



# Chapter 9

Community and stakeholder consultation



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## Chapter 9 Community and stakeholder consultation

This chapter provides an overview of consultation with stakeholders and the community between July 2013 and June 2016, the highlights of which include:

- engaging with around 2,800 individual stakeholders and stakeholder groups between July 2013 and June 2016
- Santos being a signatory to the Principles of Land Access to ensure landholders wishes are respected
- establishing a project website that to date has received around 60,000 page views over some 22,150 separate visits
- more than 420 attendees at Narrabri Gas Project briefings hosted by the Narrabri Chamber of Commerce
- around 150 face-to-face meetings with landholders from the project area
- over 4,000 individual visits to Santos shopfronts in Narrabri and Gunnedah
- over 1,000 visitors to our information stand at AgQuip
- over 350 field site tours and community events
- 40 meetings to date for the Santos Narrabri Community Committee which became the Narrabri Gas Project Community Consultative Committee (CCC)
- key community issues being addressed in the EIS are largely consistent with the NSW Chief Scientist's report (NSW Chief Scientist 2013)
- community and stakeholder feedback influenced project design
- ongoing consultation throughout the EIS assessment period and beyond.

The chapter summarises:

- consultation undertaken during project planning
- the consultation plan and approach
- stakeholders consulted to date
- consultation undertaken during each stage of project development including proposed future consultation
- consultation activities and tools employed
- key issues and opportunities identified during the consultation process
- how the key issues and opportunities raised by stakeholders and the community have been / are being addressed.

The chapter is a summary of the consultation report provided as Appendix D.

## 9.1 Consultation during project planning

Santos has been consulting with the community in relation to the gas industry, the potential gas project, and its exploration and appraisal activities in NSW since late 2011. This built on previous consultation activities undertaken by Eastern Star Gas as the former operators of Petroleum Exploration Licence (PEL) 238, Petroleum Assessment Lease (PAL) 2 and Petroleum Production Lease (PPL) 3.

In July 2013, Santos announced that the focus of operations in NSW was to be in PEL 238 and that the company was seeking approval for a more focused exploration and appraisal program targeting areas in and around the Pilliga Forest to ascertain the commercial and technical viability of the project.

The proponent has an ongoing commitment and desire to effectively engage with the community in relation to the planning for and conduct of activities in accordance with the NSW Government's *Strategic Regional Land Use Policy Delivery Guideline for community consultation requirements for exploration* (NSW Trade & Investment, 2012). Accordingly, between July 2013 and June 2016 engagement has occurred with approximately 2,800 individual stakeholders and stakeholder groups.

### 9.1.1 Key initiatives

#### Principles of land access

In March 2014, Santos, AGL, NSW Farmers, Cotton Australia, and the NSW Irrigators Council documented a set of principles in NSW (Principles of Land Access) that recognises the signatories' position that it will not undertake drilling activities on private land without the consent of the landholder. In September 2015, the Country Women's Association of NSW and Dairy Connect also became signatories to the agreement. The Principles of Land Access is intended to give the community further confidence that Santos seeks respectful, long-term relationships with landholders.

#### Information accessibility

The proponent has implemented a number of initiatives to inform and consult stakeholders and the community on the project as part of its broader work in the local community. These initiatives include the provision of general information through:

- the NSW pages of the Santos website receiving around 60,000 page views between July 2013 and June 2016, with the Narrabri Gas Project website receiving around 59,000 page views since it was created in September 2014
- media announcements - more than 50 local radio and television interviews have occurred for the project. There has also been regular local press reports and features, and project information updates and advertising
- two shopfronts (information offices) in Narrabri and Gunnedah – project displays and staff have been made available to answer questions on the project
- monthly site tours and other tours upon request for the community (see below) – with approximately 350 site tours and community events where Santos staff were available to answer question being undertaken since July 2013 attended by more than 1,000 community members
- information forums for local business hosted by the Narrabri Chamber of Commerce – with around 40 events since 2013
- a sponsorship program which assists community and sporting groups to support the areas of health, arts / culture, community wellbeing, education / youth, environment and indigenous related activities.

In addition, each year, Santos attends and hosts a well-attended information booth at AgQuip, an event held near Gunnedah. This is a major event for many businesses and individuals operating in the NSW pastoral and agricultural sector over 1,000 people have visited Santos' annual display at the event since 2011.

## Stakeholder consultation

The proponent has an active program of consultation with a range of stakeholders through information forums, media engagement and regular meetings—including on-site meetings with landholders. Key stakeholder groups consulted as part of this process include:

- landholders in the project area and within the region
- farmers and rural industry representatives within the region
- industry groups and other regional organisations
- Aboriginal community representatives
- Local Aboriginal Land Councils and Registered Native Title Applicants
- local, State and Federal Government departments and elected representatives
- the local community, including clubs and community groups
- local business and contractors
- media engagement.

A list of the representatives from each stakeholder group is included in Appendix D.

## Site tours

The proponent holds monthly site tours that are open to all members of the community. The tours are advertised locally and on Santos' community website. The proponent also holds site tours for specific stakeholder and interest groups when requested.

The site tours often include technical staff from Santos' engineering, geology, water, environment and drilling teams who present information relevant to their area of expertise to the stakeholders. The technical staff remain available to answer questions that attendees may have in relation to the project.

## Community consultative committee

Santos formed and participated in an independently chaired Santos Narrabri Community Committee on coal seam gas from August 2012 to October 2014 that met on a monthly basis in Narrabri. The Committee had representation from a cross-section of interested parties within the local community. Minutes and action items from these meetings are available on the Santos website for distribution by participants across their networks for broader community dissemination.

The final meeting of the Santos Narrabri Community Committee on coal seam gas was held on 22 October 2014 following a decision by the Minister of Resources and Energy to formally appoint a Narrabri Gas Project Community Consultative Committee (CCC).

The Santos Narrabri Community Committee has therefore been superseded by the Narrabri Gas Project Community Consultative Committee (CCC). The NSW Land and Water Commissioner is the Chair of this Committee that includes representatives from key State Government agencies, industry and community

organisations. The Committee meets monthly in Narrabri, with the first meeting being held on 9 December 2014.

The Committee has representatives from key government, industry and community organisations including Narrabri Shire Council, NSW Land and Water Commission, Department of Planning and Environment, Division of Resources and Energy, Department of Primary Industries (Water), Environment Protection Authority, Narrabri Chamber of Commerce, Narrabri Local Aboriginal Land Council, Country Women's Association of NSW, People for the Plains, Namoi Water, NSW Farmers, North West Local Land Services, Lower Namoi Cotton Growers Association and Santos. Further information on the Community Consultative Committee is provided in Appendix D.

## 9.1.2 Key issues

Consultation and engagement with stakeholders and the community has occurred prior to, and during, the development of the EIS. This provides opportunities for stakeholders and members of the community to learn about the project, and for the EIS to record and respond to the matters being raised. Key issues that remain matters of interest to stakeholders and the community include:

- groundwater drawdown
- land access rights and compensation
- drilling and well integrity
- produced water management and treatment
- the number and location of wells
- project timing
- local employment and economic benefits
- social impacts, such as housing affordability.

While this EIS addresses many of the issues raised, the proponent will continue to discuss and address these matters through existing communication channels.

Issues raised were used to inform the Consultation Plan (see Section 9.2.1) and were considered in refining the approach taken for the preparation of this EIS.

## 9.2 Consultation during the EIS

### 9.2.1 Consultation Plan and approach

#### Aims and objectives

Stakeholder and community consultation has been an integral component of the project development and EIS process.

The aim of the consultation program is to deliver engagement with community members and stakeholders regarding the project, such that wider community awareness and understanding of the project is achieved, and to ensure that the interests of the community are considered during the project development.

The objectives supporting this aim include:

- identifying and strengthening relationships with the community and other stakeholders
- identifying potential stakeholder and community issues and implementing strategies to help manage and minimise risk of conflict, and resolve issues
- developing an appropriate stakeholder and community engagement approach that provides timely, accurate and credible information to stakeholders and the broader community, and provides opportunities for interaction and feedback
- developing strategies that can build and maintain effective and sustainable relationships with stakeholders and communities based on open, transparent and trustworthy communication
- to facilitate positive Aboriginal cultural heritage outcomes by affording an opportunity for Aboriginal people to participate in decision making regarding the management of their cultural heritage.

## Consultation Plan

A Consultation Plan was developed to guide the effective and timely delivery of consultation activities during the EIS process in accordance with the NSW Government's *Strategic Regional Land Use Policy Delivery Guidelines for community consultation requirements for exploration* (NSW Trade & Investment, 2012). The Consultation Plan included:

- identification of a broad group of stakeholders potentially impacted by the project footprint
- an overview of potential issues and risks / opportunities to manage during the project development and approval process
- engagement techniques for dissemination of, and access to, timely, accurate and credible information regarding the project
- an integrated approach designed to support the commitment to build and maintain effective relationships with stakeholders and communities based on open, transparent and factual communication.

The Consultation Plan was developed to integrate with existing engagement activities undertaken as part of the project development, while also interfacing with The proponent 's broader engagement and communication strategies.

## Stakeholder identification

A stakeholder (as described by the International Association for Public Participation (IAP<sup>2</sup>) 2006) is any individual, group of individuals, organisation or political entity with an interest in the outcome of a decision. An analysis of stakeholders was undertaken to gain a stronger insight into the character, interests and needs of the community. The analysis identified around 350 stakeholder groups. Stakeholder groups were categorised according to their level of interest in the project and their potential level of impact from the project as being high, medium or low in accordance with the descriptions provided in Table 9-1.

