

Australia Pacific LNG Project

Volume 2: Gas Fields

Chapter 20: Social Impact Assessment

Contents

20.	Social impact assessment.....	1
20.1	Introduction	1
20.1.1	Purpose	1
20.1.2	Scope of works.....	2
20.1.3	The study area	2
20.2	Methodology	3
20.2.1	Social baseline	3
20.2.2	Social research.....	6
20.2.3	Stakeholder engagement	6
20.2.4	Impact identification and assessment	7
20.2.5	Social impact management plan	10
20.3	Community and stakeholder engagement.....	11
20.3.1	Existing stakeholder engagement	11
20.3.2	Stakeholder engagement to inform the social impact assessment.....	12
20.3.3	Stakeholder engagement outcomes	12
20.3.4	Key stakeholder and community issues.....	14
20.3.5	Feedback from council and interest groups	17
20.4	Social baseline summary.....	19
20.4.1	Policy review	19
20.4.2	Town profiles	19
20.4.3	Key baseline statistics	20
20.5	Workforce profile	24
20.5.1	Construction	24
20.5.2	Operations.....	26
20.6	Social impact identification	27
20.6.1	Identification of potential social impact categories.....	27
20.6.2	Social impacts and mitigation.....	28
20.7	Impact assessment and mitigation summary	52
20.8	Conclusion	73
20.8.1	Assessment outcomes	73
20.8.2	Commitments	73
	References	76

Figures

Figure 20.1 Statistical local areas – gas fields	4
Figure 20.2 Local government areas - gas fields	5
Figure 20.3 Hazards and sensitivities matrix.....	8
Figure 20.4 Key stages of impact assessment	9
Figure 20.5 Construction workforce	25
Figure 20.6 Operational workforce	27
Figure 20.7 Potential cumulative construction workforce requirements, 2009 to 2016	35
Figure 20.8 Potential cumulative operational workforce requirements	37

Tables

Table 20.1 Regional councils, SLAs and urban localities in the gas fields' study area.....	3
Table 20.2 Social research findings	13
Table 20.3 Summary of key stakeholder issues from 1 April 2009 to 9 November 2009	17
Table 20.4 Secondary stakeholder issues from 1 April to 9 November 2009	19
Table 20.5 Summary of key characteristics for studied towns	20
Table 20.6 Average workforce by construction activity over peak period (2012 to 2017)	25
Table 20.7 Construction workforce rosters.....	26
Table 20.8 Expected skills base of construction workforce – core staff.....	26
Table 20.9 Operational workforce – logistics hubs	27
Table 20.10 Impact categories	28
Table 20.11 Workforce estimates for projects under investigation or under construction	34
Table 20.12 Impact assessment and mitigation summary	53

20. Social impact assessment

20.1 Introduction

20.1.1 Purpose

This chapter of the Australia Pacific LNG Project (the Project) environmental impact statement (EIS) forms the social impact assessment of the coal seam gas (CSG) fields element of the Project. The social impact assessment (SIA) looks at the social impacts associated with constructing and operating the gas fields. It identifies the nature, magnitude and significance of those social impacts and identifies appropriate measures for impact management and mitigation, which are designed to mitigate potential impacts and improve the positive benefits and opportunities. Five steps were used in the social impact assessment process:

- Baseline assessment of the social environment
- Stakeholder engagement
- Identification and assessment of potential impacts
- Identification of mitigation measures and opportunities for enhancement
- Development of a draft social impact management plan.

The Australia Pacific LNG sustainability principles were drawn from to guide the preparation of the SIA and the draft social impact management plan (SIMP). The draft SIMP identifies the strategies required to implement the proposed mitigation measures and enhancement of opportunities and benefits, as well as outlining mechanisms and indicators to monitor the social environment. Using Australia Pacific LNG's 12 sustainability principles to guide the development of the draft SIMP ensures that the proposed strategies are consistent with the overall project approach and that contribution to sustainable development is maximised. Specifically, the Australia Pacific LNG sustainability principles relevant to the social environment are:

- Fostering the health and wellbeing of Australia Pacific LNG's workforce
- Respecting the rights, interests and diverse cultures of the communities in which it operates
- Engaging regularly, openly and transparently with people and communities affected by Australia Pacific LNG's activities, considering their views in its decision-making and striving for positive social outcomes
- Working cooperatively with communities, governments and other stakeholders to achieve positive social and environmental outcomes, seeking partnership approaches where appropriate
- Upholding exemplary ethical behaviour in all aspects of its business
- Identifying, assessing, managing, monitoring and reviewing risks to Australia Pacific LNG's workforce, its property, the environment and the communities affected by its activities
- Ensuring that all employees and contractors work consistently with its sustainability principles, commitments, values and systems.

Guided by these principles, Australia Pacific LNG aims to deliver sustainable long-term benefits to the communities within which it operates in collaboration with government, industry and communities.

Mechanisms to achieve this are outlined in the SIA and draft SIMP. Identifying opportunities for local and regional businesses and acting on these early through participatory mechanisms will play a key role in contributing to the sustainable community development. Australia Pacific LNG will select suppliers who demonstrate social responsibility, have high health, safety and environmental standards and ethical practices.

Proposed mitigation measures and strategies for enhancing positive social benefits are aligned where possible with relevant regional community development plans. A key element of sustainability is partnerships. Strategies for enhancing opportunities and benefits focus on a collaborative approach with industry, government and community stakeholders to increase the likelihood of success and improve the contribution towards community development and capacity building. Guided by their sustainability principles, Australia Pacific LNG has worked with government and community stakeholders to identify possible impacts to existing social services and institutions, and through the SIA has developed strategies to mitigate potential impacts.

Strategies for enhancing employment opportunities for local and regional residents while seeking to mitigate disruptive impacts of Project workforce requirements on the existing local and regional labour pool is a key focus of the SIA. The provision of long-term employment opportunities that reach all sectors of the community, including under-represented groups, will contribute to sustainable development. Employment opportunities are underpinned by training programs that support the development of the Project while providing diverse transferrable skills that provide employees with long-term career paths.

20.1.2 Scope of works

The SIA has been completed according to the EIS terms of reference for the Project, as set by the Coordinator-General (December 2009). The specific requirements for social impact assessment are:

"The Social Impact Assessment (SIA) should be conducted in consultation with the Department of Infrastructure and Planning (DIP) Social Impact Unit. Matters to be considered include the social and cultural area, community engagement, a social baseline study, a workforce profile, potential impacts and mitigation measures and management strategies."

20.1.3 The study area

The gas fields are located in the Bowen Basin and Surat Basin in southeast Queensland, covering an area of approximately 570,000 hectares extending from Wallumbilla to Millmerran within the Darling Downs. The SIA gas fields' study area has been defined geographically according to the following statistical local areas (SLAs), as classified by the Australian Bureau of Statistics (ABS) (2007):

- Chinchilla
- Murilla
- Tara
- Wambo
- Bendemere
- Millmerran.

Table 20.1 summarises the gas fields' SLAs and studied urban localities (marked with an asterisk). Also included are communities located adjacent to, or within, the study area. These adjacent

communities are not specifically included in the baseline assessment due to their small size and lack of location specific information.

Table 20.1 Regional councils, SLAs and urban localities in the gas fields' study area

Regional Council	SLA	Urban localities
Western Downs Regional Council	Chinchilla	Chinchilla*, Kogan
	Murilla	Miles*, Condamine
	Tara	Tara
	Wambo	Dalby*
Maranoa Regional Council	Bendemere	Roma*, Wallumbilla
Toowoomba Regional Council	Millmerran	Millmerran

* Statistically analysed urban localities

These locations also offer less of an ability to support the Project (e.g. through the supply of accommodation, goods and services and so on) due to their size. However, it is recognised that these communities will be impacted by the Project, and as such, these towns are considered when assessing potential impacts and developing strategies for mitigation and enhancement.

Also illustrated in Table 20.1 are the regional councils within the study area. Western Downs Regional Council, within which the majority of the gas fields are located, is the most impacted area. A map showing the project area and SLA boundaries is provided as Figure 20.1¹ and a map showing regional council boundaries is provided as Figure 20.2².

20.2 Methodology

This section of the report outlines the methods used to complete the SIA.

20.2.1 Social baseline

The social baseline for the gas fields' study area is presented in Volume 5 Attachment 42, and summarised in Section 20.2.1 of this chapter. Social baseline study data were collected from government agencies and other sources to define the social environment. The most up-to-date data was used wherever possible, but most statistics have a time lag of several years between collection and publication. The basic population data sets used are sourced from the Australian Bureau of Statistics (ABS) and the Department of Infrastructure and Planning (DIP) - Planning Information and Forecasting Unit (PIFU).

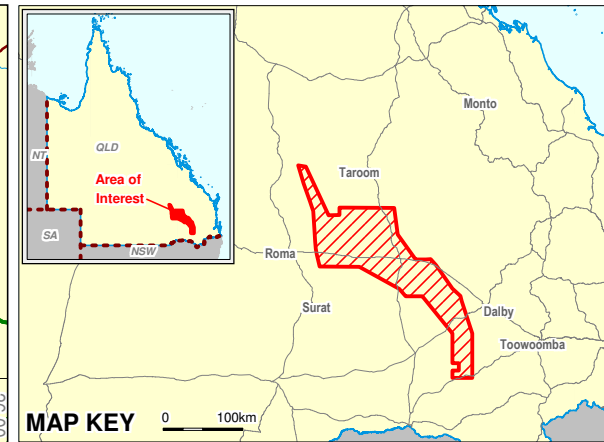
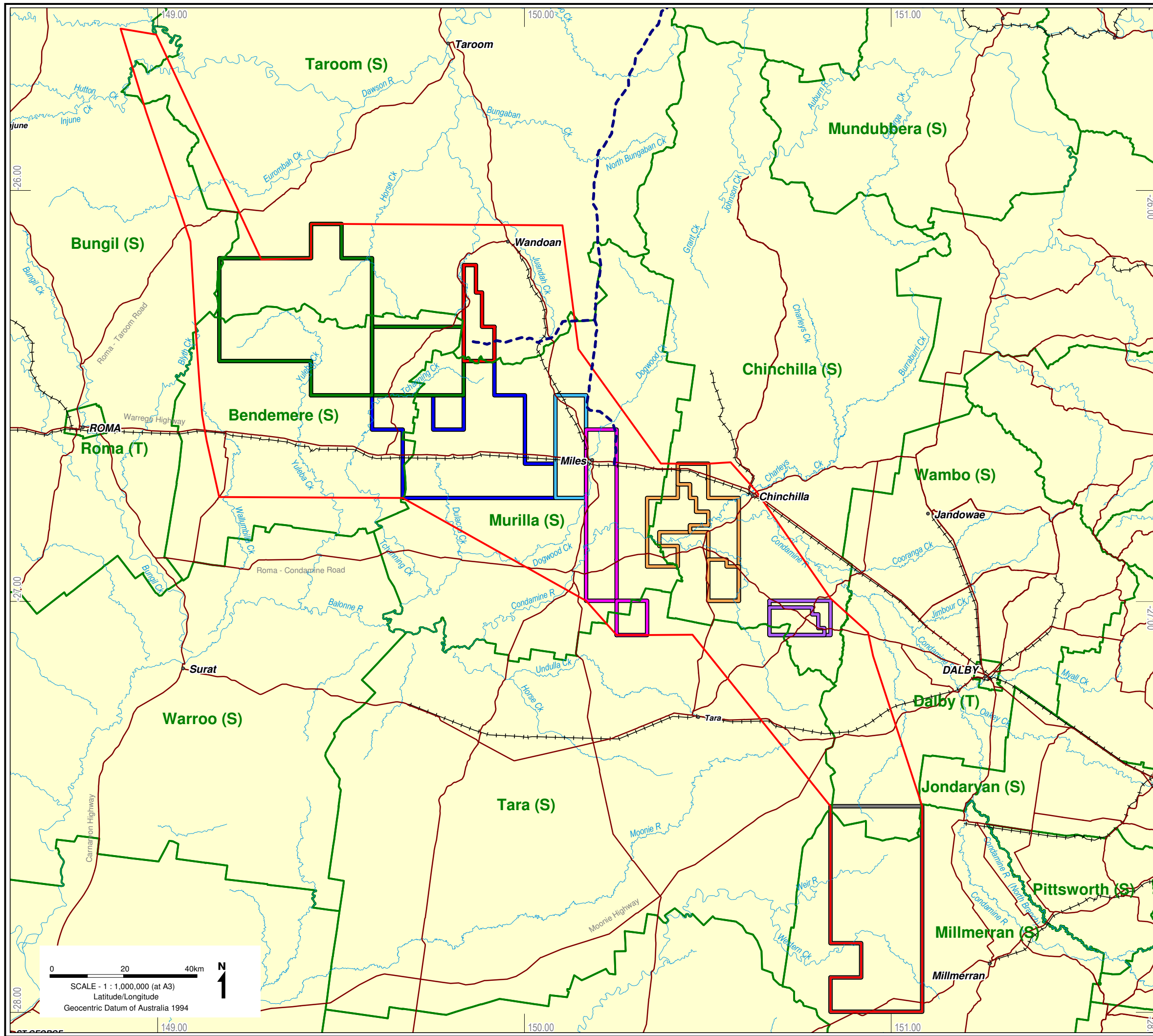
¹ The letters in parenthesis following the name of individual SLAs refers to the ABS classification of SLAs as either township (T) or shire (S)

² The letters in parenthesis following the name of individual local government areas refers to the whether it is a Shire (S) or Regional Council (R)

Information and should seek independent professional advice in relation to dealings with property.

Users of the information recorded in this document (the information) accept all responsibility and risk associated with the use of the information.

© Commonwealth of Australia (Geoscience Australia) 2008. © The State of Queensland (Department of Natural Resources and Water) 2010. © WorleyParsons Services Pty Ltd



LEGEND

- Major towns
- Major Drainage
- Railway
- Gas pipeline route
- Statistical Local Area boundary
- Gas fields study area

Statistical Local Area boundaries - the letters in parenthesis following the name of individual SLAs refers to the ABS classification of SLAs as either town (T), shire (S) or city (C).

Walloons gas fields development areas

Combabula / Ramyard	Talinga / Orana
Woleebee	Dalwogan
Carinya	Kainama
Condabri	Gilbert Gully

Source Information
Statistical Local Area Digital Boundaries (ASGC 2006) sourced from <http://www.abs.gov.au> on 29/08/2007.

Preferred gas pipeline alignment
Origin Energy on 03/11/2009

Pipeline
Department of Mines and Energy, MERLIN Mining Tenures system and Database (MTDB) 2009
Commonwealth of Australia (Geoscience Australia) 2009

Road
Department of Main Roads, Queensland 2009

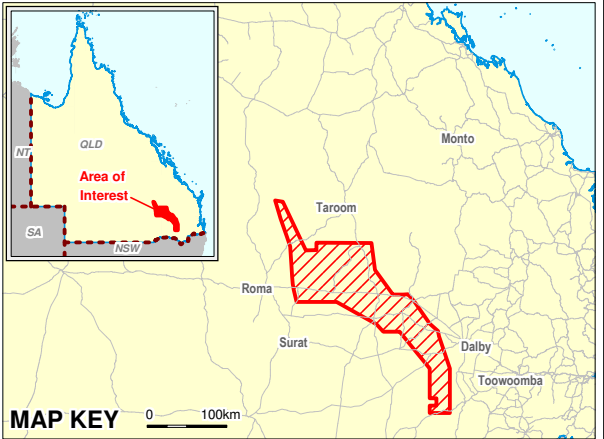
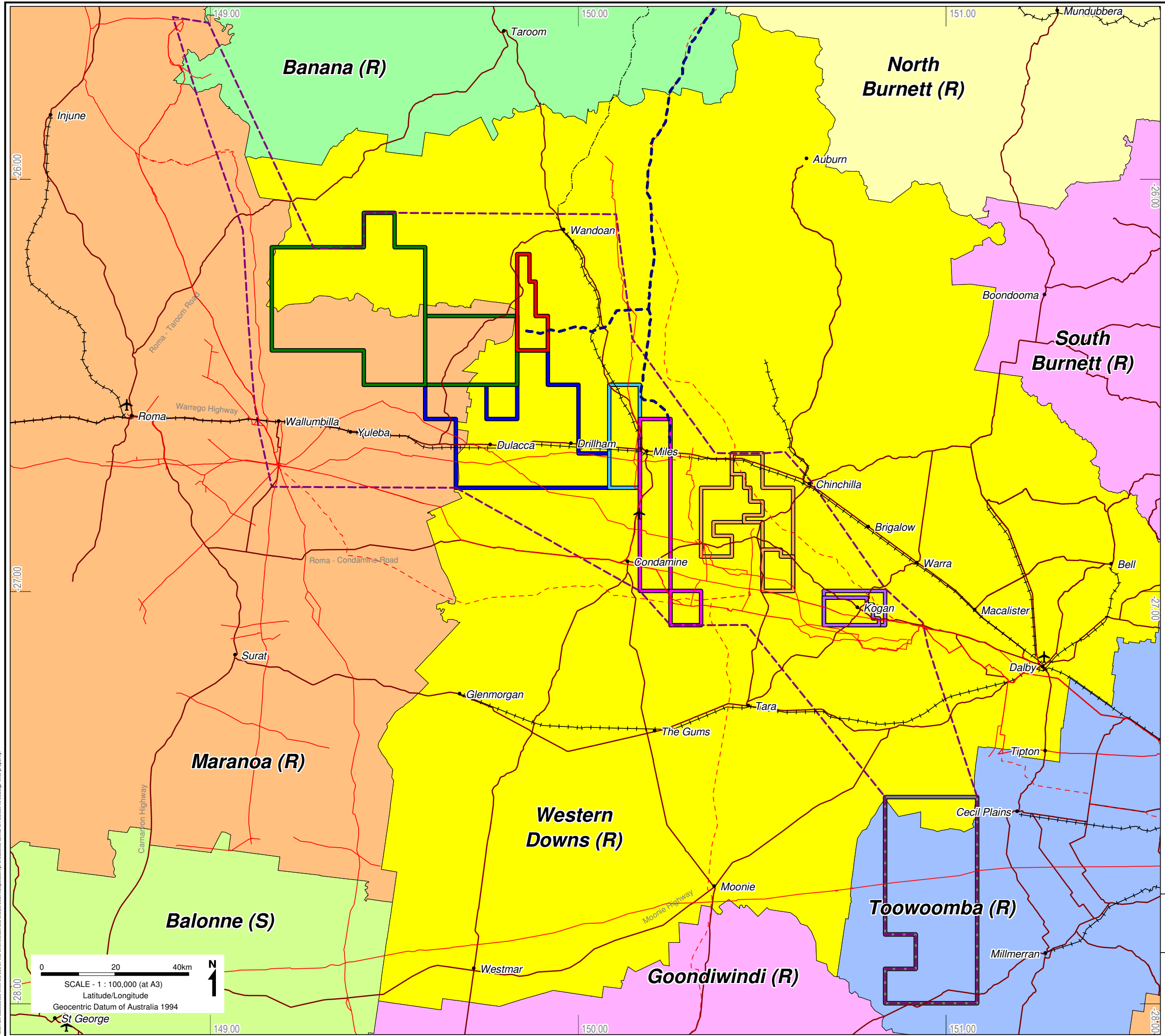
AUSTRALIA PACIFIC LNG PROJECT

Volume 2 Chapter 20
Figure 20.1 Statistical Local Areas - Gas fields

© WorkPac Services Pty Ltd. Users of the information recorded in this document (the information) accept all responsibility

© The State of Queensland (Department of Mines and Energy) 2010.

© Commonwealth of Australia (Geoscience Australia) 2010. © The State of Queensland (Department of Natural Resources and Water) 2010. and risks associated with the use of the information and should seek independent professional advice in relation to dealings with property.



