

Introduction

Enter ►

Go back to contents ►



Contents

1	Introduction	1-1
1.1	Project overview	1-1
1.2	Proponent	1-4
1.2.1	Santos GLNG joint venture	1-4
1.2.2	Environmental record and qualifications	1-5
1.3	Project rationale	1-5
1.3.1	Meeting increasing demand for more carbon-efficient energy	1-6
1.3.2	Enhancing economic and employment benefits	1-6
1.3.3	Supporting State and national policy directives	1-6
1.4	Relationship to other projects	1-7
1.5	Project alternatives	1-7
1.6	The EIS process	1-8
1.6.1	Legislative process	1-8
1.6.2	Environmental impact statement objective	1-11
1.6.3	Environmental impact statement scoping	1-11
1.6.4	Environmental impact statement structure	1-11
1.6.5	Public exhibition and submissions	1-14
1.6.6	Decision on the GFD Project	1-15
1.6.7	Subsequent GFD Project approvals	1-16
1.7	Public consultation process	1-16

Tables

Table 1-1	Consideration of GFD Project alternatives	1-8
Table 1-2	Environmental impact statement sections	1-12
Table 1-3	Environmental impact statement appendices	1-13
Table 1-4	Environmental impact statement viewing locations	1-15

Figures

Figure 1-1	GFD Project location	1-2
Figure 1-2	GFD Project area and primary infrastructure	1-3
Figure 1-3	Environmental impact statement legislative process	1-10

1 Introduction

This environmental impact statement (EIS) addresses matters set out in the *Terms of reference (ToR) for an environmental impact statement* issued in March 2013 by the Queensland Office of the Coordinator-General to inform decision makers, stakeholders and the public about the Santos GLNG Gas Field Development Project (the GFD Project).

This section introduces Santos GLNG, provides an overview of the proposed GFD Project, describes its rationale and relationship to other projects, and outlines the EIS process, including the public submissions process.

1.1 Project overview

Santos GLNG intends to further develop its Queensland coal seam gas resources to augment supply of natural gas to its existing and previously approved Gladstone Liquefied Natural Gas (GLNG) Project. The Gladstone gas transmission pipeline and the Curtis Island liquefied natural gas (LNG) facility are under construction at the time of writing this EIS and are scheduled for completion prior to the commencement of the GFD Project.

The GFD Project is an extension of the existing approved gas field development and will involve the construction, operation, decommissioning and rehabilitation of production wells and the associated supporting infrastructure needed to provide additional gas over a project life exceeding 30 years.

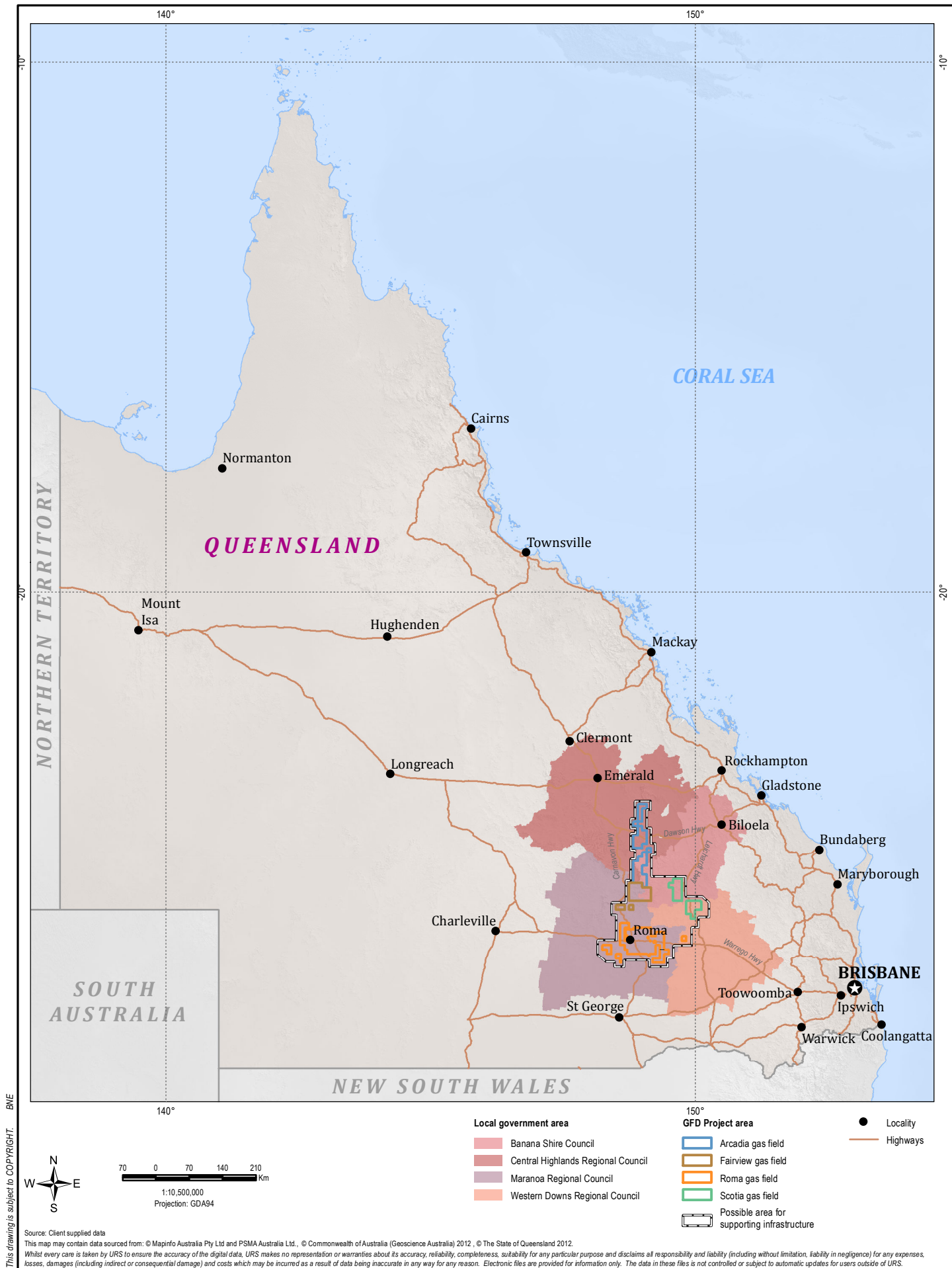
The GFD Project will involve the progressive development of petroleum tenures held by Santos GLNG in the Surat and Bowen basins in southern and central Queensland, within the local government areas of Banana Shire, and Central Highlands, Maranoa and Western Downs regional councils. The GFD Project's location is illustrated in Figure 1-1. Specifically, the GFD Project seeks approval to expand the GLNG Project's gas fields tenure from 6,887 square kilometres (km²) to 10,676 km² to develop up to 6,100 additional production wells beyond the currently authorised 2,650 wells to a maximum of up to 8,750 wells. The additional production wells will bring Santos GLNG in line with the number of wells approved for other major LNG projects in Queensland.