Table 9-1 Stakeholder impact levels

Impact level	Description of impact level
High (to very high)	Significant, repetitive, regular or frequent aspects of the project that would affect people’s lives and lifestyles.
Medium	Occasional, or regular but infrequent aspects of the project that may be avoidable or manageable.
Low (to very low)	Infrequent and very occasional impacts of the project that would not affect the community’s wellbeing.

The overall aim of the stakeholder analysis was to help better understand and address issues in the early stages of the project so that community interests can be considered during the planning process. The list of stakeholders was subject to ongoing refinement throughout the consultation process, with input from The proponent and other project stakeholders.

## Consultation approach

The consultation approach has been influenced by the expected levels of participation for entities and individuals within each grouping and consultation activities are arranged on an escalating level of involvement. It included the following levels of engagement and consultation:

- Inform – aimed at community, business and industry in the broader regional and state-wide context.
- Consult – aimed at community groups, industry, business, government entities and residents not directly involved in activities but living and operating within PEL 238.
- Involve – aimed at key stakeholder groups directly involved in the project area. These include neighbouring landholders, government departments listed as referral agencies, non-government organisations, community groups and the entities represented on the Community Consultative Committee.
- Collaborate – aimed at individuals and entities that are directly involved in project decisions. This includes landholders on whose land the activity will occur, local government in the relevant activity area, government entities with a regulatory role, Registered Aboriginal Parties and native title claimant groups.

The proposed project lies within the boundaries of the Narrabri Shire Council area, so most engagement and consultation focuses on the Narrabri community. To inform the broader list of stakeholders, information regarding the EIS has been distributed through established communication channels. Table 9-2 provides a summary of the consultation stakeholder groups, EIS consultation objectives and the approach and methodology for stakeholders on matters relating to the project. This consultation program will continue throughout the EIS exhibition period, and subject to project approval, continue during construction and operation of the project. Figure 9-1 illustrates the process of integrating consultation activities with activities undertaken for specific EIS technical studies.

Table 9-2 Consultation approach

Stakeholder group	EIS consultation scope
Local, State and Federal Government departments and elected representatives	<ul style="list-style-type: none"> <li>• Regular briefings on project activities and where appropriate provide ministers and members with access to information on The Proponent’s activities towards a project approval decision</li> <li>• Build awareness and understanding of project objectives and benefits among the Narrabri Shire Council staff and elected representatives</li> <li>• Make sure communication was and remains two-way and that the concerns of the community are identified early and addressed appropriately.</li> </ul>

Stakeholder group	EIS consultation scope
Industry groups and regional organisations	<ul style="list-style-type: none"> <li>• Raise awareness of the EIS process towards a project approval decision</li> <li>• Provide an opportunity for engagement on areas of special interest</li> <li>• Provide details on the management and mitigation of potential impacts.</li> </ul>
Landholders – direct, activity area and regional context	<ul style="list-style-type: none"> <li>• Provide updates on The Proponent’s activities to landholders within the project area, including sharing of studies and monitoring data</li> <li>• Build relationships with landholders and answer questions on The Proponent’s activities</li> <li>• Ensure clear understanding of landholder interests / concerns (such as agricultural, economic and social benefits, and impacts) for input into EIS development and resolution</li> <li>• Foster open and transparent dialogue with agricultural communities in which The proponent operates.</li> </ul>
Local Aboriginal communities, Aboriginal Land Councils and the registered Native Title Applicants	<ul style="list-style-type: none"> <li>• Raise awareness of the EIS process towards a project approval decision</li> <li>• Inform the local Aboriginal community about the progress of the project and provide an open forum for Aboriginal community members to ask questions and raise concerns about project activity in the region</li> <li>• Provide an opportunity for local engagement and input into the EIS prior to public exhibition, including provision of a draft Aboriginal Cultural Heritage Assessment Report for comment prior to EIS submission</li> <li>• Assist the local Aboriginal community to assess the potential benefits and impacts</li> <li>• Build awareness and understanding within broader Gomerioi Applicant group of native title process and progress of agreement-making with Gomerioi Applicants; and assisting the Gomerioi Applicants to inform members of progress on native title negotiations</li> <li>• Enable the local and regional Aboriginal community to participate in economic opportunities arising from the project, including development of an Aboriginal Participation Plan for the project.</li> </ul>
Local community, including clubs and community groups	<ul style="list-style-type: none"> <li>• Raise awareness and understanding of, and support for, the EIS process towards project approval</li> <li>• Inform and actively engage the community to ensure accurate, timely and relevant information is available</li> <li>• Provide technical information needed to understand the project</li> <li>• Enhance the level of project knowledge among community members</li> <li>• Provide an opportunity for local engagement.</li> </ul>
Narrabri Gas Project Community Consultative Committee	<ul style="list-style-type: none"> <li>• Enable the community and the proponent to proactively discuss, identify and resolve issues</li> <li>• Involve community representatives in deliberations and implementation relating to social impact management.</li> </ul>
Local business and contractors	<ul style="list-style-type: none"> <li>• Raise awareness of the EIS process towards a project approval decision</li> <li>• Provide an opportunity for engagement on areas of special interest</li> <li>• Provide details on the management and mitigation of potential impacts.</li> </ul>
Media, including radio TV, newspapers and social media	<ul style="list-style-type: none"> <li>• Proactive information and articles for the community and stakeholders on The Proponent’s activities</li> <li>• Advertisements and advertorials to key audiences to provide technically accurate information on the project.</li> </ul>

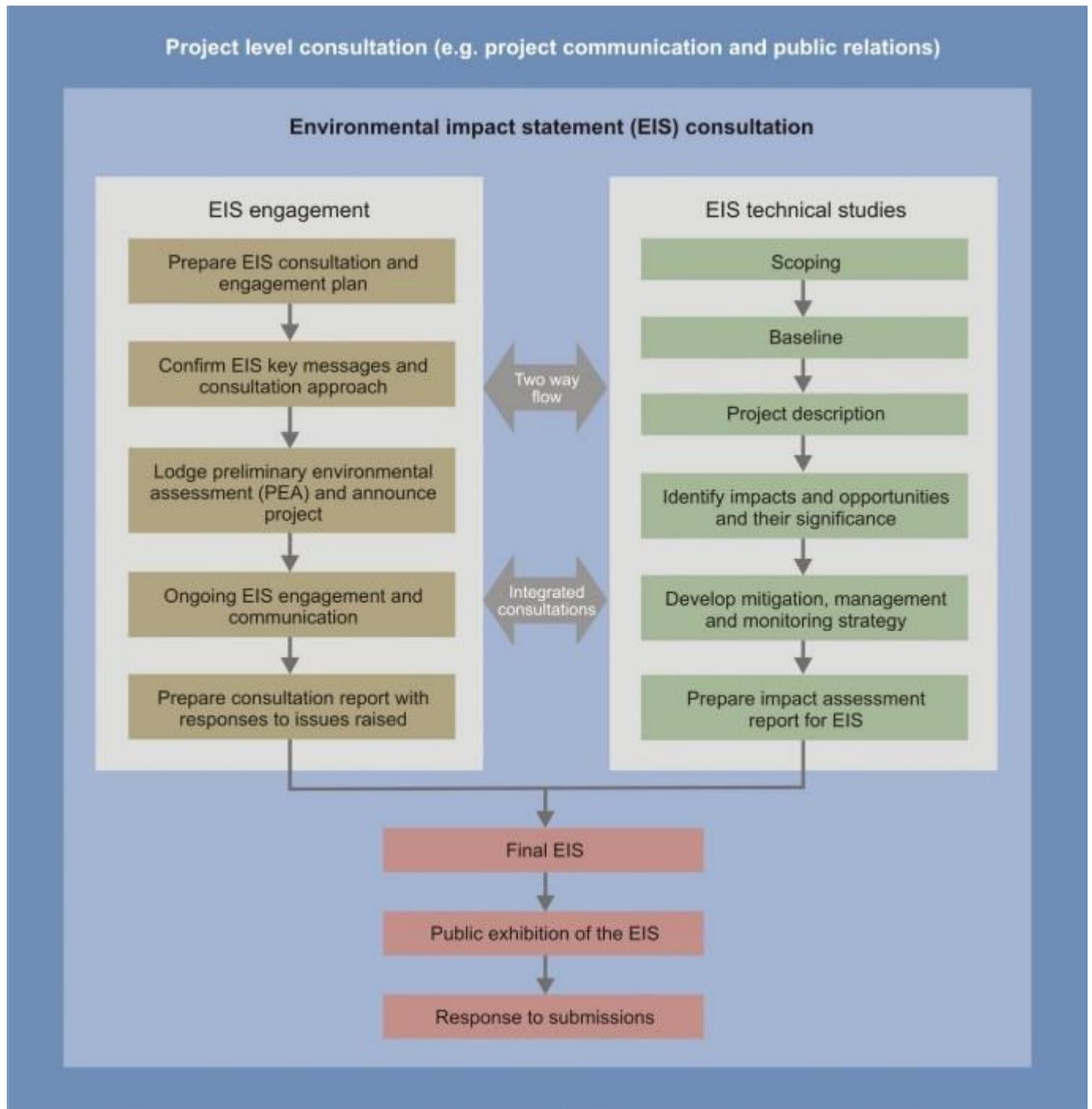


Figure 9-1 EIS engagement and integration with assessment

## 9.2.2 Stages of consultation

Consultation activities have focused around key EIS development stages as summarised in Table 9-3. The following sections of this chapter focus on activities completed for Stages 1, 2 and 3.

