

Section 7

Gas Transmission Pipeline Environmental Values and Management of Impacts

7.14 Social and Community

7.14.1 Introduction

This section summarises the outcomes of the assessment undertaken and presented in Appendix Z of the EIS.

For the purpose of the SIA, the term gas transmission pipeline will refer to the gas transmission pipeline corridor. For a definition of the corridor, refer to the project description (Section 3). The pipeline corridor and council boundaries are illustrated in Figures 7.14.1 and 7.14.2. Santos continues to negotiate access and compensation with individual landholders directly impacted by the gas transmission pipeline in accordance with the *Petroleum and Gas (Production and Safety) Act 2004* (PG (P&S) Act). As the nature of these negotiations is confidential, they are not included in this assessment; however, general community sentiments and general information collected by Santos land managers was included to better assess the project effects on the landholders. Santos has committed to ongoing communication with all stakeholders throughout all the project phases.

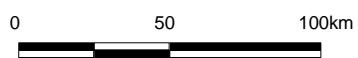
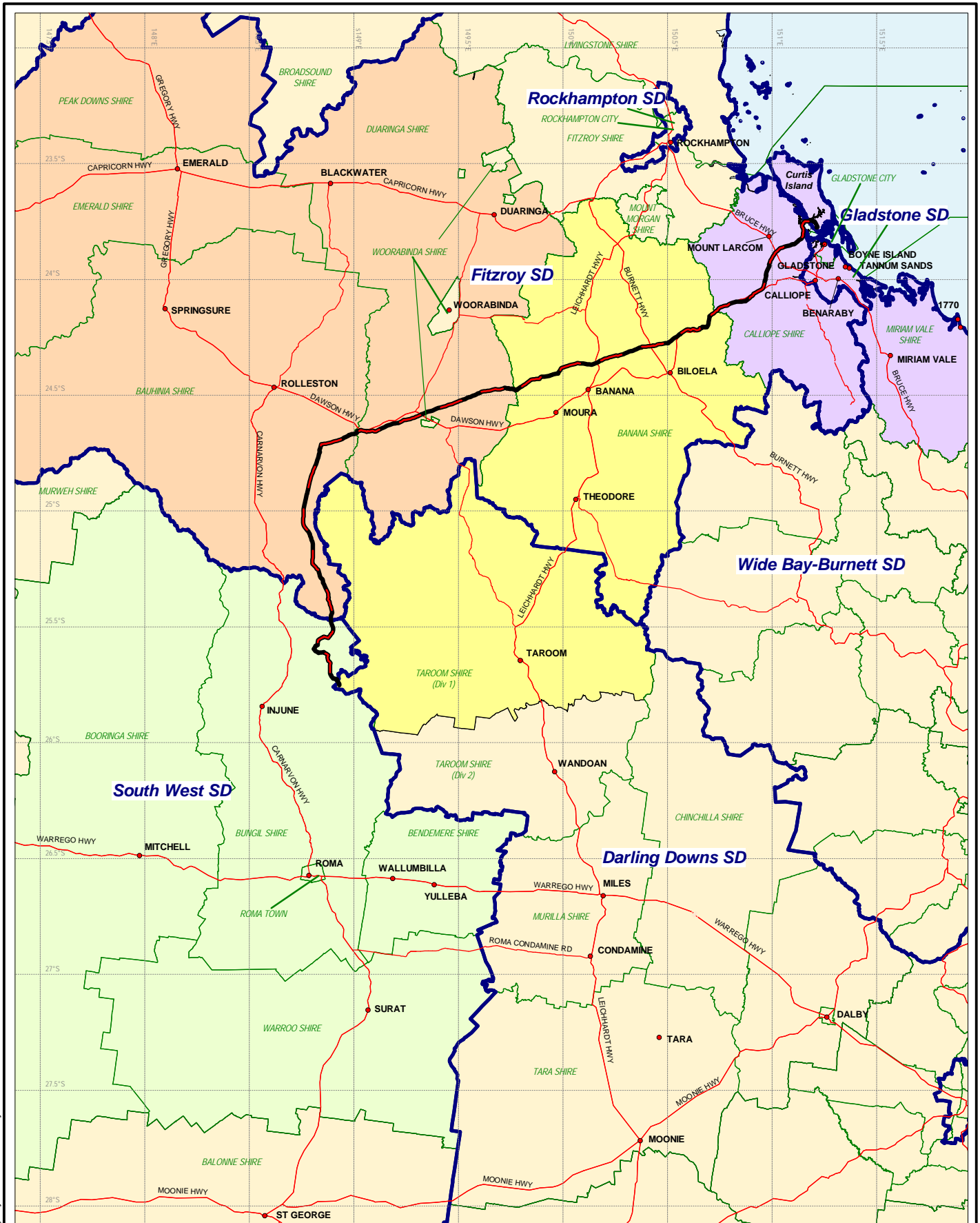
Gas transmission pipeline construction is not anticipated to have broad regional effects. The assessment presents high level data to better portray the rural nature of the area.

Table 7.14.1 outlines the local government areas (LGAs) along the gas transmission pipeline route. The areas shown in bold are included in the gas transmission pipeline baseline assessment to avoid duplication of information as the other LGAs are discussed in the Sections 6.14 and 8.14. The entire gas transmission pipeline corridor is examined when assessing impacts. Construction and operations are not anticipated to have broad regional effects, therefore the baseline assessment presents high level data to better portray the rural nature of the area.

Table 7.14.1 Gas Transmission Pipeline Local Government Areas

Study Area	Statistical Division (SD)	New LGA (post-amalgamation)	Old LGA (pre-amalgamation)	Old LGA (not directly affected)
Pipeline	South West SD	Roma Regional Council	Bungil Shire Council	Bendemere Shire Council
			-	Booringa Shire Council
			-	Warroo Shire Council
			-	Roma Town Council
	Darling Downs SD	Banana Shire Council	Taroom (Division 1) Shire Council*	-
	Fitzroy SD	Central Highlands Regional Council	Banana Shire Council	-
			Bauhinia Shire Council	Emerald Shire Council
			Duaringa Shire Council	Peak Downs Shire Council
			Calliope Shire Council	Miriam Vale Shire Council
			-	Gladstone Calliope Aerodrome Board
			-	Gladstone City Council

* Note: Taroom Shire Council is not split between Division 1 and 2 in the old LGA data sets. Taroom Division 2 is now part of Dalby Regional Council.