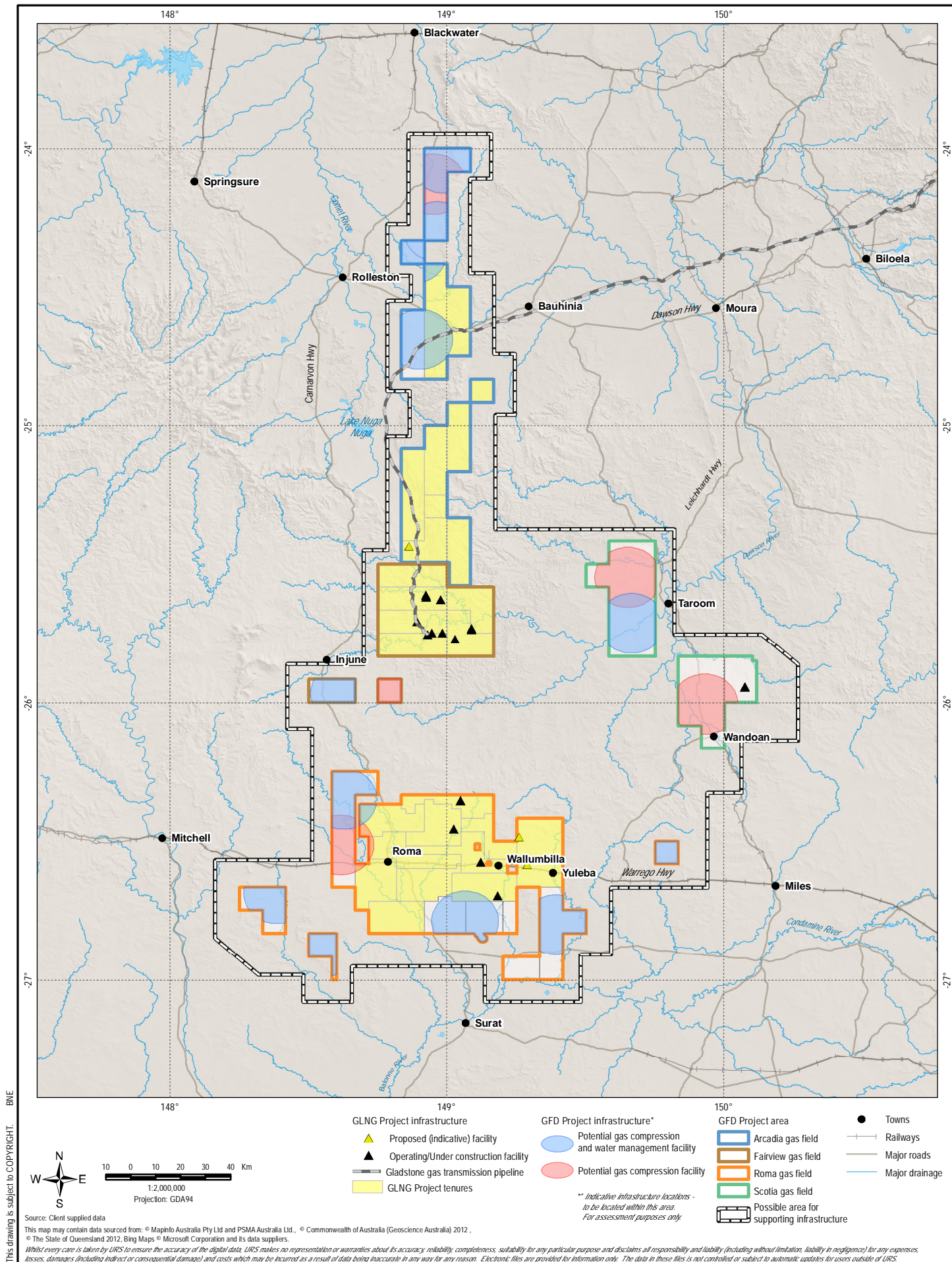
The GFD Project will continue to progressively develop the Arcadia, Fairview, Roma and Scotia gas fields across 35 Santos GLNG petroleum tenures in the Surat and Bowen basins, and associated supporting infrastructure in these tenures and adjacent areas. The location of the GFD Project area and primary infrastructure is shown on Figure 1-2.