Table 9-3 EIS critical milestones prior to submission

Timeline	Stage	Consultation tools and activities
July 2013 to October 2014	Stage 1: Start EIS process and lodge preliminary environmental assessment (PEA) and Commonwealth referral	<ul style="list-style-type: none"> <li>• Identify key stakeholders</li> <li>• Preliminary scoping of potential issues</li> <li>• Review project information</li> <li>• Prepare Consultation Plan</li> <li>• Prepare information materials</li> <li>• Send notification letter and information packs to stakeholders following lodgement of PEA</li> <li>• Conduct briefings with key stakeholders following lodgement of PEA</li> <li>• Santos Narrabri Community Committee on CSG meeting</li> <li>• Community site tours</li> <li>• Monthly update.</li> </ul>
July 2014	Stage 2: Receive Secretary's environmental assessment requirements	<ul style="list-style-type: none"> <li>• Media release</li> <li>• Community information sessions</li> <li>• Landholder information sessions</li> <li>• Santos Narrabri Community Committee on CSG meeting</li> <li>• Community site tours</li> <li>• Monthly update.</li> </ul>
February 2014 to June 2016	Stage 3: EIS development	<ul style="list-style-type: none"> <li>• Media releases</li> <li>• Government forums</li> <li>• Community information sessions</li> <li>• Landholder information sessions</li> <li>• One-on-one landholder meetings</li> <li>• One-on-one other stakeholder meetings</li> <li>• Community events</li> <li>• Community site tours</li> <li>• Santos Narrabri Community Committee on CSG and Narrabri Gas Project CCC meetings</li> <li>• Monthly update</li> <li>• Implementation of the <i>Aboriginal cultural heritage consultation requirements for proponents</i> (DECCW 2010).</li> </ul>

## 9.2.3 Consultation tools and activities

Figure 9-2 illustrates the link between the consultation tools and activities undertaken during the development of the EIS. The tools and activities have helped deliver on The Proponent's commitment to providing timely, accurate and credible project information to stakeholders and the broader community.

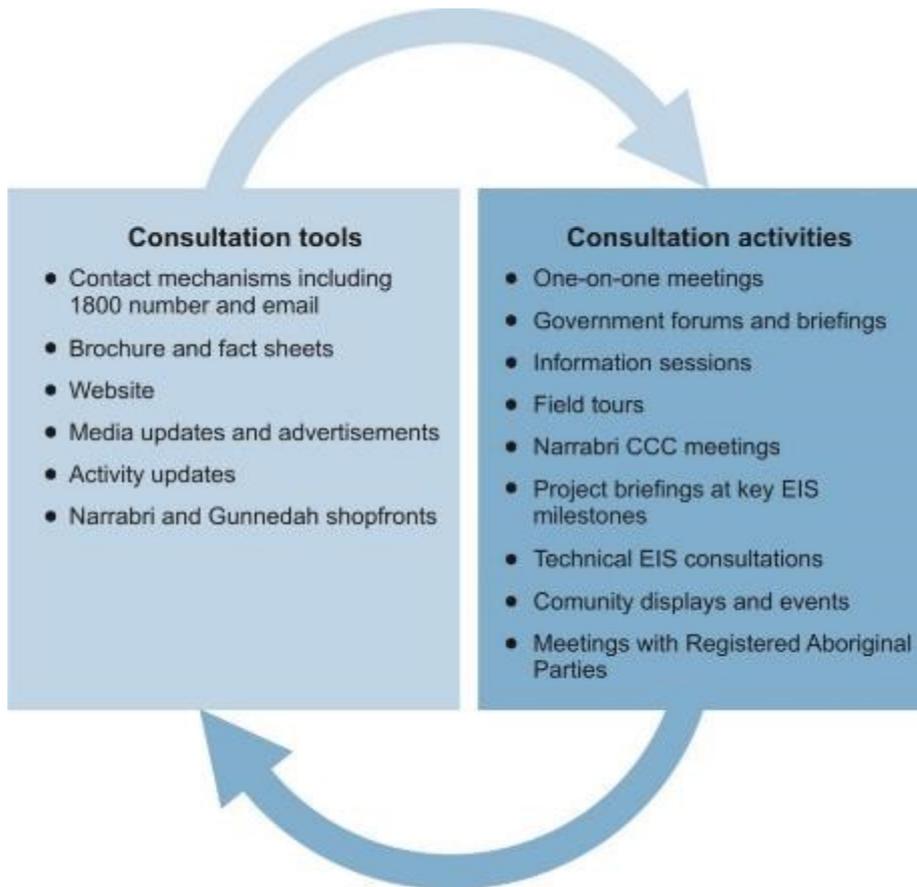


Figure 9-2 EIS Consultation tools and activities

## Consultation activities

The consultation and engagement process has provided opportunity for stakeholders and members of the community to learn about the project, and for the proponent to capture and respond to the matters being raised. Examples of community feedback considered by the proponent and included in the project are:

- ‘Landholder compensation information was ambiguous’. The landholder compensation information was subsequently reviewed in consultation with the Santos Community Committee on CSG to simplify the wording. The Fact Sheet and website page were subsequently republished.
- ‘Concerns regarding truck movements on roads with school buses’. Routes for heavy vehicle movements are now planned to avoid bus routes during school bus times.
- ‘Potential for facility lighting to interfere with the Siding Spring Observatory’. Lighting will be planned in consultation with the Australian Astronomical Observatory and a specialised lighting technician. Light generated during construction and operation of the project would be designed so it complies with *Australian Standard AS 4282-1997 Control of the Obtrusive Effects of Outdoor Lighting*, and designed considering the good lighting design principles documented in *Dark Sky Planning Guideline: Protecting the observing conditions at Siding Spring* (NSW Department of Planning and Environment 2016). Generally, lighting would be designed to minimise off-site light spill.

Table 9-4 provides an overview of the scope of engagement for each key stakeholder group, together with a summary of the key consultation activities undertaken to June 2016. Further details are provided in Appendix D.

Table 9-4 Overview of consultation activities

Stakeholder group	Activity to date
Federal and State Government (departments and elected representatives)	<ul style="list-style-type: none"> <li>• Eight government information forums and field tours</li> <li>• More than 120 meetings with government agencies and elected representatives</li> <li>• Regular Government Information Forums</li> <li>• Project briefings with State elected representatives on the progress of the project and EIS development</li> <li>• Several meetings with State agencies to inform technical components of the EIS (such as water management and biodiversity)</li> <li>• Project updates to State agency representatives coinciding with key project milestones.</li> <li>• Meetings and site tours with representatives from Siding Spring Observatory in relation to future facility lighting design.</li> </ul>
Local Government	<ul style="list-style-type: none"> <li>• Monthly project updates and notification letters with new / updated project information</li> <li>• Regular meetings with the General Manager and Economic Development Officer</li> <li>• Regular Government Information Forum</li> <li>• Council representatives on the Santos Narrabri Community Committee on CSG and the Narrabri Gas Project Community Consultative Committee</li> <li>• Briefings to Mayor and elected representatives</li> <li>• Presentation to neighbouring councils including Gunnedah, Coonamble and Liverpool Plains to provide information on the project.</li> </ul>
Landholders	<ul style="list-style-type: none"> <li>• Approximately 150 one-on-one meetings with landholders in the project area (excluding information forums and site visits)</li> <li>• more than 350 site tours and community events and 10 landholder- specific information sessions</li> <li>• More than 1,000 emails, phone calls and / or notification letters to landholders in relation to upcoming activities and landholder information sessions and events</li> <li>• Regular on-site meetings held with landholders living in proximity to Leewood</li> <li>• Interviews with a number of landholders to incorporate feedback, issues and concerns into the EIS on those areas of interest / concern (e.g. agricultural, economic and social benefits and impacts)</li> <li>• Monthly updates to government landholders on The Proponent's activities</li> <li>• Invitations to government landholders to attend one-on-one meetings and government forums</li> <li>• Regular updates on The Proponent's activities with Forestry Corporation of NSW.</li> </ul>
Industry groups and regional organisations	<ul style="list-style-type: none"> <li>• Meetings with NSW Irrigators Councils (NSWIC) and updates on current activities as needed. NSWIC staff were briefed on the EIS including regular updates via email and in meetings</li> <li>• NSWIC staff, Board members and the Executive Officer of Namoi Water were hosted on a field tour and briefing</li> <li>• Updates to the executive officer of Namoi Water, who is a member of the Narrabri Gas Project Community Consultative Committee and receives updates through the Community Consultative Committee and at meetings with The Proponent's staff</li> <li>• Information booths at the NSW Farmers Conference in Sydney in July 2014, the National Farmers' congress in Canberra in October 2014, Santos information stand at the Country Women's Association of NSW annual conference in May 2015, NSW Farmers annual conference in July 2015, Santos information stand at Cotton Industry Expo in August 2015</li> <li>• Representatives from NSW Farmers, Namoi Water, Lower Namoi Cotton Growers Association and Country Women's Association of NSW on the Narrabri Gas Project Community Consultative Committee.</li> </ul>