LEGEND

• Major towns	✈ Major towns
— Road	— Gas pipeline route
++ Existing railway	- - - Pipeline licences (Application)
- - - Proposed Railway	- - - Pipeline licences (Granted)
- - - Gas fields study area	

Walloons gas fields development areas

Combabula / Ramyard	Talinga / Orana
Woleebee	Dalwogan
Carinya	Kainama
Condabri	Gilbert Gully


Source Information

Preferred gas pipeline alignment
Origin Energy on 03/11/2009

Local Government Area (LGA) Boundaries (2008)
Department of Natural Resources and Water, Queensland 2009

Pipeline
Department of Mines and Energy, MERLIN Mining Tenures system and Database (MTDB) 2009
Commonwealth of Australia (Geoscience Australia) 2009

Road
Department of Main Roads, Queensland 2009

 **AUSTRALIA PACIFIC LNG PROJECT**

Volume 2 Chapter 20
Figure 20.2 Local Government Areas - Gas fields

0 20 40km
SCALE - 1 : 100,000 (at A3)
Latitude/Longitude
Geocentric Datum of Australia 1994

The data sets were sourced at the SLA or Queensland level, unless otherwise stated. SLA statistics are drawn from the 1996, 2001, and 2006 Census collections. However, Census statistics for urban localities are only available for 2001 and 2006 due to a change in the Census collection boundaries from 1996 to 2001. Unless otherwise stated, Census data is based upon location on Census night (place of enumeration). This is the mode most readily available for collecting data as a time series from the 2001 and 2006 Censuses.

Review of policies, programs, strategies and regional studies relevant to the gas fields' study area was completed to provide the regional context in which the Project will be operating and to gain an understanding of the implications for the development of the social environment (refer to Volume 5 Attachment 42).

The social baseline also draws from data, observations and information obtained during social research and stakeholder engagement conducted in the gas fields. The methodology for completion of social research and stakeholder engagement activities is outlined in Section 20.2.2 and Section 20.2.3 respectively.

20.2.2 Social research

Independent community research was commissioned in the gas fields on an annual basis. This research commenced in late 2008 and consists of consultation activity which is undertaken in the towns of Roma, Chinchilla and Miles. Through this annual consultation, Australia Pacific LNG aims to gain an indepth understanding of stakeholder and community issues. Three smaller-scale rounds of quarterly consultation are also conducted to supplement the annual consultation activities. This consultation will be pivotal for monitoring mitigation strategies for the Project.

This social research incorporates both quantitative (surveys) and qualitative approaches (indepth interviews and focus groups). The annual consultation is primarily completed via face-to-face consultation. Telephone discussions are used to gain stakeholder feedback for the subsequent smaller-scale rounds of quarterly consultation, where appropriate.

Research participants were randomly selected using telephone recruitment. For each round of consultation, research participants are briefed about the research process and then asked to complete a 15 to 30 minute questionnaire. The questionnaire includes measures of:

- Brand awareness and perceptions
- Community concerns
- Awareness of community initiatives being undertaken by proponents locally
- Involvement in events.

Once the questionnaires are completed, respondents take part in a 30-minute semi-structured discussion exploring attitudes and perceptions to add context to questionnaire data. A summary report is presented in Volume 5 Attachment 42. The findings are summarised in Section 20.3.3, and drawn from throughout this report.

20.2.3 Stakeholder engagement

Stakeholder engagement for the purpose of the Project began in late 2008 and will continue throughout the life of the Project. Community and stakeholder engagement activities specific to the EIS were completed between April and November, 2009. A detailed account is presented in Volume 2 Chapter 2. EIS-related stakeholder and community engagement is also anticipated to occur when this

EIS is released for public comment in 2010. In addition to these activities, specific stakeholder engagement was undertaken to inform the SIA process. A summary of these activities and outcomes is presented in Sections 20.3.3 and 20.3.4 respectively.

20.2.4 Impact identification and assessment

Identifications of impacts

Potential social impacts were identified through a three-phased approach. The first phase involved a desktop investigation of the baseline assessment findings, analysis of stakeholder consultation outcomes and review of relevant studies. An Australia Pacific LNG workshop was then conducted to identify additional potential impacts and refine previously identified ones.

The second phase was to undertake a hazards and sensitivities analysis to determine if there were any additional potential impacts not identified in the first phase. The first step in a hazards and sensitivities analysis is to define potential project hazards. Project hazards are defined as elements, activities, operations and processes which have the potential to impact the social environment. For example, the construction of accommodation facilities and laydown areas, operation of gas processing facilities, workforce and generation of waste materials are potential project hazards.

Parallel to the identification of hazards, a sensitivities analysis is carried out to identify key aspects of the receiving social environment which are considered to be most sensitive. Sensitivities are defined as aspects of the social environment which support and sustain people. For example, access to accommodation, cost of living and employment opportunities. Potential impacts are identified through this process as a result of an interaction between a project hazard and a project sensitivity. The hazards and sensitivities matrix is included in Figure 20.3. The matrix shows impact areas and at which stage of the project development (construction or operation) that the impact may occur. The impact categories are detailed in Section 20.6.1 and the full impact assessment including mitigation strategies is provided in Section 20.6.1. The draft SIMP is presented in Volume 2 Chapter 24.

The third and final impact identification phase was the social impact assessment-specific stakeholder engagement, which provided an opportunity for stakeholders to raise and discuss potential social impacts of the Project and the appropriateness and effectiveness of proposed mitigation strategies. Stakeholder engagement undertaken during this phase is summarised in Section 20.3 and the outcomes are discussed in Section 20.3.3.

	Demographic profile				Income & affordability		Employment & business				Housing, Accommodation & Land								Community Health & Safety								Education & Training				Local facilities & services								Community values & lifestyles																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																		
	Balance in gender Balance in age Balance in family structure Balance in ethnicity Displacement of under-represented groups				Cost of living Wage gap		Contracting Procurement Employment Businesses		Availability of housing Availability of rental accommodation Availability of short-term accommodation Availability of commercial real estate Cost of housing Cost of rental accommodation Cost of short-term accommodation Cost of commercial real estate Low socio-economic housing Land for development								Access to primary health care Access to secondary health care Access to tertiary health care Access to emergency services Alcohol and drug abuse Criminal activity Road safety Mental health Noise								Access to primary & secondary education Access to tertiary education Quality of education services Access to apprenticeships Skills profile				Transport Transport corridors Cultural facilities & services Recreation facilities & services Community facilities & services Relocation & multicultural services Childcare services Youth facilities & services Recreational Areas Utilities								Community values Lifestyles Community cohesion Volunteerism Community resilience Diversity																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																				
	1.1	1.2	1.3	1.4	2.1	2.2	3.1	3.2	3.3	3.4	4.1	4.2	4.3	4.4	4.5	4.6	4.7	4.8	4.9	5.1	5.2	5.3	5.4	5.5	5.6	5.7	5.8	5.9	6.1	6.2	6.3	6.4	6.5	7.1	7.2	7.3	7.4	7.5	7.6	7.7	7.8	7.9	##	8.1	8.2	8.3	8.4	8.5	8.6	8.7	8.8	8.9																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																					
C	O																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																								

Figure 20.3 Hazards and sensitivities matrix

Assessment of impacts

The key stages in assessing potential impacts are illustrated in Figure 20.4. The first stage is to explain each of the potential impacts, describing why these are regarded as an impact, and demonstrating clearly whether the impact is positive or negative, direct or indirect, long-term or short-term, local or widespread and if it is reversible or irreversible.

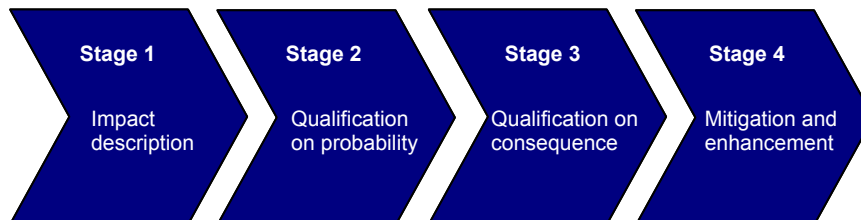


Figure 20.4 Key stages of impact assessment

The assessment has been completed using the draft guidelines for SIMPs, received from the Queensland Department of Infrastructure and Planning in November 2009. It should be noted that this methodology was adopted to ensure consistency with the draft guidelines and is consistent across the gas fields, LNG facility and gas pipeline SIAs. However, it differs to that adopted elsewhere in the EIS.

The qualification of each impact is based on two assessment characteristics. These characteristics include an assessment of the probability of the impact occurring, and an assessment of the actual result and scale of effect of an impact if it were to happen (i.e. potential consequences). These two steps make up stage two and three of the impact assessment process respectively.

The probability of occurrence is assessed for each impact and is rated between 'low' and 'high,' as follows:

- High (81-100%)
- Medium (31-80%)
- Low (0-30%).

The potential consequences may vary between 'low', 'medium' and 'high', as follows:

- Low
 - Isolated issues or complaint that can be resolved via routine site procedures
 - Insignificant to minor social harm
 - No threat to social licence to operate
- Medium
 - Repeated incidents or community complaints that require significant adjustment to overall site level and business level procedures
 - Moderate social harm
 - Medium threat to social license to operate

- High
 - Significant, widespread and enduring community issue or dissent
 - Major to severe or irreversible social harm
 - Direct threat to social license to operate.

The fourth and final stage of the impact assessment process is to identify mitigation measures and opportunities for enhancement. The purpose of mitigation is to identify measures to safeguard the environment and the community affected by the Project. Where impacts are assessed to be positive, or where there is no, or only a minimal impact, opportunities for social enhancement are identified and measures for implementation are explained.

Cumulative impacts

The first step within the cumulative impact assessment was to determine which projects to include in the assessment. Projects to be assessed cumulatively in the gas fields' SIA as agreed with the DIP are:

- | | |
|---|-------------------------------------|
| • Arrow Energy Gas Field Development | • Queensland Curtis LNG Project |
| • Cameby Downs (Coal) Expansion Project | • Queensland Gas Pipeline Expansion |
| • Darling Downs Power Station | • Queensland Hunter Gas Pipeline |
| • Gladstone LNG (GLNG) | • Surat Basin Railway |
| • Linc Energy Underground Coal Gasification | • Wandoan Coal Project |
| • Nathan Dam and Associated Pipelines | • Woori Coal Project |

This list refers to only those developments in proximity to the gas fields' study area. Additional projects have been assessed for the gas pipeline and LNG facility SIAs in Volume 3 Chapter 20 and Volume 4 Chapter 20, respectively.

Quantitative and qualitative tools (e.g. demographic modelling and stakeholder consultation) were used to evaluate the collective information from the projects to assess the cumulative impacts to the gas fields region. Information considered in the cumulative impact assessment about these projects included (but was not limited to):

- Construction and operational workforce numbers
- Location of the Project
- Construction and operational timelines
- Potential for individually insignificant but cumulatively significant impacts.

20.2.5 Social impact management plan

The Queensland Government is developing guidelines to assist proponents to develop a SIMP for all State resource projects. A draft SIMP has been developed for the Project to establish and define Australia Pacific LNG's management of social performance throughout the life of the Project. The Project's draft SIMP framework has been based on the guidelines provided by the DIP (October 2009) and identifies and develops the strategies required to implement the proposed mitigation measures and opportunities for enhancement.

In particular, Australia Pacific LNG recognises that the Queensland Government has a significant role in planning and delivering core services such as health, education, emergency services, transport and infrastructure, and the Federal Government in relation to employment and training initiatives. Where relevant, the draft SIMP designates the appropriate State or Federal Government department with a shared responsibility for the implementation and/or monitoring of a particular mitigation strategy.

The draft SIMP is presented in Volume 2 Chapter 24.

20.3 Community and stakeholder engagement

This section of the report provides a summary of the broader project community and stakeholder engagement program completed during the EIS process. It also outlines the stakeholder engagement undertaken specifically for the purpose of the SIA and then summarises the stakeholder engagement outcomes for the parallel processes.

The terms of reference for the Project's EIS define a 'stakeholder' as a person or organisation with an interest or stake in a project. The term 'community' has also been used to describe that stakeholder group which is comprised of both individual community members and community groups. For the purpose of this report, 'stakeholder engagement' relates to engaging community and stakeholders.

The interests and issues raised by stakeholders are addressed in Section 20.6.2, social impacts and mitigation.

20.3.1 Existing stakeholder engagement

In addition to seeking the feedback of communities within close proximity to the proposed infrastructure, Australia Pacific LNG also encouraged those who influenced or had an interest in the gas fields' study area, to become involved in the consultation process. During the course of the consultation period, Australia Pacific LNG personnel travelled to the gas fields in Queensland's south-west, communities extending along the gas pipeline (approximately 450km) and areas associated with the LNG facility at Curtis Island, near Gladstone.

Australia Pacific LNG also used media releases, media interviews, newsletters, a suite of information sheets, print advertisements, posters, attendance at local events and information displays to communicate project details to the public. Furthermore, information was available via a project-dedicated website, project-dedicated email address and the toll-free project hotline. Australia Pacific LNG values the feedback it receives from those impacted by, or interested in, the Project's future and expects the work completed to date will enable positive relationships and community activities to continue across the life of the Project.

Key stakeholders involved in the Australia Pacific LNG EIS study included local, State and Federal elected representatives and officers from regulatory bodies, local council and peak industry bodies, community and landholders, Indigenous Australians, and environmental and business groups. Feedback received from these stakeholders was used to inform various decision-makers for the Project, including those involved in matters relating to the SIA.

Stakeholder engagement in the gas fields region, for the purpose of the Project, began in late 2008. However Origin (a joint venture partner in Australia Pacific LNG) has historically had a strong presence within these areas. Origin has been operating CSG and conventional oil and gas facilities, electricity generation and an LNG retail business throughout south-west Queensland for more than a decade. Through these existing operations, and applying lessons learned from previous consultation processes linked to projects such as the Talinga gas fields and the Darling Downs Power Station,

Origin has established proactive working relationships with landholders, Traditional Owner organisations, customers and government across the region.

Origin (on behalf of Australia Pacific LNG) employs a team of eight local landowner liaison officers, who service the gas fields and gas pipeline elements of the Project. In addition to providing project updates, the officers are responsible for developing a detailed understanding of the landowners' farm plan and business. This information is used to influence and guide project decisions.

A summary of the main stakeholder engagement activities are outlined below. Further details about the feedback received through the community engagement process in the gas fields' study area are presented in Volume 2 Chapter 2.

20.3.2 Stakeholder engagement to inform the social impact assessment

The social impact assessment was able to leverage off the broader project stakeholder engagement program as well as findings from consultation undertaken in the gas fields as a result of government initiatives (e.g. regional summits).

Stakeholder engagement completed for the SIA was undertaken in the form of one-on-one meetings with key stakeholders to assist with identifying and assessing social impacts and to discuss the appropriateness and effectiveness of proposed mitigation strategies.

Stakeholders engaged specifically as a part of the gas fields social impact assessment process included:

- Department of Communities
- Department of Education and Training (DET)
- Department of Employment, Economic Development and Innovation
- Department of Environment and Resource Management (DERM)
- Department of Infrastructure and Planning (DIP) – Social Impact Unit
- DIP – Planning Information and Forecasting Unit (PIFU)
- Queensland Health
- Queensland Police Service
- Western Downs Regional Council
- Maranoa Regional Council
- Community Non-Government Organisations.

20.3.3 Stakeholder engagement outcomes

Social research

Findings from independent research indicate that Origin has historically effectively engaged with the broader local community. Respondents commented that Origin's approach to engagement and community consultation was industry leading. Notwithstanding such positive responses, it appears landholders feel a loss of independence due to the increasing presence of resource projects in the region. Furthermore, the study found any threat to their water supply was a major concern to study participants.

Particular areas of interest differed slightly between local leaders and community members, as shown in Table 20.2.

Table 20.2 Social research findings

Participant	Feedback
Local leaders	<ul style="list-style-type: none"> • Gas has brought prosperity and confidence to the area • Economy is no longer reliant on rural enterprise only • Employment opportunities, business growth and social diversity had developed • Massive opportunity for road building and additional funding required • Additional resources required to enhance infrastructure • Optimistic that CSG water will make town water supply sustainable (expectation that gas companies will provide water, using an economic basis for distribution) • Salt problem will diminish as environmental controls are improving and water treatment is in place • Landholders feel disenfranchised about issues relating to compensation and confidentiality restrictions were creating tension, yet the purchasing of properties has assisted with concerns
Community members	<ul style="list-style-type: none"> • Businesses serving the gas industry are benefiting from CSG • Demand for local services has increased • Local people with skills have moved to the gas industry for jobs and higher pay • Fly-in/fly-out workers create demand for goods and services and assist the local business economy • Slight population increase means more work • Small businesses find it difficult to retain employees (higher wages difficult to match) and this creates tension between local business and gas companies • Residents cannot access plumbers, electricians and other services • Gas brings prosperity and promise of long-term viability, especially in drought • Long-term water supply is a concern (breach of ponds or contamination of or reduced flows from bores) • Concerns regarding weed and weed seed transfer • Community initiatives are valuable, but sometimes companies can dominate not collaborate with locals • Many townspeople are frightened by the volume and speed of road trains and other construction vehicles • Gas companies have built some roads, but only in areas relating to their work (locals believe the problem extends further to other roads too) • Council, Government and industry should do more to improve the major roads

Participant	Feedback
	<ul style="list-style-type: none"> • The influx of activity and workers has not led to social inclusion • House prices and rent have increased significantly in a relatively short time • More detail about noise and dust from traffic, land clearing, road and fence building and drilling is required by landholders • Concerns that drilling and production will affect farm production capacity; property value and lifestyle

Source: Bergent Research (2008)

20.3.4 Key stakeholder and community issues

During the first phase of the community consultation process (late 2008 to May 2009), the most common issues related to water access and management; local infrastructure and land use. Given the communities' dominant agricultural identity, concerns relating to water and land use were expected to be of paramount concern to the gas fields' communities. Treatment and access to water attracted a considerable amount of interest, in particular with Councils. Furthermore, a desire to improve and limit the impact to local infrastructure, such as roads, may stem from concerns that certain townships have lost funding and localised support due to the recent amalgamation of local authorities.

Australia Pacific LNG responded to these concerns by proactively engaging decision-makers in discussions relating to mitigating potential impacts and maximising benefits and opportunities. For example, during the second round of community consultation (October to November 2009), new realistic short and long-term water management solutions received favourable responses from local Councils.

Australia Pacific LNG also acknowledged that where possible, construction and operational practices would complement existing local strategies and policies. Other themes of interest also related to provision of adequate infrastructure, health services and water. Discussions about the location of vehicle inspection and cleaning facilities, construction methodologies and strategies suitable for inclusion within the Project's traffic management plan were developed to address local concerns relating to land use, weed management and use of local roads. Australia Pacific LNG intends to work closely with local Councils and community groups to ensure that the Project's impacts can be determined and resolved in advance and, where possible, long-term collaborative solutions are adopted through community investment initiatives.

As a result of feedback received from the community engagement process, the following documents will be developed and implemented in close consultation with Government, industry and community partners:

- Workforce strategy
- Housing and accommodation strategy
- Community investment strategy
- Indigenous engagement strategy
- Flexible work policy
- Local content strategy
- Emergency response plan.

Feedback from social service and education providers

Discussions with key social service and education providers were conducted in Maranoa, Roma, Miles and Chinchilla on 21 and 27 to 29 October 2009. Participants were encouraged to speak openly about the services, aspirations and challenges and general community values. The outcomes of these discussions are summarised below and represent the views of the stakeholders consulted only.

Employment and business

As new employment opportunities have emerged across the region, so too have skills shortages as workers begin to transition from traditional industries, such as retail and agriculture, to the resources sector. Stakeholders reported that migrant-workers holding 457 visas³ are back-filling jobs of those who may have been attracted to the resources sector.

Community health and safety discussions

Like many rural areas in Australia, towns in the gas fields region are experiencing a shortage in general practitioners. Many doctors currently servicing these communities are flying in from other locations in Queensland to meet the shortages, which present challenges when patients want to build the traditional doctor-patient relationships. Significant increases to rental prices were regarded as an influencing factor for not being able to attract medical personnel. Some community members believe the industry is placing additional strain on medical services.