The GFD Project will include the following components:

- Production wells
- Fluid injection wells, monitoring bores and potentially underground gas storage wells
- Gas and water gathering lines
- Gas and water transmission pipelines
- Gas compression and treatment facilities
- Water storage and management facilities
- Access roads and tracks
- Accommodation facilities and associated services (e.g. sewage treatment)
- Maintenance facilities, workshops, construction support, warehousing and administration buildings
- Utilities such as water and power generation and supply (overhead and/or underground)
- Lay down, stockpile and storage areas
- Borrow pits and quarries
- Communications.

A detailed description of the planning, construction, operation and decommissioning of the GFD Project is presented in Section 4: Project description.





1.2 Proponent

1.2.1 Santos GLNG joint venture

The GFD Project will be delivered by the Santos GLNG joint venture, the same joint venture that developed the GLNG Project. The joint venture participants include some of the world's largest gas producers, exporters and buyers, namely:

- Santos Limited
- Petroliaam Nasional Berhad (PETRONAS)
- Total S.A. (Total)
- Korea Gas Corporation (KOGAS).

1.2.1.1 Santos Limited

Santos Limited has the largest gas and petroleum exploration and production acreage in Australia, with interests in all major Australian petroleum provinces as well as in Indonesia, Vietnam, Papua New Guinea and Bangladesh. Santos Limited employs 3,300 people across Australia and Asia with the head office located in Adelaide. In 2013, Santos produced 51 million barrels of oil equivalent and has a proven plus probable (2P) reserve base of approximately 1,368 million barrels of oil equivalent.

With significant investment in the development of LNG, Santos Limited is positioning itself to meet growing regional demands for energy, particularly gas, over the next 25 years. Santos Limited has been exporting LNG to Asia since 2006 from its Darwin LNG Project, since 2014 for its PNG LNG Project, and the GLNG Project is scheduled to begin exporting LNG in 2015.

1.2.1.2 PETRONAS

PETRONAS is a Malaysian based oil and gas corporation ranked among FORTUNE Global 500s largest corporations in the world. The company operates in Africa, Asia Pacific, Central Asia, Latin America, Middle East, Europe and North America. It is headquartered in Kuala Lumpur, Malaysia and employs over 46,000 people. PETRONAS has extensive experience in LNG and is currently operating the world's largest integrated LNG facility in Bintulu, Sarawak, which has a total capacity of around 24 million tonnes per annum from eight LNG trains.

1.2.1.3 Total

Total is the fifth largest publicly-traded integrated international oil and gas company and a world-class chemicals manufacturer. Total operates in more than 130 countries, has over 96,000 employees. Total is a leading player in the international LNG sector. Total is active in almost all LNG producing regions and LNG markets with exploration and production activities in more than 40 countries.

1.2.1.4 KOGAS

KOGAS is a leading multinational energy company with exploration and production interests in 11 countries. KOGAS currently holds interests in and operates 3,022 km of pipelines across the Republic of Korea (South Korea).

1.2.2 Environmental record and qualifications

1.2.2.1 Santos GLNG

Through the successful delivery of Australian and international petroleum and gas projects, the Santos GLNG joint venture participants have demonstrated the necessary experience, capability and performance record over a long history of working effectively with stakeholders and communities. Santos GLNG has successfully established the GLNG Project, including the Gladstone gas transmission pipeline and the Curtis Island LNG facility, as well as existing operations across the GLNG Project and Scotia gas fields.

Santos GLNG is committed to maintaining this track record through its commitment to environmental, health and safety, and community policies (included in Appendix G: Corporate environmental policy), and proven management standards (discussed in Section 6: Management framework).

The individual environmental policies of each joint venture partner are provided in Appendix G: Corporate environmental policy.

Santos GLNG has had no environmental convictions during the last ten years. It has fines amounting to \$95,000 relating to 33 infringement notices from the Department of Environment and Heritage Protection and 3 infringement notices from the Department of the Environment. Infringement notices are generally given for minor breaches of a permit that have not resulted in environmental harm.

1.2.2.2 Santos Limited

In January 2014, Santos NSW Pty Ltd was fined \$52,500 in the NSW Land and Environment Court regarding reporting failures in relation to coal seam gas operations in the Pilliga Forest, NSW, previously owned and operated by Eastern Star Gas. Santos acquired Eastern Star Gas in November 2011. The incidents that were the subject of the fines occurred before Santos took over Eastern Star Gas's operations and related to the Bibblewindi water treatment plant which Santos has since decommissioned.

1.2.2.3 PETRONAS, Total, and KOGAS

PETRONAS, Total and KOGAS have no environmental convictions in Australia in the last ten years.

1.3 Project rationale

The GFD Project is driven by the need to meet the gas supply demands of markets previously identified in the GLNG Project's EIS in 2009 (2009 EIS). The GFD Project will enable Santos GLNG to develop its gas fields and expand production to meet supply demands of the approved GLNG Project's LNG facility and of third parties.

On a broader scale, the GFD Project will:

- Assist in meeting the increasing global demand for more carbon-efficient energy supplies
- Enhance the economic and employment benefits to the region, State and nation
- Support State and national policy directives.

With the technical feasibility of the GFD Project's construction and operation demonstrated by the GLNG Project and other related projects (described in section 1.4), not proceeding with the GFD Project would mean considerable commercial production inefficiencies and the loss of significant economic and social benefits (discussed in section 1.5).

1.3.1 Meeting increasing demand for more carbon-efficient energy

Global demand for energy continues to rise, with energy consumption anticipated to grow by more than 56% between 2010 and 2040 (Energy Information Agency, 2013). Coupled with the increasing demand for energy, demand for gas has outstripped that of other fossil-fuel based energy sources based on its energy efficiency and its ease of transmission and distribution once converted to LNG (ABARE, 2011; IEA, 2013).

