

Narrabri Gas Project Social Impact Assessment

Preliminary review and high-level gap analysis: questions to the Proponent

July 2017

The Centre for Social Responsibility in Mining (CSR) is a leading research centre, committed to improving the social performance of the resources industry globally.

We are part of the Sustainable Minerals Institute (SMI) at the University of Queensland, one of Australia's premier universities. SMI has a long track record of working to understand and apply the principles of sustainable development within the global resources industry.

At CSR, our focus is on the social, economic and political challenges that occur when change is brought about by resource extraction and development. We work with companies, communities and governments in mining regions all over the world to improve social performance and deliver better outcomes for companies and communities. Since 2001, we have contributed to industry change through our research, teaching and consulting.

Contents

1	Introduction	1
2	High-level gap analysis	2
2.1	<i>Local economic development</i>	<i>2</i>
2.2	<i>Community investment</i>	<i>3</i>
2.3	<i>Housing.....</i>	<i>3</i>
2.4	<i>Medical services</i>	<i>5</i>
2.5	<i>Mental health services</i>	<i>5</i>
2.6	<i>Inclusiveness and diversity</i>	<i>6</i>
2.7	<i>Conflict and community cohesion</i>	<i>7</i>
2.8	<i>Ongoing community engagement</i>	<i>8</i>
2.9	<i>Impact monitoring.....</i>	<i>9</i>
2.10	<i>Information transparency</i>	<i>10</i>

References

1 Introduction

In May 2017, the New South Wales (NSW) Department of Planning and Environment (DPE) invited Professor Deanna Kemp, Director of the Centre for Social Responsibility in Mining (CSRМ), part of the Sustainable Minerals Institute (SMI) at The University of Queensland, to provide (i) expert review of the social impact assessment (SIA) components of the environmental impact assessment (EIA) relating to the proposed Narrabri Gas Project and (ii) independent advice and recommendations to the DPE relating to the above.

In accordance with the scope of work provided by the DPE, this report offers a preliminary review and high-level gap analysis of the EIA documentation prepared by the Proponent, Santos Ltd, including relevant sections of the *Narrabri Gas Project Environmental Impact Statement (EIS)* and *Appendix T1 Social Impact Assessment (SIA)*, prepared by GHD Consultants. The report highlights areas where additional information would help to clarify potential social impacts of the proposed project, in order to complete a full review.

Leading practice SIA guidance documents used as general reference in the preliminary review include:

- the International Association of impact Assessment (IAIA) *Social Impact Assessment: Guidance for Assessing and Managing the Social Impacts of Projects* (2015)¹
- standards of international financial institutions²
- voluntary standards of industry groups, such as the global oil and gas industry association for environmental and social issues (IPIECA) and the International Council of Mining and Metals (ICMM)³
- the International Association for Public Participation's (IAP2) Public Participation Spectrum⁴
- Social Impact Assessment Draft Guidelines for State significant mining, petroleum production and extractive industry development projects in NSW.⁵

The preliminary review and high-level gap analysis is based on the authors' experience and familiarity with these leading practice guides, and literature relating to the social impacts of extractive industries. Prof. Kemp was assisted in the preparation of this report by Dr. Ceit Wilson, Research Analyst at CSRМ.

¹ https://www.iaia.org/uploads/pdf/SIA_Guidance_Document_IAIA.pdf

² ISO 26000 Social Responsibility; IFC 2012 Performance standards on environmental and social sustainability

³ Ten Principles of Sustainable Development (2015), <https://www.icmm.com/en-gb/about-us/member-commitments/icmm-10-principles>

⁴ https://www.iap2.org.au/Tenant/C0000004/00000001/files/IAP2_Public_Participation_Spectrum.pdf

⁵ <http://www.planning.nsw.gov.au/Policy-and-Legislation/Under-review-and-new-Policy-and-Legislation/Social-Impact-Assessments>. As the guideline was in draft at the time of this review, the authors were instructed by the DPE to consider to guideline as general background.