Service providers discussed community health and safety initiatives and/or improvements that could be considered, including:

- Additional funding for health services in Roma, in particular for preventative care for children and services for the fly-in/fly-out obstetricians and surgeons
- Accessing the skills and experiences of workers' partners to supplement the existing services
- Roma community centre services to be driven by a mix of preventative and holistic options instead of driven by the availability of practitioners
- Up-skilling existing nursing professionals in Chinchilla (in particular for midwifery), to expand service availability. Chinchilla currently has nine consulting rooms being used by 2.5 full-time doctors
- Provision of information regarding Project emergency response mechanisms to the community - especially with regard to impacts associated with an industrial emergency and demand for emergency services personnel.

The Project's intention to develop rules for the workers' temporary accommodation facilities, and communicate and enforce a code of conduct amongst employees and subcontractors was discussed and welcomed by law enforcement agencies. Roma police have noticed increased volumes of traffic along the Warrego and Leichhardt Highways and reported increases in traffic and road safety issues, domestic violence and alcohol abuse. In Miles, similar concerns about alcohol-related offences and increases in traffic were noted by police.

³ Temporary Business (Long Stay) - Standard Business Sponsorship (Subclass 457)

Education and training

Primary and secondary schools across the gas fields region have experienced steady growth in enrolments in recent years, particularly in towns such as Chinchilla. Teachers and principals were looking forward to the opportunity to grow their school communities. Schools in Miles are reported as being under capacity, yet have experienced steady growth in recent years. Demand for the regional guidance officer was extremely high (case load of approximately 800 pupils).

One recommendation related to assessing resourcing needs according to regional, not urban conditions. Educational concerns also extended beyond the formal system and included adult literacy problems. In the secondary school, it was considered that cultural connection was poor for the students who identified themselves as Indigenous Australians. Despite this issue, it was generally reported that the school community exhibited a strong family connection.

Existing and close relationships with industry had enabled training programs to be developed, which were popular with students. This was evidenced by a 50:50 split for those completing vocational subjects and those pursuing Overall Positions in Year 12. The ratio of school-based traineeships to apprenticeships was 2:1.

The private primary school in Chinchilla reported reaching its capacity, following steady growth from 127 students in 2007 to 171 in 2009. It has a strong parents' group and connection with local sporting clubs. The use of a local speech therapist and psychologist are offered at this school as well as access to local State School services.

Community values and lifestyle discussions

The community in this region values its traditional rural lifestyle, but is keen to better understand how they can benefit from the development opportunities. The entrepreneurial nature of residents is highlighted by community members placing a high value on the notion that they can benefit economically from this Project.

Community members feel strongly connected to their local area, with many having lived in the small communities for many generations. Relationships with families and partners are highly valued, as is ensuring that there are opportunities for young people to stay in towns if they choose. As traditional agricultural communities, water and the environment are regarded as important elements of rural life.

Although the councils are still working through the changes associated with the recent amalgamation of local councils, the region is being offered a diverse range of services. The services include developing hospitality skills, celebrating cultural differences, supporting women within small businesses, providing child-friendly environments and offering information for adopting healthy lifestyles. While recognising that the nature of business in the town had changed, Roma was 'willing to embrace new things'. A desire for long-term and short-term residents to mix more socially was also of paramount interest, and appeared to acknowledge that the transient workforce had become embedded into their community character for a significant length of time.

The Cultural and Arts Centre in Miles also promotes community engagement opportunities through access to information technology services, children's playground, library, art gallery, volunteering group and workshops with artists and authors. Further opportunities to enhance the town's cultural presence are dependent on funding. A community coordinator mentioned other issues present within Taroom, Miles, Chinchilla, Wandoan and Tara were related to greater prosperity in some communities, increased rent and housing availability, drug availability and use, homelessness and lack of job opportunities for people with disabilities, Indigenous Australians and unemployed youth.

20.3.5 Feedback from council and interest groups

Additional one-on-one discussions were held with AgForce, Maranoa Regional Council, Murilla and Chinchilla Landcare, Miles Historical Society, Miles and District Chamber of Commerce, Commerce Roma and Chinchilla Community, Commerce and Industry from 27 to 29 October 2009. Common themes from the discussions related to water and weed management, community investment opportunities, condition of local roads, lack of health services, opportunities for communities and business to prosper, and the release of land for housing developments.

Further details about identified issues, mitigation strategies and project positions have been outlined in Section 20.6.

Summary of themes from discussions

Table 20.3 outlines the key topics of discussion identified from consultation activities undertaken in communities within close proximity to the gas fields. The feedback outlined above has been included within these summaries

Table 20.3 Summary of key stakeholder issues from 1 April 2009 to 9 November 2009

Themes from discussions ⁴	Location of detailed discussion in the EIS	Interest shown by whom ⁵
Water access and management		
<ul style="list-style-type: none"> Logistics for supplying water to local councils (short and long-term) A desire for a technical group to be formed to review project details Use of associated water Brine management Affordability of treated water and access offered to landholders Management of aquifers 	<ul style="list-style-type: none"> Volume 2 Chapter 10 – Groundwater Volume 2 Chapter 11 – Surface Water Volume 2 Chapter 12 – Associated water management 	<ul style="list-style-type: none"> Toowoomba Regional Council Western Downs Regional Council Department of Employment, Economic Development and Innovation Queensland Department of the Environment and Resource Management Department of Transport and Main Roads Surat Basin Corporation Chinchilla District Landcare Group Capricorn Conservation Council Community members
Community		
<ul style="list-style-type: none"> Adequate community infrastructure is required when growth is 	Volume 2 Chapter 20 – Social impact assessment	<ul style="list-style-type: none"> Maranoa Regional Council

⁴ The list of themes provided in the table above is not exhaustive. The most frequently raised themes have been documented in the table.

⁵ The list of stakeholders provided in the table above is also not exhaustive. Additional individual stakeholders also raised discussions related to the themes; however individual names are not listed for confidentiality reasons.

Themes from discussions ⁴	Location of detailed discussion in the EIS	Interest shown by whom ⁵
<p>experienced</p> <ul style="list-style-type: none"> • Social impact relating to a fly-in, fly-out workforce and the Project in general • Government benefits need to be returned to the community too • Culturally diverse people need diverse local facilities and services • Child care facilities are full, with extensive waiting lists • Increased incidences of domestic violence being experienced 	(this chapter)	<ul style="list-style-type: none"> • Toowoomba Regional Council • Western Downs Regional Council • Queensland Police • Murilla Landcare Group • Community members
Local infrastructure		
<ul style="list-style-type: none"> • Impacts to roads (including dust and concerns from residents). • Upgrades to local infrastructure • Increase demand of Roma airstrip would require maintenance contribution from Project. • Use of rail infrastructure 	<ul style="list-style-type: none"> • Volume 2 Chapter 13 – Air quality • Volume 2 Chapter 17 – Traffic and transport • Volume 2 Chapter 20 – Social impact assessment (this chapter) • Volume 2 Chapter 21 – Economic impact assessment 	<ul style="list-style-type: none"> • Maranoa Regional Council • Toowoomba Regional Council • Western Downs Regional Council • Department of Transport and Main Roads • AgForce • Community members
Land use		
<ul style="list-style-type: none"> • Access procedures • Common water and gas corridors would reduce impacts • Land rehabilitation • Location of wells • Landholder engagement • Weed management • Long-term land use and how this differs from current agricultural practices • Agricultural land should not be used for CSG production. 	<ul style="list-style-type: none"> • Volume 2 Chapter 2 – Stakeholder engagement • Volume 2 Chapter 3 – Project description • Volume 2 Chapter 6 – Land use and planning • Volume 2 Chapter 8 – Terrestrial ecology • Volume 2 Chapter 24 – Environmental management plan 	<ul style="list-style-type: none"> • Toowoomba Regional Council • Elected representative (State) • AgForce • Miles and District Chamber of Commerce • Surat Basin Corporation • Chinchilla and District Landcare Group • Industry representatives • Community members

Table 20.4 outlines further topics of discussion identified from consultation activities undertaken in communities within close proximity to the gas fields.

Table 20.4 Secondary stakeholder issues from 1 April to 9 November 2009

Themes from discussions	Location of detailed discussion in the EIS	Interest shown by whom
Community		
<ul style="list-style-type: none"> Monitoring of social impacts. Collaborate with community to plan for long-term social services. 	Volume 2 Chapter 20 – Social impact assessment (this chapter)	<ul style="list-style-type: none"> Fitzroy Basin Association Community members
Employment		
<ul style="list-style-type: none"> Source of workforce. 	Volume 2 Chapter 21 – Economic impact assessment	<ul style="list-style-type: none"> Rockhampton Regional Council
Health		
<ul style="list-style-type: none"> Limited medical support facilities and staff available in Biloela. 	Volume 2 Chapter 20 – Social impact assessment (this chapter)	<ul style="list-style-type: none"> Enterprise Biloela Association Inc.
Local infrastructure		
<ul style="list-style-type: none"> Review the use of rail as an option for taking trucks off the road. 	Volume 2 Chapter 17 – Traffic and transport	<ul style="list-style-type: none"> Banana Shire Historical Society
Regulation		
<ul style="list-style-type: none"> Government's role for monitoring the gas pipeline. 	Volume 2 Chapter 3 – Project description	<ul style="list-style-type: none"> Industry representative

20.4 Social baseline summary

20.4.1 Policy review

A detailed review of policies, programs, strategies and regional studies relevant to the study area is presented in the social baseline assessment, Volume 5 Attachment 42. The review provides the regional context in which the Project will be operating and facilitates an improved understanding of the implications for the development of the social environment as well as informing the Project's mitigation measures and strategies for enhancement.

20.4.2 Town profiles

Detailed profiles of towns within the study area are presented in the social baseline assessment, Volume 5 Attachment 42, with a summary of key characteristics in Table 20.5.

Table 20.5 Summary of key characteristics for studied towns

Characteristic	Chinchilla	Dalby	Miles	Roma	Gas fields	Queensland
Population, 2008	4,067	10,546	1,296	6,438	22,889 ^a	4,091,546 ^a
Average age, 2006	40.5	36.1	41.5	34.4	38.5	37.2
Population AAGR, 1996 to 2008	2.2%	1.0%	1.5%	0.6%	2.6% ^b	2.1% ^b
Estimated population AAGR, 2009 – 2031	1.5%	0.9%	0.4%	0.2%	0.7%	1.7%
Indigenous population, 2006	3.5%	6.1%	7.3%	8.9%	3.5%	3.3%
Unemployment rate, March Quarter 2009	1.3% ^c	3.1% ^d	1.1% ^e	2.1%	1.5%	4.1%
Average weekly household income, 2006	\$1,094	\$1,070	\$789	\$1,155	\$966	\$1,202
Education completed up to Grade 12, 2006	26.90%	29.30%	27.70%	33.70%	26.4%	41.3%
Median dwelling price, 2009 (\$A)	\$235,000	\$260,000	\$175,000	\$235,000	NA	\$414,000 ^f
Average weekly rent, October 2009 (A\$)	\$280	\$300	\$223	\$283	NA	\$450 ^f

^a 2006 population estimate

^b annual average growth rate (AAGR) 1996 to 2006

^c based upon Chinchilla SLA estimate as data at the town level were not available for Chinchilla; ^d Brisbane only

^d based upon Wambo SLA estimate as data at the town level were not available for Dalby

^e based upon Murilla SLA estimate as data at the town level were not available for Miles

^f Brisbane

Source: ABS (2006), RP Data (2010), Your Investment Property (YIP) (2010) and Office of Economic and Statistical Research (OESR) (2009)

20.4.3 Key baseline statistics

Sources of data for the key baseline statistics summarised below are referenced in the social baseline assessment in Volume 5 Attachment 42.

Population

- The SLAs covering the gas fields are rural in character with relatively small populations
- 2008 population estimates for the major towns in the study area are:
 - Chinchilla 4,385
 - Dalby 11,037
 - Miles 1,524

- Roma 6,647
- Chinchilla recorded the strongest population growth between 1996 and 2008 (average annual growth rate 2.2%)
- The population of towns grew at a faster rate between 2006 and 2008 compared to between 1996 and 2006, which represents recent developments in the CSG and other resource sectors during this period
- As at 2008, Miles recorded the highest proportion of non-resident workers accounting for 15.0% of the total population, followed by Wandoan (11%) and Chinchilla (7%)
- In the gas fields' study area, 1,744 people, or 10.5% of the population aged over 15 years reported that they had provided unpaid care to a person with a disability, slightly higher than the Queensland average of 9.5%
- The trend between 1996 and 2006 shows an ageing population with the proportion of males in the 20-34 years age cohort decreasing from 18.1% to 15.4%; the proportion of females in this age category, for the same period, decreased from 18.6% to 15.8%
- When compared to the age distribution of the Australian population for 2006, the most significant difference is the considerably lower proportion of 15-29 year olds in the gas fields' SLAs (14.9% compared to the national 20.1%)
- The gas fields' study area region is predominantly made-up of Australian-born residents, with just 5.7% of people were born overseas which is significantly lower than the Queensland average (19%)
- There were a lower proportion of single parent families in the gas fields in comparison to Queensland and a higher proportion of lone households – this is indicative of an ageing population.

Indigenous Australians

- In 2006, there were 1,314 persons of Aboriginal and/or Torres Strait Islander heritage in the gas fields' study area of which the majority (45%), resided in Dalby SLA, followed by Chinchilla SLA (13%)
- Consistent with national trends, the Indigenous community was very young with 60% aged younger than 25 years
- The study area has a very low proportion (2.8%) of the Indigenous population over the age of 65 years
- Couple with children households comprised the largest share of Indigenous households across the gas fields' study area, representing about 35% of total Indigenous households
- Indigenous households recorded considerably lower incomes in comparison to the overall population (A\$769 compared with A\$966 per week)
- There was considerable variation within the gas field communities, with the median Indigenous household income in Tara being A\$575 per week, compared with \$971 per week for Indigenous households in Wambo
- Within the gas fields region there was a low Indigenous workforce participation rate, particularly in Tara SLA (31.8%)

- A considerably larger proportion of the Indigenous workforce in the gas fields' study area was employed by the private sector (85%) in comparison to the Queensland average (60%)
- In 2006 there were 411 students of Aboriginal or Torres Strait origin attending preschool, primary school or secondary school
- The proportion of Indigenous students in the region enrolled in vocational education and training, and working full-time was higher than the Queensland average
- The majority of Indigenous community housing is located in Dalby, and managed by the Goolburri Regional Housing Company, Gamba Lodge Hostel and Murrumba Aboriginal Housing Company
- The Bungeeba Aboriginal Community Centre is located in Dalby and has an oval and tennis courts, offers yoga sessions and boxing training.

Income and affordability

- As at 2006, the median weekly household income in gas fields' SLAs ranged from A\$802 per week in Tara SLA to A\$1,088 per week in Chinchilla SLA, all of which were lower than the Queensland average
- Miles had the lowest median household income of \$789 per week which is significantly lower than the national average of A\$1,225 per week
- Median weekly household incomes increased significantly in the gas fields' study area between 2001 and 2006, ranging from 11.1% in Millmerran SLA (from A\$880 per week) to 51.3% in Chinchilla SLA (from A\$719 per week)
- As measured by the ABS Socio-Economic Indexes for Area (SEIFA), Tara SLA recorded the most disadvantaged socio-economic conditions and economic resources, and Millmerran had the most disadvantaged education and occupation characteristics
- Wambo was the least disadvantaged of all of the gas fields' SLAs across all SEIFA indices
- In 2007, 49.4% to 64.8% of residents in the studied communities located within the gas fields' area were receiving some form of government allowance; compared to 18% for Queensland.

Employment and business

- The workforce participation rate for the gas fields' area was 67.6% in 2006, marginally higher than for Queensland as a whole (66.3%)
- In 2006, the Agriculture, Forestry and Fishing sector was the largest employer in all gas fields' SLAs, with the exception of Chinchilla, where the Construction sector accounted for the majority of employment
- Employment in the Agriculture, Forestry and Fishing sector in 2006 ranged from 31.7% in Murilla SLA to as high as 43.8% in Bendemere SLA, compared to 3.4% for Queensland as a whole
- The Construction sector recorded the greatest proportional increase of employment across the gas fields' SLAs (6.4%) between 1996 and 2006, with Chinchilla recording an increase from 4.5% to 19.5% of total employment
- The proportion of persons employed in manufacturing in 2006 was particularly high in Dalby (11.3%)

- The proportion of people employed in the construction industry more than doubled in Chinchilla between 2001 and 2006 (up from 8.4% in 2001 to 17.2% in 2006)
- The unemployment rate decreased in all SLAs between March 2001 and March 2009, with the largest decrease recorded in Tara SLA (9.4% to 3.4%)
- As at March 2009, the unemployment rate in all gas fields' SLAs was significantly lower than Queensland as a whole (4.0%)

Education and training

- As at 2009 there were approximately 4,000 primary and secondary students in state schools in the study area
- Within the gas fields' study area, a considerably higher proportion of the population (55%) had achieved certificate and diploma qualifications (the majority of which were gained from vocational education providers), compared to Queensland (35%)
- The proportion of people with non-school qualifications, holding university qualifications, ranged from 13.3% in Chinchilla to 23.4% in Roma
- There are no tertiary institutions located directly within the gas fields' study area

Housing and accommodation

- The median price of houses in the gas fields' urban centres has grown significantly during the last five years
- For the period 2004 to 2008 the greatest increase in median house price was in Miles, increasing from A\$81,340 to A\$222,200, representing an AAGR of 28.6%, compared to 11.7% for Australia as a whole for the same period.
- Although Tara has the lowest median house price for all centres in the gas fields, it has experienced significant growth during the last 12 months
- All centres in the region are experiencing high rental rates and these have increased by 55% in Chinchilla and 95% in Roma since the 2006 Census
- The greatest number of applications for social housing within the study area was in Dalby, of which a high proportion were for seniors housing
- High demand and low supply of commercial residential accommodation is particularly evident in Wandoan (90% occupation), Tara (64% occupation) and Chinchilla (53% occupation)

Community health and safety

- Aged care facilities within the gas fields' study area include aged care, respite and palliative care accommodation, home and community care (HACC) such as Meals on Wheels services, assisted living and allied health services
- Queensland Government health indicators suggest that the population of the study area has poorer health outcomes than the Queensland average, particularly with regard to obesity and physical activity
- The total number of offences against the person was higher in the Dalby district (785 offences/100,000 people) and Roma district (902 offences/100,000 people) compared to the State as a whole (Queensland recorded 705 offences/100,000 people).

- Offences against property in the study area relate mainly to unlawful entry, theft, property damage and fraud.

Facilities and services

- Miles recorded the highest number of child care facilities per 100 children aged 0 to 4 (3.4), followed by Chinchilla (1.7)
- Overall, the study area has a diverse array of cultural, community and recreation facilities
- A review of Regional Council and relevant websites found a large number of diverse community events in the study area which would indicate an active community.

Community values, attitudes and liveability

- There are high levels of social capital, particularly in the smaller communities
- The region's communities regard themselves as possessing a strong sense of identity and being cooperative, collaborative and welcoming places
- The low commuting times, more relaxed lifestyle, safety and family friendliness, rural setting, open space and recreation options are highly valued by the community
- Local businesses are supportive of development in the CSG industry, but identified some issues of concern for the day-to-day capacity of their towns (e.g. retention of employees for small businesses, reduction in the availability of services)
- The broader community is generally supportive of Australia Pacific LNG, however recognises that some issues need to be managed effectively for the Project to be regarded as successful within the community (e.g. impacts to house prices and itinerant workers changing community dynamics).

20.5 Workforce profile

The Australia Pacific LNG environmental impact statement is utilising a 'maximum development' case for the gas fields. The construction and operational workforce numbers match this conservative case.

20.5.1 Construction

Construction of the gas fields will be undertaken in a rolling process, and is expected to begin in 2011 and be completed by 2027. The peak workforce will be required between 2012 and 2017, where on average; a workforce of 1,767 will be required per year. The workforce will peak in 2013 with up to 2,100 construction workers in the gas fields for this year.