The GLNG Project is one of Australia's major LNG projects and the expansion offered by the GFD Project will increase Santos GLNG's capacity to meet global energy needs.

1.3.2 Enhancing economic and employment benefits

Significant economic and employment benefits have already been experienced in Queensland by the development of the GLNG Project and other resource projects. The GFD Project could deliver the following additional socio-economic benefits:

- Increase in economic output by up to \$2.9 billion regionally and \$3.6 billion at the State level
- Creation of up to 4,621 full-time equivalent jobs in the Queensland economy over the GFD Project life
- Flow-on or indirect economic benefits such as the growth in service industries
- Up-skilling of workers following training and development opportunities
- Expansion of Queensland's export industry.

A detailed discussion of the expected economic benefits of the GFD Project is detailed within Section 22: Economics, while the projected employment and other social benefits are discussed in Section 21: Social.

1.3.3 Supporting State and national policy directives

Successful development of the GFD Project will support State and national policy objectives, including the safe and sustainable development of Queensland's energy resources and the delivery of secure, reliable, and clean energy to consumers. The GFD Project will also respond to the ongoing need to provide reliable and affordable energy internationally, as well as capturing export opportunities in rapidly expanding markets. Santos GLNG will do this through development and implementation of streamlined management practices that focus on long-term efficiency and productivity while taking into account economic, social and environmental considerations.

Development of the GFD Project's coal seam gas resources will provide communities within the Surat and Bowen basins the ability to increase employment growth and enhance the region's economic diversity and competitiveness (Department of Local Government and Planning, 2011).

1.4 Relationship to other projects

Gas produced from the Arcadia, Fairview, Roma and Scotia gas fields will be transported via the Gladstone gas transmission pipeline to the approved LNG facility on Curtis Island or to third parties. The GFD Project does not involve additions or changes to the Gladstone gas transmission pipeline or the LNG facility.

Where practicable, opportunities will be pursued to maximise production capacities and improve efficiencies. Improved efficiencies will be realised via integration of the GFD Project with GLNG Project infrastructure already developed (or approved for development) including key linear and fixed infrastructure such as transmission pipelines, gas compression facilities, water management facilities and supporting services (e.g. access roads, accommodation, laydown areas). The components that form the basis of the approved GLNG Project currently being implemented are illustrated on Figure 1-2.

There are three other coal seam gas to LNG projects in Queensland that overlap with the GFD Project in terms of timing, geographic location, resources and co-location opportunities. These include the Australia Pacific LNG (APLNG) Project, the Queensland Curtis LNG (QCLNG) Project and the Arrow Energy (Bowen and Surat) Gas Project. There are also exploration and appraisal activities occurring on these and other resource tenures in the area. Santos GLNG and APLNG signed a cooperation agreement in 2013, which will facilitate the shared use of infrastructure, particularly in the two project's Surat Basin gas fields. This agreement will reduce the need for additional pipeline infrastructure for both projects. The potential for further integration of the GFD Project with other projects through the co-location of infrastructure will be considered as part of the field planning and design process as described in Section 5: Assessment framework. The potential cumulative impacts are described in Section 26: Cumulative impacts.

1.5 Project alternatives

As the GFD Project's primary objective is to help meet the gas demand of the GLNG Project, the main alternative to the GFD Project would be to source gas from a third party (effectively the 'non project' alternative). The considerations and outcomes applicable to the 'non project' alternative as well as to geographical location and timing alternatives are summarised in Table 1-1.

The GFD Project is an extension of the GLNG Project gas field area and duration i.e. the concept will progressively develop in a way that makes the most of interdependencies between existing, approved and proposed project components to maximise project viability.

Santos GLNG will make use of best available technologies i.e. different technology will be adopted in different areas depending on geological and logistical requirements and technological developments. Using predefined technology may result in efficiency losses and prevent the application of new technologies to further reduce environmental impact and improve environmental sustainability.

The GFD Project activities and infrastructure that will be subject to ongoing evaluation during the life of the project include:

- Drilling techniques (e.g. vertical, horizontal and directional drilling or via multi-well lease)
- Well stimulation (e.g. hydraulic fracturing and cavitation)
- Water management (e.g. construction practices, desalination or water amendment approaches)
- Electricity supply and reticulation (e.g. gas-fired reciprocating engines or turbines, diesel generators, or grid connection; and above or below ground reticulation)
- Design and materials.

For the purposes of this EIS, current technology that will be considered is described in Section 4: Project description.

Table 1-1 Consideration of GFD Project alternatives

Alternative	Consideration	Outcome
Alternative gas supply – Non project	Supplementary gas could be sourced from third parties – only where commercial opportunities become available, and gas meets specifications for treatment and export.	Provision of gas from existing supplies could cause stresses to the current supply and demand balance. Santos GLNG does not consider the 'non project' alternative viable. A 'non project' alternative would not result in overall reduced environmental impact. The impact would simply occur elsewhere, and may in fact be more than the GFD Project, which can draw on existing infrastructure, resources and workforces.
Alternative geographical locations	There are limited alternative project locations as the GFD Project is restricted to areas overlying viable coal seams within Santos GLNG's existing petroleum tenures. GFD Project infrastructure will be located following assessment of resource data and environmental constraints during the detailed design and field development stages. Where opportunities exist, existing approved facilities (Santos GLNG or third party) will be used, or infrastructure co-located within existing corridors or footprints to minimise impacts. Flexibility in location decisions can improve gas recovery and reduce potential environmental impacts.	Inflexibility in location decisions can lead to increased environmental impact and less efficient use of existing facilities and infrastructure. Santos GLNG does not consider alternative geographic locations to be a viable alternative.
Alternative timing	The timing of field development and associated activities depends on the progress of approved field development activities and the outcome of ongoing exploration, appraisal and production activities. Flexibility in project timing can improve planning effectiveness (such as considering the ability to co-locate infrastructure) and allow changes which could reduce environmental impacts or increase gas recovery.	Inflexibility in project timing can limit opportunities to reduce environmental impacts or increase gas recovery, and could impact the commercial viability of the GLNG Project which will be reliant on the extraction of gas proposed by the GFD Project. Santos GLNG will program the timing of the development of the GFD Project to optimise productivity and gas recovery and to minimise environmental impact.