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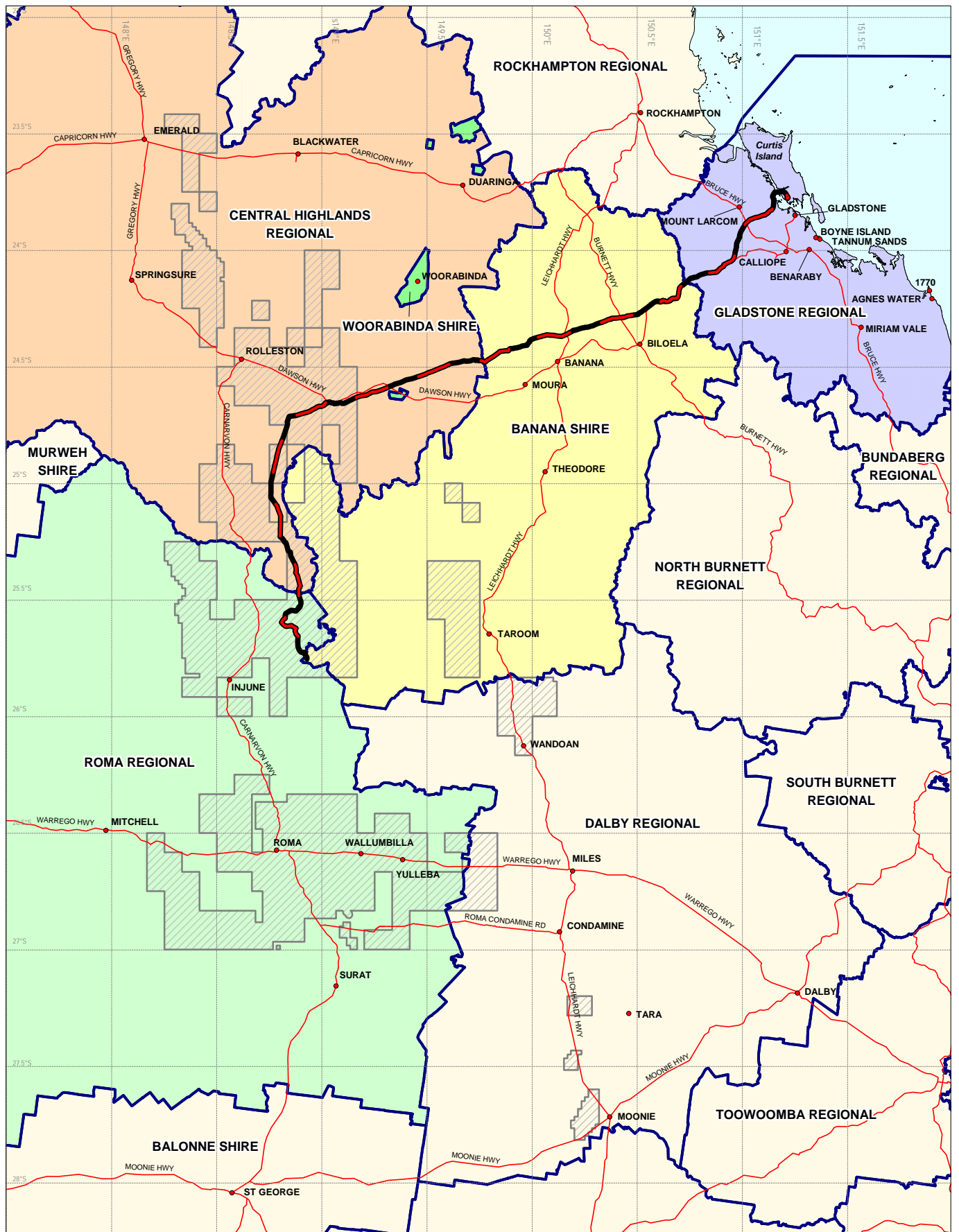
- Post March 2008 Calliope Shire
- Post March 2008 Banana Shire
- Post March 2008 Central Highlands Regional Shire
- Post March 2008 Roma Regional Shire

- Statistical Sub Division Boundary
- Pre March 2008 Shire Boundary
- Gas Transmission Pipeline

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

Client 	Project <p style="text-align: center;">GLADSTONE LNG PROJECT ENVIRONMENTAL IMPACT STATEMENT</p>	Title <p style="text-align: center;">SIA STUDY AREAS GAS TRANSMISSION PIPELINE</p>						
	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 33%;">Drawn: VH</td> <td style="width: 33%;">Approved: JB</td> <td style="width: 33%;">Date: 13-05-2008</td> </tr> <tr> <td>Job No: 4262 6220</td> <td colspan="2">File No: 42626220-g-852.wor</td> </tr> </table>	Drawn: VH	Approved: JB	Date: 13-05-2008	Job No: 4262 6220	File No: 42626220-g-852.wor		Figure: 7.14.1
Drawn: VH	Approved: JB	Date: 13-05-2008						
Job No: 4262 6220	File No: 42626220-g-852.wor							

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

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 	Project GLADSTONE LNG PROJECT ENVIRONMENTAL IMPACT STATEMENT	Title COUNCIL AMALGAMATIONS MARCH 2008	
	Drawn: LL	Approved: JB	Date: 13-05-2009
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Figure: 7.14.2			A4

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7.14.2 Methodology

A similar methodology was used in all three study areas and comprised a number of data collection and analysis steps. For details of the social assessment methodology, see Appendix Z.

7.14.3 Regulatory Framework

The SIA has been developed based on the requirements of the ToR. The SIA framework has also been developed around the *Sustainable Resource Communities Policy – social impact assessment in the mining and petroleum industries* (September 2008) and best practice guidelines and principles. Section 6.14.3 of the EIS provides further detail of the regulatory framework developed for the EIS.

7.14.4 Existing Regional Social Context

The gas transmission pipeline travels through the Bauhinia, Duinga, Bungil and Banana shires, which are sparsely populated (as shown in Figure 7.14.3). There are limited built up areas throughout the region, with populations ranging from a few hundred to a few thousand. Listed below are the larger communities and their old shire name, with their new council in parentheses:

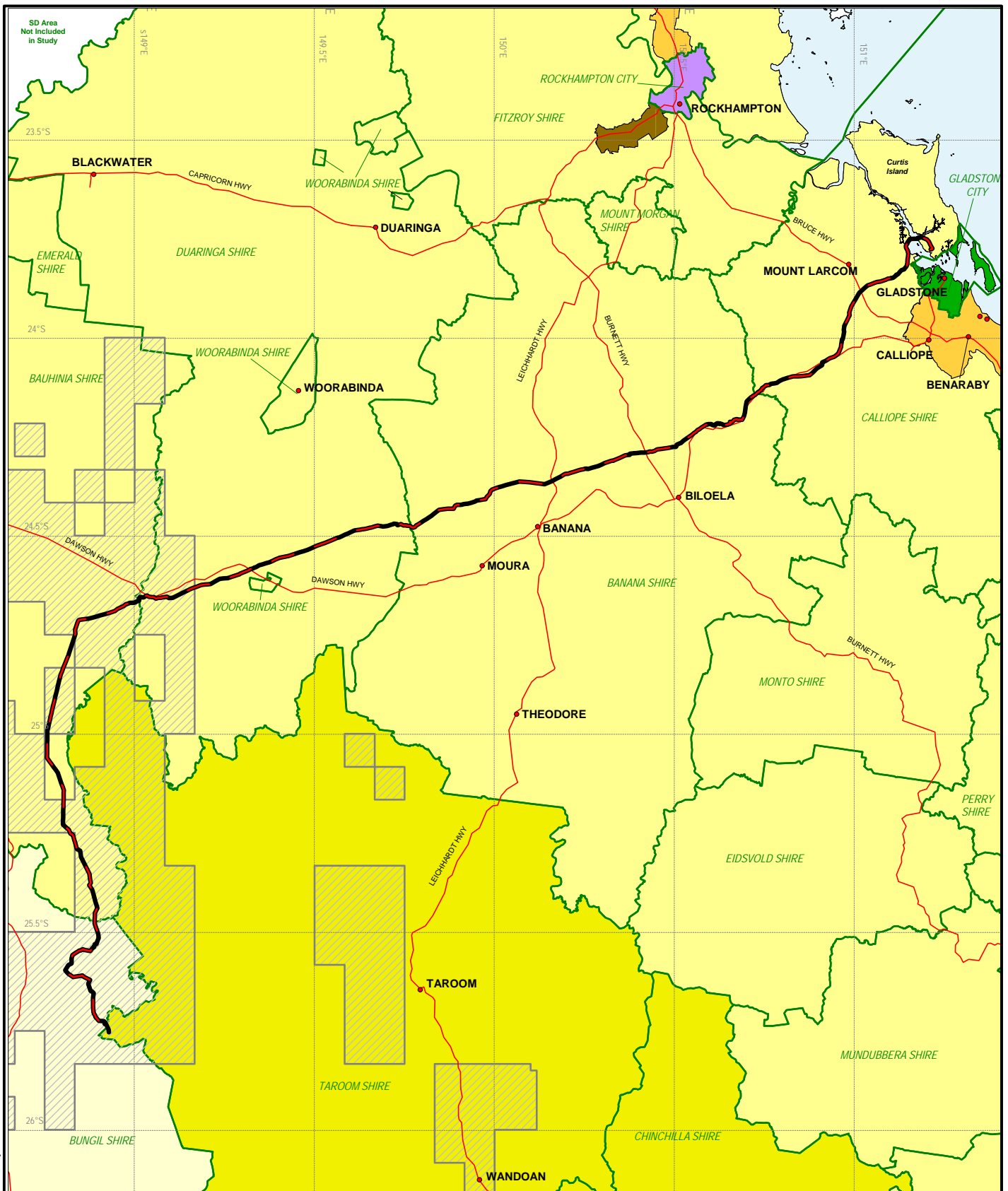
- Taroom in Taroom Shire (now Banana Shire Council);
- Biluela and Moura in Banana Shire Council (still Banana Shire Council);
- Duinga in Duinga Shire (now Central Highlands Regional Council);
- Rolleston and Springsure in Bauhinia Shire (now Central Highlands Regional Council);
- Emerald in Emerald Shire (now Central Highlands Regional Council); and
- Woorabinda in Woorabinda Aboriginal Shire Council.