The activities being completed by the construction workforce are categorised as follows:

- Early civil works
- Temporary accommodation facility construction
- Gas processing facility (GPF) construction
- Water treatment facility (WTF), water transfer station (WTS) and brine pond construction
- Drilling of CSG wells
- Gas, water and high pressure (HP) gathering network installation and connection

- Exploration drilling and surveying.

The estimated workforce required for each of the construction activities during the peak period (2012 to 2017) is summarised in Table 20.6. The construction workforce will mainly consist of gas, water and high pressure network connection crews (28.8%), gas processing facility construction (25.6%) and CSG well drilling crews (22.6%).

Table 20.6 Average workforce by construction activity over peak period (2012 to 2017)

Construction activity	Number	Percentage
Early civil works	24	1%
Temporary accommodation facility construction	108	6%
Gas plant construction	452	26%
Water treatment facility, water transfer station and brine pond construction	225	13%
Drilling wells	400	23%
Gas, water and high pressure network	508	28%
Exploration drilling and survey	50	3%
Total	1,767	100%

The construction workforce requirements for the 17-year construction period (broken down into key construction activities), are shown in Figure 20.5. The construction workforce peaks in 2013, which is due to the six gas processing facilities which will be constructed simultaneously.

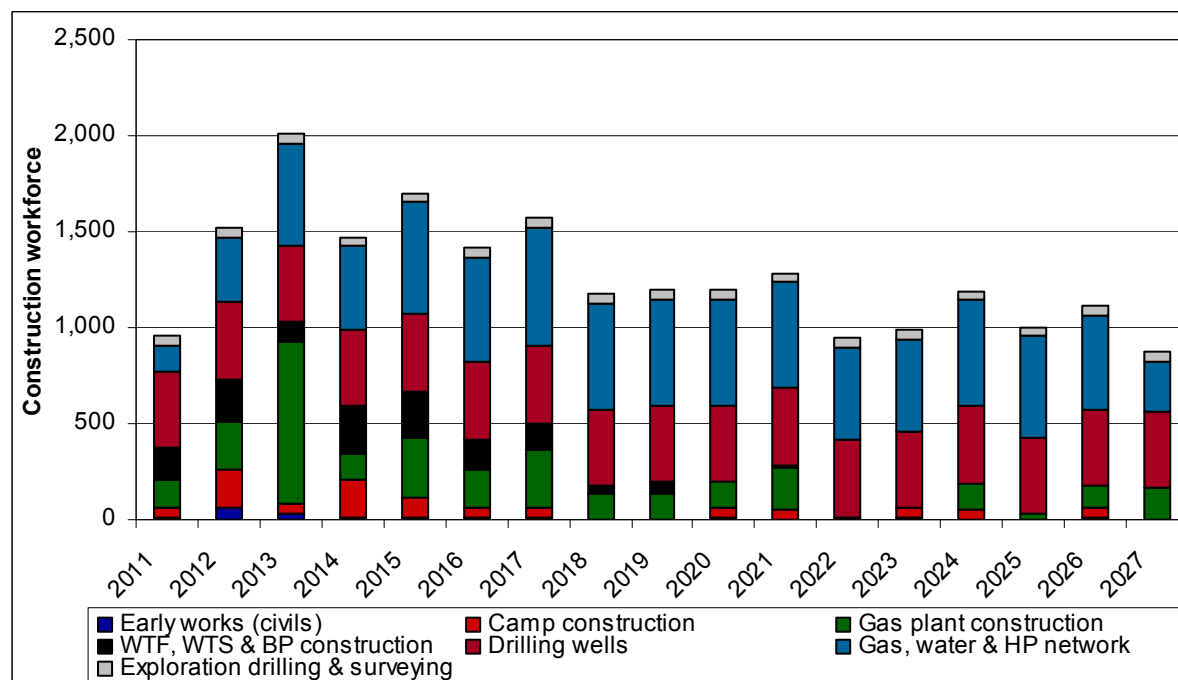


Figure 20.5 Construction workforce

The construction workforce hours of work and rotational rosters vary between each of the segments of the workforce. Hours of work and rotational rosters will be developed by the contractors, but values representative of typical rosters are summarised in Table 20.7.

Table 20.7 Construction workforce rosters

Workforce	Shift	Rotation
Civil works	1 x 12hr shift	Six days on, one day off
Temporary accommodation facility construction	1 x 12hr shift	Five days per week
GPF, WTF, WTS and brine pond construction; Gas and water gathering network installation and connection	1 x 12hr shift	Four weeks on, one week off
Surveying		
Drilling of CSG wells	2 x 12hr shifts	
Exploration drilling		

The expected skills required (as defined by Energy Skills Queensland (2009a)) for the construction, commissioning and operational phases of the Project are outlined in Table 20.8.

Table 20.8 Expected skills base of construction workforce – core staff

Core Staff	
Drilling engineers	Occupational health and safety advisors
Completion engineers	Operations superintendents
Reservoir engineers	Operations supervisors
Production engineers	Cultural Heritage coordinators
Project engineers	Cultural Heritage monitors
Electrical/Instrument/control engineers	Logistics supervisors
Environmental advisors	Logistics technicians
Primary contracting staff	Drillers
Field construction supervisors	Driller's assistants
Field construction technicians	Cultural Heritage monitors
Driller supervisors	Pipeline welders
Senior drillers	Utility men

20.5.2 Operations

The operational workforce requirements for the gas fields will commence in 2011, with an average of 30 workers required for the first year. Operational workforce requirements will steadily increase between 2011 and 2027, when a total of 690 workers will be eventually required (Figure 20.6). Between 2011 and 2027, an average of 471 workers will be required. Workforce numbers beyond 2027 are anticipated to remain comparable to the 2027 level.

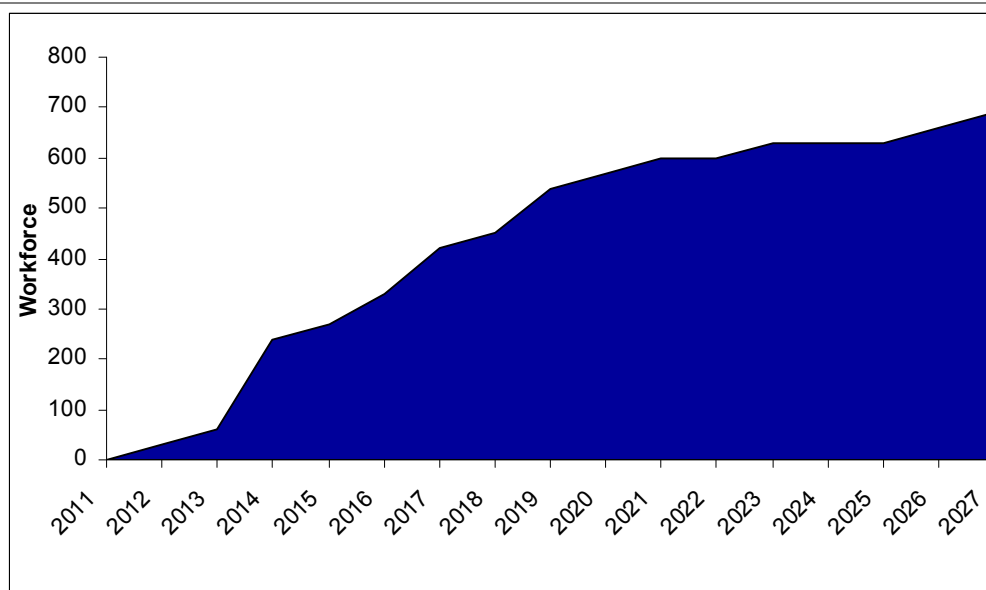


Figure 20.6 Operational workforce

In addition to the gas fields' operational workforce, there will be requirements for workers in the logistics hubs in Brisbane, Miles and Roma. These requirements are summarised in Table 20.9. Due to the small number of workers required, it is expected that there will be minimal impact to the available labour force.

Table 20.9 Operational workforce – logistics hubs

Year	Brisbane	Miles	Roma
2011–2012	25	25	25
2013–2019	50	50	50
2020–2027	67	67	67

A variety of rosters will be utilised to accommodate the local and non-local operational workforce.

20.6 Social impact identification

This section of the report provides a detailed discussion of the assessment of potential social impacts for the construction and operational phases of the Project. Impacts are discussed for each of the social impact categories, including cumulative effects resulting from other development projects (refer to Section 20.2.4).

Following a description of the potential social impact, mitigation strategies are described. Where impacts are assessed to be positive, or where there is no, or only a minimal impact, opportunities for social enhancement have been identified and discussed. The impact assessment and mitigation summary is presented in Section 20.7.

20.6.1 Identification of potential social impact categories

Social impacts have been classified according to the categories presented in Table 20.10. Social impact categories were identified through existing knowledge of the study area and contemporary SIA practices, and then refined during the Australia Pacific LNG impact assessment workshops (refer to

Section 20.6.1). Each of the impact categories are explained within the context of potential implications of the Project to the social environment.

Table 20.10 Impact categories

Impact category	Implication to social environment
Population impact	Implications for demand for social infrastructure, services and population trends.
Demographic profile	Implications for community safety, attraction and retention of people to the region and demand for social infrastructure and services.
Indigenous Australians	Implications for Indigenous values, social harmony, access to employment and services, equality, health and wellbeing and employment opportunities.
Income and affordability	Implications for quality of life, liveability, equality and social harmony.
Employment, training and business	Implications for economic diversity and resilience, sustainable communities, standard of living, opportunities for employment and addressing skills gap.
Primary and secondary education	Implications for attraction and retention of people to the region and transition from school to work.
Housing and accommodation	Implications for workforce, local businesses and industry, housing affordability, short-term accommodation, rental affordability and under-represented sectors of the community.
Community health and safety	Implications for provision of adequate primary, secondary and tertiary health care services, mental health, community safety, liveability and community cohesion.
Facilities and services	Implications for quality of life, liveability, attraction and retention of people to the region.
Community values and lifestyle	Implications for community cohesion, resilience to change, workforce integration, liveability and social harmony.

20.6.2 Social impacts and mitigation

Population impact

Construction

All employees and contractors will be accommodated in temporary accommodation facilities located within 1km of each of the gas processing facilities being constructed. It is estimated that up to 23 GPFs and 10,000 production wells will be constructed throughout the life of the Project.

The only exception will be the civil works crews which will mobilise to site prior to the construction of the accommodation facilities and will either reside in commercial accommodation within local towns or in mobile facilities established in close proximity to the worksites. It is estimated that the mobile facilities will need to be able to accommodate up to 12 workers and will be required for a period of up to two months for the construction of each of the GPFs.

Australia Pacific LNG aims to provide local employment opportunities wherever possible but, given the low unemployment rate and high levels of labour force participation in the gas fields, this may prove challenging. Labour force constraints and proposed mitigation strategies are discussed later in this section.

Potential cumulative construction workforce requirements for projects under investigation or construction in the region are discussed in detail later in this section. The estimates depict a maximum scenario, as these are based on maximum workforce requirements and assume that the full construction workforce commences immediately. Therefore, it does not take into consideration the ramping up (or down) of a workforce. Based on these assumptions, up to 6,300 workers could be required for the cumulative projects by 2012, with an average of 3,400 during the 2009 to 2016 period. It is expected that the overall cumulative population increase will be significant.

Operations

The operational workforce requirements in the gas fields will commence in 2011 with an average of 30 workers for the first year. This will increase between 2011 and 2027, where 690 workers will be eventually required. Between 2011 and 2027, an average of 471 workers will be needed each year.

The GPFs will be developed in groups of two or three in central locations within the gas fields' development area. Some facilities will be located close to existing communities whilst others will be too distant to consider accommodating personnel away from the work sites. Permanent operations personnel who do not reside in communities close to these developments will be accommodated in facilities sited within a close radius of each group of GPFs. These locations will be chosen with consideration given to efficient operational access requirements. However, in situations where developments are close to existing communities, personnel will be encouraged to reside within those communities.

In addition to the gas fields' operational workforce, there will be requirements for workers in the logistics hubs located in Brisbane, Miles and Roma. Overall, 25 workers will be required from 2011 to 2012, increasing to 50 during the 2013 to 2019 period. Approximately 67 workers will be required after that date. The population impact from the logistic hub workforce will be minimal given the spread and small number of workers.

Potential cumulative operational workforce requirements are discussed in 'employment, training and business' in this section (page 33). As for the cumulative construction workforce estimates, these details depict a maximum scenario as the information is based upon maximum workforce requirements and assume that the full operational workforce commences immediately after construction ceases for these projects. Based upon these assumptions, up to 1,000 workers could be required by 2013 and then ramping up to 2,100 by 2016 and beyond. It is expected the overall cumulative population increase will be significant.

Mitigation

The temporary population increase for the region during the construction phase will be significant. The construction workforce will be accommodated in temporary accommodation facilities located within 1km of the GPFs while they are being constructed. During the operational phase, there will be some local community population increase, but this will depend on the numbers of operational personnel recruited locally and others who may choose to relocate to and reside in the local areas and communities. Other personnel residing outside of the local areas will be accommodated in facilities sited within the gas fields to suit ongoing operational requirements.

However, the decision of accommodating operational personnel at site or offering the opportunity to reside in local communities will also consider and assess the risk of the travelling distances from the communities to the individual work sites. There will also be an increase in the population of the gas fields' area attributable to indirect flow-on effects (e.g. increased indirect employment and business opportunities and a more resilient and diversified economy).

The population increase during the construction phase will be mitigated to some extent by employing locals where possible and by accommodating workers in temporary accommodation facilities. To address the cumulative impact of a population increase, Australia Pacific LNG will work with other industries, government and service providers to plan and share information relating to potential impacts and mitigation measures. This will facilitate longer term planning and allow for increased services and social infrastructure to be provided to match the increasing population.

An increase in the population has a direct impact on social factors such as housing and accommodation, community health and safety, and facilities and services. Mitigation measures for these impact categories are discussed in Section 20.7.

Demographic profile

Construction

The demographic profile of the construction workforce will most likely be younger and dominated by males. The impact to the overall male to female ratios or the proportion of people in age categories is not expected to be significant given that this group of workers will be operating on a fly-in/fly-out or drive-in/drive-out basis.

Although the construction workforce will be on various rotational rosters, it is anticipated that the workers will interact with the community to some extent. For example, interaction will occur when travelling out during breaks or whilst sourcing miscellaneous goods and services from regional centres. The potential impacts of an increase in the proportion of young males, in terms of community safety, are discussed in later in this section.

Apart from age and sex, the other demographic aspect potentially impacted by an influx of construction workers would relate to cultural diversity should overseas workers be sourced. This may be a direct or indirect impact of the Project. Direct impacts occur when the Project employs overseas workers and an indirect impact relates to local or regional businesses employing overseas workers due to a labour shortage created by the Project. Stakeholder consultation found local businesses in the gas fields' study area are sponsoring 457 visa workers to supplement their workforce due to regional labour shortages. A potential impact of an influx of overseas workers is an increase in demand for relocation and multicultural services.

The Project will improve employment opportunities for domestic labour. In the event that overseas workers are required, they would be accommodated in temporary accommodation facilities. Furthermore, any overseas workers would be employed in accordance with all relevant government regulations and requirements.

Operations

The operational workforce will be accommodated in temporary accommodation facilities close to site, or within existing communities to suite the ongoing operation requirements. The impact on the existing demographic profile is not expected to be significant due to the size of the operational workforce relative to the existing population and due to the fact that the demographic profile is expected to be more similar to the existing population.

If overseas workers are needed they would be employed in accordance with all relevant Government regulations and requirements. Potential impacts may include an increase in the demand for relocation and multicultural services.

Mitigation

While it is expected that the majority of the construction workforce will be sourced from outside the local and regional area, Australia Pacific LNG will prioritise local employment over non-local employment, subject to skill and training limitations. A key component of the Project's workforce strategy will include methods to attract eligible local, under-represented groups to the workforce (e.g. women, Indigenous Australians, and people with a disability).

In collaboration with industry, Australia Pacific LNG will estimate the number of overseas workers likely to enter the region and provide that data to government to help it to evaluate the demand for relocation and multicultural services.

Indigenous Australians

Indigenous population demographics

A potential impact of the Project could be an increase in the Indigenous population of the gas fields if Indigenous Australians move to the area to pursue direct or indirect employment and business opportunities. Potential cumulative impacts to Indigenous population demographics would be similar to that of the non-Indigenous population and are discussed in 'population impacts' in this section (page 28).

Indigenous income and affordability

Lower income levels in Indigenous communities are often attributed to factors such as a younger age profile, lower educational and training levels, higher participation rates in part-time employment and higher levels of unemployment.

An increase in the cost of living relative to households where income levels don't increase at the same rate will result in lower levels of affordability. If the cost of living were to increase significantly, this will impact on Indigenous Australians, especially given the lower than average levels of disposable income found in this sector of the community. Through the development of the Indigenous engagement strategy, Australia Pacific LNG aims to improve the positive contribution to Indigenous economic and social development. Specifically, Australia Pacific LNG will invest across a number of areas, including:

- Education and training
- Employment
- Business development and support
- Cultural heritage.

Investment in the above areas will provide an opportunity for the project to have a positive impact on Indigenous economic and social development. Volume 2 Chapter 18 discusses this further.

Indigenous employment and business

Relevant to employment and business, the Australia Pacific LNG Indigenous engagement strategy will have two goals, as follows:

- Increase Indigenous participation in the workforce within Australia Pacific LNG's communities of interest.
- Foster Indigenous business development and contracting opportunities in Australia Pacific LNG's communities of interest.

Australia Pacific LNG recognises the main challenges facing Indigenous Australians seeking to benefit from the Project through employment and business opportunities relate to lower educational and training levels; the need for better targeted company recruitment and retention strategies and lack of business training or experience. Australia Pacific LNG's Indigenous engagement strategy will outline strategies to improve the positive impact of the Project on employment and business opportunities for Indigenous Australians by addressing the above challenges.

Another challenge recognised by Australia Pacific LNG in improving employment and business opportunities for Indigenous Australians is the small Indigenous population in the study area.

Indigenous education and training

Relevant to education and training, the goal of the Indigenous engagement strategy is to 'improve access to education and training levels achieved by Indigenous students in Australia Pacific LNG's communities of interest'. A potential positive impact of the Project will be improving Indigenous education through the provision of traineeships and scholarships.

Australia Pacific LNG will aim to improve the positive contribution to training opportunities for Indigenous Australians by continuing to work with Energy Skills Queensland, Queensland Minerals and Energy Academy and relevant training organisations to identify skills gaps and to address these gaps through the development and implementation of targeted training programs, mentoring support and career opportunities.

Indigenous housing and accommodation

A potential impact of the Project to housing and accommodation for Indigenous Australians may relate to the reduced ability to access the private rental and home ownership markets due to inflated prices. Potential housing and accommodation impacts and mitigation measures for Indigenous Australians are similar to that of the broader community which are discussed in 'housing and accommodation' in this section (page 43). It is anticipated that impacts would be exacerbated for Indigenous Australians given the lower levels of home ownership and higher dependency on affordable rental housing.

To mitigate potential impacts to housing affordability and availability, Australia Pacific LNG's community programs will include working with Government and agencies that provide housing to people in financial distress. Australia Pacific LNG will work with Government, the community and other industries to plan for potential cumulative impacts and share information relating to potential impacts and mitigation measures.

Indigenous facilities and services

Potential impact to facilities and services for Indigenous Australian, and proposed mitigation measures, are the same as for the broader community and these are discussed in the following sections.

Indigenous cultural values

Potential impacts to Indigenous cultural and heritage values and proposed mitigation strategies for the gas fields' area are discussed in Volume 2 Chapter 18.

Income and affordability

Construction

KPMG Econtech (2009) estimate that at a regional level, the Project has the potential to contribute to a short term increase in the cost of living for households due to inflationary pressure from higher wages and increased demand for goods and services in the region. In addition, increased demand for infrastructure and social services may place further upward pressure on prices in the region, in the short term (KPMG Econtech 2009).

An increase in the cost of living relative to households whose income levels do not increase at the same rate, will result in lower levels of affordability or at worst, people having to leave the area and relocate to a more affordable location.

