ensure that construction and operations workers attain a high level of awareness of the social environment in the project area, including issues of importance to Indigenous residents and native title holders; and
- The effective implementation of CHMPs and compliance with Santos standards and procedures (in particular EHS 11 Indigenous Cultural Heritage Management (for Australian Operations) Revision 3, and the Procedure for the management of Indigenous Cultural Heritage Sites (2007)).

Refer to Appendix Z for more information on the Indigenous Social component.

6.14.8 Cumulative Impacts

Section 1 identifies other CSG development projects planned for the surrounding region. Some of these projects are up to 100 km from the GLNG Project CSG fields areas and some may be within the GLNG Project future development (FD) area. There is limited information available as to the planned development of those projects or the quantity and timing of the development of the wells or associated infrastructure; however, a qualitative assessment can be made of the possible cumulative impacts.

The primary cumulative effect of the CSG fields development will be the effect on landholders. The stresses and other issues of land negotiations can prove difficult for some landholders and their families. Not all petroleum leases are aligned with surface property boundaries and some large properties can have several different petroleum leases. The potential for multiple companies approaching the same landholders is possible, and the cumulative effects of these negotiations could be of concern to individual landholders and their families. Santos will continue to consult landholders while working with government and other industry groups to determine policies and strategies to limit such occurrences, as well as the resultant stresses.

Another social impact from the cumulative effects of other projects in the CSG fields is the negative publicity from one project becoming an industry standard in the public's opinion. In other words, the public not wanting to differentiate one company's activities from the next or being able to differentiate with the information available. This is already evident, with stakeholders at public events and community meetings confusing statements from different companies, as well as past and current practices.

Where practicable, Santos will work with government and other producers to minimise the risk.

From a population change and community demographics perspective, the cumulative effects of several companies operating in the area at once are low. This is because most projects will likely build TAFs for their construction and operations workforces who will operate on a FIFO basis as is current standard procedure in the industry.

There is a potential cumulative impact on the use of local services depending on where other potential projects house their workforce and their policies on the level of interaction with the local communities. This could potentially impact on health, education, and other social services and infrastructure.

Table 6.14.20 provides a summary of potential social impacts and mitigation measures for the CSG fields.

Section 6

Coal Seam Gas Fields Environmental Values and Management of Impacts

Table 6.14.20 Potential Social Impacts and Mitigation Measures

Aspect	Potential Impact	Mitigation Measures	Objective
Construction, Operation & Decommissioning			
Employment	Provide employment opportunities locally. May further result in poaching of local skilled labour.	<ul style="list-style-type: none"> • Prioritise local employment over non-local employment where practicable • Improve local skill levels through investment in skills development and training. • Monitor recruitment from the local community, including information on previous place of employment. • Develop measures to address worker transition impacts. 	<p>Optimise local employment benefits of the project.</p> <p>Assist in improving local and regional employment opportunities and develop the skill level of the local community.</p>
Housing and Accommodation	<p>The increased demand for housing imposed by the Santos locally-based workforce may raise the level of rents and price of housing making it less affordable to locals who are on minimum wages.</p> <p>Some project employees may be temporarily housed in local hotels and motels.</p>	<ul style="list-style-type: none"> • Majority of construction workers to stay in TAF. • Use of local accommodation limited to hotels and motels for small number of senior staff and contractors as required. • Coordinate use with accommodation owners when possible. • Engage in community consultation on accommodation. 	<p>Minimise adverse impact on local accommodation.</p> <p>Maintain housing affordability and availability.</p>
Health	Increased population will mean greater demand and less access to quality health services.	<ul style="list-style-type: none"> • Liaise with local health services providers to outline likely service requirements prior to commencing activity in the area. • Develop policy on procurement of local suppliers and inventory of self identified suppliers. • Monitor the satisfaction of the community with the provision of health services. 	<p>Optimise use of local health services and facilities.</p> <p>Minimise any impacts on the surrounding area.</p>
Education and	Increased use of local	<ul style="list-style-type: none"> • Liaison with Education Queensland. 	