Stakeholder group	Activity to date
Aboriginal community, Local Aboriginal Land Councils and Registered Native Title Applicants	<ul style="list-style-type: none"> <li>• Representative from Narrabri Local Aboriginal Land Council on the Narrabri Gas Project Community Consultative Committee</li> <li>• Approximately 550 Aboriginal people expressed an interest in being involved in consultation in relation to cultural heritage for the project – the ‘Registered Aboriginal Parties (RAPs)’. The proponent has fully complied with the NSW Government’s consultation requirements for RAPs. Eleven meetings were held with RAPs in the towns of Wee Waa, Gunnedah and Narrabri. In addition, a site visit was also undertaken for RAPs wishing to attend. All information was mailed to RAPs that could not attend meetings.</li> <li>• The proponent has committed to liaise with the Gomeroi Applicants and has held forums to discuss the activities occurring within PEL 238 and PAL 2 and the natural gas industry more generally. The 19 Gomeroi Applicants are the elected representatives of 5,000 to 6,000 Gomeroi; a large proportion of who reside within the claim area. The proponent has held meetings with the Gomeroi Native Title Applicant Group and is negotiating section 31 Agreements under the provisions of the Native Title Act for the granting of four petroleum production licences associated with the project.</li> </ul> <p>Further information on consultation with the Aboriginal community, Local Aboriginal Land Councils and Registered Native Title Applicants is provided in Chapter 20 and Appendix N1 (Aboriginal Cultural Heritage Assessment).</p>
Narrabri Gas Project Community Consultative Committee	<ul style="list-style-type: none"> <li>• 40 meetings to date for the Santos Narrabri Community Committee which became the Narrabri Gas Project Community Consultative Committee (CCC) since it was established in August 2012 (refer to Section 9.1.1).</li> </ul>
Local business and contractors	<ul style="list-style-type: none"> <li>• More than 50 integrated work team meetings to discuss current and future work program and contract management with contractors</li> <li>• Approximately 30 field visits with suppliers and contractors from across the region</li> <li>• Attendance at 15 Narrabri Chamber of Commerce meetings and presented on more than 40 occasions to the local business community at information forums hosted by the Chamber of Commerce</li> <li>• Information sessions in Gunnedah in August 2013 and in Narrabri in July 2013, December 2013, December 2014, August 2015 and December 2015 for local contractors and suppliers. The sessions provided local contractors with an overview of Santos’ current operations within the project area.</li> </ul>
Local community	<ul style="list-style-type: none"> <li>• Over 6,500 project brochures distributed throughout the Narrabri Shire area via Australia Post letterbox drop</li> <li>• Letter and project brochure distributed to 130 clubs and community groups. The letter included information on community site tours and email, office shopfront, telephone and website contact information</li> <li>• Monthly community site tours have attracted a broad cross-section of people and groups from the local community</li> <li>• Community site tours are advertised in the Narrabri Courier</li> <li>• Other site tours for stakeholders and community groups were held upon request with approximately 350 site tours and information stands at community events from July 2013 to June 2016</li> <li>• Updates covering operations, community events, project milestones and the lodgement of documents such as the preliminary environmental assessment and other approvals, are placed in the Narrabri Courier either monthly or fortnightly (depending on the level of activity) so the community can easily access information about The Proponent’s work</li> <li>• Santos exhibits at AgQuip, a major annual event in the rural calendar for many businesses and individuals operating in the pastoral and agricultural sector of NSW. It attracts nearly 100,000 people. Over 1,000 people have visited Santos’ annual display at AgQuip since 2011.</li> </ul>

Stakeholder group	Activity to date
Media	<ul style="list-style-type: none"> <li>• Interviews and information routinely and regularly supplied to local newspapers</li> <li>• Updates to the local newspapers on all important milestones</li> <li>• Over 50 radio and television interviews</li> <li>• 20 published letters to the editor</li> <li>• Eight advertorial / opinion pieces</li> <li>• Monthly activities updates, more frequent when required</li> <li>• 14 site visits by local and metropolitan journalists</li> <li>• 24 advertisements to explain: <ul style="list-style-type: none"> <li>– the benefits of natural gas from coal seams</li> <li>– the signing of the MOU with the NSW Government</li> <li>– the Agreed Principles of Land Access document</li> <li>– the lodgement of the PEA.</li> </ul> </li> </ul>

Interviews and information have been routinely and regularly supplied to local print media with a more than 230 events recorded in the reporting period.

Additional targeted consultation was undertaken to support the Social Impact Assessment (SIA) and Agricultural Impact Statement (AIS) (refer to Appendices T1 and K respectively). Local and regional stakeholders including representatives of Narrabri Shire Council, industry groups, local service providers, local businesses, community groups and landowners were interviewed to:

- identify likely communities to be affected by the project
- understand the existing socio-cultural characteristics, conditions and dynamics of the community to inform baseline data
- understand the potential impacts of the project on people and communities
- understand the potential impacts and benefits of the project on local services and agricultural practices
- inform strategies to mitigate and manage social impacts and opportunities.

The interviews were held between January and June 2014. Consultation was completed by one-on-one, face-to-face meetings and telephone interviews. As noted above, a summary of these interviews is provided in Appendix T1 (Social Impact Assessment) and in Appendix K (Agricultural Impact Statement).

## Consultation tools

Table 9-5 provides a description of the consultation tools and materials developed and how they have been disseminated. The activity to date refers to the period between July 2013 and June 2016. During this period engagement has occurred with approximately 2,800 stakeholders.

Table 9-5 Overview of consultation tools and activity outcomes

Tool / activity	Description	Activity to date
Contact mechanisms	<p>A variety of contact mechanisms have been established including project email, information phone line and website feedback.</p> <p>Contact details have been included on all project related communication materials.</p>	<p>Questions, concerns and issues received through the contact channels were captured, reviewed and responded to within appropriate timeframes. Where relevant, statutory timeframes were met.</p> <p>During the consultation period, approximately 60 calls were received on the 1800 number and 220 emails through project email.</p>
Project website	<p>Santos maintains a project website that is regularly updated with the most current information and promotes forthcoming consultation activities. The website identifies Santos activities in NSW (<a href="http://www.santos.com/exploration-acreage/nsw-csg.aspx">http://www.santos.com/exploration-acreage/nsw-csg.aspx</a>).</p> <p>In addition, Santos established a new community website <a href="http://www.narrabrigasproject.com.au">www.narrabrigasproject.com.au</a> specifically for the project in September 2014. The website was designed to provide easy access to project information and The Proponent's plans. It includes a feedback component where visitors to the site can email questions to The Proponent.</p>	<p>During the consultation period, the NSW pages of Santos' website had received over 60,000 page views. The most visited page was the Narrabri Gas Project page, followed by the Environmental Approvals page.</p> <p>The Narrabri Gas Project website had 22,150 separate sessions. On average, visitors have remained on the site for over three minutes with a total of 59,000 page views recorded. The most visited page was the Home Page, followed by <i>About the Narrabri Gas Project</i>.</p>
Media updates	<p>Santos issues updates fortnightly through advertisements in the <i>Narrabri Courier</i> newspaper. These updates provide information on the proposed work activities and upcoming work program. Advertisements also promote awareness of, and attendance at, community site tours.</p>	<p>The proponent has placed more than 50 media updates on activities and upcoming community site tours in the <i>Narrabri Courier</i> newspaper.</p>
Activity updates	<p>The proponent emails a monthly activity update to key stakeholders including government agencies, Narrabri Shire Council, Narrabri Gas Project Community Consultative Committee, local chamber of commerce, Namoi Water and NSW Farmers. It provides an update on current and future activities. The updates are available for dissemination by representative bodies and entities to their members and associates.</p> <p>Activity updates are also issued as advertisements in the <i>Narrabri Courier</i>.</p>	<p>Monthly activity updates have been distributed to key stakeholders providing information on:</p> <ul style="list-style-type: none"> <li>• Decommissioning of wells</li> <li>• Workovers</li> <li>• Drilling of exploration core holes</li> <li>• Pilot wells</li> <li>• Leewood</li> <li>• Other work (including environmental baseline studies)</li> <li>• Site visits</li> <li>• Community</li> <li>• Other issues (such as industry news, government activities and initiatives relevant to the project).</li> </ul>

Tool / activity	Description	Activity to date
Brochures and fact sheets	<p>A brochure and series of fact sheets were developed for the project to support consultation activities and provide a detailed overview of key components of the project.</p> <p>The brochure contained information on the Narrabri Gas Project and location, the need for natural gas in NSW, the benefits of Narrabri Gas Project, an overview of Santos' drilling practices, water management, safety, groundwater monitoring, environmental management, The Proponent's approach toward working with landholders and the community, the approvals process, and details on where stakeholders can find further project information.</p> <p>The brochure is supported by seven fact sheets that contain more detailed information on the matters outlined in the brochure. The fact sheets cover the following topics (refer to Appendix D):</p> <ul style="list-style-type: none"> <li>• project overview</li> <li>• Santos in NSW</li> <li>• working in the Pilliga</li> <li>• working with landholders</li> <li>• drilling with care</li> <li>• protecting local aquifers</li> <li>• Native Title and the Right to Negotiate.</li> </ul>	<p>The brochure and fact sheets were made available to stakeholders through the project website and the Narrabri and Gunnedah shopfronts.</p> <p>The brochure and fact sheets were also provided to stakeholders at information sessions, community events and forums.</p> <p>A copy of the brochure was also distributed broadly throughout the Narrabri LGA through an Australia Post letter box drop, with over 6,500 brochures delivered.</p> <p>Additional fact sheets prepared by the NSW Government were available from the Narrabri shopfront and provided to stakeholders at information sessions, community events and forums. The fact sheets included the following coal seam gas topics (refer to Appendix D):</p> <ul style="list-style-type: none"> <li>• what is coal seam gas?</li> <li>• exploration and production</li> <li>• how is gas extracted from coal seams?</li> </ul>
Narrabri and Gunnedah shopfronts	<p>The shopfronts have Santos personnel on hand to respond to visitor enquiries.</p> <p>Printed information and displays to build awareness and understanding of project objectives are displayed at both the Narrabri and Gunnedah shopfronts.</p>	<p>Approximately 4,000 visitors to the Narrabri and Gunnedah shopfronts have been recorded from July 2013 to June 2016.</p>

## 9.2.4 Outcomes of consultation

### Issues raised during consultation

During the consultation process, stakeholders identified a range of impacts and benefits of the project. Although feedback has differed based on individual stakeholder interests, a number of consistent issues emerged.