Should the income of 'high wage earners' increase at a faster rate than 'low wage earners' this will increase the gap between these two sectors of the community and has the potential to create social divides between people who earn high wages working in the construction industry, and those in other industries.

At a regional level it is likely that the Project will contribute to an increase in prices in the short to medium term, as the supply side in local areas adjust to the increase in demand associated with the Project (KPMG Econtech 2009).

Operations

As discussed above, potential impacts on income and affordability are estimated to be short to medium term. Refer to the economic impact assessment for more detailed discussion of potential impacts to income and affordability in the gas fields' area (Volume 2 Chapter 21).

Mitigation

Maximising participation in the workforce by all sectors of the community, including the under-represented, will ensure as many people benefit from the Project as possible. As well as addressing recruitment and retention of under-represented groups, the Australia Pacific LNG workforce strategy will also outline mechanisms for working with industry groups to develop opportunities for scholarships, apprenticeships and cadetships, outside, as well as within industry.

Apart from individuals benefiting from the Project, implementation of the Australia Pacific LNG local content strategy will improve the benefits of local businesses supplying goods or services to the Project. The Australia Pacific LNG community investment strategy will support local businesses through education and capacity-building programs.

A reduction in housing affordability may create a greater social divide within the community. The Australia Pacific LNG housing and accommodation strategy, which designates temporary accommodation camps for the construction phase, will address potential impacts to local housing affordability.

Employment, training and business

Construction

The availability of labour in the gas fields is restricted with the region experiencing low levels of unemployment (1.5% overall) and a high rate of participation. The Project will provide an opportunity to increase labour force participation, but recognising the constraints of the local labour market, a key

focus of the Australia Pacific LNG workforce strategy will be to target sectors of the community that are not currently participating in the labour force (e.g. under-represented groups). For a detailed account of potential labour force impacts and skills shortages in the gas fields' area, refer to the economic impact assessment in Volume 2 Chapter 21.

Construction and operational workforce estimates for the projects in the gas fields that are either under investigation, committed or under construction are summarised in Table 20.11. Only projects under investigation are assessed cumulatively as population impacts from projects under construction have been captured in the baseline assessment. The construction workforce estimates are for peak requirements and do not take into consideration that the workforce will increase to a maximum load for a period of time and then drop off progressively until construction ceases. Similarly, operational workforce estimates represent the maximum required workforce and do not take into consideration gradual ramping-up of workforce numbers, if relevant.

Table 20.11 Workforce estimates for projects under investigation or under construction

Project	Construction start date	Construction end date	Construction employment	Operational employment
Under investigation				
Australia Pacific LNG	2011	2027	1,330	470
Cameby Downs (Coal) Expansion Project	2009	2010	100	100
Gladstone LNG (GLNG)	2010	2034	840	500
Linc Energy Underground Coal Gasification	unknown	unknown	400	200
Nathan Dam and Associated Pipelines	2012	2014	200	3
Queensland Curtis LNG Project	2011	2013	1,650	800
Surat Basin Railway	2010	2013	900	25
Wandoan Coal Project	2010	2012	1,380	unknown
Woori Coal Project	unknown	2013	unknown	unknown
Under construction				
Queensland Gas Pipeline Expansion	2009	2010	unknown	unknown
Queensland Hunter Gas Pipeline	2009	2010	600	25
Arrow Energy Gas Field Development	2009	unknown	1,000	unknown
Darling Downs Power Station	2007	2010	450	25

Source: Desktop research of proponents' websites and EIS documents.

Known construction workforce estimates in the above table are shown cumulatively in Figure 20.7 and include contract and permanent employees for the assessed projects. For the period 2009 to 2016, an average of 3,400 construction workers would be required under the maximum scenario. The potential impact of such a workforce requirement would place severe strains upon labour force availability. This is discussed in more detail in the economic impact assessment, in Volume 2 Chapter 21.

Potential impacts of a large construction workforce to housing and accommodation, income and affordability, community health and safety and community values and lifestyle in the gas fields are discussed in the following sections.

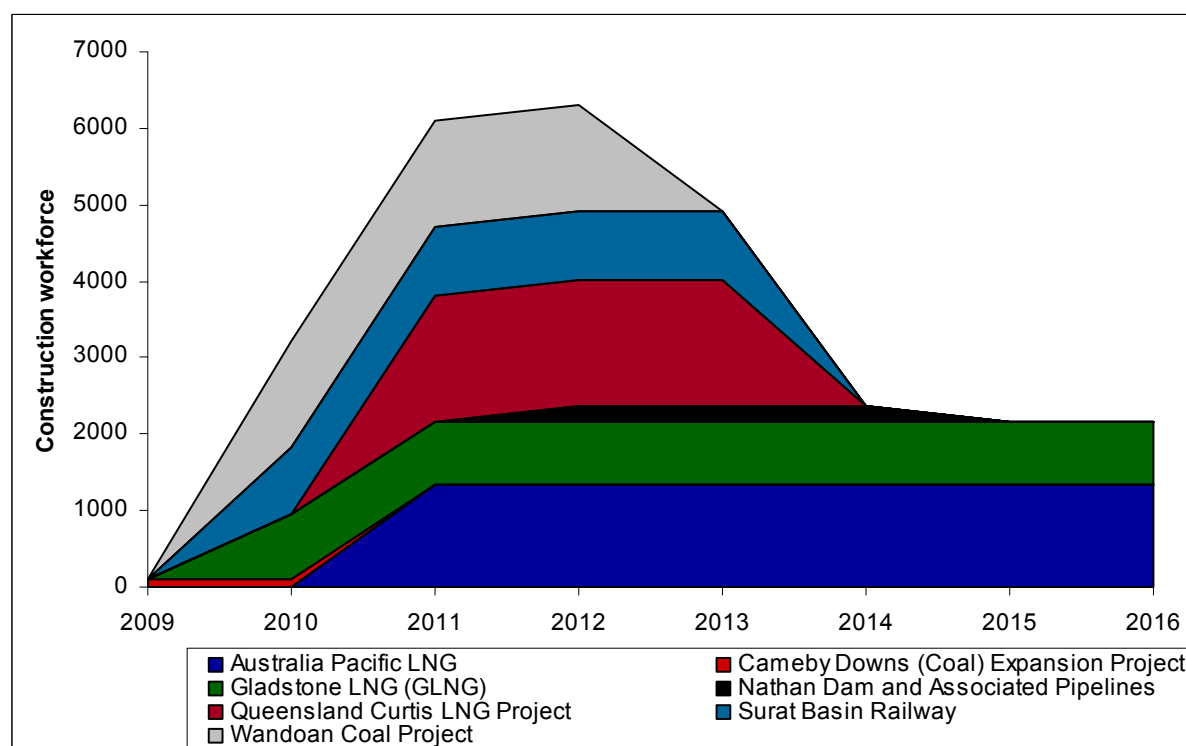


Figure 20.7 Potential cumulative construction workforce requirements, 2009 to 2016

Source: Desktop research of proponents' websites and EIS documents.

Energy Skills Queensland (2009b) predicts the greatest period of employment growth in the Queensland CSG/LNG sector to be within the next five years. In particular the growth is expected to be in vocational occupations with technical skills.

The Project will provide opportunities for Australia Pacific LNG to engage with training organisations to increase the local skills capacity for employment during the construction phase of the Project and in transition from construction to operations. The lead time required to supply additional skills through apprenticeships and traineeships or to up-skill existing workers is significant and Australia Pacific LNG will incorporate ways of addressing these matters in the Australia Pacific LNG workforce strategy.

Primary sources of skilled labour identified in a Department of Education, Employment and Workplace Relations (DEEWR) survey conducted in 2005 suggest 'other employers' (44%), followed by upgrading skills of existing employees (22%) and universities (18%) are the top three sources of skills (DEEWR 2008). Businesses that have a high turnover of employees due to staff leaving to seek employment on the resource projects may experience increased recruitment, retention and training costs which will impact the business's profitability. Depending on the supply and demand of certain skills it could be likely some businesses simply cannot attract staff which will impact the ability to service the local market. Strategies for attracting and retaining workers, while minimising impacts to local businesses, will be a key aspect of the Australia Pacific LNG workforce strategy.

Local and regional businesses will benefit from the Project through increased activity in supplying goods and services to it. Businesses in the gas fields are represented by a number of organisations including Commerce Roma, Miles and District Chamber of Commerce, Dalby Chamber of Commerce,

Chinchilla Chamber of Commerce and Community and the Surat Basin Corporation. These organisations work with business in a number of ways to improve the opportunities from industry development, such as networking events, supply chain education, strengthening and fostering relationships and promotion of services. To improve benefits to local and regional businesses, Australia Pacific LNG will work with industry and the representative organisations to identify demand for particular goods and services, and which businesses are best placed to deliver those goods and services.

Competition between the Project and local and regional businesses for labour, goods and services, and commercial real estate has the potential to place upward pressure on prices and create shortages for supply of goods and services.

The impact of the Project on farming activities will depend on the amount of land, the location of project infrastructure relative to farming activities, the area and duration of the disruption or disturbance, the capacity to modify farming practices to accommodate project infrastructure and the type of farming activities in the specific location. However, it is possible to say that fragmentation of agricultural land associated with the construction of the gas fields is expected to have a short-term effect. In the long term, the impacts on agricultural land of the Project will be minimal.

The potential impact on the value of the agricultural, forestry and fishing industry is not expected to be significant. KPMG Econtech (2009) estimate that, during the construction phase, there will be a 0.3% decline in the agricultural, forestry and fishing industry value for the Darling Downs–South West Queensland region. During the operational phase it is estimated there will be a 0.5% decline.

Other potential impacts to farm businesses may include the spread of weeds or impact to groundwater or surface water supply. Mitigation measures are discussed below.

Operations

Where possible and appropriate, the workforce required for the Project's operational phase will be sourced from the Project's construction workforce, existing local residential labour and workers from outside of the local areas. The operational workforce will reside in accommodation facilities, sited to suit the ongoing operational requirements

Operational workforce estimates are illustrated cumulatively in Figure 20.8 and include contract and permanent staff for the assessed projects. Based upon these assumptions, up to 2,100 workers could be required by 2013. Cumulative impacts to population are discussed in Sections 20.5.1 and 20.5.2. Impacts to housing and accommodation, income and affordability, community health and safety, and community values and lifestyle are discussed in the following sections. Potential impacts to the regional labour force are discussed in the Project's economic impact assessment in Volume 2 Chapter 21.

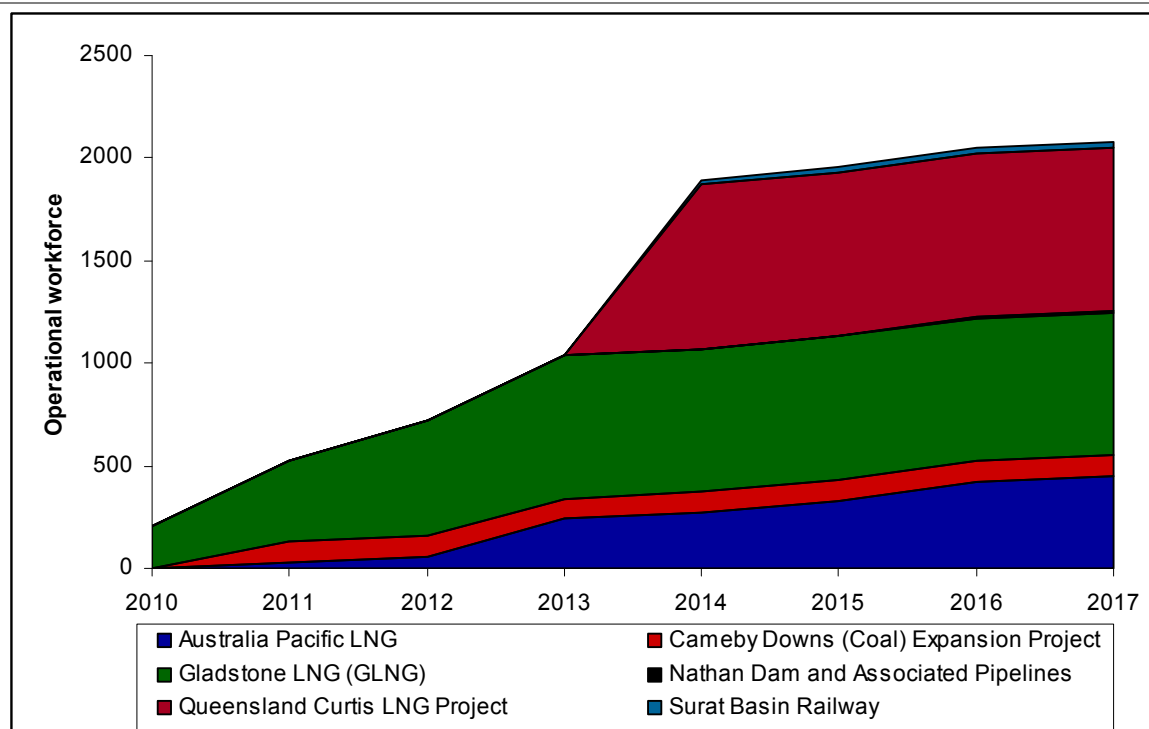


Figure 20.8 Potential cumulative operational workforce requirements

Source: Desktop research of proponents' websites and EIS documents.

A CSG/LNG steering committee has been set up by Energy Skills Queensland, with representation from each of the four major CSG companies– Origin, Santos, Arrow and QGC. The committee is developing a workforce competency and development plan. Energy Skills Queensland was established in 2005 as a centre of excellence under the auspices of the Queensland Skills Plan with a mandate to provide strategic workforce planning and workforce development strategies to the energy sector of Queensland.

Australia Pacific LNG's workforce strategy will complement and build upon the work of the CSG/LNG steering committee established by Energy Skills Queensland.

The operational workforce will be recruited locally as much as practicable and it is envisaged that a proportion of the operational workforce will be sourced from workers involved in the construction of the gas fields. Where local labour is not available, the workforce will be sourced according to skills requirements.

Aspects to be considered for sourcing the operational workforce will be outlined in the workforce strategy, including for:

- Local employment
 - Participating in career fairs at the local towns, such as Dalby and Chinchilla
 - providing targeted workshops to assist personnel in developing specific skills
 - Working with the Chamber of Commerce
 - Interaction with schools and other community bodies
- Employment of under-represented groups such as women, the disabled and Indigenous Australians

-
- Review of demographics and skill sets
 - Awareness programs.

Local and regional business

Opportunities for local and regional businesses to supply goods and services during the operational phase of the Project will be identified in the Australia Pacific LNG local content strategy. The local content strategy will identify the most effective ways to engage businesses through relevant networking and support organisations such as: the Queensland Industry Capability Network, Commerce Roma, Miles and District Chamber of Commerce, Dalby Chamber of Commerce, Chinchilla Chamber of Commerce and the Surat Basin Corporation.

Farm businesses

Access to properties will be required during the operational phase of the Project and will be conducted according to agreed landholder requirements.

The potential for spread of weeds will be an ongoing issue throughout the life of the Project, as will impact to groundwater or surface water supply.

Mitigation measures are discussed below on page 41. Landholder liaison is discussed in Volume 2 Chapter 2 – Stakeholder engagement.

Mitigation

Employment and training

Australia Pacific LNG will develop a workforce strategy detailing its approach to employment and training during the construction and operational phases of the Project. The strategy will be developed within the context of the gas fields' environment, which is experiencing a period of unprecedented growth. Strategies will be developed and implemented to ensure the following:

- Adequate supply of labour
- Timely engagement of labour
- Appropriate competence development
- Timely competence development.

Specifically, the workforce strategy will include but not be limited to the following:

- In-house training programs
- Analysis of ongoing labour requirements
- Training strategies targeted to local labour
- Targeted employment and training programs
- Methods to attract local people to the workforce
- Methods to attract under-represented groups to the workforce.

In order to attract employees to the Project, Australia Pacific LNG recognises it will need to provide adequate incentives. The Australia Pacific LNG workforce strategy will outline the incentives it will implement, such as a 'flexible workforce policy' and options for encouraging mature-aged workers back into the workforce.

The recruitment of vocational trades will be critical for achieving project milestones, as a result of the specialised nature of the CSG business.

Australia Pacific LNG will advertise positions through the usual local and mainstream recruitment channels (e.g. local, State and national print media, online) and develop regular employment opportunities bulletins (e.g. Centrelink and community noticeboards). To assist job seekers, readily accessible information and advice will be provided through the Australia Pacific LNG/Origin shopfronts, open days and workshops and an online recruitment portal.

As the labour market is tight, Australia Pacific LNG will need to focus on a number of strategies to attract and retain workers. Potential strategies may include attracting retirees back to the workforce; sourcing labour and skills from industries in decline; targeting unrepresented groups and sourcing labour from interstate.

Construction workforce labour requirements will be minimised through the use of pre-fabricated gas processing modules, which are constructed and tested in a factory environment and then transported and re-assembled at site. This will reduce the labour requirements for the Project as this method of construction is less labour intensive. Another benefit of using pre-fabricated modules is reduced construction times.

Origin, on behalf of Australia Pacific LNG, has commenced delivery of an operator development program, which is structured around the national PMA-08 Process Plant Operations training package. The program is expected to take two to three years to complete for inexperienced staff. It forms part of an integrated competence assurance approach designed to ensure:

- Safety critical roles and tasks are identified and personnel performing these roles and tasks are competent
- Competency based training is received by personnel prior to being assessed for competency in the execution of second order critical tasks and prior learning is recognised
- All new inexperienced personnel, existing personnel changing job roles or operating sites or after a technological or system change, receive competency based training.

Other already existing training and development programs will continue to be an important part of Australia Pacific LNG's overall workforce strategy:

- Professional development program
- Graduate program
- Traineeship program
- Indigenous traineeship program
- Apprenticeship program.

The Project will also improve employment opportunities through the assessment of existing community skills and by identifying gaps to offer targeted skills training to a diverse range of people and sectors of the community (including under-represented groups). Ongoing labour availability will be analysed to ensure training strategies are well-targeted to local labour. The workforce strategy will outline how Australia Pacific LNG will work with local employment and training organisations to identify workers within the region who can obtain qualifications based upon the principle of prior learning to improve employment opportunities.

The Australia Pacific LNG workforce strategy will outline the resourcing requirements for the construction and operational phases of the Project and communicate demand to TAFE, universities industry networks and training organisations to provide early and accurate information about the number and types of skills required. This will assist to mitigate against the long lead time required to supply additional skills through apprenticeships, traineeships and tertiary education.

Key studies or programs underway, or completed, to assist this process include:

- Energy Skills Queensland recently completed a labour market analysis to investigate industry demand for skills, potential and known future labour, and skills supply markets. This study has improved industry's understanding of likely shortfalls in the availability of skilled labour and will inform Australia Pacific LNG's workforce strategy
- Southern Queensland Institute of TAFE (SQIT) are developing a PMG-08 Process Plant Operations certificate II level training course (started semester one in 2010) for Years 11 and 12 students from selected high schools at Dalby, Chinchilla and Roma. An industry advisory committee has been formed to ensure the content, quality and outcome of the course will satisfy the needs of the CSG industry
- The Education Queensland and Industry Partnership Program (EQIP) which aims to have high school students 'job-ready' when they graduate by providing on-the-job training
- Origin, Santos, Arrow and QGC have liaised with the Queensland Minerals and Energy Academy (QMEA) about the expansion of QMEA's school information and guidance programs on career pathways into the upstream CSG industry in general and the Surat and Bowen basin areas in particular. Guidance programs commenced in term one of 2010.

The primary objective of QMEA is to provide advice and assistance to young people by opening career pathways into the resources and energy sector. Building a network of public and private high school alliances allows the CSG/LNG industry to be well-placed for attracting and retaining the interest of potential employees. The type of activities supported by QMEA and sponsoring companies includes:

- Promotion of the industry
- School visits to sites
- Supporting school based industry specific projects
- Providing a career advice
- Facilitating industry specific vocational teaching programs
- Seminars and workshops
- Providing industry familiarisation to teachers and QMEA personnel
- Scholarships and awards to students.