Additional communities in the general area of the gas transmission pipeline corridor include Theodore and Banana. Bungil Shire's baseline is addressed in Section 6.14 in order to reduce duplication, as it is now a part of Roma Regional Council. Due to the nature of impact likely to be felt from the construction and operation of the gas transmission pipeline and the proximity of the communities to the corridor, most of the social assessment focuses on the overall region, with greater analysis of the specific areas conducted where relevant. Therefore, the focus for the gas transmission pipeline is on Banana Shire Council and Central Highlands Regional Council.

The social impact on Indigenous communities is discussed in Section 7.14.7.

7.14.4.1 Demographic Profile

As at 30 June 2007, the estimated resident population of Banana Shire Council was 15,420 persons, which equates to 0.4 % of the State's population (see Table 7.14.2). The annual average rate of change in population in Banana Shire Council between 30 June 2002 and 30 June 2007 was -0.4 % compared with 2.4 % for the State. Central Highlands Regional Council consisted of 28,672 persons for the same time period, which equates to 0.7 % of the State's population. The annual average rate of change in population in Central Highlands Regional Council between 30 June 2002 and 30 June 2007 was 2.3 %, compared with 2.4 % for the State (OESR, 2008a).



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- 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)

- SD Data Map Sourced**
- 1
 - 3 & 4
 - 2
 - 3
 - 3
 - 3

- Population Density Per Square KM**
- 0-1
 - 0-7
 - 0-72
 - 7-32
 - 32-46
 - 46-179
 - 179-312

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

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;">POPULATION DENSITY</p>	
	<p>Drawn: LL</p>	<p>Approved: JB</p>	<p>Date: 13-05-2009</p>	<p>Figure : 7.14.3</p>
<p>Job No: 4262 6220</p>		<p>File No: 42626220-g-854.wor</p>		<p>Rev:B</p> <p style="text-align: center;">A4</p>

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Table 7.14.2 Estimated resident population by local government area, Banana Shire Council and Central Highlands Regional Council, 2002, 2006, and 2007^(a)

Local government area	Estimated residential population at 30 June, 2007			Change	
	2002	2006	2007	2002 to 2007 ^(b)	2006 to 2007
	Number			%	%
Banana Shire Council	15,754	15,643	15,420	-0.4	-1.4
Central Highlands Regional Council	25,627	28,256	28,672	2.3	1.5
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) is based on concorded 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: Australian Bureau of Statistics, Regional Population Growth (Cat no. 3218.0) and unpublished data.

The Planning Information and Forecasting Unit (PIFU) projects population growth, from 2006 to 2026, of 5.5 % for Banana Shire Council and 52.4 % for Central Highlands Regional Council (see Table 7.14.3). Queensland as a whole is projected to grow by 36.5 % over the same period. These figures highlight a difference between the two councils, although the Central Highlands growth rate does not reflect likely growth around the proposed gas transmission pipeline corridor. The majority of Central Highlands Regional Council projected population growth is likely to occur in the north of the council, as a result of increased coal activity in the Bowen Basin. This is evident by the current population density in the northern part of the region, as opposed to the southern part.

The relatively slow growth in Banana Shire Council is a reflection of the changing demographics in the traditional agricultural areas. Lack of alternate industries has left these areas susceptible to drought, and less insulated to economic downturn because of a lack of economic diversification. As a result, growth in Banana Shire Council is more a reflection of the slightly higher natural regeneration rate than migration to the area.

Table 7.14.3 Banana Shire Council, Central Highlands Regional Shire and Queensland Population Projections 2006–2026¹

Area	Year									
	2006		2011		2016		2021		2026	
	No.	%	No.	%	No.	%	No.	%	No.	%
Banana Shire Council	15,634	1.2	15,830	0.2	15,987	0.2	16,182	0.2	16,495	0.4
Central Highlands Regional Shire	28,256	2.7	32,359	2.7	35,765	2.0	39,264	1.9	43,053	1.9
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 e, f.

When the Banana Shire Council and Central Highlands Regional Council boundaries are assessed at their pre-amalgamation LGA boundaries; the general demographic profile from the 2006 census highlights the population distribution. The gas transmission pipeline corridor passes through southern Bauhinia and Duaringa shires, away from the majority of the population, which is located further north.

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Emerald Shire and Peak Downs Shire are not impacted by any gas transmission pipeline activities, and are accessed by a separate east-west highway system. Emerald and Peak Downs will not be included in the gas transmission pipeline baseline as it is unlikely that these areas will experience potential impacts from the project; however, the data is included as a part of the region demographics.

Table 7.14.4 General Demographics Profile of Local Government Areas

Area*	2006 Population	Males		Females		Born overseas	
		No.	%	No.	%	No.	%
Fitzroy SD	188,403	96,125	51.0	92,278	49.0	15,365	8.2
Bauhinia (S)	2,190	1,211	55.3	979	44.7	85	3.9
Duaringa (S)	6,744	3,722	55.2	3,022	44.8	435	6.5
Emerald (S)	14,354	7,545	52.6	6,809	47.4	1,476	10.3
Peak Downs (S)	3,188	1,767	55.4	1,421	44.6	216	6.8
Banana (S)	13,361	6,962	52.1	6,399	47.9	859	6.4
Queensland	3,904,534	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.

The majority of Banana Shire's population is situated close to the gas transmission pipeline corridor. As seen in Table 7.14.4, there are approximately 13,361 people living in the shire, with the majority within 25 km of the proposed corridor. The corridor purposely transects an area to the north of the Banana Shire population to reduce the impact on the local population (see Figure 7.14.1).

Population figures, based on the pre-amalgamation shire boundaries for shires within the gas transmission pipeline corridor, indicate an over-representation of males. This is a reflection of the dominance of agriculture and mining within these communities (see Table 7.14.4). With the exception of Bauhinia and Emerald Shires, there is a slightly lower percentage of people born overseas compared to the rest of Queensland. The significance of mining activity and associated industry in Emerald explains the higher representation of overseas born individuals compared to the other shires. Bauhinia has a much lower representation of overseas born individuals, similar to the proportional representation of the shires assessed in the CSG fields.

In Banana Shire Council in June 2007, 23.9 % of persons were aged 0 to 14 years, 65.3 % were aged 15 to 64 years (combined from Table 7.14.5 to reflect working aged demographic) and 10.8 % were aged 65 years and over. In Central Highlands Regional Council at the same time, 24.7 % of persons were aged 0 to 14 years, 69.8 % were aged 15 to 64 years and 5.4 % were aged 65 years and over (OESR, 2008a). Banana Shire had a greater percentage of children and people aged 25 - 44 than Queensland as a whole, as did Central Highlands Regional Council (which also had very few people aged 65+, reflecting the predominance of the mining industry in the Bowen Basin).

Negotiations with landholders to date have identified approximately 220 individuals named on 87 title deeds for properties along the gas transmission pipeline corridor, with approximately 120 additional family members residing on these properties (pers. comm., D. Wood, 2008). There were also 56 additional non-family workers identified on these properties. These workers often work on a seasonal basis. This information is based on interviews with approximately 95 % of landholders along the gas transmission pipeline corridor. There may be minor revisions to the numbers identified should portions of the gas transmission pipeline corridor change.