1.6 The EIS process

1.6.1 Legislative process

In November 2012, Santos GLNG lodged an application to have the GFD Project declared a 'significant project' and an initial advice statement with the Queensland Department of State Development, Infrastructure and Planning (DSDIP). The initial advice statement sought to provide the Coordinator-General with sufficient information on the GFD Project and its potential environmental, social and economic impacts to determine whether to declare the GFD Project a 'significant project' under section 26 of the *State Development and Public Works Organisation Act 1971* (SDPWO Act). On 16 November 2012, the GFD Project was deemed a 'significant project' requiring an EIS.

In November 2012, the GFD Project was referred to the Commonwealth Minister for Sustainability, Environment, Water, Population and Communities (SEWPaC, now Department of the Environment) under the Commonwealth *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act). The EPBC Act requires actions likely to have a significant impact on matters of national environmental significance (MNES) to be referred to Commonwealth Government for assessment and approval. On 3 December 2012, SEWPaC deemed the GFD Project to be a controlled action (reference number EPBC 2012/6615). Hence the GFD Project requires assessment and approval under Part 9 of the EPBC Act before it can proceed.

The controlling provisions under the EPBC Act are:

- Wetlands of international importance
- Listed threatened species and communities
- Listed migratory species.

In October 2013, Santos GLNG was advised by the Commonwealth Department of the Environment (successor of SEWPaC) that an additional controlling provision relating to the impact of coal seam gas development on water resources also applied to the GFD Project.

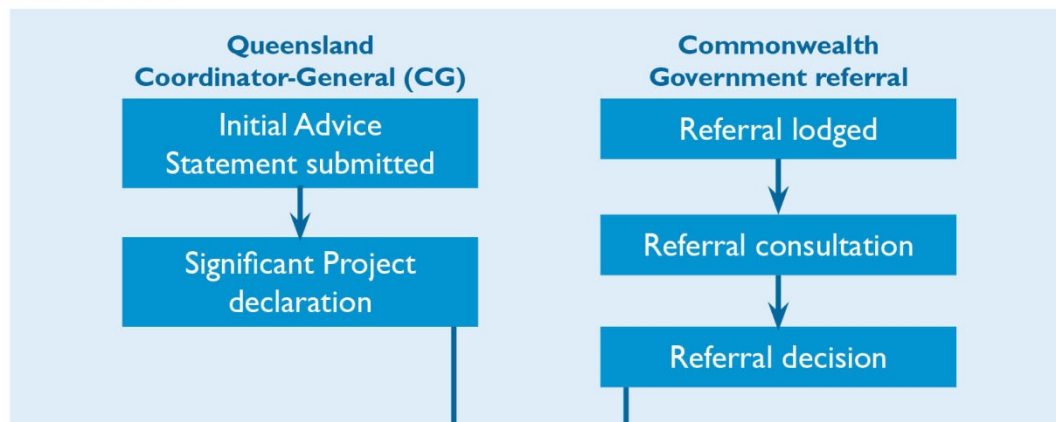
This EIS has been prepared and will be assessed in accordance with the Bilateral Agreement between the Commonwealth Government and the Queensland Government as a Class 2 Action under Part 4 of the SDPWO Act and the *State Development and Public Works Organisation Regulation 1999* (Qld). The Commonwealth Government has accredited the SDPWO Act process coordinated by the Queensland Coordinator-General for the purpose of assessment.

Relevant Commonwealth, Queensland and local government authorities have been invited to participate in the EIS process as advisory agencies, as discussed in Appendix D: Consultation report.

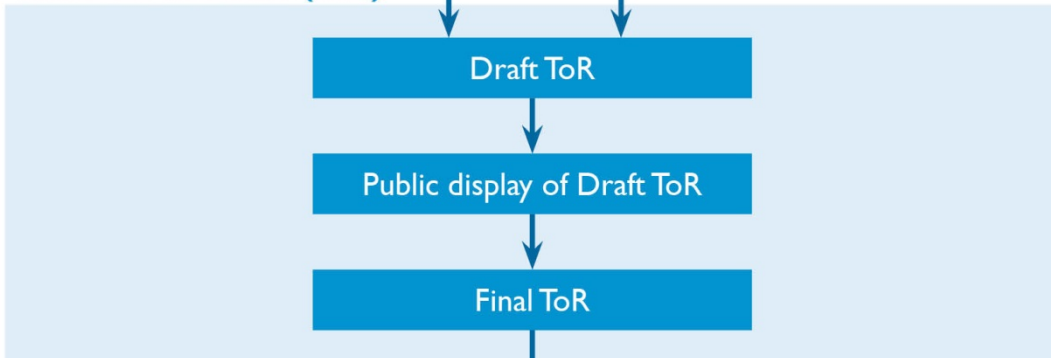
The legislative process that applies to the preparation of this EIS is depicted in Figure 1-3.