Australia Pacific LNG will further develop its apprenticeship program. The existing Community Skills Scholarship Program will continue to encourage locals to participate in non-industry specific employment, which also targets under-represented groups.

Australia Pacific LNG will work with educators such as TAFE, Central Queensland University and secondary schools to arrange visits to the gas fields during construction and operations to raise awareness of the skills required and to support programs aimed at transition from school to work or

higher education. These visits will be appropriately timed to coordinate with construction and operations schedules.

Feedback from DET indicated that within the schooling sector, more males than females entered trade schools. The same applied for Indigenous students undertaking these pathways. However, the percentage of females (Indigenous and non-Indigenous) entering part-time work post-schooling is much higher for females than for males. This may present an opportunity for Australia Pacific LNG to increase female participation in trade school qualifications.

Local and regional businesses

Maximising benefits to local and regional businesses will be achieved through the development and implementation of the Australia Pacific LNG local content strategy. The local content strategy will be based upon an accurate understanding of current and potential future business capacity and is developed in collaboration with industry support organisations, local and regional businesses and specialist training organisations. There are a significant number of industry support organisations in the gas fields' area, such as the Department of Employment, Economic Development and Innovation, the Surat Basin Corporation and Queensland Industry Capability Network.

A key component of the Australia Pacific LNG local content strategy will be a local business capacity-building program providing business networking and development groups and businesses with regular project updates, overview of goods and services packages and supply chain education. Where challenges facing businesses are identified, these will be addressed through participatory measures (e.g. workshops, one-on-one engagement).

Project shopfronts will play a pivotal role in providing information and assistance to local and regional businesses. One currently exists in Roma, with shopfronts also proposed for Miles and Chinchilla from 2010.

Competition for labour resulting in local businesses losing employees to the Project will be mitigated through a number of measures. Australia Pacific LNG will use existing local programs to promote local and regional businesses to project employees and contractors and will buy locally where possible to support the sustainability of these businesses. Australia Pacific LNG will also work with businesses to highlight and engage existing available government workforce programs to attract workers. It will foster support for the local area through the Australia Pacific LNG community investment program. Support for local and regional apprenticeship programs such as the Community Skills Scholarship Program will assist to improve the availability of qualified labour for local and regional businesses to draw from.

To mitigate potential commercial real estate shortages during the construction phase, Australia Pacific LNG will continue to participate in local government and regional planning processes by providing information regarding demand for commercial real estate. The Australia Pacific LNG housing and accommodation strategy will also include provisions for the commercial real estate market and will be developed in the context of expected local economic growth, taking into account the potential cumulative impacts resulting from increased demand from all projects that are under investigation or committed in the gas fields' area.

Farm businesses

As discussed above, fragmentation of agricultural land is expected to be a short-term effect associated with the construction of the gas fields. In the long term, the Project's impacts on agricultural land will be minimal. Strategies to mitigate potential impacts to farming activities are discussed in Volume 2 Chapter 6.

Australia Pacific LNG is strongly committed to working with landowners and the process for liaising with landowners. A dedicated landowner liaison team exists to provide one point of contact for landowners and is expanding as the Project grows. In consultation with landowners, Australia Pacific LNG will integrate and manage project activities around the farm business in a way that reduces impacts. This is discussed further in Volume 2 Chapter 2.

In 2008, the Queensland Government established the Land Access Working Group to foster improved relationships between minerals and energy explorers, rural landholders and the Queensland Government. Australia Pacific LNG is working with this Group to inform the development of an industry wide Code of Conduct for working with landowners.

The use of vehicle inspection and cleaning facilities at appropriate locations is integral to mitigating against the spread of weeds. The installation of vehicle inspection and cleaning facilities may also provide opportunities for local businesses to benefit from the Project, as discussed previously. The Project's environmental management plan details specific measures to prevent spread of noxious weeds, as well as outlining practices to rehabilitate disturbed farm land to appropriate standards. Pipeline infrastructure will be buried on farming land to ensure continuity of farming activities.

If required, Australia Pacific LNG will 'make good' a decline in the water supply to impacted water bores in accordance with requirements of the *Petroleum and Gas (Production and Safety) Act 2004*. Specific mitigation measures relevant to potential impacts on groundwater or surface water are discussed in Volume 2 Chapter 10 and Volume 2 Chapter 11, respectively.

Australia Pacific LNG will identify community investment opportunities that support local agricultural values and businesses, including the expansion of the Community Skills Scholarships program to include rural traineeships. Australia Pacific LNG will continue to partner with agriculture colleges and tertiary institutions to identify opportunities for using company-owned facilities as a training location.

Primary and secondary education

Construction

The majority of the construction workforce will be accommodated in temporary accommodation facilities and therefore would not be accompanied by their families. Although there is no expected impact to demand for primary and secondary education services directly related to the construction workforce, an indirect increase in demand is expected due to people (and their families) associated with support services moving to the area.

Increased demand for educational services is particularly relevant within a cumulative context as there is potential for large numbers of people and their families to move to the region.

DET has retained 68 government-employee houses in the region – 12 in Miles, 18 in Chinchilla, and 38 in Roma. Access to government-employee houses is a significant advantage for attracting and retaining employees in the region. The Project will not directly impact on the availability of government-employee houses for DET employees.

Operations

The integration of the operational workforce into town housing will be undertaken in phases and as workers move from residing in temporary accommodation facilities onsite to being housed in towns, it is expected that families would also relocate to the region (where applicable). With an average operational workforce of 260 people between 2011 and 2016, an increased demand for primary and secondary educational services would be expected.

Within the cumulative context of all of the relevant proposed projects, demand could increase significantly, with an estimated 1,000 operational workers required by 2013 and then ramping up to 2,100 by 2016 and beyond. This assumption is based on a maximum scenario and assumes that operational workers for all projects assessed cumulatively would be new to the region and would live in towns.

Mitigation

The operational workforce and to a much greater extent, the cumulative effects of operational workers and their dependents, is expected to cause an increase in demand for primary and secondary educational services in the study area. Although the capacity of existing institutions to meet additional demand is reasonable, potential impacts will need to be managed, particularly in a cumulative context. Australia Pacific LNG will assist primary and secondary education institutions by providing relevant workforce data to relevant Queensland Government departments.

Australia Pacific LNG will work with government, the community and other industries to plan for potential cumulative impacts and share information relating to potential impacts and mitigation measures.

Housing and accommodation

Construction

The temporary accommodation facilities will be built to comply with the Queensland Development Code Part MP 3.3, Temporary Accommodation Buildings and Structures, and will comply with all government and other regulatory approvals.

Project impact on the demand for housing is not expected to be significant as construction workers will be accommodated in temporary accommodation facilities. However, it is expected the Project will indirectly impact the demand for housing due to increased regional growth.

While Australia Pacific LNG's non-resident workers will be accommodated in temporary accommodation facilities to minimise the impact on short-term commercial accommodation, it is expected there will be some increase in demand, caused indirectly by support businesses as well as contractors or consultants staying in towns rather than onsite.

Potential cumulative construction workforce requirements of all of the relevant projects are discussed above in 'population impacts' on page 28. The estimate (based on a maximum scenario) that there could be up to 6,300 construction workers required by 2012, with an average of 3,400 workers required for the 2009 to 2016 period. It is expected that the majority of these workers would be accommodated in temporary accommodation facilities.

Operations

In addition to the gas fields' operational workforce, there will be requirements for workers in the logistics hubs located in Brisbane, Miles and Roma. Around 25 workers will be required from 2011 to 2012, increasing to 50 during the 2013 to 2019 period, following which an estimated 67 workers will be required thereafter. The impact to housing will be minimal given the small workforce.

As for the cumulative construction workforce estimates, these details depict a maximum scenario as they are based upon maximum workforce requirements and assume the full operational workforce commences immediately after construction ceases. Based on these assumptions, up to 1,000 workers

could be required by 2013, ramping-up to 2,100 by 2016 and beyond. It is expected that the overall cumulative population increases will be significant.

Volume 2 Chapter 21 discusses the analysis of potential impacts on property values during the construction and operational phases of the gas fields, including cumulative impacts.

Mitigation

Potential impacts to housing and accommodation due to the construction and operations of the gas fields will be mitigated largely by accommodating the construction, and initially the operational, workforce in temporary accommodation facilities located within 1km of the GPFs. Indirect and cumulative impacts are expected to result in increased demand for housing and accommodation and Australia Pacific LNG will develop a housing and accommodation strategy detailing how it will minimise impacts to the local housing and rental market by focusing on four key areas:

- Temporary accommodation
- Permanent accommodation
- Short-term accommodation
- Affordable housing.

Specifically, the Australia Pacific LNG housing and accommodation strategies will include:

- Working with government, the community and other industries to plan for potential cumulative impacts and share information relating to potential impacts and mitigation measures
- Participating in regional council and government planning processes and provide information about the Project to inform discussion and decision-making in a timely manner
- Housing for construction staff and contractors in temporary accommodation to reduce impact to housing cost and availability
- Consulting with stakeholders including the local council as part of the site selection process for the temporary accommodation facilities
- Progressive integration of the operational workforce into the local community as housing becomes available
- Working through committees established within the Queensland Government's Sustainable Resource Communities Policy to identify housing market issues, forecasts and possible responses
- The housing and accommodation strategy will be developed in the context of expected local economic growth, taking into account the potential cumulative impacts resulting from increased demand from all projects that are under investigation or committed in the gas fields' area.

Temporary accommodation

Accommodating the construction and initially operational workforce in temporary accommodation facilities onsite will assist in mitigating against short to medium-term inflationary pressure for housing and accommodation costs.

A concern raised during the stakeholder engagement process was that there could be anti-social behaviour within the temporary accommodation facilities that may potentially impact the host community. To address this concern, Australia Pacific LNG will manage its employees and contractors

through a Code of Conduct and specific project rules to ensure high standards of behaviour extend beyond the temporary accommodation facilities and into the general community.

The purpose of this Code of Conduct is to guide all directors, employees and other persons that act on behalf of the company, to perform their job in line with high ethical standards and applicable legal requirements.

The Code of Conduct will apply to direct employees and contractors employed for construction, operation or maintenance activities that apply to the Australia Pacific LNG Project.

The Code of Conduct includes key policy and directives in relation to:

- Equal Employment Opportunity (EEO)
- Discrimination and harassment prevention
- Bullying prevention
- Health, safety and environment
- Drugs and alcohol
- Email and internet use
- Dealing in securities
- Gifts and gratuities
- Conflicts of interest
- Confidentiality and privacy
- Continuous disclosure
- Trade practices.

Australia Pacific LNG believes the most sustainable housing strategy for the community relates to accommodating the construction and initially operational workforce in temporary accommodation facilities, and progressively integrating the operational workforce into the local community as housing becomes available. Accommodating the construction workforce within towns would place significant pressure on facilities and services as well as housing and accommodation costs. Increased competition may result in inflationary pressures and shortages within the market and impact on residents and businesses.

Permanent accommodation

Pressure placed on the housing and accommodation in local towns during the integration of the operational workforce will be mitigated by forecasting and reviewing demand for housing to government and developers to assist in planning for future growth. Operational workers would only be integrated at such a time sufficient housing stock were available so as to not place additional pressure on housing availability and affordability.

When visiting sites, Australia Pacific LNG employees and contractors will be housed in accommodation facilities located onsite to minimise the impact on short-term commercial accommodation where possible.

Affordable housing

To mitigate potential impacts to housing affordability and availability, Australia Pacific LNG community programs will include working with government and agencies that provide housing to people in financial distress.

Community health and safety

Construction

The nature of construction work is generally physically demanding, executed in isolated areas and for lengthy periods of time. As such, the work attracts a young, male-dominated workforce. This observation is reinforced by a recent statement made by the Construction, Forestry, Mining and Energy Union stating 'too many older, experienced workers are being pushed out of the industry because of their age or because they require special treatment for injuries received on the job' (ABC 2009).

While the influx of a young, male-dominated peak construction workforce of approximately 2,100 will have minimal impact to the overall regional demographic profile (as they will be working a fly-in/fly-out or drive-in/drive-out roster), there will be potential impacts to community safety and health, access to facilities and services, and community values and lifestyle.

The construction workforce accommodated in temporary accommodation facilities will be working a four week on, followed by one week off roster and will interact with the community during their rostered days off, during shift change and when visiting towns to source goods, services or for logistical purposes. Social research within the gas fields found some stakeholders said their communities are becoming less safe, especially in relation to theft and public safety, and some people felt uncomfortable in social venues dominated by industry workers.

Construction of the gas fields will cause a significant increase to road, air and shipping movements as a direct result of the transport of people, materials and equipment. The potential impact to road and maritime safety (and congestion) is discussed in detail in Volume 2 Chapter 17.

Operations

Impacts to community safety and health due to the operational workforce are not expected to be as significant for the operational phase given the workforce numbers will be significantly less and the demographics of the operational workforce more closely aligned to the existing population. Although it is not expected to be as significant, Australia Pacific LNG will put in place mitigation measures to address any potential impacts on community safety and health. Proposed mitigation measures are discussed in the following section.

Impacts to road safety and congestion during the operational phase are discussed in detail in Volume 2 Chapter 17.

Mitigation

The good behaviour of project employees and contractors during construction of the gas fields will be a key component to mitigating against any potentially impacts to community health and safety. There are two components to this:

- Workforce culture
- Workforce health promotion programs.

Creating a culture of good behaviour, responsibility for actions and respect for the existing community to ensure harmony and minimal disturbance will be partly achieved by the design and construction of high quality temporary accommodation facilities with sufficient recreational activities. As well as a high quality temporary accommodation facility, Australia Pacific LNG will manage its employees and contractors through a Code of Conduct and specific project rules to ensure high standards of behaviour extend beyond the temporary accommodation facilities and into the general community.

The implementation of workforce health promotion programs will assist to mitigate potential impacts to community health and safety. Australia Pacific LNG will implement health promotion programs amongst its workforce, such as 'fit for work' and 'drug and alcohol' policies to ensure high standards of behaviour are maintained.

Australia Pacific LNG will work with government, the community and other industries to plan for potential cumulative impacts and share information relating to potential impacts and mitigation measures.

Australia Pacific LNG will continue consultation and engagement programs with stakeholders to ensure their views are understood and considered throughout the life of the Project and will implement a community complaints procedure for stakeholders to raise concerns and in turn have the enquiries addressed within in a timely manner.

Emergency response planning for the gas fields' area is addressed in Volume 2 Chapter 22, while safe transportation management practices are addressed in Volume 2 Chapter 17. Australia Pacific LNG's emergency response planning will include consultation with neighbours and collaboration with relevant stakeholders, as practicable.

Key mitigation measures to address traffic safety and congestion include developing and implementing a range of road safety programs for employees and community members targeting fatigue and safe driving, designing workforce transport to minimise potential impacts to traffic congestion and diverting travel routes away from sensitive receptors (e.g. schools, hospitals). Australia Pacific LNG will maintain regular dialogue with all levels of government in relation to road conditions and safety.

Facilities and services

Construction

Construction of the gas fields is expected to begin in 2011 and be completed by 2027, with a peak workforce required between 2012 and 2017, where on average a workforce of 1,767 will be required per year over this period. The construction workforce will be accommodated in temporary accommodation facilities onsite, which will reduce the potential impact on demand for facilities and services in the region, but overall it is expected the region will experience a significant increase in demand when flow-on effects and cumulative impacts are considered. For example, workers and dependents are expected to move to the area to seek employment, business and contracting opportunities directly and indirectly related to the Project.

Facilities and services potentially impacted as a result of regional growth can be categorised as:

- Medical and health
- Recreation
- Emergency services
- Community support services and facilities

- Utility services.

Potential impacts to these facilities and services are discussed below.

Medical and health

It is highly likely that towns within, or located adjacent to, the study area will experience increased demand for medical and health services as a result of the increase in population attributed to the construction of the project and flow-on effects. This would particularly relate to primary health care services. Primary health care is the first point of entry for people into the health system and includes services such as visits to general practitioners, dentist, prescription chemist and physiotherapy.

The public health system in the gas fields' study area is stretched and attracting sufficient numbers of medical and health professionals is a challenge, which is an issue throughout regional Australia.

Australia Pacific LNG is conducting a number of risk assessment studies to further define the hazards and risks and the need and extent of medical facilities that will be required. Specialists have been engaged by Australia Pacific LNG to review the risks and hazards associated with the construction activities and to provide advice on the medical facilities which will be required. Australia Pacific LNG will collaborate with government, industry and other providers to mitigate the impact to health services in local communities including providing the appropriate level of medical facilities for its temporary accommodation facilities and operating facilities.

Recreation

Australia Pacific LNG does not anticipate impacts to common recreational areas in the gas fields' development area (e.g. parks or designated water reserves used for swimming). However, it is expected that there will be an increase in demand for recreational facilities and services in the local community. The provision of high quality recreational facilities at the temporary accommodation facilities will mitigate potential increases in demand by the workforce during the construction and operational phases of the Project.

Emergency services

The construction phase of the Project is not expected to create significant demand for emergency services in the study area as the Project will be well-equipped to handle emergency situations. However, the Project may need to draw on the expertise and assistance of local emergency services during an emergency situation. Potential impacts for hazard and risk, as related to emergency services in the gas fields' area, are discussed in Volume 2 Chapter 22.

Many emergency services operating in Queensland are volunteer-based and the gas field workforce (for construction and operational phases) could potentially contribute to such volunteering (e.g. the volunteer fire brigade).

Community support services and facilities

The presence of quality and diverse community support services and facilities is vital for the social health of a community. It plays an important role in the quality of life for residents and for building a vibrant and strong community.

It is expected that the direct and indirect construction impacts of the Project and particularly in a cumulative context, will create additional demand for community support services, particularly in relation to community and cultural facilities.

The fly-in/fly-out and drive-in/drive-out component of the construction workforce will increase the pressure placed on regional airports and local roads respectively. The potential impacts are discussed in Volume 2 Chapter 17.

Utility services

There is not expected to be a significant impact to utility services due to the construction of the Project, given the construction workforce will be accommodated in temporary accommodation facilities and will be mainly self-sufficient.

Operations

The operational workforce will initially be accommodated in the temporary accommodation facilities onsite and will be progressively integrated into local towns as housing stock becomes available. Potential impacts associated with the operational phase of the Project in relation to facilities and services are described below.

Medical and health

As the operational workforce progressively integrates into the existing town, they may choose to relocate their families. It is expected the demand for medical and health services is likely to increase as a result.

Medical facilities located onsite for operations will be commensurate with the hazards and associated level of risk and will be implemented according to that level or risk, as discussed in the previous section.

Recreation

Australia Pacific LNG does not anticipate an impact on common recreational areas (such as parks or designated water reserves used for swimming) in the gas fields during the operational phase of the Project. It is expected that there will be an increase in demand for recreational facilities and services in the towns where the operational workforce and their families integrate.

Emergency services

Demand for emergency services is not expected to increase significantly as a result of the operations of the Project. However, the Project may need to draw from the expertise and assistance of local emergency services if the situation required. Potential impacts for hazard and risk as related to emergency services in the gas fields' area are discussed in Volume 2 Chapter 22.

Many emergency services operating in Queensland are volunteer-based and the gas fields' workforce (for construction and operational phases) could potentially contribute to such volunteering (e.g. the volunteer fire brigade).

Community support services and facilities

It is expected that demand for community support services will increase as the operational workforce and their families integrate into towns.

The provision of child care services is an important factor for enabling parents to participate in employment, education and training, community activities and personal activities. Inadequate child care services will also present challenges for attraction and retention of workers with young families and targeting increased participation of carers into the workforce. Demand for child care and general family support services is expected to increase. Demand for youth services would also expect to increase.

Should the need arise for overseas workers to be employed on the Project, Australia Pacific LNG would provide adequate levels of support for the integration of these workers.

Utility services

Demand for utility services would increase, resulting from an expanding population.

Mitigation

In developing mitigation strategies for potential impacts to facilities and services, Australia Pacific LNG will consult with the relevant local and State government departments and be guided by relevant local and regional plans.