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Table 7.14.5 Estimated resident population by age groups (years) by local government area, Banana Shire Council and Central Highlands 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.	%
Banana Shire Council	3,687	23.9	1,820	11.8	4,562	29.6	3,685	23.9	1,667	10.8
Central Highlands Regional Council	7,070	24.7	4,085	14.2	9,648	33.6	6,317	22.0	1,552	5.4
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 the 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).

7.14.4.2 Employment

Section 7.15 of the EIS provides a more detailed economic assessment for the gas transmission pipeline corridor; however, some economic detail is included in Appendix Z to better contextualise the economic profile in relation to the social environment.

Table 7.14.6 shows employment characteristics of shires within the study area. Throughout the potentially affected areas of the gas transmission pipeline corridor, the unemployment rate is less than half the State average (see Table 7.14.6). Participation rates ranged from 63.3 % to 76.5 %, well above the Queensland average of 61.8 %.

Table 7.14.6 Gas Transmission Pipeline General Employment Characteristics

	Total population 2006	Persons 15+		Total labour force	Part. Rate ¹	Persons employed		Un-empl. Rate ²
	No.	No.	%*	No.	%	No.	%	%
Fitzroy (SD)	188,403	145,008	77.0	91,753	63.3	87,627	95.5	4.5
Bauhinia (S)	2,190	1,688	77.1	1,291	76.5	1,265	98.0	2.0
Duaringa (S)	6,744	5,023	74.5	3,671	73.1	3,593	97.9	2.1
Banana (S)	13,361	10,131	75.8	7,057	69.7	6,889	97.6	2.4
Queensland	3,904,534	3,097,995	79.3	1,915,947	61.8	1,824,997	95.3	4.7

Note: SD = statistical division and S = shire.

* Percentage of total population based on place of usual residence.

¹ Participation Rate: The percentage of the population aged 15 - 64 who participate in the workforce and are considered employable at any time. Participation rate is calculated by dividing the total labour force by all persons aged between 15 and 64, as is expressed as a percentage.

² Unemployment Rate: The percentage of the workforce who is able to work but unable to find employment.

Source: ABS Basic Community profiles, 2006 census data.

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The median weekly income levels for individuals and households along the pipeline corridor also reflect the type of activity predominant in the area, with mining and agriculture, forestry and fishing sector activities raising the levels above the Queensland median level (see Table 7.14.7). The lower cost of living, compared to the major regional and coastal centres, points to higher disposable incomes in these areas.

Table 7.14.7 Bauhinia Shire, Duaringa Shire and Banana Shire Median Weekly Income

Area	Individuals 15+	Household
Bauhinia (S)	\$557	\$1,056
Duaringa (S)	\$755	\$1,782
Banana (S)	\$528	\$1,143
Queensland	\$476	\$1,033

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

Tables 7.14.8 to 7.14.10 show employment in the corridor by industry sector. The agriculture, forestry and fishing sector is the dominant industry in Bauhinia, with mining dominant in Duaringa. Banana has a mix of agriculture, forestry, fishing, manufacturing, electricity, gas, water, waste services and mining. See Section 7.15 of the EIS for more details.

7.14.4.3 Health, Emergency Services and Education

A brief overview of the project's relationship with the local services is provided. The focus was on the construction phase of the project, as the gas transmission pipeline operations workforce is expected to be less than ten individuals along the entire corridor, a number that will not be expected to impose a significant increase in demand for services in the area.

Health

There are five medical and health facilities in the surrounding area of the pipeline:

Hospital	Distance to Main Referral Hospital
Biloela Hospital	Rockhampton Hospital (150 km);
Moura Hospital	Rockhampton Hospital (200 km);
Theodore Hospital	Rockhampton Hospital (225 km);
Springsure Hospital	Richmond Health Centre (330 km); and
Woorabinda Hospital	Rockhampton Hospital (150 km).

One of the major hospitals in the corridor is the Biloela Hospital, which has 20 beds and a current utilisation of 50 %. There is a total staff of approximately 30 nurses. If the hospital could not manage an emergency, they would send patients to:

- Rockhampton;
- Moura; or
- Mount Morgan.

A small number of incidents on mining sites in the past have resulted in Biloela Hospital staff travelling to site, as the situation warranted (pers. comm., Biloela Hospital, 2008).

In addition to the Biloela Hospital, there are 23 other health care services and providers in the area, ranging from dentists and mental health to aged care and community care services.

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Table 7.14.8 Pipeline 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 & food services
	No.	%*	%*	%*	%*	%*	%*	%*	%*
Bauhinia (S)	1,484	36.3	10.0	3.1	0.6	5.8	2.5	5.7	4.6
Duarina (S)	4,407	9.4	30.0	3.7	0.3	15.0	2.2	4.9	5.7
Banana (S)	7,551	15.3	17.4	7.5	3.9	9.0	2.9	7.7	4.8
Queensland	1,840,887	3.4	1.7	9.9	1.0	9.0	3.9	11.6	7.0

Table 7.14.9 Pipeline Employment by Industry 2006 – Part 2

Area	Transport, postal & warehousing	Information media & telecommunications	Financial & insurance services	Rental, hiring & real estate services	Professional, scientific & technical services	Administrative & support services
	%*	%*	%*	%*	%*	%*
Bauhinia (S)	4.2	0.3	0.5	0.6	2.4	0.9
Duarina (S)	6.3	0.1	0.5	1.3	2.2	2.3
Banana (S)	3.5	0.4	1.1	1.1	2.6	2.8
Queensland	5.1	1.4	2.9	2.1	5.6	3.0

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Table 7.14.10 Pipeline Employment by Industry 2006 – Part 3

Area	Public administration & safety	Education & training	Health care & social assistance	Arts & recreation services	Other services
	%*	%*	%*	%*	%*
Bauhinia (S)	6.7	4.9	4.2	0.2	3.4
Duaringa (S)	2.6	4.5	2.5	0.2	3.4
Banana (S)	3.4	5.5	5.7	0.1	2.7
Queensland	6.7	7.6	10.2	1.4	3.7

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

Source: ABS time series profiles, 2006 census data

The Moura Hospital has a total number of 10 beds; however, there is access to 4 additional beds if necessary. Currently the Moura Hospital has the capacity to manage eight beds. Two medical superintendents are available for emergencies; however, the hospital must access other hospitals in order to use some of their equipment (e.g. anaesthetic equipment). If the hospital reaches capacity, they would send patients to Biloela hospital, which can be reached within 45 minutes by ambulance (pers. comm., Moura Hospital, 2008).

In addition, there are nine health care services and providers in the area, and three support services offered from the Moura hospital. Services include a retirement village, community health centre, dentist, two chemists, therapy specialists, social worker and further care services.

The Theodore Hospital can provide a total of 13 beds, although 6 beds are currently used. During a shift, two nurses are on duty. In the case of an emergency, the hospital could mobilise one medical superintendent, one surgery assistant and ten nurses in an appropriate time. If they cannot manage with the number of patients or extent of the injuries, they would transfer them to Moura, Biloela or Rockhampton (pers. comm., Theodore Hospital, 2008).

The Springsure Hospital has 12 acute and ten long stay beds; however, there are 4 beds in use at the moment. During a shift, 2 to 4 nurses are on duty, with the total number of nurses being approximately 30. In the case of an emergency, there is a doctor available in town. If more people are injured than can be treated, they would be transferred to the Emerald hospital (pers. comm., Springsure Hospital, 2008).

The smallest capacity hospital in the vicinity of the gas transmission pipeline corridor is the Woorabinda hospital. The hospital has eight beds. During a shift, there are one to three nurses on duty. The hospital is unable to maintain extended services or acute treatment. If the hospital reached full capacity, they would transfer patients to Blackwater, Emerald or Rockhampton using the flying doctors or an ambulance (pers. comm., Woorabinda Hospital, 2008).

The company contracted to construct the pipeline will provide their own self contained medical staff, as is customary for pipeline construction in remote or rural areas. As such, there is a low likelihood of use by the construction workforce of the local health services.