Section 6

Coal Seam Gas Fields Environmental Values and Management of Impacts

Aspect	Potential Impact	Mitigation Measures	Objective
Training	education and training facilities/vacancies whereby there is limited availability and insufficiency.	<p>Development of skills training program (refer to employment aspect).</p> <ul style="list-style-type: none"> Implement stakeholder engagement and community consultation strategy to plan local services requirements. 	<p>Optimise use of local educational and training services and facilities.</p> <p>Maximise education opportunities.</p>
Emergency Services	Increased use of local emergency services so that services are unable to cope with additional demand.	<ul style="list-style-type: none"> Inform local emergency services prior to commencing activity in the area. 	To minimise any impacts on the surrounding area and maintain or temporarily improve emergency services.
Local facilities and services	Insufficient local benefit form project or adverse impact of excessive demand.	<ul style="list-style-type: none"> Execute continuous program of community consultation and engagement to plan local procurement requirements with business owners and local stakeholders Allow local businesses to bid on potential contracts Develop a policy regarding local procurement of suppliers. 	To utilise local services and facilities without affecting the normal supply to the local community.
Community Values, Lifestyle	Reduction/loss of community values and lifestyle. Project does not meet community expectations.	<ul style="list-style-type: none"> Execute continuous program of community consultation and stakeholder engagement on project issues. Undertake project sponsorship/community support program. 	Santos behaviour and actions meet the expectations of the community.
Landholder activity conflict	Landholder uncertainty may be induced within the tenement area due to the precise location of wells and other infrastructure being undetermined. Effective property management will be difficult to implement.	<ul style="list-style-type: none"> Implementation of a leading practice landholder consultation and engagement program to address landholder concerns in relation to ongoing CSG field development planning. This program will address issues relating to: <ul style="list-style-type: none"> Explanation of the CSG extraction process Plain English interpretation of land access legislation and guidelines Land access protocols acceptable to the 	Minimise landholder uncertainty.

Section 6

Coal Seam Gas Fields Environmental Values and Management of Impacts

Aspect	Potential Impact	Mitigation Measures	Objective
		<ul style="list-style-type: none"> landholder - Location of infrastructure - Land diminution and compensation negotiations 	
Local infrastructure capacity -Roma airport -Roma town water supply	Addition of a large number of FIFO workers transiting Roma airport may put a strain on the existing facilities. Dewatering activities may negatively impact on existing bores supplying water to the Roma township area.	<ul style="list-style-type: none"> • Monitor the passenger movements in and out of the Roma airport. • Collaboratively develop strategies with local government and private airlines to address impacts that arise from an increased flow of workers in and out of the area. • Undertake a technical analysis of any potential interference with the town borefield as part of gas well location investigations • Monitor groundwater usage and levels in the vicinity of town water supply bores 	Optimise local infrastructure capacity utilisation. Minimise any impacts on the community use of local infrastructure.

Section 6**Coal Seam Gas Fields Environmental Values and Management of Impacts****6.14.9 Summary of Findings**

The majority of potential social impacts in the CSG fields will be experienced by individual landholders with associated project infrastructure situated on their property. Santos has been negotiating with landholders in accordance with Queensland regulations and will continue to do so once project infrastructure locations are determined. Part of the location process is directly associated with landholder negotiations to determine preferred locations and mitigation measures. This is an ongoing process that is anticipated to occur throughout the life of the project as new wells are located and drilled, and old wells are decommissioned.

Santos intends to house its construction and operations workforces in TAFs throughout the CSG fields. These TAFs will be established within reasonable driving distance of active areas in order to situate workers as close to their work areas as possible. TAF locations will be part of the landholder negotiation process unless situated on property owned by Santos. All CSG fields workers will be housed in the TAFs for their work rotation. This will reduce road traffic and disturbances to the general public. Roma airport will likely be the central transportation point for workers entering and exiting the field area. Santos will establish an operations office in Roma ramping up to approximately 50 staff after the first five years of operations. These staff will have an impact on Roma since they will be permanently based in Roma. Most of the potential social impacts are anticipated to be positive for the area including:

- Increased economic and employment opportunity;
- Economic diversification;
- Population diversification; and
- Increased ability to attract and retain professionals.

The potential project impacts will remain consistent through construction and operations because these two phases occur simultaneously throughout the life of the project. Santos will implement policies for local hiring and procurement of goods whenever possible to maximise local benefits.

Santos will develop a social management plan with the SIA as a foundation. Santos will monitor social impacts associated with the project and work with local services and stakeholders to develop practical solutions. Unforeseen impacts will be identified through Santos' established consultation network and mitigated. This social management plan will allow Santos to mitigate negative social impacts, enhance positive impacts and update the management strategy as the project evolves.