2 High-level gap analysis

This section identifies 10 areas where gaps in data/information presented in the SIA limited the review of potential social impacts of the proposed project, and the adequacy of the Proponent's responses to those impacts. These areas include:

- | | |
|---------------------------------|------------------------------------|
| 1. local economic development | 6. inclusiveness and diversity |
| 2. community investment | 7. conflict and community cohesion |
| 3. local housing | 8. ongoing community engagement |
| 4. local medical services | 9. social impact monitoring |
| 5. local mental health services | 10. information transparency |

After providing general points on each topic, we comment on the data/information contained within the SIA, and present a series of questions for consideration by the Proponent.

2.1 Local economic development

General points:

- It is broadly agreed that extractive companies should support the economic development of communities in which their projects are located (ICMM 2015).
- It is important to consider indigenous economic engagement, particularly where indigenous groups are present and/or claim customary ownership over territories where project development is proposed.
- Leading SIA researchers suggest that companies should support local and regional development plans and aspirations (Esteves et al. 2010; Esteves 2008).
- Companies are encouraged to promote regional economic development through partnerships with local governments and other local organizations (ICMM 2015).

Narrabri Shire has a series of strategic social and economic plans for the region, including: Narrabri Shire Economic Development Strategy; Narrabri Shire Economic Social Plan; Business Retention and Expansion Program; Narrabri Community Economic Development Strategic Plan; and the Narrabri Shire Extractive Industries Policy.

The Proponent predicts that the project will create jobs and local business opportunities, but does not describe how this aligns with, or supports, the local aspirations for economic development. The Narrabri Gas Project SIA references but does not engage the documents listed above.

Questions:

- 1) How does the Proponent plan to enhance local economic development?
- 2) How will the project affect other sectors given the potential for competition over skilled labour during project construction (as stated in the SIA)?
- 3) Does the Proponent have an Indigenous Engagement Plan, or strategies targeting indigenous economic participation in project-related opportunities?

2.2 Community investment

General points:

- There is general agreement that extractive companies have a role in facilitating community development (ICMM 2015; IFC 2012).
- According to the Australian government, community development is about “investing in affected communities so they are better able to meet their needs and aspirations themselves, now and into the future, not doing it for them” (Dollis 2017).
- In recent years, extractive industries have moved away from viewing community development as philanthropic gift giving, to a practice that is more collaborative and partnership driven (Kemp 2009).
- Companies are advised to partner with government agencies and other local organisations, and align their activities with local community development plans, programs and initiatives (ICMM 2015).

In line with the NSW Gas Plan, the Narrabri Gas Project SIA proposes a “Gas Community Benefit Fund”.⁶ Funds would be managed with the NSW government agency, the Rural Assistance Authority. According to the plan, funds are to benefit the local community where gas exploration and production occurs. The Narrabri Gas Project SIA indicates that, over the life of the project, the company would contribute approximately \$120 million to a fund, which would be used to offset and/or enhance impacts identified in the SIA, including: economic growth and regional development, impacts on social infrastructure, and community cohesion. Despite its prominence as a mitigation measure throughout the SIA, information about the nature of the contributions, the timeline for establishment, and the approach to addressing impacts identified in the SIA, is limited.

Questions:

- 4) How will contributions into the fund be calculated over the life of the project?
- 5) How will funds be distributed across the life of the project (i.e. will there be disbursements during the higher impact construction period, before earnings)?
- 6) How will the proponent and the fund administration authority work together ensure that the fund offsets or enhances the impacts identified in the SIA?

2.3 Housing

General points:

- There is considerable research about the negative impact of extractives industries on rural housing markets in Australia (Ennis et al., 2013; Haslam McKenzie et al., 2009).
- Reports highlight that population growth associated with the in-migration of a transient workforce (including ancillary ‘service industry’ workers) can outstrip the capacity of local housing/accommodation in low population rural markets.

⁶ http://www.resourcesandenergy.nsw.gov.au/_data/assets/pdf_file/0005/534830/NSW-Gas-Plan.pdf

- In some locations, increased housing prices and rental rates have led to the displacement of long-term residents, and affected the recruitment and retention of workers in other sectors.
- Identification of the housing needs of extractive industry and ancillary workers, and the potential impact on local communities is considered to be a core component of an SIA (IAIA 2015).