Table 9-6 provides a summary of these issues and opportunities together with a response and / or reference to where these issues are addressed in this EIS. Further details are included in Appendix D. This summary is an overview of community and stakeholder perceptions in relation to the project rather than a technical assessment of potential impacts or benefits. The themes and issues are not presented in priority order. It is, however, noted that the most raised issues by stakeholders related to groundwater and groundwater management, and / or land access.

Table 9-6 Response to issues raised during consultation

Summary of issue or opportunity	Interested stakeholder groups	EIS response
Groundwater		
Potential for aquifer contamination, monitoring and insurances should contamination occur	Landholders Community	<p>All wells will be drilled in accordance with the <i>NSW Code of Practice on Well Integrity</i> (DTIRIS 2012). When constructed in accordance with these standards the risk of groundwater contamination is assessed as negligible. In addition, the groundwater / geological profile within the project area indicates that high yielding groundwater supplies in the Namoi Alluvium and Pilliga Sandstone are separated from the project’s target coal seam gas bearing strata at depth by units of relatively low permeability which effectively act as barriers to groundwater flow, inhibiting hydraulic connectivity.</p> <p>The assessment of groundwater including possible impacts to groundwater quality is included in Chapter 11 (Groundwater). The assessment concluded that the significance of impact would be low.</p> <p>Appendix G3 is the project’s Water Monitoring Plan which outlines the proposed surface and groundwater monitoring locations, discusses what is to be monitored, and the process to be followed if monitoring data fall outside the expected range of parameters.</p> <p>Operators are required to submit a financial assurance to the NSW Government to cover the costs of rehabilitation.</p>
Baseline data collection and level of ongoing monitoring of groundwater. Santos’ Water Portal content	Government Landholders Community	<p>Appendix G3 (Water Monitoring Plan) and Appendix G4 (Hydrological Baseline Report) provide information on the surface and groundwater quality data collected to date, and the proposed ongoing plan for water monitoring.</p> <p>The Water Monitoring Plan provides an outline of proposed monitoring activities to identify and measure potential impacts to water resources within, and within the vicinity of, the project area during operations. It addresses potential surface and groundwater impacts associated with the extraction of water from coal seams, and the management of beneficial uses of treated water during operations.</p> <p>The Water Monitoring Plan is intended to meet the relevant regulatory requirements prescribed by DPI - Water, the Environmental Protection Authority (EPA) and the Department of Planning and Environment (DoPE).</p> <p>The water portal is a tool for the general public to understand the amount of baseline water quality data that has been collected in the area. The water portal is updated quarterly.</p>

Summary of issue or opportunity	Interested stakeholder groups	EIS response
Impact of water extraction on the Water Sharing Plan for irrigators	Landholders Community	<p>As for other water users, the project will be required to attain the necessary water access licences issued in accordance with the allocations made by the NSW Government under the Water Sharing Plan.</p> <p>The project seeks approval to extract 37.5 gigalitres of water over a 25-year period, being an average of 1.5 gigalitres per year. This represents:</p> <ul style="list-style-type: none"> <li>• 1.3 per cent of the maximum sustainable diversion limit (114.5 gigalitres) identified for the Gunnedah-Oxley Basin by the Commonwealth in its Murray Darling Basin Plan each year</li> <li>• 0.73 per cent of the maximum sustainable diversion limit (205.6 gigalitres) (long term average annual extraction limit) currently identified in the Water Sharing Plan for the NSW Murray-Darling Basin Porous Rock Groundwater Source each year</li> <li>• 5.6 per cent of the water which is currently made available to the market (23.1 gigalitres) each year.</li> </ul>
Produced water – amount produced, infrastructure required to store and treat produced water, construction standards	Government Landholders Community	<p>The operation of a well, the estimated water produced, and details of the infrastructure to be constructed as part of the project, including water storage and treatment facilities, are described in Chapter 7 (Produced water management).</p> <p>The project would include a range of infrastructure to manage and treat produced water, which would include removing almost all of the dissolved salt. Produced water extracted at each production well would be transferred to Leewood via a network of underground water gathering lines and in field balance tanks. Produced water would be stored in ponds at Bibblewindi or Leewood, before being treated at the Leewood central water treatment facility. The peak daily treated water volumes would be around 10 megalitres. Importantly, this peak is only expected to last during the initial stages of depressurisation, over the first two to four years of production. After this period, volumes of produced water from each well would decline substantially. The estimated average daily water treatment volume over the 25-year assessment period is 3.9 megalitres (from around 4.1 megalitres of produced water).</p>
<b>Surface water</b>		
Produced water salinity and / or quality following treatment	Community	<p>Produced water will be treated to suitable quality to enable beneficial reuse. Following treatment, the water would generally be used to irrigate crops on nearby properties. During sustained periods of wet weather, treated water would be managed through release to Bohena Creek under appropriate flow conditions.</p> <p>Chapter 7 (Produced water management) describes the proposed water management strategy including water quality parameters.</p> <p>Appendix G4 Water Baseline Report provides a summary of baseline water quality in the area.</p>

Summary of issue or opportunity	Interested stakeholder groups	EIS response
<p>Potential use of treated water for irrigation</p> <p>Soil impacts on land used for irrigation</p>	Landholders	<p>The irrigation assessment (Appendix G2) identified an area suitable for irrigation within 20 kilometres of Leewood based on soil type and a range of crop types. It has also described the impacts to soil and land capability of using treated water.</p> <p>At both peak and longer term average produced water production rates, the rate of salt application to irrigated land would be broadly consistent with salt concentrations in irrigation water used regionally. Therefore, it may be concluded that as long as the irrigation regime and schedule is managed appropriate to the crop, soil type and meteorological conditions, there is a low risk of soil and surface water quality impacts.</p>
<p>Landholders seeking to be potential beneficiaries of treated water</p> <p>Availability of produced or treated water for fire-fighting purposes</p>	Landholders Community	<p>The proposed use of treated water is described in Chapter 7 (Produced water management). Irrigation potential is discussed in Appendix G2 (Irrigation Assessment). The irrigation assessment has identified the area that is suitable for irrigation within 20 kilometres of Leewood.</p> <p>Availability of water for firefighting will be discussed with the Rural Fire Service and Forestry Corporation of NSW. If possible, it will be made available at both Leewood and Bibblewindi.</p>
<b>Land Access</b>		
<p>Impacts on biophysical strategic agricultural land (BSAL)</p>	Government Non-government organisations Landholders Community	<p>Comprehensive soil testing has confirmed there is no BSAL within the project area. A site verification certificate acknowledging the absence of BSAL in the project area was issued by the NSW Department of Planning and Environment and is included as Appendix I2.</p> <p>An assessment of impacts to agricultural land was prepared and is included as Appendix K (Agricultural impact assessment).</p>
<p>Concerns about property fragmentation resulting from location of well pads and access roads on private properties</p> <p>Ability for agricultural activities to coexist with CSG activities</p> <p>'Lock the Gate' campaign to stop CSG company representatives coming onto property</p>	Government Landholders Community	<p>Santos is a signatory to the <i>Agreed Principles of Land Access</i> signed in March 2014, with two additional signatories in September 2015. This includes a commitment not to enter a Landholder's property to conduct drilling operations where that Landholder has clearly expressed the view that operations on their property would be unwelcome.</p> <p>Where a landholder chose to work with The Proponent, a Land Access Agreement and a Farm Management Plan will be developed. The location of infrastructure is agreed with the landowner.</p> <p>Further detail is provided in Appendix D (Stakeholder and Community Consultation Report) and Appendix K (Agricultural Impact Statement).</p>
<p>Compensation framework</p>	Landholders	<p>A compensation framework is in place that provides an income stream for landholders who host exploration and drilling activities. The framework features a land-value based payment to compensate for the amount of land utilised by The Proponent's surface facilities and a fee for service to the landholder. In exchange for the fee for service, the landholder signs a Services Agreement and agrees to assist with general monitoring and upkeep of the sites located on their land. A Land Access Agreement is also negotiated.</p> <p>Further details are provided in Appendix T1 (Social Impact Assessment).</p>