Australia Pacific LNG is conducting a number of risk assessment studies to further define the hazards and risks and the need and extent of medical facilities that will be required. A technical review of the risks and hazards associated with the construction activities is being conducted and will be used to provide advice about the medical facilities required. Australia Pacific LNG will collaborate with government, industry and other providers to mitigate the impact to health services in local communities including providing the appropriate level of medical facilities for its temporary accommodation facilities and operating facilities.

The Project's health and safety management system will also protect and enhance the health of the workforce and their families by addressing common health issues. Australia Pacific LNG will also implement employee and family wellbeing programs and conduct regular education campaigns to improve health and wellbeing such as the 'fit for work' and 'drug and alcohol' policies.

Relevant landowners will also be involved in any emergency response planning. Mitigation measures for hazard and risk related to emergency services are discussed in Volume 2 Chapter 22.

In the event that common recreational areas are going to be impacted by the Project, Australia Pacific LNG will consult and engage relevant stakeholders to ensure their views are understood and considered and will communicate the extent and timing of any impacts to affected stakeholders and schedule works. Australia Pacific LNG has implemented a community complaints procedure in the gas fields which ensures stakeholders' concerns are addressed in a timely manner.

Australia Pacific LNG will collaborate with government, industry and community partners for research programs to understand the social impacts and opportunities created by development in communities in which it operates and lives, particularly relevant in the cumulative context. Community investment programs will support sustainable community development by identifying and supporting programs that target community support services.

Social research in the gas fields found some stakeholders are frustrated because they feel the CSG industry is not adequately utilising local services for employees, that is, there is a lack of integration of workers into the community. Australia Pacific LNG will provide orientation to employees moving to the region through the workforce induction program to assist in alleviating pressuring on existing support services. The orientation support will also provide employees with information on services, facilities, activities and programs in the region and will develop an employee-driven social program to encourage workers to become active members of the workforce and community.

Australia Pacific LNG will provide data for regional assessments to anticipate cumulative demand for utility services, highlighting any short falls to the Queensland Government and utility providers.

Community values and lifestyle

Construction

Social research completed for Origin in the gas fields' study area (refer to Section 20.2.2 for methodology) indicated a largely positive community sentiment with strong values and a high level of satisfaction with existing lifestyle patterns. The following key observations were made by stakeholders:

- Preference for integration of company employees and contractors within existing communities so that they can be a part of, and participate in, the community
- Strong family values and rural heritage are a key attraction of living in the country and stakeholders are concerned with preservation of the status quo
- Dalby stakeholders see their town as a modern country town that retains a small-town feel
- Pride in the agricultural ability of the region is high amongst Dalby stakeholders
- Chinchilla stakeholders see their town as very family-focused, with a small-town feel
- Miles stakeholders believe their town offers a relaxed country lifestyle and it is an ideal place to raise a family
- Roma stakeholders see themselves as pioneers of the mining and oil and gas industry and feel the lifestyle is attractive but tough.

An influx of construction workers has the potential to impact community values and residents lifestyle patterns. Stakeholders who participated in the Origin social research noted the 'small-town feel', 'family values', 'rural heritage' and 'relaxed country lifestyle' as important values and lifestyle patterns. In a cumulative context, these values and lifestyle patterns would be impacted significantly by an increase of population, non-resident workers, growth to the CSG industry and the general increase to economic activity.

Another important component of addressing potential impacts to community values and lifestyle is the integration of workforce and dependents in a way that upholds existing community values. This is best achieved by fostering a culture of good behaviour, high levels of participation in community activities (including volunteering) and ensuring adequate resettlement and orientation services are available to those relocating.

Furthermore, community values and lifestyle may be impacted due to the relationship between increased disposable income and how people spend it. For example, increased spending on gambling, alcohol or drugs could contribute to a decline in community values and strength.

Potential impacts to facilities and services which relate to lifestyle are discussed in detail later in this section and impacts of lighting, dust and noise to community amenity and lifestyle in the gas fields' study area are discussed in Volume 2 Chapter 7, Volume 2 Chapter 5, Volume 2 Chapter 13 and Volume 2 Chapter 15, respectively.

Operations

It is expected that the potential impact on community values and lifestyle patterns would not be as significant for the operational phase of the Project as for construction given the smaller workforce numbers required and that fact that workers will be progressively integrated into existing communities. Furthermore, the demographics of the construction workforce will be more similar to that of the existing community which will assist in workforce integration.

Potential impacts to facilities and services which relate to lifestyle are discussed in detail later in this section and impacts of lighting, dust and noise to community amenity and lifestyle in the gas fields' study area are discussed in Volume 2 Chapter 7, Volume 2 Chapter 5, Volume 2 Chapter 13 and Volume 2 Chapter 15, respectively.

Mitigation

It is Australia Pacific LNG's intention to become an integral and valued community member by upholding, and adding value to, existing community values and lifestyle. Australia Pacific LNG will build upon Origin's reputation as a well-regarded member of the business community. Contributing to community values and lifestyle in the most effective and appropriate way will be underpinned by the Australia Pacific LNG community investment strategy, which will be developed in close consultation with key stakeholders. The support for health promotion and wellbeing programs through internal human resources programs will contribute to the social health and wellbeing of the Project's workforce and the region more broadly.

Regular monitoring and consultation will be necessary to ensure any detrimental change to community values and lifestyles is recognised quickly and acted upon. The independent community research process already established by Origin, on behalf of Australia Pacific LNG (Section 20.2.2), will be fundamental to identifying changes attributed to the Project, as well as any cumulative impacts. Stakeholder comments, complaints and criticism will be addressed promptly and appropriately through the Project's community complaints procedure. Details about the community complaints procedure are contained within the draft SIMP (Volume 2 Chapter 24).

To mitigate against potential impacts of workers' possible anti-social behaviour to community values and lifestyle, Australia Pacific LNG will manage its employees and contractors through a Code of Conduct and specific temporary accommodation facility rules to ensure high standards of behaviour extend beyond the temporary accommodation facility and into the general community. Australia Pacific LNG is committed to upholding and improving where possible, the environmental and social values of the region. Strategies to mitigate against the potential impacts of dust, noise, lighting and traffic on community values and lifestyles, related to the gas fields' development area, are discussed in Volume 2 Chapter 7, Volume 2 Chapter 15, Volume 2 Chapter 17, Volume 2 Chapter 5 and Volume 2 Chapter 13, respectively.

20.7 Impact assessment and mitigation summary

Table 20.12 contains a summary of the social impacts identified for the construction and operation stages of the gas fields' development and the corresponding mitigation measures. The table format follows the draft guidelines for SIMPs received from the Queensland Department of Infrastructure and Planning in November 2009. The risk categories used to assess probability and consequence were also received from DIP (refer to Section 20.2.4). Social impacts have been classified according to the categories presented in the table. Each of the impact categories are explained within the context of potential implications to the social environment from the Project.



Table 20.12 Impact assessment and mitigation summary

Abbreviations: H = high, M = medium, L = low Cons = Construction phase, Ops = Operational phase + = positive impact

Potential Impact	Phase of Project	Probability (H, M, L)	Consequence (H, M, L)	Mitigation or enhancement	Residual Risk H, M, L
Population impact					
Increase in regional population.	Cons	H	M	<ul style="list-style-type: none"> Australia Pacific LNG will provide housing for non-local construction staff and contractors in temporary accommodation facilities and will consult with stakeholders including the local councils as part of the site selection process. 	M
	Ops	H	M	<ul style="list-style-type: none"> Australia Pacific LNG will work with government, the community and other industries to plan for potential cumulative impacts and share information relating to potential impacts and mitigation measures. 	L
				<ul style="list-style-type: none"> Australia Pacific LNG will continue to participate in Local Government and regional planning processes and provide information about its Project to inform discussion and decision making in a timely manner. 	
				<ul style="list-style-type: none"> Australia Pacific LNG will continue to use or develop methods to attract local people to the workforce. 	
				<ul style="list-style-type: none"> Australia Pacific LNG will continue to use or develop methods to attract under-represented groups to the workforce. 	
Demographic profile					
Change in community demographics due to construction workforce profile	Cons	H	M	<ul style="list-style-type: none"> Australia Pacific LNG will continue to use or develop methods to attract people local to the region to the workforce. 	L
	Ops	L	L	<ul style="list-style-type: none"> Australia Pacific LNG will continue to use or develop methods to attract under-represented groups to the workforce. 	L



Potential Impact	Phase of Project	Probability (H, M, L)	Consequence (H, M, L)	Mitigation or enhancement	Residual Risk H, M, L
				attract under-represented groups to the workforce.	
				<ul style="list-style-type: none"> Australia Pacific LNG will uphold a high standard of behaviour and will communicate and strictly enforce its Code of Conduct for all employees and contractors. 	
				<i>Refer to 'community health and safety' mitigation measures</i>	
Increase in the number of overseas workers in the community.	Cons	L	M	<ul style="list-style-type: none"> Australia Pacific LNG will continue to use or develop methods to attract people local to the region to the workforce. Australia Pacific LNG will continue to use or develop methods to attract under-represented groups to the workforce. 	L
				<i>Refer to 'facilities and services' mitigation measures.</i>	
Indigenous Australians					
Reduced ability to access affordable housing.	Cons	L	H	<ul style="list-style-type: none"> Australia Pacific LNG will work with government, the community and other industries to plan for potential cumulative impacts and share information relating to potential impacts and mitigation measures. 	L
	Ops	M	H	<ul style="list-style-type: none"> To mitigate potential impacts to housing affordability and availability, Australia Pacific LNG community programs will include working with Government and agencies that provide housing to people in housing distress. 	M
Difficulty in securing and retaining employment on the Project for Indigenous Australians	Cons	M	M	<ul style="list-style-type: none"> Australia Pacific LNG will continue to use or develop methods to attract people local to the region to the workforce. 	L
	Ops	M	M	<ul style="list-style-type: none"> Australia Pacific LNG will continue to use or develop methods to attract under-represented groups to the workforce. 	M



Potential Impact	Phase of Project	Probability (H, M, L)	Consequence (H, M, L)	Mitigation or enhancement	Residual Risk H, M, L
Lack of business development opportunities realised for Indigenous businesses.	Cons	M	M	<ul style="list-style-type: none"> Australia Pacific LNG will aim to build collaborative partnerships with government and community organisations to enhance the capacity of employers to provide jobs and the capacity of locals to develop skills and secure jobs. For example through the Community Skills Scholarship program. 	L
	Ops	M	M	<ul style="list-style-type: none"> Australia Pacific LNG will develop an Indigenous engagement strategy to address recruitment and retention strategies specific to Indigenous Australians. 	
				<ul style="list-style-type: none"> Australia Pacific LNG will implement a local content strategy whereby we participate in or establish programs which assist qualified local and regional businesses with the opportunity to tender for provision of goods and services for the Project. 	
				<ul style="list-style-type: none"> Australia Pacific LNG will ensure contracts with suppliers and sub-contractors are aligned with Australia Pacific LNG's sustainability principles. 	
Lack of respect for				<ul style="list-style-type: none"> Australia Pacific LNG will develop an Indigenous engagement strategy to identify business opportunities and programs for development. 	L
	Cons	M	H	<ul style="list-style-type: none"> Australia Pacific LNG will continue to implement cultural awareness 	



Potential Impact	Phase of Project	Probability (H, M, L)	Consequence (H, M, L)	Mitigation or enhancement	Residual Risk H, M, L
Indigenous Australians.	Ops	M	H	<p>programs.</p> <ul style="list-style-type: none"> Australia Pacific LNG will work with Indigenous stakeholders in Caring for Country initiatives⁶. Australia Pacific LNG will engage with Indigenous Australians in a respectful and culturally appropriate way, in accordance with the Code of Conduct. 	L
Income and affordability					
Increased cost of living due to inflationary pressure from higher average weekly incomes.	Cons	M	M	<ul style="list-style-type: none"> Australia Pacific LNG will provide housing for non-local construction staff and contractors in temporary accommodation facilities and will consult with stakeholders including the local council as part of the site selection process for these facilities. Australia Pacific LNG will work through committees established under the Sustainable Resource Communities Policy to identify housing market issues, forecasts and possible responses. To mitigate potential impacts to housing affordability and availability, Australia Pacific LNG community programs will include working with Government and agencies that provide housing to people in housing distress. 	L

⁶ Caring for our Country is a Commonwealth Government initiative which commenced in 2008 and integrates delivery of the Australian Government's previous natural resource management programs, including the Natural Heritage Trust, the National Landcare Program, the Environmental Stewardship Program and the Working on Country Indigenous land and sea ranger program. The program includes supporting Indigenous employment in natural resource management and heritage related activities.



Potential Impact	Phase of Project	Probability (H, M, L)	Consequence (H, M, L)	Mitigation or enhancement	Residual Risk H, M, L
Social divide resulting from increased wage gap (for example the 'haves' and 'have nots').	Cons	M	M	<ul style="list-style-type: none"> Australia Pacific LNG will continue to use or develop methods to attract people local to the region to the workforce. 	L
	Ops	L	M	<ul style="list-style-type: none"> Australia Pacific LNG will implement a local content strategy whereby Australia Pacific LNG participates in or establishes programs which assist qualified local and regional businesses with the opportunity to tender for provision of goods and services for the Project. 	L
				<ul style="list-style-type: none"> Australia Pacific LNG will continue to use or develop methods to attract under-represented groups to the workforce. 	
				<ul style="list-style-type: none"> Australia Pacific LNG will aim to build collaborative partnerships with government and community organisations to enhance the capacity of employers to provide jobs and the capacity of locals to develop skills and secure jobs. For example through the Community Skills Scholarship program. 	
				<ul style="list-style-type: none"> Australia Pacific LNG's community investment programs will support sustainable community development. 	
				<ul style="list-style-type: none"> To mitigate potential impacts to housing affordability and availability, Australia Pacific LNG community programs will include working with Government and agencies that provide housing to people in housing distress. 	
Employment, training and Business					
Opportunity to increase labour-force participation and increase local skills	Cons	M	+	<ul style="list-style-type: none"> Australia Pacific LNG workforce strategy to address: 	+
	Ops	M	+	<ul style="list-style-type: none"> in-house training programs, including potential opportunities for 	+



Potential Impact	Phase of Project	Probability (H, M, L)	Consequence (H, M, L)	Mitigation or enhancement	Residual Risk H, M, L
capacity.				<ul style="list-style-type: none"> on-site training <ul style="list-style-type: none"> analysis of ongoing labour requirements training strategies targeted to local labour targeted employment and training programs methods to attract people local to the region to the workforce methods to attract under-represented groups to the workforce Australia Pacific LNG will work with government, the community and other industries to plan for potential cumulative impacts and share information relating to potential impacts and mitigation measures. Australia Pacific LNG will work together with the CSG/LNG industry through the CSG/LNG Skills Taskforce of Energy Skills Queensland to help address skill shortages by: <ul style="list-style-type: none"> raising awareness of the CSG/LNG industry in local communities supporting vocational training facilitating career advice and work readiness programs for new entrants and mature entrants from related industries Australia Pacific LNG will participate in CSG/LNG gateway programs with secondary schools in the Project region in partnership with providers such as the Queensland Minerals and Energy Academy to implement programs that promote career opportunities and facilitate employment in the CSG/LNG industry. Australia Pacific LNG will continue to collaborate on programs with 	H, M, L



Potential Impact	Phase of Project	Probability (H, M, L)	Consequence (H, M, L)	Mitigation or enhancement	Residual Risk H, M, L
				government training and education groups that build the local skills base both to meet the specific needs of the industry and other impacted sectors. This will include: further development of apprenticeships, traineeships, scholarships and higher education programs and potentially including those that recognise prior learning.	
Opportunities for local and regional businesses to supply goods and services to the Project.	Cons Op	H M	+ +	<ul style="list-style-type: none"> Australia Pacific LNG will implement a local content strategy whereby it participates in or establishes programs which assist qualified local and regional businesses access the opportunity to tender for provision of goods and services for the Project. Australia Pacific LNG will ensure contracts with suppliers and sub-contractors are aligned with Australia Pacific LNG's sustainability principles. 	+ +
Inflationary pressure to commercial real estate costs impacts local businesses.	Cons Ops	L L	M M	<ul style="list-style-type: none"> Australia Pacific LNG will continue to participate in government local and regional planning processes and provide information to on demand for commercial real estate to allow for evaluation of future growth and due consideration for additional land release. 	M M
Impact to local and regional businesses losing employees to the Project.	Cons Ops	M L	M M	<ul style="list-style-type: none"> Australia Pacific LNG will aim to build collaborative partnerships with government and community organisations to enhance the capacity of employers to provide jobs and the capacity of locals to develop skills and secure jobs. For example through the Community Skills Scholarship program. Australia Pacific LNG will continue to collaborate on programs with government training and education groups that build the local skills base both to meet the specific needs of the industry and other 	L L



Potential Impact	Phase of Project	Probability (H, M, L)	Consequence (H, M, L)	Mitigation or enhancement	Residual Risk H, M, L
Impact on operation of agricultural businesses	Cons	H	H	impacted sectors. This will include: further development of apprenticeships, traineeships, scholarships and higher education programs and potentially including those that recognise prior learning.	L
	Ops	M	M	<ul style="list-style-type: none"> Australia Pacific LNG will integrate and manage Project activities in consultation with landowners. Australia Pacific LNG will continue to work with the Government's Land Access Group to inform the development of an industry wide Code of Conduct for working with landowners. Vehicle inspection and cleaning facilities will be used by Australia Pacific LNG at appropriate locations to mitigate against the spread of weeds. Australia Pacific LNG will bury pipeline infrastructure on farming land to ensure continuity of farming activities. Australia Pacific LNG will 'make good' a decline in the water supply to impacted water bores in accordance with requirements of the <i>Petroleum and Gas (Production and Safety) Act 2004</i>. Australia Pacific LNG's community investment programs will support sustainable community development. Australia Pacific LNG will engage with the community to develop sustainable regional land use strategies that combine the interests of CSG and agricultural values. 	
Refer to <i>Stakeholder and Community Engagement Chapter, Volume 2, Chapter 2</i> .					