State Emergency Services

The Central Region Rockhampton Area State Emergency Services (SES) office is located in Rockhampton. This regional office covers the areas within the corridor, including:

- Banana SES Unit;
- Bauhinia SES Unit;
- Duaringa SES Unit; and
- Emerald SES Unit.

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Royal Flying Doctor Service

The Royal Flying Doctor Service (RFDS) is available to remote communities in the area. There are eight bases scattered throughout Queensland, with the closest being Brisbane, Bundaberg, Charleville and Rockhampton. Flying doctors and emergency evacuations are determined by the emergency dispatch, which then coordinate regional resources to deal with the evacuations. Medical emergencies requiring patient extraction, or situations where the TAF medical services cannot handle the emergency could require use of the RFDS or local ambulance services.

Queensland Ambulance Service (QAS)

Queensland Ambulance Service (QAS) presence along the pipeline corridor is covered by the Central Region ambulance, which extends from the Whitsunday Shire to the south of Miriam Vale and west to the South Australian border. The region covers approximately 440,000 km² and serves a regional population of approximately 320,000 people. The majority of the gas transmission pipeline corridor passes through this region. The service works closely with rescue helicopters based at Rockhampton and Mackay and with the RFDS fixed wing aircraft, also based at Rockhampton (Department of Emergency Services, 2008).

Fire and Police Stations

The Central Region has 37 urban fire stations and an operational staff of 161 full time and 451 auxiliary firefighters. Auxiliary stations can be found in Biloela, Moura, Springsure, Thangool, Taroom, Wandoan and Theodore. The Region's Fire Communications Centre is in Rockhampton (Department of Emergency Services, 2008). The TAF and work sites will have firefighting equipment as part of the health and safety procedures; however, should a serious fire occur, local authorities will be notified.

Along the pipeline corridor, the police operate from police stations in Biloela, Moura, Springsure, Theodore, Woorabinda and Daringa.

Education

The educational profile of the gas transmission pipeline region was examined at a post-secondary level, to give an indication of the potential for the project to employ locals for specific roles such as machine operators and labourers during construction. During operations, the workforce is anticipated to be less than ten individuals inspecting and maintaining the gas transmission pipeline, so no effect on the local schools is anticipated.

Table 7.14.11 shows the level of education attained by persons over 15 years in the corridor. The majority of people have Certificate III and IV, although a large portion did not adequately describe or did not state their level of education.

7.14.4.4 Recreation, Sport and Leisure

The following section is a brief overview of the recreational, sporting, cultural and leisure services and facilities in the vicinity of the pipeline corridor. A more detailed assessment of these services and facilities, including detailed lists of organisations and venues, can be found in Appendix Z. The project is not anticipated to use or impact on these facilities and services.

Recreational facilities and activities

As the pipeline corridor includes mostly rural settlements, the need for recreation areas is less than in industrial towns; however, there are five parks and gardens in Moura and there is one park in Biloela.

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Cultural facilities

Cultural facilities in the gas transmission pipeline corridor are limited. However, people have access to libraries in Banana, Biloela and Moura. Theatre/performance art venues and museums are available in Biloela and Moura. Biloela has three main cultural events in its local agenda throughout the year.

Leisure facilities

Banana, Moura and Biloela all have Community Hall facilities. Furthermore, there are Youth Centres and Scouts/Guides huts in Biloela and Moura.

A local Shopping centre can be found in Biloela. Additional supermarkets are located in Biloela and Moura.

Sporting facilities

In Banana, there is a sporting ground. Moura has a swimming pool, skate park, bowls club, 18 sport clubs and additional activities like Shotokan Karate. There are 13 sporting facilities in Biloela, ranging from an aquatic centre to Magavalis Sports Complex. These facilities in Biloela are used by 25 associated sport clubs.

7.14.4.5 Community facilities and services

A brief summary of the community facilities and services available in the vicinity of the pipeline corridor is presented in this section. A more detailed assessment of these services and facilities, including detailed lists of organisations and venues, can be found in Appendix Z.

Child Care

There are 11 child care facilities in 5 communities in the Central Queensland Region relevant to the project. These facilities have a combined capacity of 383. There were places available in all the communities and it was indicated that more capacity could occur in many places if required. Most facilities interviewed said that many area residents had at least one stay-at-home parent, which resulted in a lower requirement for child care facilities in those communities.

Places of Worship

There are 16 places of worship within the communities of Woorabinda, Biloela, Moura, Rolleston and Springsure in the vicinity of the pipeline corridor. All of these places of worship were for the Christian faith.

Government Services

There are a range of government services available in the vicinity of the pipeline corridor, with the majority in Biloela. The level of services available reflects the size of the local population as well as the proximity to larger centres like Gladstone and Rockhampton, where additional services are available. The local government amalgamations of March 2008 have changed the structure and delivery of services. An assessment of the effectiveness of these services was not conducted, as it was too early to accurately assess.

Recreational Areas and Facilities

In rural communities like those along the pipeline corridor, sports and recreation are also seen as an integral part of maintaining social interaction and civic pride. These activities help maintain social activity, as well as help build community character.

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Much of the pipeline corridor intentionally bypasses populated areas and environmentally sensitive areas to minimise potential impacts. As a result, most of the population along the corridor will experience little to no direct impacts. There is some potential for minor disruptions to their daily lives as a result of construction activities.

As the length of the gas transmission pipeline is approximately 435 km, the assessment of community values, vitality, lifestyle and wellbeing for communities along the corridor is diverse. Starting from the CSG fields, for the most part the communities (both identifiable towns and areas of dispersed settlement such as the Arcadia Valley) tend to be more representative of the rural values associated with the CSG fields. For the last quarter section of the corridor as the gas transmission pipeline nears the coast, there is a gradual transition from a rural community orientation to a more urban orientation. Although the corridor remains within the former Calliope Shire (now Gladstone Regional Council), the properties become smaller and therefore more numerous in this area (see Section 7.11 of this EIS for more detail on property size changes). This is a reflection of housing and property values in this area (which have rapidly increased in the first decade of the 21st century), as well as a more urbanised approach to planning, although the area is still considered predominantly rural in nature.

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Table 7.14.11 Pipeline 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.	%	No.
Fitzroy SD	1,449	2.2	1,270	1.9	10,480	15.8	6,550	9.9	1,787	2.7	24,462	36.8	1,786	2.7	28,035	42.2	18,670	28.1	66,454
Bauhinia (S)	7	1.2	9	1.5	95	16.0	85	14.4	20	3.4	217	36.7	26	4.4	263	44.4	133	22.5	592
Duarina (S)	22	1.0	22	1.0	292	12.7	191	8.3	71	3.1	926	40.3	65	2.8	1,062	46.2	708	30.8	2,297
Banana (S)	57	1.4	76	1.8	647	15.6	424	10.2	139	3.4	1,614	38.9	115	2.8	1,868	45.1	1,072	25.9	4,144
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.

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For the gas transmission pipeline corridor, the changes in land use along the corridor have an effect on the local setting. In the Fairview area, the industry is predominantly beef, similar to that in the CSG fields. The Arcadia Valley is predominantly cultivation, before returning to mainly beef closer to Rolleston. The Moura area is predominantly beef, although cotton is quite common as well. This is continued through to Gladstone Regional Council, where the area becomes more urban and properties smaller as previously discussed. The properties are smaller with good quality soils and are therefore able to sustain small herds and cotton cultivation. The abundance of cattle rather than cultivation along the corridor is a reflection of the soil quality in various locations, as well as the topography and access to irrigation.

Throughout the majority of the gas transmission pipeline corridor, the population is classified as rural, with strong ties to family, the land and the community. There are few physical communities along the corridor, with the majority focussed around Moura. The pipeline corridor around Moura was situated north of the Dawson Highway in order to avoid the population build up there. At the western end, Arcadia Valley does not have a physical community centre; however, there is a sense of community in the valley, with similar feelings toward industry and community shared throughout. This is a good reflection of the community bond shared by many people living in the rural regions of Queensland.