Figure 1-3 Environmental impact statement legislative process

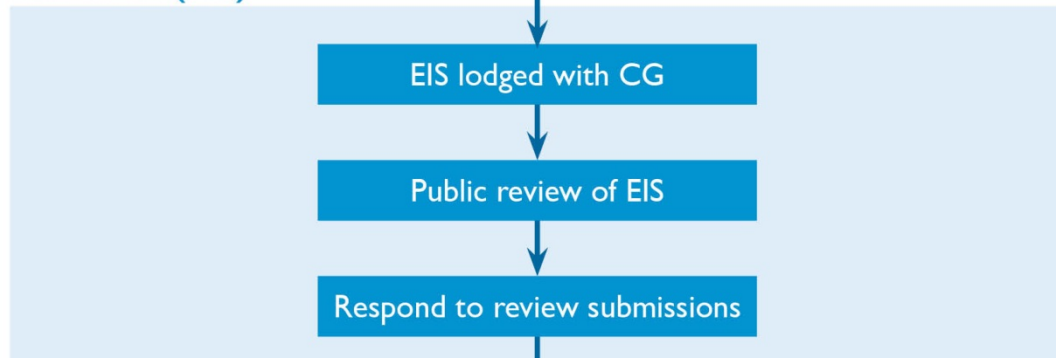
Application



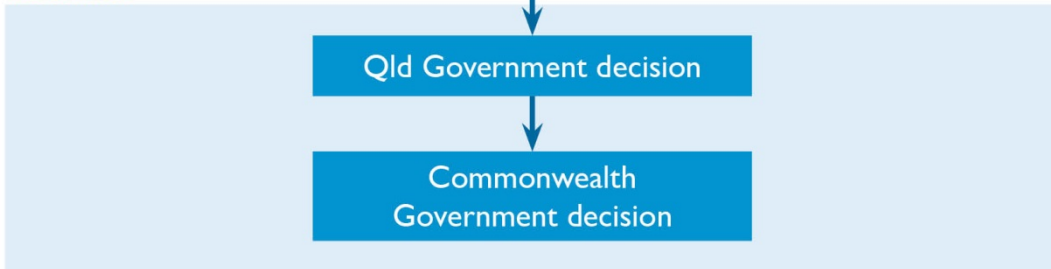
Terms of reference (ToR)



Environmental impact statement (EIS)



Decision



1.6.2 Environmental impact statement objective

The objective of this EIS is to assess the environmental, social and economic impacts of the GFD Project, to develop mitigation and management strategies, and to inform stakeholders and the community about the GFD Project in a way that meets regulatory requirements.

This EIS aims to be a comprehensive document that provides:

- Interested and affected stakeholders a basis for understanding the GFD Project, the existing environment, potential impacts and the proposed management strategies.
- Regulatory agencies and advisory bodies a framework for assessing the impacts of the GFD Project to assist in the development of conditions that would attach to an approval.
- The proponent a statement of commitment and actions to be implemented to manage adverse impacts from the construction, operations and decommissioning of the GFD Project.

1.6.3 Environmental impact statement scoping

The SDPWO Act requires a draft ToR be developed as one of the initial steps in the EIS process. The ToR outlines the issues that need to be addressed in the EIS. It details the matters to be assessed by the Coordinator-General on behalf of the Queensland Government and by the Commonwealth Minister for Environment under the requirements of the EPBC Act. The draft ToR was prepared and advertised for public comment from 15 December 2012 to 4 February 2013. Relevant Commonwealth, State and local government agencies and authorities were invited to participate in the process as advisory agencies. The draft ToR was available on the Department of State Development, Infrastructure and Planning's website during this period to enable communities and other stakeholders from the public to view and comment.

In finalising the ToR, the Coordinator-General gave regard to submissions received on the draft ToR. The final ToR was released by the Coordinator-General on 28 March 2013 and is attached as Appendix A: Final Terms of reference.

In response to the ToR, Santos GLNG commissioned a range of studies to identify the environmental, social and economic values that may be affected by GFD Project activities and to develop the necessary mitigation measures. Technical studies assessing the potential impacts on each of the identified environmental, social and economic values detail the sources of information and assumptions used to prove the results, which form the basis of this EIS.

The assessment framework that has been applied to the EIS is described in Section 5: Assessment framework.

1.6.4 Environmental impact statement structure

This EIS consists of a main report and supporting technical appendices. The main report provides a detailed description of the GFD Project, the impact assessment, and the draft environmental management plan. The appendices contain the detailed data, analyses and technical assessment that support this EIS. The structure of the main report is outlined in Table 1-2, and the structure of the EIS appendices is set out in Table 1-3.