Summary of issue or opportunity	Interested stakeholder groups	EIS response
<b>Well integrity</b>		
Potential for the cement used in the well casing to degrade	Government	<p>All wells would be drilled and constructed in accordance with the <i>NSW Code of Practice for Well Integrity</i> (DTIRIS 2012) as discussed in Chapter 6 (Project description). The Code of Practice outlines how drilling is to be undertaken in order to eliminate cross-contamination of aquifers.</p> <p>Chapter 30 (Environmental management and monitoring) and Appendix G3 (Water Monitoring Plan) outline the proposed surface and groundwater monitoring plan respectively. The water monitoring plans are in place to ensure that if a change is detected, it can be investigated and appropriate mitigation measures implemented.</p> <p>Appendix T3 (Chemical Risk Assessment) provides further detail on potential impacts and management of drilling chemicals. Findings indicate that the chemicals used in drilling will not adversely impact on human health.</p>
Integrity of steel casing	Non-government organisations	
Potential for drilling to lead to cross-contamination of aquifers	Indigenous groups	
Adequacy of plugging and abandoning well processes	Landholders Community	
<b>Hydrology and geomorphology</b>		
Flood mitigation at Leewood	Community	<p>Chapter 13 (Hydrology and geomorphology) provides a description of potential flooding impacts. A flood study was undertaken to assess a one in 100-year flood. This is considered a key flood risk management event under the <i>NSW Floodplain Development Manual - the management of flood liable land</i> (NSW Government 2005) and was used to develop an understanding of the nature and extent of flooding in the catchment and, therefore, potential flooding impacts from the project. The proposed produced water and brine ponds have the effect of increasing flood levels locally along the western extent of both the existing and proposed ponds. Increases in flood levels are generally less than 250 millimetres with a small area of up to 330 millimetres near the property boundary. The affected area is currently vegetated with no residences or other buildings in place.</p> <p>Further details on flood modelling are provided in Appendix H (Hydrology and geomorphology).</p>
<b>Soil erosion</b>		
Erosion and sediment control standards	Landholders Community	<p>Chapter 14 (Soils and land contamination) summarises potential impacts on land capability and erosion and sediment control measures.</p> <p>An erosion and sediment control management plan will be developed and implemented. The plan would be based on <i>Managing Urban Stormwater – Soils and Construction Vol. 1 (Blue Book)</i> (Landcom 2004).</p>
Erosion from old sites or recently plugged and decommissioned sites	Government Landholders	<p>Works undertaken for this project will be rehabilitated in accordance with the Rehabilitation Strategy (Appendix V). Previously approved and constructed sites that are not part of this project are covered by separate approvals (Chapter 2), and are therefore outside the scope of this EIS. Issues would be managed in accordance with the relevant approval requirements.</p>

Summary of issue or opportunity	Interested stakeholder groups	EIS response
<b>Ecology</b>		
<p>Impacts on threatened species</p> <p>Availability of ecological survey information collected</p>	<p>Government</p> <p>Landholders</p> <p>Community</p>	<p>Chapter 15 (Terrestrial ecology) summarises impacts and proposed mitigation strategies. Further details are provided in Appendix J1 (Ecological Impact Assessment).</p> <p>A number of avoidance and minimisation measures would be included in the design of the project to minimise the potential impacts on flora and fauna in the project area. These measures include:</p> <ul style="list-style-type: none"> <li>• where practicable development planning will maximise the use of existing roads, tracks and disturbance corridors for construction, operational access and the placement of linear infrastructure (for example gas and water gathering systems).</li> <li>• placing infrastructure in previously cleared areas where possible</li> <li>• developing and implementing a Field Development Protocol and ecological scouting framework.</li> </ul> <p>Additional mitigation and management measures (such as clearing vegetation in accordance with a pre-clearing and clearing procedure and rehabilitating cleared areas in accordance with a rehabilitation strategy) would further reduce the impact of the project on flora and fauna (including threatened and migratory species, populations and ecological communities).</p> <p>The implementation of mitigation and management measures would be satisfactory to control and minimise the potential impacts of the project.</p> <p>Residual impacts on threatened and migratory species and ecological communities would be offset as part of a biodiversity offset strategy in accordance with the <i>NSW Offsetting Principals</i> (OEH 2014f) and the <i>NSW Biodiversity Offset Policy for Major Projects</i> (OEH 2014c).</p> <p>All threatened species records have been provided to the Office of Environment and Heritage. Office of Environment and Heritage upload the data onto their ATLAS wildlife database, where it is available to the public.</p>
<b>Property and land use</b>		
<p>Debate on project rights with respect to property in the broader NSW community</p> <p>Permits and licence requirements for State-owned land</p>	<p>Government</p> <p>Landholders</p> <p>Community</p>	<p>Mineral rights are outside the scope of this EIS.</p> <p>All required permits and licences are discussed in Chapter 4 (Legislation and approvals).</p> <p>Santos holds an occupation permit enabling land use for access and activities associated with petroleum titles, issued under the now repealed <i>NSW Forestry Act 1916</i>. In accordance with this permit, Santos may use the area subject to the permit (defined in Schedule 1 of the permit) for activities it is authorised to carry out under the <i>Petroleum (Onshore) Act 1991</i>, including access through the permit area.</p>

Summary of issue or opportunity	Interested stakeholder groups	EIS response
Depth of flow lines and ability for continued farm operations (such as use of heavy machinery)	Landholders	Gas and water gathering lines would be buried with a minimum of 750 mm cover. Following construction of the gas and water gathering lines it is anticipated that normal farming practices will continue.  Impacts associated with agricultural activities are addressed in Chapter 17 (Property and land use) and Appendix K (Agricultural Impact Statement).
Horizontal drilling, particularly the process and requirements for land access.	Landholders Community	Further details on the process and requirements for horizontal drilling are provided in Chapter 6 (Project description). Land access agreements only apply to properties where surface infrastructure would be located.
<b>Air quality</b>		
Flare emissions	Government	Air quality impacts are assessed in Chapter 18 (Air quality) and Appendix L (Air Quality Assessment).  An Air Quality Management Plan would be developed and implemented for the construction, operation and rehabilitation stages of the project. It would include a suite of mitigation measures that could be implemented to prevent or minimise air emissions as well as an air quality monitoring program. Mitigation and management measures would include dust control methods (such as water sprays, carts and / or suppressants to minimise emissions) and construction zone speed limits.  Brine ponds would contain dissolved salts in water; therefore, solid salt would not be blown out of the ponds.
Concerns about the increase in dust	Landholders	
Concerns about the dispersion of salt into the air from the brine ponds	Community	
<b>Noise and vibration</b>		
Noise from facilities at Leewood and the Wilga Park Power Station affecting neighbouring residents	Landholders Community	Noise impacts are considered in Chapter 19 (Noise and vibration) and Appendix M (Noise and Vibration Assessment).  Noise mitigation measures will be implemented during construction and operation to ensure compliance with noise management levels at occupied sensitive receivers unless a private negotiated agreement is in place.
Concerns about noise associated with drilling and vehicle movements at night		With the implementation of mitigation treatments, operational noise levels from Leewood are predicted to comply with the noise criteria at all surrounding sensitive receivers during both calm and adverse meteorological conditions.

Summary of issue or opportunity	Interested stakeholder groups	EIS response
<b>Aboriginal heritage</b>		
<p>Consultation process and communication methods</p> <p>Importance of involving Elders</p> <p>Importance of protecting cultural heritage and Aboriginal involvement</p> <p>Need for employment and training opportunities for local Aboriginal people</p> <p>Need for local Aboriginal people to benefit economically</p>	<p>Government</p> <p>Indigenous groups</p>	<p>Registered Aboriginal Parties (RAP)s were identified through implementing the process outlined in <i>Aboriginal cultural heritage consultation requirements for proponents</i> (DECCW 2010).</p> <p>All issues raised by the RAPs and responses are detailed in Chapter 20 (Aboriginal heritage) and Appendix N1 (Aboriginal Cultural Heritage Assessment).</p> <p>The Cultural Heritage Management Plan (Appendix N2) describes how the impact of activities required for the project on Aboriginal cultural heritage will be managed. Project activities will be designed such that, to the greatest extent possible, there is no impact on Aboriginal cultural heritage. Where impact cannot be avoided then the project activity will be designed to minimise impact on Aboriginal objects, place or values, and other management measures as appropriate are to be implemented to minimise or mitigate harm.</p>
<b>Historic heritage</b>		
<p>Presence of historic (or European) cultural heritage sites</p>	<p>Government</p> <p>Community</p>	<p>Historic heritage impacts are addressed in Chapter 21 (Historic heritage) and Appendix O (Historic Heritage Impact Assessment).</p> <p>Items within the project area with heritage significance were identified through a search of heritage registers, a review of available literature and a field investigation. Where archaeological items were identified, they were analysed in light of each site’s historical context in order to assess heritage significance.</p> <p>The project would avoid impact at a number of the identified sites including the sawmill, habitation and camping site and some timber extraction areas and loading ramps. By avoiding these sites, the heritage value of the Pilliga East Cultural Landscape would also be preserved. The oil well and air shower recording pits would also be avoided. All of the sites to be avoided are included as surface development exclusion areas in the Field Development Protocol.</p>
<b>Traffic and transport</b>		
<p>Increased traffic on major highways particularly during construction</p> <p>Impacts on council roads and parking in Narrabri town centre</p> <p>Availability of funds from the Gas Community Benefit Fund for maintenance / upgrade of transport infrastructure</p> <p>Additional truck movements on local roads to move salt to licensed facility</p>	<p>Government</p> <p>Community</p>	<p>Traffic impacts are described in Chapter 22 (Traffic and transport) and Appendix P (Traffic Impact Assessment).</p> <p>The assessment found that the project would increase daily and of peak-hour traffic, but that the existing road network would accommodate the additional traffic to an acceptable standard. As part of the project two intersections on the Newell Highway would be upgraded to provide safe and reliable access to and from Leewood and Bibblewindi.</p> <p>The Gas Community Benefit Fund that is expected to be up to around \$120 million over the life of the project is discussed in Chapter 26 (Social and health) and Appendix T1 (Social Impact Assessment). The proponent is currently in discussion with key stakeholders to determine the management of the Gas Community Benefit Fund.</p>