The Narrabri Gas Project SIA states that the impact on housing and accommodation availability and affordability during the construction phase is 'possible' and during operation phase is 'almost certain' (Chapter 26, p.24). However, it is not clear what the impact will be, as the SIA implies that FIFO construction workers will not reside in (and therefore place additional pressure on) private market accommodation in Narrabri.

Data used to inform the housing and accommodation component of the SIA baseline is based on 2011 information. A more recent assessment of Narrabri housing stock would be useful to determine how much of the residential development pipeline (p.41 of Appendix T1) has since been delivered. This would allow for a more accurate assessment of the capacity of the local market to absorb the in-migration of 50 additional operational workers and their families to the area, and population increase of ancillary service industries workers and their families.

The Narrabri Gas Project SIA does not address the question of housing vulnerability, or consider impacts on housing due to the in-migration of ancillary service industries workers and their families. The SIA limits its population increase to direct employees and contractors. The issue of ancillary workers is pertinent if, according to the SIA in Appendix T1 (p.41):

'caravan parks, hotels, motels and other forms of temporary accommodation in the region are often full (and)... rental vacancy in the town is extremely low and house sales are limited ... with the existing housing stock (being) and ageing stock '.

Questions:

- 7) What is the projected impact on housing and accommodation if ancillary workers and their families are included?
- 8) How does the proposed 'construction workforce housing and accommodation strategies' address projected impacts?
- 9) Will the housing strategy consider levels of vulnerability amongst the 30 percent of residents (or 61% of the indigenous population) who rent? What measures will be put in place to prevent displacement of vulnerable groups?

2.4 Medical services

General points:

- The provision of health services to remote and regional communities is an ongoing challenge in remote and regional Australia.
- Long distance commuting work arrangements can place additional pressure on the provision of medical services in these areas, including general practitioners.
- The parliamentary inquiry into fly-in, fly-out (FIFO) and drive-in, drive-out (DIDO) workforce practices in Australia noted elevated levels of non-resident worker presentations at regional hospitals and medical services. The final report stated: 'there can be little doubt that continuing to mistakenly assert that non-resident workers do not place pressure on health care and other essential services is dangerous and short-sighted in the extreme' (HoRSCORA 2013, p. 62).
- Analysis of the impact of non-resident workers on medical services in regional areas is critical to improving planning at both the local and state level to support regional health delivery.

The Narrabri Gas Project SIA states (Chapter 26, p.14) that 'significant population increases may place additional demand on health and emergency social infrastructure'. The SIA does not explain why this increase will occur. The SIA also states that the non-resident workforce for construction would address their regular health needs at their place of permanent residence. No reference or data is presented to support this statement. In light of the general points presented above, it is likely that non-resident workers may need to use local health services while on roster. No mitigation measures for impacts to medical and health services are presented by the Proponent.

Questions:

- 10) On what basis does the SIA assume that non-resident workforce will address their regular health needs in their place of permanent residence?
- 11) How will the Proponent manage the health and well-being of its workers and contractors' workers while on site, without placing pressure on local services?

2.5 Mental health services

General points:

- The treatment of mental health is a serious challenge in rural communities. The suicide rate of men and women in regional and remote areas has been shown to be substantially higher than the likelihood of those who reside in major cities (Australian Bureau of Statistics, 2011).⁷

⁷ For men aged 15-29 years, the death rate from suicide for those who live outside major cities is twice as high as that in major cities. Unemployment, greater availability of lethal means of self-harm, barriers to mental health care services and loneliness are seen as key reasons for suicide in this age group (Australian Bureau of Statics, 2011).

- There is an emerging number of peer-reviewed studies which highlight that in addition to this elevated level of risk, new types of concerns related to CSG may further increase the stress burden on farmers (Lai et al., 2017; Haswell et al. 2016; Morgan et al. 2016).
- The effects of FIFO/DIDO arrangements and extended working hours on the stress, lifestyle, relationships and health characteristics of extractive industry employees and their partners has been raised as a national concern (HoRSCORA 2013).