Table 1-2 Environmental impact statement sections

No.	Section title	Description
-	Executive summary	Summary of the GFD Project, the potential impacts and the proposed environmental management strategies and commitments.
1	Introduction	Introduces the proponent and the proposed GFD Project, its rationale and relationship to other projects, the EIS and public submissions process.
2	Project approvals	Lists the applicable approvals, triggers and legislative frameworks.
3	Natural gas from coal seams	Provides a generic description of the production of natural gas from coal seams and typical gas field development and production processes.
4	Project description	Describes the proposed GFD Project including nature, location and timing for construction, operation and decommissioning.
5	Assessment framework	Describes the assessment methodology employed to determine the potential impacts of the GFD Project's construction, operations and decommissioning activities.
6	Management framework	Describes the Santos GLNG management framework and how this will be implemented to manage the potential impacts of the GFD Project's construction, operations and decommissioning activities.
7	Climate and climate change	Describes the existing regional climatic conditions, as well as potential impacts of climatic conditions on the GFD Project, and vice versa.
8	Land use and tenure	Describes land use and tenure values within the GFD Project area, the potential impacts and mitigation measures.
9	Land resources	Geology, topography and soils – describes the relevant geomorphologic features and local geology, topography and soil characteristics and potential impacts and mitigation measures. Resources – describes target resources. Contaminated land – discusses the potential for contaminated land within the GFD Project area and provides a framework to manage contaminated land.
10	Landscape and visual amenity	Describes the landscape and visual amenity values within the GFD Project area, the potential impact and mitigation measures.
11	Traffic and transport	Describes the existing transport network and traffic demands within and adjacent to the GFD Project area, potential impacts and mitigation strategies.
12	Waste	Describes the waste streams generated by the GFD Project and appropriate management and mitigation measures.
13	Surface water	Describes the surface water values within the GFD Project area, potential impacts and mitigation measures.
14	Groundwater	Describes groundwater values within the GFD Project area, potential impacts and mitigation measures.
15	Air quality	Describes the air quality values within the GFD Project area, potential impacts and mitigation measures.
16	Greenhouse gases	Describes the greenhouse gas emissions to be generated by the GFD Project, potential impacts and abatement measures.
17	Noise and vibration	Describes the noise and vibration values within the GFD Project area, potential impacts and mitigation measures.
18	Terrestrial ecology	Describes terrestrial ecological values within the GFD Project area, potential impacts and mitigation measures.
19	Aquatic ecology	Describes aquatic ecological values within the GFD Project area, potential impacts and mitigation measures.
20	Cultural heritage	Describes the known Indigenous and non-indigenous cultural heritage values within the GFD Project area, and provides a framework to manage potential impacts to achieve cultural heritage protection objectives.
21	Social	Describes the social and community values within the GFD Project area, the potential impacts on mitigation measures.

No.	Section title	Description
22	Economics	Describes the likely impacts of the GFD Project on the local and regional economies as well as relevant impacts to the Queensland and Australian economies. It also identifies strategies to mitigate negative economic impacts and maximise the economic benefits.
23	Health and safety	Describes the health and safety issues relating to the GFD Project, potential impacts and mitigation measures.
24	Preliminary hazard and risk	Describes the potential hazard and risks of the GFD Project and identifies management strategies.
25	Decommissioning and rehabilitation	Describes the decommissioning and rehabilitation strategies, the framework to be implemented, and the criteria to be met.
26	Cumulative impacts	Describes and assesses the cumulative impacts that could result from activities undertaken by the GFD Project combined with those from other adjacent projects, and identifies mitigation measures.
27	Conclusions and recommendations	Presents conclusions and recommendations of the EIS main report.
28	References	Lists the references used for the EIS and associated figures.
29	Glossary and abbreviations	Lists technical terms and abbreviations used throughout the EIS.

Table 1-3 Environmental impact statement appendices

No.	Appendix title
A	Final Terms of reference
B	Terms of reference cross-reference
C	Regulatory framework
D	Consultation report
E	Study team
F	Proponent commitments
G	Corporate environmental policy
H	Ecologically sustainable development
I	Climate, natural hazards and climate change
J	Land use and tenure
K	Land resources
L	Landscape and visual amenity
M	Traffic and transport
N	Surface water
O	Groundwater
P	Air quality
Q	Noise and vibration
R	Terrestrial ecology
S	Aquatic ecology
T	Non-indigenous cultural heritage
U1	Report on matters of national environmental significance (ecology)
U2	Report on matters of national environmental significance (water resources)
V	Social
W	Economics
X	Hazard and risk
Y	Draft environmental management plan
Y-A	Existing Santos GLNG environmental authorities
Y-B	GFD Project Environmental protocol for constraints planning and field development

No.	Appendix title
Y-C	Environmental monitoring and reporting strategy
Y-D	Contingency plan for emergency environmental incidents
Y-E	Erosion and sediment control management plan
Y-F	Chemical and fuel management plan
Y-G	Land release management plan
Y-H	Significant species management plan
Y-I	Fauna management plan
Y-J	Pest and weed management plan
Y-K	Noise management plan
Y-L	Waste management plan
Y-M	Rehabilitation management plan
Y-N	Decommissioning and abandonment management plan
Y-O	Proposed environmental authority conditions
Y-P	Hydraulic fracturing risk assessment: compendium of assessed fluid systems
Y-Q	Stimulation impact monitoring program
Z	Coal seam water management strategy
AA	Land access
AB	Offset strategy
AC	Social issues action plans
AD	Plan of operations
AE	Water resource management plan
AE-A	Hydraulic connectivity characterisation
AE-B	Joint industry plan for an early warning system for the monitoring and protection of EPBC springs
AE-C	Evaluation of prevention or mitigation options for Fairview springs
AE-D	Stimulation impact monitoring program
AE-E	Ground deformation monitoring and management plan
AE-F	Hydraulic fracturing risk assessment: compendium of assessed fluid systems
AE-G	Dawson River discharge scheme receiving environmental monitoring program summary

1.6.5 Public exhibition and submissions

A draft of this EIS was submitted to the Coordinator-General to confirm compliance with the requirements of the ToR. Santos GLNG then finalised the EIS based on comments received from the Coordinator-General. Once the EIS was finalised, public notices inviting submissions on the EIS have been published in local, regional and State newspapers.

EIS documentation can be obtained by:

- Downloading it from the Santos GLNG website at www.santosglng.com
- Requesting USB by contacting:
 - Emailing community@santos.com
 - Telephoning 1800 761 113
 - Writing to Reply Paid, GLNG Community Engagement, GPO Box 1010, Brisbane QLD 4001.

Viewing locations of the EIS are detailed in Table 1-4.