Summary of issue or opportunity	Interested stakeholder groups	EIS response
<b>Landscape and visual</b>		
<p>Impact on amenity of neighbouring properties from flares and night works</p> <p>Change to the amenity of agricultural landscape</p> <p>Concerns about Siding Spring Observatory and Australia Telescope sites for astronomical observation including changes to the night sky</p>	<p>Government</p> <p>Landholders</p> <p>Community</p>	<p>Visual impacts and light pollution are addressed in Chapter 23 (Landscape and visual) and Appendix Q (Landscape and Visual Impact Assessment).</p> <p>During night-time hours, light emitted from the small pilot flares may be visible from some sensitive receptors (residences) but the impacts would likely be reduced by the presence of intervening vegetation or the distance between potential sensitive receptors and the flares. During safety or routine scheduled maintenance situations (which would be rare and intermittent), the safety flares at Bibblewindi and Leewood would likely not be visible to sensitive receptors throughout the day but would likely be visible at night. The pilot well flares and safety flares would not cause an impact on the long-term operation of the observatory at Siding Spring.</p> <p>The visual impact assessment found that pilot well flares and safety flares would not cause an impact on the long-term operation of Siding Spring Observatory, near Coonabarabran. The principles in <i>Dark Sky Planning Guideline: Protecting the observing conditions at Siding Spring</i> (NSW Department of Planning and Environment 2016) will be considered when planning outdoor lighting.</p>
<b>Hazards, risk &amp; safety</b>		
<p>Increased risk of bushfires during construction and operation</p> <p>Concerns about the preparedness for bushfires of the proponent and its contractors</p> <p>Collaboration with Emergency Services for emergency response planning</p>	<p>Government</p> <p>Landholders</p> <p>Community</p>	<p>Appropriate mitigation measures would be undertaken during construction and operation to minimise risk of ignition. Bushfire hazards are considered in Chapter 25 (Hazards, risk and safety) and Appendix S (Hazard and Risk Assessment).</p> <p>A site-specific Bushfire Management Plan would be prepared in conjunction with landholders and the NSW Rural Fire Service, with components under The Proponent's control implemented for the study area to mitigate bushfire risk.</p> <p>The Bushfire Management Plan would indicatively include:</p> <ul style="list-style-type: none"> <li>• formal preparedness procedures for staff and contractors</li> <li>• formal rehearsed procedures for staff and contractors to respond to a formal bushfire warning being issued by emergency services, including identification of escape routes and refuge areas</li> <li>• identification of specific asset protection zones around assets where vegetation management is required</li> <li>• identification of appropriate construction standards for buildings and refuge areas</li> <li>• preparation of an annual works mitigation schedule to identify works required to be implemented to prepare asset protection zones around assets, and maintenance to the assets themselves to improve their resilience to bushfires.</li> </ul>

Summary of issue or opportunity	Interested stakeholder groups	EIS response
<p>Impact on aquifers from chemicals used during drilling</p> <p>Storage of chemicals and the potential for a pollution incident</p> <p>Reporting obligations if there is a contamination or pollution incident during operations</p> <p>Potential leaching of salts from spill areas or old unlined pond areas affecting soil pH levels</p> <p>Transport of hazardous chemicals</p>	<p>Government</p> <p>Non-government organisations</p> <p>Indigenous groups</p> <p>Landholders</p> <p>Community</p>	<p>Appendix T3 (Chemical Risk Assessment) provides further details on the impacts and management of drilling chemical use on aquifers.</p> <p>Installation of the coal seam gas wells involves the use of drilling fluids, which have potential to interact with groundwater systems overlying the targeted coal seams. The potential for drilling fluid within the drill hole to interact with surrounding groundwater and potentially migrate off-site to existing groundwater users was assessed as a very low risk.</p> <p>Drilling fluid is predominantly comprised of water (more than 70 per cent) with the balance being weighting agents and additives which are added in varying proportions depending on the geological conditions and the objectives of the drilling activity. Additives commonly used include bentonite or polymer, which are used to form a temporary filter cake on the sides of the uncased well. This rapidly reduces the infiltration of drilling fluids into the formations through which the well extends.</p> <p>All produced water and brine storage ponds would be constructed in accordance with the <i>Exploration Code of Practice: Produced Water Management, Storage and Transfer</i> (NSW Department of Industry, Skills and Regional Development (2015c).</p> <p>Chapter 25 (Hazards, risk and safety) and Appendix S (Hazard and Risk Assessment) provide further details on the use and management of chemicals. In addition, potential contamination of soils from chemicals is provided in Chapter 14 (Soils and land contamination).</p> <p>Chemicals would be stored and handled in accordance with relevant Australian Standards, including AS 1940-2004 The storage and handling of flammable and combustible liquids.</p> <p>There is a duty to report pollution incidents under section 148 of the <i>Protection of the Environment Operations Act 1997</i> (POEO Act). Pollution incidents causing or threatening material harm to the environment must be notified. A 'pollution incident' includes a leak, spill or escape of a substance, or circumstances in which this is likely to occur. 'Pollution incident' is defined in the Dictionary to the Act and is reproduced in Chapter 34 (Terms and Abbreviations). 'Material harm to the environment' is defined in section 147 and includes on-site harm, as well as harm to the environment beyond the premises where the pollution incident occurred.</p>

Summary of issue or opportunity	Interested stakeholder groups	EIS response
<b>Social and health</b>		
<p>Sponsorship opportunities for local community groups and sporting clubs</p> <p>Protest activity causing disruptions to other businesses within the Narrabri community</p> <p>Use of royalties in the local community</p> <p>Application of the Gas Community Benefit Fund</p> <p>Capacity building</p>	<p>Indigenous groups</p> <p>Landholders</p> <p>Community</p>	<p>The proponent will implement a range of policies including sponsorship and supporting local businesses. Further details are provided in Appendix T1 (Social Impact Assessment).</p> <p>It is outside the scope of this EIS to address protest activity.</p> <p>The project is expected to contribute around \$1.1 billion in state revenue over the life of the project, directly to the NSW Government, helping to deliver hospitals, schools, roads, police services, public transport and other state-based infrastructure and public services.</p> <p>To ensure that local communities directly benefit from the project, a Gas Community Benefit Fund will be established which will receive an estimated \$120 million through the life of the project. The NSW Government has committed that for every two dollars paid by a gas producer that holds a petroleum title into an authorised Gas Community Benefit Fund, the company will receive a one-dollar rebate on its gas royalties, up to a maximum of 10 per cent of the royalty due in each year.</p> <p>The proponent is currently in discussion with key stakeholders to determine the management of the Gas Community Benefit Fund.</p> <p>It is anticipated that local jobs will be generated both directly and indirectly. During operation approximately 150 employees will be located within Narrabri and surrounds which would comprise a mix of locals and new residents relocating to Narrabri. In addition a number of indirect jobs would be created.</p>
<p>Concerns that other communities claim that gas from coal seams activities have caused health impacts</p> <p>Impact of a fly-in / fly-out workforce</p>	<p>Government</p> <p>Landholders</p> <p>Community</p>	<p>Queensland Health conducted a review of health complaints among a group of residents in Tara noting that complaints were not representative of the wider region. The outcome of the assessment was that there was no clear link between the health complaints and the impacts of the coal seam gas industry on air, water or soil within the community.</p> <p>Further details on the likelihood of potential health impacts are provided in Appendix T2 (Environmental Health Impact Assessment).</p> <p>Chapter 26 (Social and health) and Appendix T1 (Social Impact Assessment) describe the potential impacts on the community and mitigation measures that would be implemented.</p> <p>Consultation with Narrabri Police and members of the community indicated that anti-social behaviour associated with fly-in / fly-out (FIFO) workers had occurred on occasion, however developments in workforce management by mining and resource companies had effectively mitigated the potential impact.</p>