There are various levels of social infrastructure and services in the area, with the majority being located in the major centres. People from the more remote or smaller communities (as well as those on homesteads and farms) are generally required to travel to these centres for many services. This has always been required in the region, being a part of the social fabric of neighbours looking after neighbours and a general self/family reliance for many people isolated from communities. Access can be difficult for some, particularly the poor and elderly with limited mobility or access to transportation. In the case of the elderly, the low numbers of people over 65 reflects the long-term trend of the elderly leaving the area for better access to services in the larger centres (see Table 7.14.5).

The area along the route has also experienced varying degrees of impact as a result of recent droughts up to present. This has resulted in many people leaving the area permanently, as well as children leaving for schooling or other opportunities outside the area and not returning. As a result, while much of Queensland is growing at a fairly reasonable pace, much of the gas transmission pipeline corridor populations are relatively stagnant or experiencing slight declines (see Table 7.14.3). Although the Central Highland area is projected to increase above the Queensland average to 2026, it is important to note that the majority of the population lives over 200 km north of the pipeline corridor and is not reflective of the population in the region adjacent to the gas transmission pipeline. The population adjacent to the pipeline corridor is experiencing more of the population changes associated with Banana Shire Council.

Many populations may be stagnant in number but experiencing the aging of their residents. Thus, in the next few generations they could experience rapid population declines as people move to retire or pass away with no population inflow or natural increase. This is a reality of much of the rural landscape being badly affected by the drought, combined with a changing societal trend toward urbanisation. The areas with greater diversity of industries (like Moura, which has cotton, cattle and coal) tend to be better insulated from negative change than the areas with single industries.

7.14.5 Pipeline Workforce

7.14.5.1 Assumptions

Table 7.14.12 presents the anticipated breakdown of workforce between local and non-local workers for each area of the project. The term "local" as it applies to the gas transmission pipeline refers to any individual who resides within the regional council areas in which the route traverses. Individuals from adjacent regional councils approximately 100 km from the route will also likely be considered as "local" due to the country Queensland lifestyle they share. Closer to the coast, people from Rockhampton Regional Council and Gladstone Regional Council will also be considered "local" as the gas transmission pipeline traverses the Gladstone Regional Council area on route to the LNG facility, and is in close proximity to the Rockhampton Regional Council area.

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However, as seen in Table 7.14.12, the majority of the construction workforce is anticipated to comprise non-local workers. Santos will engage a contractor to construct the pipeline, and these contractors require a specialised skilled workforce to undertake the work. In addition, unemployment is relatively low along the pipeline route and the population is not of sufficient size to meet the skill demands of the project. Construction is anticipated to commence in Gladstone and progress to Fairview in sequence along the route.

Non-local workers will be housed in temporary accommodation facilities (TAFs) on or near site while on shift. In many instances, local workers 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 7.14.12 Percentage of Construction Workforce - Local and Non-local Workers

Worker Location	Gas Transmission Pipeline Construction
Local	< 5 % (0 - 5 %)
Non-local	~ 100 % (95 - 100 %)

Note: The number is the anticipated percentage of local or non-local (FIFO) workforce in that phase at that location. The number in brackets is the anticipated range. The percentage of local employees will depend upon workforce availability.

A significant majority of the construction workforce is expected to be non-local workers due to the workforce numbers and skill level required. A higher percentage of locals are likely to be employed during operations, as the number of workers required is less and the duration of the work is longer term.

Santos would prefer to hire 100 % local for all areas of the project, but is aware that this is highly unlikely, due to labour market supply, individual preferences and local skills availability. The assumptions in Table 7.14.12 are based on predicted workforce availability in the various study areas, and the likely sourcing of some contractor workforces undertaking certain aspects of the project.

7.14.5.2 Construction Workforce

The construction workforce is anticipated to comprise approximately 1,000 individual's distributed over two to three main construction TAFs, and one or two satellite TAFs mid-way between the main workforce accommodation facilities. These TAFs will move along the route as the pipeline is constructed. Pipeline construction is anticipated to occur over an 18 - 24 month period.

The construction workforce will include personnel directly employed to construct the pipeline, plus transportation and support staff. The breakdown of occupational groupings by percentage of the overall workforce is presented in Figure 7.14.4.

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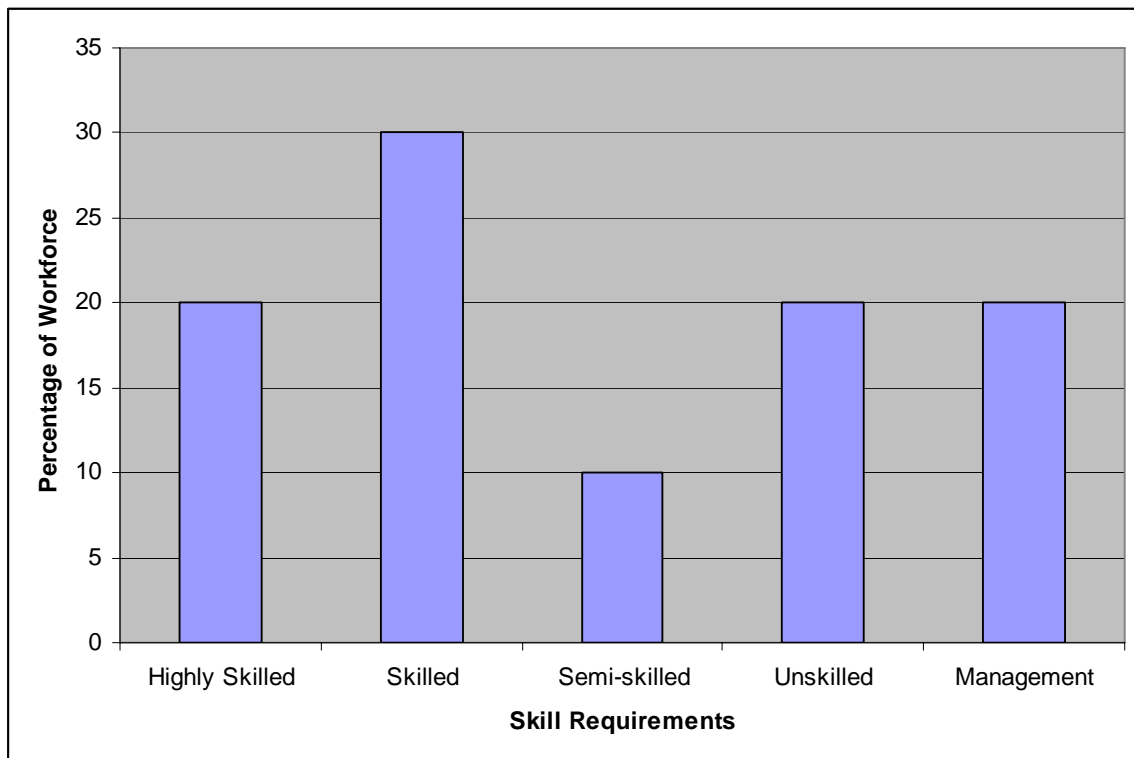


Figure 7.14.4 Pipeline Construction Workforce Numbers by Skill Level Required

Source: Santos

Some of the positions within each skill requirement are listed below as examples:

- Highly skilled:
 - Welders, electricians, x-ray technicians, etc.
- Skilled:
 - Plant equipment operators, haul truck drivers, earth-mover operators, etc.
- Semi-skilled:
 - Apprentices, traffic controllers, fork-lift operators, etc.
- Unskilled:
 - Cleaners, delivery drivers, general labourers, etc.
- Management/Office Staff:
 - Managers, engineers, professional staff, etc.

The workforce will need to be transported to site (likely FIFO and explain DIDO - bus) and will therefore be housed in the TAFs. Workers will likely be flown to Gladstone or Roma depending on which end of the ROW is being constructed at the time. Santos will transport workers to and from the TAFs will consist of four wheel drive (4WD) buses with a carrying capacity of 20 individuals. There is also the potential for workers to be transported via rail from Gladstone to Moura, though this option is still being explored.