Table 1-4 Environmental impact statement viewing locations

Location	Address
Biloela Library	Corner of Grevillea and Melton Streets, Biloela
Dalby Library	107 Drayton Street, Dalby
Emerald Library	44 Borilla Street, Emerald
Moura Library	McArthur Street Moura
National Library of Australia	Parkes Place, Canberra, ACT
Roma Library	38-44 Hawthorne Street, Roma
Taroom Library	24 Yaldwyn Street
State Library of Queensland	Cultural Centre, Stanley Place, South Bank, Brisbane
Santos GLNG Roma Community Shopfront	80 McDowall Street, Roma
Santos GLNG Taroom Community Shopfront	37/39 Yaldwyn Street, Taroom

During the advertising period, the public and government advisory agencies are invited to make a submission on the EIS. A 'properly made' submission is one that:

- Is made in writing to the Coordinator-General
- Is received on or before the deadline for submissions
- States the name and address of each submitter
- Is signed by each submitter
- States the grounds of the submissions and the facts and circumstances relied on in support of the grounds.

Submissions must be made in writing and sent before 22 December 2014 to:

EIS Project Manager—Santos GLNG Gas Field Development Project
Coordinated Project Delivery
PO Box 15517
City East Qld 4002

You can also make submissions online through the Queensland Governments Citizen Space at <https://haveyoursay.dsdp.qld.gov.au/coordinatorgeneral/gasfield>.

Submissions received will be provided to Santos GLNG, who may be required to provide supplementary information to address specific matters raised in the submissions.

1.6.6 Decision on the GFD Project

Once the submissions and additional matters have been addressed, the Coordinator-General will prepare a report evaluating this EIS and other related material pursuant to section 35 of the SDPWO Act. The evaluation will take into account relevant material including:

- This EIS
- Properly-made submissions and other submissions accepted by the Coordinator-General
- Other material the Coordinator-General considers relevant to the GFD Project
- Comments and advice from advisory agencies
- Technical reports on specific components of the GFD Project.

The Coordinator-General's report will include an evaluation of the environmental effects of the GFD Project and related matters and will reach a conclusion about the environmental effects and associated mitigation measures. The Coordinator-General's report will approve, approve with conditions, or not approve the GFD Project.

As part of the EIS process, the Commonwealth Department of the Environment will review the EIS to ensure that it adequately addresses the requirements of the EPBC Act and will prepare its own assessment report for the Commonwealth Minister. The Minister will receive a copy of the Coordinator-General's assessment report and will take its findings into account when making his decision on the GFD Project, which will be to approve, approve with conditions, or not approve the GFD Project.

1.6.7 Subsequent GFD Project approvals

This EIS seeks to obtain primary approvals for the project including the Queensland Government Coordinator-Generals Report and Commonwealth Government EPBC Act approval.

Application for or amendments to existing environmental authorities will occur subsequent to this EIS process. Other subsequent approvals required after the EIS process has been completed, corresponding triggers and legislative frameworks applicable to the GFD Project are identified in Section 2: Project approvals.

Approval of this EIS will trigger a number of subsequent approvals required for the GFD Project to proceed. Approvals will be required on tenure and off-tenure. Section 2: Project approvals summarises the key approvals necessary for the planning, construction, operations and decommissioning of the GFD Project. The triggers for each approval, the relevant administering authority and application details are provided. Consultation on the subsequent approvals will be ongoing with the administering authorities.

1.7 Public consultation process

Santos GLNG is committed to promoting positive social and economic benefits for local communities and mitigating adverse impacts.

Santos GLNG's vision is to be a valued and valuable member of the communities in which it operates. Santos GLNG is committed to sharing the benefits of its world-class natural gas business with the community. Santos GLNG has consulted extensively with the community in order to understand and manage the potential social impacts of its activities and will continue to do so using these four key principles:

- Information and communication
- Community engagement and participation
- Actions align with values
- Mitigate and manage impacts.

Santos GLNG has implemented a consultation plan to provide a framework for engaging with stakeholders, landholders, interest groups and the broader community. The consultation plan identifies:

- Key stakeholders
- The types and timing of consultation and communication activities to be undertaken
- How consultation will be integrated within the EIS and the overall GFD Project development process
- Consultation responsibilities
- Communication protocols
- Reporting and feedback arrangements.

The key stakeholders groups consulted on the GFD Project include:

- Local, state and federal government agencies
- Special interest groups
- Peak body associations
- General community
- Social service groups
- Aboriginal groups
- Landholders.

Communities affected by the GFD Project have been consulted and engaged using a variety of mechanisms as described below:

- **Stakeholder briefings:** Santos GLNG has provided tailored GFD Project briefings for key stakeholders.
- **Community information sessions:** Santos GLNG held public information sessions in the communities affected by the GFD Project.
- **Issue specific workshops:** Santos GLNG engaged with its industry colleagues, local and State governments, peak bodies, special interest groups and the general community to discuss issues of community significance.
- **Site tours:** Santos GLNG conducts site tours as a way to demonstrate to interested stakeholders the project co-existence with agriculture and the wider community.
- **Community shopfronts:** Santos GLNG has regional community shop fronts located at 80 McDowall Street in Roma and at 37/39 Yaldwyn Street in Taroom.
- **1800 761 113 free-call service:** Santos GLNG has a free-call service which is staffed during business hours. Enquiries are registered and responded to within 48 hours.
- **Website:** www.santosglng.com and www.santos.com facilitate access to information about the GFD Project. The websites also contain links to the latest fact sheets along with an email address (info@glng.com) for further specific enquiries.
- **Community newsletters and fact sheets:** Community newsletters and GFD Project updates have been prepared to inform the community of progress on the GFD Project. Newsletters have been distributed through local newspapers, direct mail and email. A range of fact sheets covering key topics of interest has also been made available.

Feedback already obtained through the public consultation process has been taken into consideration in this EIS. Some of this information has been used to develop mitigation and monitoring measures.

Further details of the process and outcomes of the GFD Project's community consultation are contained in Appendix D: Consultation report.