Summary of issue or opportunity	Interested stakeholder groups	EIS response
<b>Economics</b>		
<p>Local procurement and employment, training and capacity building for local workers</p> <p>Potential for the project to impact on the local available agricultural labour market</p>	<p>Government</p> <p>Indigenous groups</p> <p>Non-government organisations</p> <p>Landholders</p> <p>Community</p>	<p>Local employment and training opportunities are discussed in Chapter 26 (Social and health) and Chapter 27 (Economics). The proponent aims to maximise supply opportunities for competitive local businesses when bidding for contracts and / or supplying goods and services, however quotations and tenders will be assessed with the intent of selecting the most appropriate competitive offer. The proponent would contribute to and support initiatives that attract new investment, encourage employment creation and promote sustainable industry development within the areas in which it operates.</p> <p>Economic modelling on the impact to other industries indicates that there may be some negative changes to the employment numbers in the agricultural (-0.29%), mining (-0.55%) and manufacturing (- 0.30%) industries. Regardless, the project is projected to generate an overall positive change in employment. Workers in the existing mining industry possess skills that match the needs of the project and therefore are expected to face stronger competition for labour. Further details are provided in Appendix U2 (Economic Impact Assessment).</p>
<b>Waste management</b>		
<p>Disposal of drill cuttings</p> <p>Quantity of salt that would be produced and the likelihood of drilling chemicals being present in the salt</p> <p>Storage and length of time brine would be stored prior to treatment</p> <p>Crystallisation technology, particularly: the process, integrity of equipment and facility in relation to leaks and toxicity of end product</p>	<p>Government</p> <p>Indigenous groups</p> <p>Non-government organisations</p> <p>Landholders</p> <p>Community</p>	<p>All waste would be managed in accordance with relevant waste guidelines.</p> <p>It is proposed that drill cuttings would be beneficially re-used on well pads using a mix, turn, bury strategy. Applications of drill cuttings to well pads for site rehabilitation would be carried out in accordance with Section 115 of the <i>Protection of the Environment Operations Act</i>, which prohibits a person from disposing of waste in a manner that harms or is likely to harm the environment. Drill cuttings not appropriate for beneficial reuse on well pads for rehabilitation purposes such as those containing coal fines would be transported off site and disposed of at an appropriately licensed waste management facility.</p> <p>Following treatment and removal of the water for reuse, saline brine remains. The brine will be further treated through a concentration process, to turn it into a solid salt product that can be safely transported. The average salt production over the life of the project would be just under 50 tonnes per day or a little over one B-double truck load per day—with around two and a half B-double truck loads per day during the peak in years two to four.</p> <p>All produced water and brine storage ponds would be constructed in accordance with the <i>Exploration Code of Practice: Produced Water Management, Storage and Transfer</i> (NSW Department of Industry, Resources and Energy (2015c).</p> <p>Chapter 28 (Waste management) describes the impacts of drill cuttings and the classification and management of the salt and brine waste stream.</p> <p>Chapter 6 (Project description) and Chapter 7 (Produced water management) describe the management of drill cuttings and the proposed infrastructure at Leewood including the brine crystalliser.</p> <p>Chapter 25 (Hazards, risk and safety) describes the impact of equipment and infrastructure failure.</p>

Summary of issue or opportunity	Interested stakeholder groups	EIS response
<b>Cumulative impacts</b>		
Impact of water extraction on the water sharing plan for irrigators Impact on other uses of the State Forest, including timber harvesting and bee-keeping	Government Landholders Community	<p>A numerical ground water model, which was peer reviewed by the CSIRO, was developed by the proponent to investigate cumulative impacts (refer to Appendix F). Modelling has concluded that there will be minimal impact to aquifers.</p> <p>It is estimated that an average of 1.5 gigalitres per year (37.5 gigalitres over the 25-year assessment period for the project) of produced water would be extracted from the target coal seams. The current water access licences allocated by the NSW Government in the Gunnedah Oxley Basin are 23.1 gigalitres per year, with the annual long term annual extraction limit being set at around 206 gigalitres per year. The NSW Government has assessed the volume of groundwater stored in the Gunnedah-Oxley Basin as around 9,000,000 gigalitres, and has set a long-term annual extraction limit for licensed users, while also allocating over 99 percent of stored groundwater as not being made available for licenced extraction. The project, if approved, would become another regulated (licensed) water user along with existing irrigators, resource projects, industrial users and those drawing under licence for stock and domestic use. The project would seek a licence to extract an average of 1.5 gigalitres per year, representing around 0.7 percent of the annual long term annual extraction limit set by the NSW Government. Currently, no other water users are known to extract water from the coal seams that the project would seek a licence to extract from as the water quality is unsuitable for human consumption and / or agricultural use without treatment.</p> <p>Given the dispersed nature of the field and the relatively small amount of surface clearing at each well, it is anticipated that there will be minimal impacts to other forest users, including bee-keeping activities.</p> <p>Impacts from the project on agricultural activities, including bee-keeping, are addressed in Chapter 17 (Property and land use) and Appendix K (Agricultural Impact Statement).</p>
Quality of public roads within the forest	Landholders	The ongoing management of forestry roads will remain the responsibility of Forestry Corporation NSW (FCNSW). Under Santos' agreement with FCNSW, damage to roads caused under the project would be repaired at no cost to FCNSW.
Rehabilitation plan, type of seed stock, use of mulch, monitoring and sign off process	Government Landholders	<p>Rehabilitation and decommissioning are discussed in Chapter 6 Project description. Further details are provided in Appendix V (Rehabilitation Strategy).</p> <p>The Department of Industry (Division of Resources and Energy) is responsible for monitoring and auditing title compliance, including in relation to rehabilitation and security deposits.</p> <p>All well decommissioning and rehabilitation activities would be undertaken in accordance with the <i>Code of Practice for Coal Seam Gas – Well Integrity</i> (DTIRIS 2012) and the <i>Exploration Code of Practice: Rehabilitation</i> (NSW Department of Industry, Skills and Regional Development 2015b).</p>

Summary of issue or opportunity	Interested stakeholder groups	EIS response
<b>Project timing</b>		
Program and timeframes	Government Landholders Community	The assessment process is described in Chapter 4 (Legislation and approvals). Project phasing and scheduling is described in Chapter 6 (Project description). Subject to obtaining the required regulatory approvals, and a financial investment decision, construction of the project is expected to commence in early / mid 2018, with first gas scheduled for 2019 / 2020. Progressive construction of the gas processing and water management facilities would take around three years and would be undertaken between approximately early / mid-2018 and early / mid-2021.
Timing of well rehabilitation	Landholders	A Rehabilitation Strategy would be implemented involving both partial and complete rehabilitation for works undertaken by the proponent as part of this project (Appendix V). Partial rehabilitation of a well site would occur following drilling with the area reduced to the space required for ongoing operation of the well.  All well decommissioning and rehabilitation activities would be undertaken in accordance with the <i>Code of Practice for Coal Seam Gas – Well Integrity</i> (DTIRIS 2012) and the <i>Exploration Code of Practice: Rehabilitation</i> (NSW Department of Industry, Skills and Regional Development 2015b).
<b>Legislation and approvals</b>		
Role of government in approving and then monitoring the project Audit and compliance requirements Planning legislation and differences between levels of assessment Role of Narrabri Shire Council in decision-making	Landholders Community	The project is subject to the assessment and approval provisions of Division 4.1 of Part 4 of the EP&A Act. The Minister for Planning is the consent authority, and is able to delegate the consent authority function to the Planning Assessment Commission, the Secretary of the Department of Planning and Environment, or other public authorities.  The project is permissible with development consent under the <i>State Environmental Planning Policy (Mining, Petroleum and Extractive Industries) 2007</i> , and is identified as 'State significant development' under section 89C(2) of the <i>Environmental Planning and Assessment Act 1979</i> (EP&A Act) and the <i>State Environmental Planning Policy (State and Regional Development) 2011</i> .  The ongoing operation of the project would be monitored through the Environment Protection Licence administered by the EPA.  The assessment process is described further in Chapter 4 (Legislation and approvals).
<b>Other</b>		
Suitability and safety of using the existing storage ponds at Bibblewindi and Tintfield	Government	The proponent would ensure that existing ponds meet the relevant standards for storage of produced water and brine.

Summary of issue or opportunity	Interested stakeholder groups	EIS response
Hydraulic fracturing	Government Landholders Community	Hydraulic fracturing is not proposed as part of the current proposal. If hydraulic fracturing is proposed in the future, separate approvals would be required.
Export pipeline and the interaction with the proposed project	Government Non-government organisations Indigenous groups Landholders Community	The export pipeline does not form part of this project. It would be assessed under a separate approval process.

## 9.3 Ongoing consultation and next steps

Immediately following the lodgement of the EIS, The proponent will carry out the activities listed in Table 9-7 (Stages 4 to 6). In addition, communication methods and activities implemented as part of the EIS would continue. This includes the Santos website and a dedicated Narrabri Gas Project website with a feedback mechanism, a 1800 free call service, email address, the shopfront at Narrabri, monthly community site tours, surveys, public meetings, stakeholder briefings, newsletters, fact sheets, advertisements, displays and attendance at community events and agricultural shows.

Table 9-7 Future consultation for EIS post lodgement

Estimated timeline	Stage	Consultation tools and activities
Future	Stage 4: Lodge and exhibit EIS and call for public submissions	<ul style="list-style-type: none"> <li>• EIS available at public exhibition (hard copies and electronic)</li> <li>• Letters to advise of public exhibition process</li> <li>• 'How to' advice on making a submission</li> <li>• Advice notices in local media</li> <li>• Community information sessions</li> <li>• Landholder information sessions</li> <li>• One-on-one landholder meetings</li> <li>• One-on-one other stakeholder meetings</li> <li>• Community site tours</li> <li>• Monthly update.</li> </ul>
Future	Stage 5: respond to public submissions	<ul style="list-style-type: none"> <li>• Letter to stakeholders informing them of next steps in the EIS process</li> <li>• Media release</li> <li>• Community site tours</li> <li>• Monthly update.</li> </ul>
Future	Stage 6: EIS approval decision	<ul style="list-style-type: none"> <li>• Letter to stakeholders informing them of outcomes of the EIS process</li> <li>• Media release</li> <li>• Community site tours</li> <li>• Monthly update.</li> </ul>