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7.14.5.3 Operations Workforce

The operational workforce for the pipeline is anticipated to be 15 - 20 individuals. To capture any variation, for much of the report the operational workforce is recorded and assessed at less than 20. This crew will be charged with operational activities and maintenance. In the unlikely circumstance of a major event, major works may be required; however major works to the pipeline and its infrastructure are not anticipated to occur. Such works will require contractors, and is not regarded as part of the operational workforce.

7.14.6 Potential Impacts and Mitigation Measures

The potential social impacts are anticipated to occur during construction and (to a lesser extent) rehabilitation and decommissioning. Previous pipeline construction in 1989 along much of the same corridor as the gas transmission pipeline was considered in the assessment, including the apparent absence of long-term or cumulative social effects as a result. During operations, the workforce is anticipated to be less than ten individuals throughout the entire corridor, and therefore is not expected to be noticed above the normal background movements in the area. Therefore, for the purposes of this assessment, the focus is on the construction unless otherwise stated.

For the construction, a large component of the mitigation proposed is an effective communication strategy for the local communities and landholders. This strategy will be designed to properly inform the communities of the potential impacts or disruptions to their daily lives during times of activity, as well as the potential opportunities for employment and services. This will be conducted prior to construction as well as during construction, especially for the communities where construction will be passing through in a few months. This will allow people to better understand what is coming so they can plan around the activities as much as possible.

The general potential social impacts associated with construction are the inconvenience to people in the area and the effects on directly affected landholders. The former is an unavoidable impact that is not expected to be significant for the following reasons:

- The construction activities are anticipated to occur in any given location for only two to three months;
- Much of the corridor is away from the general population centres;
- Much of the corridor is away from the major transportation corridors; and
- Environment Management Plans (EMPs) (including traffic control, noise and dust suppression where practicable and scheduling certain events around community activities if possible) will be implemented to coordinate construction activities with daily community routines.

The latter is addressed in the landholder negotiations prior to construction. It is Santos' intention that access and compensation agreements with individual landholders will include specific landholder requirements to minimise to the extent reasonably practicable the impact of construction on landholder activities. Landholders and the general public were consulted as part of the stakeholder consultation program and their comments and concerns were included in the SIA. For more information on stakeholder consultation for the gas transmission pipeline see Section 9 of this EIS and Appendix E.

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.

7.14.6.1 Impact on Demographic Profile

Given that construction workers will be housed in TAFs (and therefore will not move into the communities along the corridor), there are no anticipated impacts on the study area's demographic profile.

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Santos' policy aim is to employ locals wherever possible. For the construction of the gas transmission pipeline, there may be opportunities for local employment for some components, like traffic controllers, graders, plant equipment operators, and general labourers. The exact numbers and types of employment opportunities for people in the corridor region will be dependent on the selected contractor requirements and in-house capabilities. Santos will encourage the selected contractor to employ locally whenever possible.

Unemployment levels for old shires within the councils were 0.6 % to 3.7 % in Roma Regional Council, 4.2 % to 5.4 % in the Gladstone area and 1.7 % to 2.4 % in the rural areas between (Bauhinia, Duaringa and Banana) according to the most recent data available. This indicates a fairly strong employment rate for the rural areas (including Roma Regional Council, which is less reliant on employment opportunities associated with the gas transmission pipeline) and an employment opportunity for those unemployed in the Gladstone Regional Council. Since the potential local employment opportunities are anticipated to be minor, there is not likely to be a measurable impact on local area employment figures associated with the gas transmission pipeline construction. For more information on the impact on the State and local labour market and impacts by occupational groupings see Section 6.15 of the EIS.

7.14.6.3 Impact on Income and Cost of Living

Since the construction activities are not static and will only be active in a specific area for a short duration, there is not likely to be an impact on the cost of living. The level of incomes of locals who successfully sought employment with the construction crews will likely increase in the short term, as the construction salaries are anticipated to be at or above the average incomes in the corridor (with the exception of Duaringa, which is already well above neighbouring regions mainly due to coal mining activities in the area). This may have an impact in some communities; however, as discussed in Section 7.14.6.2, the number of local residents hired is anticipated to be low.

7.14.6.4 Impact on Housing and Accommodation

There are expected to be little or no impacts on housing demand and supply associated with the gas transmission pipeline. The pipeline will not be in close proximity to any towns or urban settlements. Almost all gas transmission pipeline construction workers will be accommodated in a series of self sufficient TAFs erected along the gas transmission pipeline route. Small numbers of the construction team will stay in motel accommodation at towns along the route. The TAFs will comprise a main workforce accommodation facility and a fly workforce accommodation facility. Locations for these facilities will be determined closer to construction. The fly workforce accommodation facility will precede the main workforce accommodation facility, so once the main workforce accommodation facility moves to its new location further down the line, the fly workforce accommodation facility will pack up and move back in front of the main workforce accommodation facility. Due to the use of this common system in pipeline construction projects, no significant impacts on local housing and accommodation are anticipated.

The ongoing operational workforce accommodated along the pipeline route will be less than ten and will consequently have negligible influence on housing.

7.14.6.5 Impact on Health, Emergency Services and Education

First-aid facilities will be available at the work site and at TAFs. The facilities will have capacity to treat non-serious injuries and stabilise more serious injuries prior to transport to hospitals. Serious injuries will often be referred to larger hospitals including Gladstone, Rockhampton or Emerald hospitals. The workforce is not anticipated to have a significant demand on general health and medical services in the region.

Education impacts are not anticipated because of the short duration of the construction in any specific area. Additionally, no training facilities will be developed for the gas transmission pipeline because of the short duration of construction. Operations workers will be trained by Santos to monitor the pipeline.

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7.14.6.6 Impact on Community Facilities and Services

The TAFs will be self sufficient, including recreational facilities and full accommodation (including meals), so the workforce is not anticipated to have an impact on these services locally. Workers may occasionally venture into communities for the odd purchase, but this is not anticipated to negatively affect activities in the community. The economic activity associated with such activities will have a positive impact on local businesses, although this is not anticipated to be significant, due to the construction duration, workforce size and self contained TAFs.

7.14.6.7 Impact on Community Values and Lifestyles

There are minor to negligible impacts anticipated on the community values and lifestyle associated with the gas transmission pipeline construction due to the duration of construction, the small amount of time in any specific area, the housing of the workforce in TAFs and the minor local employment opportunities. Since the entire corridor is already predominantly blue collar industries, locals successfully securing employment opportunities with the project will not change community values or lifestyles.

7.14.7 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 study area. Indigenous people are represented in the area's 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 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 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 Indigenous population. In relation to health, Indigenous people 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.

7.14.7.1 Potential Impacts

Table 7.14.13 summarises the potential social impacts to the Indigenous population in the study area. The impacts are discussed within the matrix for each phase of the project, including a pre-construction phase which includes the EIS process. Santos will examine the potential impacts from decommissioning and closure closer to the event, to better assess the potential impacts and suitable mitigation strategies.

Table 7.14.13 Potential Indigenous Impacts for the Gas Transmission Pipeline

Spatial Boundary	Temporal Boundary		
	Pre-construction	Construction	Operations
CSG Fields North	<ul style="list-style-type: none"> Inter-family and inter-group stress induced by negotiations for Indigenous Land Use Agreements (ILUAs) and Cultural Heritage Management Plan (CHMPs) over the pipeline route areas. 	<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 with attitudes that are intolerant of Indigenous people. 	<ul style="list-style-type: none"> Potential impacts on cultural heritage to be managed through the CHMPs negotiated. Inability to secure employment opportunities due to

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Spatial Boundary	Temporal Boundary		
	Pre-construction	Construction	Operations
	<ul style="list-style-type: none"> Concerns concerning the protection of significant sites, even where these are not known with certainty. 	<ul style="list-style-type: none"> Inability to secure employment opportunities due to lack of job readiness (addressed through Santos Aboriginal Engagement policy). 	<ul style="list-style-type: none"> lack of job readiness (addressed through Santos Aboriginal Engagement policy).