Potential Impact	Phase of Project	Probability (H, M, L)	Consequence (H, M, L)	Mitigation or enhancement	Residual Risk H, M, L
Opportunities for apprenticeships, scholarships and vocational training.	Cons	M	+	<ul style="list-style-type: none"> Australia Pacific LNG will continue to collaborate on programs with government training and education groups that build the local skills base both to meet the specific needs of the industry and other impacted sectors. This will include further development of apprenticeships, traineeships, scholarships and higher education programs potentially including those that recognise prior learning.. 	+
	Ops	H	+	<ul style="list-style-type: none"> Australia Pacific LNG will work with government, the community and other industries to plan for potential cumulative impacts and share information relating to potential impacts and mitigation measures. 	+
Opportunity to support work readiness programs and pre-trade training concepts.	Cons	M	+	<ul style="list-style-type: none"> Australia Pacific LNG will continue to participate in government local and regional planning processes and provide information about its project to inform discussion and decision making in a timely manner. 	+
	Ops	H	+	<ul style="list-style-type: none"> Australia Pacific LNG will continue to develop or utilise existing local partnerships to assist students to transition from school to work or higher education. Australia Pacific LNG will partner with local training providers to develop industry and employment skills. Australia Pacific LNG will work together with the CSG/LNG industry through the CSG/LNG Skills Taskforce of Energy Skills Queensland to help address skill shortages by: <ul style="list-style-type: none"> (a) raising awareness of the CSG/LNG industry in local communities. (b) supporting vocational training. (c) facilitating career advice and work readiness programs for new 	+



Potential Impact	Phase of Project	Probability (H, M, L)	Consequence (H, M, L)	Mitigation or enhancement	Residual Risk H, M, L
				entrants and mature entrants from related industries.	
				<ul style="list-style-type: none"> Australia Pacific LNG will participate in CSG/LNG gateway programs with high schools in the Project region to implement programs that promote career opportunities and facilitate employment in the CSG/LNG industry. Australia Pacific LNG will expand competency based training and skills development programs for Production and Process Plant Operators. 	
Primary and Secondary Education					
Inability of primary and secondary education facilities to meet demand.	Cons	L	M	<ul style="list-style-type: none"> Australia Pacific LNG will assist primary and secondary education institutions in forecasting future demand by providing relevant workforce data to relevant State Government departments 	L
	Ops	L	M	<ul style="list-style-type: none"> Australia Pacific LNG will work with government, the community and other industries to plan for potential cumulative impacts and share information relating to potential impacts and mitigation measures. 	L
Housing and accommodation					
Increase in housing and/or rental prices caused by increased demand and limited supply resulting in poor levels of housing affordability and an over-	Cons	H	H	<ul style="list-style-type: none"> Australia Pacific LNG will provide housing for non-local construction staff and contractors in temporary accommodation facilities and will consult with stakeholders including the local council as part of the site selection process for these facilities. 	L
	Ops	M	H	<ul style="list-style-type: none"> To mitigate pressure on housing affordability during gas fields' operations, temporary accommodation will be provided for personnel wishing to relocate until such time as housing stock 	M



Potential Impact	Phase of Project	Probability (H, M, L)	Consequence (H, M, L)	Mitigation or enhancement	Residual Risk H, M, L
inflated market.				<p>becomes available.</p> <ul style="list-style-type: none"> Australia Pacific LNG will work with government, the community and other industries to plan for potential cumulative impacts and share information relating to potential impacts and mitigation measures. Australia Pacific LNG will continue to participate in Local Government and regional planning processes and provide information about its Project to inform discussion and decision making in a timely manner. Australia Pacific LNG will work through committees established under the Sustainable Resource Communities Policy to identify housing market issues, forecasts and possible responses. To mitigate potential impacts to housing affordability and availability, Australia Pacific LNG community programs will include working with Government and agencies that provide housing to people in housing distress. 	H, M, L
Concerns that workers accommodation facilities will foster anti-social behaviour and impact host communities.	Cons	M	H	<ul style="list-style-type: none"> Australia Pacific LNG will continue consultation and engagement programs with stakeholders to ensure their views are understood and considered throughout the life of the Project. Australia Pacific LNG will uphold a high standard of behaviour and will communicate and strictly enforce its Code of Conduct for all employees and contractors. Australia Pacific LNG will design and construct a high quality temporary accommodation facility with sufficient social and recreational facilities. 	L



Potential Impact	Phase of Project	Probability (H, M, L)	Consequence (H, M, L)	Mitigation or enhancement	Residual Risk H, M, L
Increased demand for hotel/motel accommodation presents challenges for competing local industry and businesses.	Cons	M	H	<ul style="list-style-type: none"> Australia Pacific LNG will continue to implement a community complaints procedure for stakeholders to raise concerns, and in turn have them addressed in a timely manner. Australia Pacific LNG will work with government, the community and other industries to plan for potential cumulative impacts and share information relating to potential impacts and mitigation measures. Australia Pacific LNG will continue to participate in Local Government and regional planning processes and provide information about its Project to inform discussion and decision making in a timely manner. Australia Pacific LNG will provide housing for non-local construction staff and contractors in temporary accommodation facilities. To mitigate pressure on housing affordability during gas fields' operations, temporary accommodation will be provided for personnel wishing to relocate until such time as housing stock becomes available. 	L
Community health and safety					
Community concern about health and safety impacts resulting from the Project.	Cons	M	H	<ul style="list-style-type: none"> Project health and safety practices and results of relevant monitoring will be communicated through a range of channels such as Australia Pacific LNG's Community Centre, consultation sessions, media and meetings. 	L
	Ops	M	H	<ul style="list-style-type: none"> Australia Pacific LNG's emergency response planning will include consultation with neighbours and collaboration with relevant stakeholders, as practicable. 	L



Potential Impact	Phase of Project	Probability (H, M, L)	Consequence (H, M, L)	Mitigation or enhancement	Residual Risk H, M, L
Potential for socially unacceptable behaviour due to the increase in population and changed demographics.	Cons	M	H	<ul style="list-style-type: none"> Australia Pacific LNG will continue to implement a community complaints procedure for stakeholders to raise concerns, and in turn have them addressed in a timely manner. Australia Pacific LNG will work with government, the community and other industries to plan for potential cumulative impacts and share information relating to potential impacts and mitigation measures. Australia Pacific LNG will continue consultation and engagement programs with stakeholders to ensure their views are understood and considered throughout the life of the Project. 	L
	Ops	L	H	<ul style="list-style-type: none"> Australia Pacific LNG will uphold a high standard of behaviour and will communicate and strictly enforce its Code of Conduct for all employees and contractors. Australia Pacific LNG will design and construct high quality temporary accommodation facilities with sufficient social and recreational facilities. Australia Pacific LNG will continue to implement a community complaints procedure for stakeholders to raise concerns, and in turn have them addressed in a timely manner. Health promotion programs relating to the 'Fit for Work' and 'Drug and Alcohol' policies will be implemented by Australia Pacific LNG. 	



Potential Impact	Phase of Project	Probability (H, M, L)	Consequence (H, M, L)	Mitigation or enhancement	Residual Risk (H, M, L)
Increase in road, air and shipping movements impacting road and maritime safety, and congestion.	Cons	H	H	<ul style="list-style-type: none"> Australia Pacific LNG will work with the Federal, State and local government and industry in regard to potential upgrades required to meet the increase demands on regional infrastructure. 	M
	Ops	M	H	<ul style="list-style-type: none"> Australia Pacific LNG will develop a logistics management plan to efficiently move people and materials and to reduce the impact of traffic and transport on communities by: <ul style="list-style-type: none"> consolidation of material prior to transport to reduce truck movements siting logistic hubs (warehouses and lay down facilities) that divert traffic flows around local towns the use of buses for personnel site access during construction and operations appropriate travel restrictions development and implementation of safe transportation management practices to reduce the impact to the local environment. avoid travel along school routes during set down pick up times night time travel managed where routes pass sensitive sites, e.g. residential and schools speed restrictions especially next to sensitive sites – residential, schools or along unsealed roads to reduce dust creation vehicles lights and warning lights illuminated as appropriate 	M



Potential Impact	Phase of Project	Probability (H, M, L)	Consequence (H, M, L)	Mitigation or enhancement	Residual Risk H, M, L
				<ul style="list-style-type: none"> ○ implementation of driver training program • Australia Pacific LNG will expand the Community Safety Awareness program in conjunction with industry partners, government and community groups to develop responses to community safety concerns in the region <p><i>Refer to mitigation measures in traffic and transport section of EIS - Volume 2, Chapter 17.</i></p>	
Facilities and Services					
Increased demand for medical and health services.	Cons	M	H	<ul style="list-style-type: none"> • Australia Pacific LNG will collaborate with government, industry and other providers to mitigate the impact on health services in local communities including providing the appropriate level of medical facilities for its temporary accommodation facilities and operating facilities. • Australia Pacific LNG will continue to participate in Local Government and regional planning processes and provide information about its Project to inform discussion and decision making in a timely manner. • Health promotion programs relating to the 'Fit for Work' and 'Drug and Alcohol' policies will be implemented by Australia Pacific LNG. 	L
	Ops	M	H		L
Reduced access to recreational areas.	Cons	L	M	<ul style="list-style-type: none"> • Australia Pacific LNG will continue consultation and engagement programs with stakeholders to ensure their views are understood and considered throughout the life of the Project. 	L



Potential Impact	Phase of Project	Probability (H, M, L)	Consequence (H, M, L)	Mitigation or enhancement	Residual Risk H, M, L
				<ul style="list-style-type: none"> Australia Pacific LNG will continue to communicate the extent and timing of any impacts to affected stakeholders and schedule works around minimal disturbance. Australia Pacific LNG will continue to implement community complaints procedure for community members and stakeholders to raise concerns, and in turn have them addressed in a timely manner. 	
Increased demand to emergency services.	Cons Ops	M L	M M	<ul style="list-style-type: none"> Australia Pacific LNG will continue to participate in Local Government and regional planning processes and provide information about its Project to inform discussion and decision making in a timely manner. Australia Pacific LNG will collaborate with government, industry and other providers to mitigate the impact on health services in local communities including providing the appropriate level of medical facilities for its temporary accommodation facilities and operational facilities. 	L L
See Volume 2, Chapter 22 for mitigation measures for hazard and risk as they relate to emergency services in the gas fields' study area.					
Increased demand for community support services and facilities (for example child care, public transport, airport, family services).	Cons Ops	H M	H H	<ul style="list-style-type: none"> Australia Pacific LNG will collaborate with government, industry and community partners on research programs to understand the social impacts and opportunities created by development in communities in which it operates. Australia Pacific LNG's community investment programs will support sustainable community development. 	L L



Potential Impact	Phase of Project	Probability (H, M, L)	Consequence (H, M, L)	Mitigation or enhancement	Residual Risk H, M, L
				<ul style="list-style-type: none"> Australia Pacific LNG will work with government, the community and other industries to plan for potential cumulative impacts and share information relating to potential impacts and mitigation measures. Australia Pacific LNG will provide orientation to employees moving to the region through the workforce induction program to assist in alleviating pressure on existing support services. Australia Pacific LNG will continue to participate in Local Government and regional planning processes and provide information about its Project to inform discussion and decision making in a timely manner. See Volume 2, Chapter 17 for mitigation measures for impacts to traffic and transport services and infrastructure. 	
Increased pressure to utility services.	Cons	L	M	<ul style="list-style-type: none"> Australia Pacific LNG will work with government, the community and other industries to plan for potential cumulative impacts and share information relating to potential impacts and mitigation measures. Australia Pacific LNG will continue to participate in Local Government and regional planning processes and provide information about its Project to inform discussion and decision making in a timely manner. 	L L
Community values and lifestyles					
The region's growth will impact local community values and residents' lifestyle patterns.	Cons	H	M	<ul style="list-style-type: none"> Australia Pacific LNG will collaborate with government, industry and community partners on research programs to understand the social impacts and opportunities created by development in communities in which it operates. 	L L



Potential Impact	Phase of Project	Probability (H, M, L)	Consequence (H, M, L)	Mitigation or enhancement	Residual Risk H, M, L
				<ul style="list-style-type: none"> Australia Pacific LNG's community investment programs will support sustainable community development. Australia Pacific LNG will ensure contracts with suppliers and sub-contractors are aligned with Australia Pacific LNG's sustainability principles. Australia Pacific LNG will continue consultation and engagement programs with stakeholders to ensure their views are understood and considered throughout the life of the Project. Australia Pacific LNG will uphold a high standard of behaviour and will communicate and strictly enforce its Code of Conduct for all employees and contractors. Australia Pacific LNG will develop a social program to encourage employees to become active members of the community during the operational phase of the Project. 	
Rostered work employment decreases the time spent with their families and participation in community activities (including volunteering).	Cons Ops	M M	M M	<ul style="list-style-type: none"> Australia Pacific LNG will collaborate with government, industry and community partners on research programs to understand the social impacts and opportunities created by development in communities in which it operates. Australia Pacific LNG will design flexible rosters. 	M L
Relationship between increased disposable income and impact on community values.	Cons Ops	M L	H H	<ul style="list-style-type: none"> Australia Pacific LNG will uphold a high standard of behaviour and will communicate and strictly enforce its Code of Conduct for all employees and contractors. Australia Pacific LNG will continue consultation and engagement 	L L



Potential Impact	Phase of Project	Probability (H, M, L)	Consequence (H, M, L)	Mitigation or enhancement	Residual Risk H, M, L
				<p>programs with communities and stakeholders to ensure their views are understood and considered throughout the life of the Project.</p> <ul style="list-style-type: none"> Australia Pacific LNG's community investment programs will support sustainable community development programs. Australia Pacific LNG will work with government, the community and other industries to plan for potential cumulative impacts and share information relating to potential impacts and mitigation measures. Australia Pacific LNG will collaborate with government, industry and community partners on research programs to understand the social impacts and opportunities created by development in communities in which it operates. Health promotion programs relating to the 'Fit for Work' and 'Drug and Alcohol' policies will be implemented by Australia Pacific LNG. 	
Impact of lighting, dust, noise and traffic to community amenity and lifestyle.	Cons	H	M	<ul style="list-style-type: none"> Australia Pacific LNG will continue consultation and engagement programs with stakeholders to ensure their views are understood and considered throughout the life of the Project. 	L
	Ops	M	M	<ul style="list-style-type: none"> Australia Pacific LNG will continue to participate in Local Government and regional planning processes and provide information about its Project to inform discussion and decision making in a timely manner. Australia Pacific LNG will continue to implement a community complaints procedure for stakeholders to raise concerns, and in turn have them addressed in a timely manner. 	L
See Volume 2, Chapter 7 for mitigation measures for potential visual					



Potential Impact	Phase of Project	Probability (H, M, L)	Consequence (H, M, L)	Mitigation or enhancement	Residual Risk (H, M, L)
				amenity impacts.	
				See Volume 2, Chapter 7 for mitigation measures for potential lighting related impacts.	
				See Volume 2, Chapter 5 and 13 for mitigation measures for potential dust related impacts.	
				See Volume 2, Chapter 17 for mitigation measures for potential traffic related impacts.	
				See Volume 2, Chapter 15 for mitigation measures for potential noise related impacts.	
Community concerns about the management of environmental, social or economic issues.	Cons	M	M	<ul style="list-style-type: none"> Australia Pacific LNG will continue consultation and engagement programs with stakeholders to ensure their views are understood and considered throughout the life of the Project. 	L
	Ops	L	M		L
				<ul style="list-style-type: none"> Australia Pacific LNG will collaborate with government, industry and community partners on research programs to understand the social impacts and opportunities created by development in communities in which it operates. Australia Pacific LNG's community investment programs will support sustainable community development. 	

20.8 Conclusion

20.8.1 Assessment outcomes

The Project has the potential to impact the social environment and communities within the gas fields' study area. Some impacts will be beneficial to communities. Others, if not appropriately mitigated, may be detrimental. Project benefits include growth in local skills, employment and business opportunities and the potential for sustainable community development through the establishment of partnerships with governments and community groups. Without mitigation, the Project could also directly impact on access to affordable housing, increase pressure on local services and facilities, increase demand on the local workforce and further polarise socio-economic groups in the community.

20.8.2 Commitments

Australia Pacific LNG has committed to a range of strategies which improve the level of benefits of the Project and mitigates those impacts which could be detrimental to local communities. These commitments are aligned with Australia Pacific LNG's 12 sustainability principles and are detailed, along with associated performance measures, in the draft SIMP in Volume 2 Chapter 24.

A summary of the key social commitments made by Australia Pacific LNG are presented below.

Employment and business

Australia Pacific LNG will:

- Continue to use existing methods or develop new methods to attract people to the workforce who are local to the region, as well as those from under-represented groups
- Implement a local content strategy, to participate in or establish programs to assist qualified local and regional businesses with tendering opportunities for providing goods and services for the Project
- Aim to build collaborative partnerships with government and community organisations, to enhance the capacity for employers to provide jobs and for local people to develop skills and obtain employment (e.g. through the Community Skills Scholarship program)
- Work with government, the community and industry to plan for potential cumulative impacts and to share information about potential impacts and mitigation measures
- Ensure contracts with suppliers and contractors are aligned with Australia Pacific LNG's sustainability principles and objectives
- Work closely with Energy Skills Queensland's CSG/LNG Skills Taskforce to help meet the growing skills demand by:
 - Creating community awareness about the industry and opportunities
 - Enhancing vocational training
 - Facilitating career advice and work readiness programs for new entrants and mature entrants from related industries.

Stakeholder engagement and consultation

Australia Pacific LNG will:

- Continue consultation and engagement programs with stakeholders to ensure their views are understood and considered throughout the life of the Project
- Continue to participate with government in local and regional planning processes and provide timely information about the Project to inform discussion and decision making
- Continue to work to mitigate project impacts on local landowners throughout the project life by:
 - Engaging with each landowner within the project area prior to any project activity on their land
 - Where possible, working towards mutually beneficial outcomes
 - Assigning a dedicated liaison officer to each landowner in the project area
 - Locating and scheduling project activities to reduce impacts on landowner activities.

Education and training

Australia Pacific LNG will:

- Implement CSG/LNG gateway programs with high schools in the region, in partnership with providers such as the Queensland Minerals and Energy Academy, to promote career opportunities and facilitate employment in the CSG/LNG industry
- Expand competency based training and skills development programs for production and process plant operators, including further development of the dedicated training facilities at the Peat gas processing facility near Wandoan
- Continue to collaborate on programs with government, training and educational groups that build the local skills base, to meet the specific needs of the industry and other impacted sectors, including ongoing development of apprenticeship, traineeship, scholarship and higher education programs.

Community health and safety

Australia Pacific LNG will:

- Expand its community safety awareness program in conjunction with industry partners, government and community groups, to develop responses to project-related community safety issues in the region
- Communicate and strictly enforce its Code of Conduct for all staff and contractors, to uphold a high standard of behaviour
- Collaborate with government, industry and other providers to mitigate the impact on health services in local communities, including providing the appropriate level of medical facilities for operating plants and accommodation facilities.

Local services and facilities commitments

Australia Pacific LNG will:

- Collaborate on research programs with government, industry and community partners to understand social impacts and opportunities the development creates in the communities in which it operates
- Implement community investment programs to support sustainable community development..

Housing and accommodation commitments

Australia Pacific LNG will:

- Provide temporary accommodation facilities for non-local construction staff and contractors, and consult with stakeholders during the site selection process for these facilities
- Mitigate pressure on housing affordability during gas fields' operations, temporary accommodation will be provided for personnel wishing to relocate until such time as housing stock becomes available
- Work through committees established under the Queensland Government's Sustainable Resource Communities Policy to identify housing market issues, forecasts and possible responses
- Mitigate potential impacts on housing affordability and availability, through community programs that involve working with government and agencies that provide housing to people in distress.

References

- Australia Broadcasting Corporation (ABC) 2009, *Ageing construction workers feel the squeeze*, viewed 10 November 2009, <<http://www.abc.net.au/news/stories/2009/10/13/2712738.htm>>
- Australian Bureau of Statistics (ABS) 2006, *Census of Population and Housing*, viewed 15 December 2008, <<http://www.abs.gov.au>>
- Australian Bureau of Statistics (ABS) 2007, *Australian Standard Geographical Classification (ASGC), July 2007*, catalogue number 1216.0, viewed 5 December 2008, <<http://www.abs.gov.au/AUSSTATS/abs@.nsf/DetailsPage/1216.0Jul%202007?OpenDocument>>
- Bergent Research 2008, *Origin Landowner Impact Study Report*, prepared for Origin Energy, December 2008.
- Department of Education, Employment and Workplace Relations (DEEWR) 2008. *Small Area Labour Markets December 2008*, Department of Education, Employment and Workplace Relations, Canberra.
- Energy Skills Queensland (ESQ) 2009a, *Part A – Workforce Planning Report to inform the Workforce and competency Development Strategy Plan for the Queensland Coal Seam Gas / Liquefied Natural Gas Industry*, Confidential Draft of Workforce Planning Report, August 2009.
- Energy Skills Queensland (ESQ) 2009b, *Addendum Labour Market Analysis – Demand and Supply*, prepared for the Queensland Coal Seam Gas / Liquefied Natural Gas Industry, August 2009.
- KPMG Econtech 2009, *Economic Analysis for the Environmental Impact Statement of the Australia Pacific LNG Project*, prepared for Australia Pacific LNG, 12 November 2009.
- Office of Economic and Statistical Research (OESR) 2009, *Information Brief: Rental Housing Vacancy Rates Qld*, March 2005 to March 2009 quarters, viewed 13 June 2009, <<http://www.oesr.qld.gov.au/queensland-by-theme/industry/housing-construction/briefs/rental-housing-vacancy-rates-qld/index.shtml>>
- RP Data 2010, *Suburb Profiles*, viewed 13 January 2010, <http://reports.rpdata.com.au/cgi-bin/vgmsg/RP_Reports/subprofile/rprephome.p?type=1>
- Your Investment Property (YIP) 2010, *Your Investment Property*, February 2010 edition.