Note: ILUA = Indigenous Land Use Agreement, CHMP = Cultural Heritage Management Plan

7.14.7.2 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'.

Refer to section 6.14.7.2 for mitigation measures which are applicable for the gas transmission pipeline as well.

7.14.8 Material by Rail Option

An option currently being assessed is that of transporting pipeline construction materials from Gladstone port to a laydown area along the right of way. The exact location and number of areas is yet to be determined. This option is being considered in order to reduce the potential risk of road accidents from transporting such materials by trucks. Moura has been identified as a possible end point for the rail option as it is the farthest rail point from Gladstone in the vicinity of the pipeline route. This rail option is discussed in Section 2 of the EIS and primarily addressed in detail Section 4 and Appendix J of this EIS.

This option will reduce the negative social impacts associated with increased traffic and safety risks from the transportation by trucks of materials. Proposed laydown areas will likely be located adjacent to, or in close proximity to the existing rail line, the public road network and the proposed pipeline ROW.

There is a potential for direct and flow-on employment opportunities associated with this option, although the numbers are anticipated to be minimal (see below).

- Potential employment opportunities with Gladstone Ports Corporation (GPC): likely less than ten;
- Potential employment opportunities with Queensland Rail (QR): likely less than ten;
- Potential employment opportunities with Santos at Moura storage and laydown area: likely 25 - 50; and
- Potential employment opportunities with Santos for the intermediate pipeline laydown areas: around 60 - 100 jobs (based on six to ten potential laydown areas requiring a maximum of ten people per site).

Based on the potential employment opportunities for this option, it is unlikely that there will be measurable social impacts associated with this option. There will likely be increased activities around the community of Moura as a result of this option but these are anticipated to be minimal. Santos' preference would be to construct any facilities on "brownfield" sites (e.g. former mining lease) away from towns in order to minimise disturbance to the local population and avoid disturbance to new ground.

Prior to the first quarter of 2009 Moura and the surrounding area were experiencing strong economic growth as a result of the mining boom in the Bowen Basin; however, the changing economic situation has had an impact on the area. The area has experienced increased unemployment rates (though unemployment levels in the Moura area have been below the Queensland average for many years). The employment opportunities associated with the rail option for Moura and area are therefore a positive social impact, and could help stabilise the local economy during the gas transmission pipeline construction phase. As a result, sourcing workers locally for the Moura facility may be more plausible than

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it was six months to a year prior to submission of this EIS. As with other components of this project, Santos would prefer to hire locally whenever possible. Employment opportunities associated with the pipeline construction are anticipated to last 12 to 24 months.

Santos will continue to consult with Banana Shire Council and Gladstone Regional Council on the project components as they evolve.

7.14.9 Cumulative Impacts

Section 1 identifies other proposed gas transmission pipelines associated with other potential CSG projects. There is limited information available as to the planned development or timing of these projects. However, a qualitative assessment can be made of the possible cumulative impacts.

The Queensland Government has advised that its preference is for the gas transmission pipelines for all LNG facilities proposed for Curtis Island to be located in a common pipeline corridor across the Gladstone State Development Area (GSDA), including the Port Curtis Crossing and Curtis Island pipeline sections to minimise potential impacts in this area.

These projects have potentially significant cumulative impacts for landholders, particularly if two or more pipelines are under construction at the same time over a similar route. The likelihood of two or more pipelines under construction in the same area is low. Based on public information this situation is most likely to occur in the area of the Yarwun Neck. It is expected that construction will be coordinated by the Queensland Government as part of its common user infrastructure corridor. This will minimise potential cumulative impacts to the community.

There will be minimal impacts to the general community from cumulative development due to the standard construction programs for the construction of pipelines expected to be applied by each project developer. This includes short duration of construction in a particular locations and the separation of the pipeline workforce from the community. The construction workforce will be largely sourced from outside of the local area. The workforce will mostly utilise facilities and services provided at the TAFs.

TAFs built for the project will be moved along the corridor as it advances and will be dismantled by the sub-contractor operating the facilities after construction is complete. The operational workforce is anticipated to be around 15 - 20 workers, and will not have a measurable cumulative effect on the community, regardless of what other developments occur in the area at the time.

It is expected that the other gas transmission pipeline development projects will include some or all of the proposed mitigation measures in relation to soils and land described in this section. By utilising the mitigation methods the expectation is the minimisation of the cumulative impacts on the receiving environment.

Table 7.14.14 provides a summary of potential social impacts and mitigation measures for the gas transmission pipeline.

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Table 7.14.14 Potential Social Impacts and Mitigation Measures

Aspect	Potential Impact	Mitigation Measures	Objective
Construction, Operation & Decommissioning			
Demographic Profile	No anticipated impact since workforce will be housed in TAF.	<ul style="list-style-type: none"> Prioritise local employment over non-local employment where practicable. 	To reduce likelihood of altering existing community profile.
Employment	Opportunity to reduce unemployment rate, particularly around the Gladstone end. Provide employment opportunities locally.	<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. 	To assist in improving local and regional employment opportunities and develop the skill level of the local community.
Income and Affordability	Increase in weekly incomes; Increase in cost of living.	<ul style="list-style-type: none"> Local employment priority where practicable 	To maximise income generation opportunities and limit increases in cost of living.
Housing and Accommodation	Some management and contractors may be temporarily housed in local hotels and motels.	<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. 	Maintain housing affordability and availability. Minimise adverse impact on local accommodation.
Health	Health services unable to cope with additional demand.	<ul style="list-style-type: none"> Inform local health services prior to commencing activity in the area. 	To minimise any impacts on the surrounding area.
Education and Training	Limited availability/insufficient education and training facilities/ vacancies.	<ul style="list-style-type: none"> Liaison with Education Queensland. Development of skills training program (refer to 	Maximise education opportunities.

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Aspect	Potential Impact	Mitigation Measures	Objective
		employment aspect).	
Emergency Services	Emergency services 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	No anticipated impact since workforce will be housed in TAF. Minimal use of local services, likely to the economic benefit of business owners.	<ul style="list-style-type: none"> May explore the potential to procure some supplies locally if possible. 	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"> Becoming an active member of community, supporting events promoting those community values during construction phase. Commit to a social monitoring and measuring program, grievance mechanism and community consultation strategy that will focus on project issues. 	Santos behaviour and actions meet the expectations of the community.

Section 7**Gas Transmission Pipeline Environmental Values and Management of Impacts****7.14.10 Summary of Findings**

The majority of potential social impacts occur to individual landholders along the right of way (RoW) for the pipeline during the construction phase of the project. Santos is addressing these potential impacts as part of the landholder negotiations process. Santos' proposed workforce housing demand cannot be supplied locally. As a result, the potential social impacts on the rest of the population are significantly reduced by Santos housing the entire construction workforce in a system of TAFs. Santos will establish three to four main TAFs (up to 600 people per facility) and two to three satellite TAFs (up to 400 people per facility) to house the construction workforce. These TAFs will be close to or adjacent to the ROW to minimise travel distances as well as interaction with the local population.

There is a potential for negative social interaction despite Santos' intentions to minimise negative social impacts. Santos will implement a zero tolerance policy for anti-social behaviour and negative social interaction in order to discourage such behaviour from Santos employees and contractors while on their work rotation. There is also the potential for positive social interaction and nominal economic opportunities from workers purchasing goods and services locally. This is likely to be low because the TAFs will be fully self sufficient including catering and entertainment services. As a result, the potential social interaction from the project is anticipated to be low.

Traffic and temporary disruptions to normal routines are expected to be the most likely potential social impacts associated with the project. Alternative options to reduce road traffic are being explored including transporting the majority of the pipeline components from Gladstone to Moura by rail. Santos will also implement internal safe driver training programs throughout the route for all employees and contractors. Santos will also work with local road safe programs to increase traffic awareness during the construction phase of the project. Disruptions to the normal flow of traffic are anticipated, and mitigated using standard construction traffic controls (see Section 4 Traffic and Transport of this EIS).

During operations, the workforce is anticipated to be less than 20, and will not have a noticeable effect on the community.

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.