There is little acknowledgement within the Narrabri Gas Project SIA of the potential impacts presented by the Project to the mental health of the community in which the project is located. The SIA refers to a study by Coote (2013), conducted in Condamine, to discount the potential for stress on landholders by noting that in this study, 'there was a level of tolerance and resilience within the community'.⁸ Conversely, Figure 26-2 of the Narrabri Gas Project SIA identifies that stress and anxiety, 'caused by a wide range of aspects of the project', have the potential to impact the wider community.

The SIA notes that community health impacts would be avoided, mitigated and/or managed through consultation with affected landholders, while a range of other strategies and initiatives would be implemented to minimise negative social and health impacts at a broader level. What these strategies and initiatives will involve is not made clear in the SIA.

Questions:

- 12) What are the most significant set of project uncertainties that may cause stress or anxiety, and which groups are most at risk?
- 13) In the event that landholders/farmers (including non-agreeing landowners) experience impacts on mental health as a result of project activities, what existing support/counselling services are available in the LGA?
- 14) Is it possible for a landholder to re-negotiate or dissolve an agreement if they feel that the impacts upon their property, their household, or their mental health are too great, or that the compensation is not commensurate with the impact?
- 15) What mitigation measures (i.e., services and facilities) are proposed to support mental health and well-being of different groups?

2.6 Inclusiveness and diversity

General points:

- A common challenge of social impact assessment studies is that diverse stakeholder groups are homogenised under the rubric of 'social' or the concept of 'community' (Agrawal & Gibson, 1999).

⁸ No citation is provided and the review team were not able to locate the publication.

- Ensuring that alternative, minority and/or marginalised voices are recognised and have an opportunity to meaningfully participate in development decisions is a core principal of SIA and community engagement (IAIA 2015; IAP2 2014).

The Narrabri Gas Project SIA does not consider the (potentially unequal) impacts of the Project on different groups within the community in any detail. Only landholders are identified as a group likely to experience impacts arising from the project. For example:

- Negative impacts on housing are discussed in relation to the effects on local tourism and trade. Impacts to segments of the population (i.e., people on low incomes, single-parent families, indigenous peoples, the elderly) is not discussed.
- Employment opportunities resulting from the Project are described in broad terms (e.g. an average of 512 FTE direct and indirect jobs to be created across NSW). A discussion on what segments of the population are likely to benefit from these opportunities is not presented.
- The project will rely on the employment of mostly construction and engineering workers. It can be expected that women are less likely to benefit from these employment opportunities. No information on employment diversity is provided.

Overall, the SIA is limited in its engagement with issues of vulnerability, gender and indigenous peoples. As a consequence, the identification of measures to mitigate risks to those groups, and support equitable access to opportunities that may arise from the project, is limited.

Questions:

- 16) Did the Proponent collect gender disaggregated baseline/consultation data, or any other data disaggregated by demographic grouping? If so, what were the findings?
- 17) Does the Proponent have targets for female or indigenous employment?
- 18) The Proponent is aiming for a “net positive economic impact”. What groups are least able to benefit, and how will opportunities be extended to these groups?
- 19) Will a negotiated agreement with the Gomeroi native title applicants be in place prior to the commencement of construction to enable these groups to maximise economic and community development opportunities?

2.7 Conflict and community cohesion

General points:

- Large-scale resource extraction projects (including their exploration and planning phases) can generate or exacerbate social conflict and diminish community cohesion.
- SIAs encourage the anticipation and identification of conflict, given that conflict management and resolution requires all parties to be aware of the potential for conflict and to take action to address issues (IAIA 2015).

- When managed effectively, conflict can be beneficial. For example, it can inspire creative solutions or organizational change, and can facilitate processes of democratisation (i.e., inclusive discussion), which can improve social cohesion (Prenzel & Vanclay 2014).
- Since conflict is a dynamic process, continuous monitoring of the circumstances of conflict is an important component of SIA practice (IAIA 2015).

There is limited consideration of the different positions, perspectives, views and/or aspirations of different groups within the Narrabri Gas Project SIA. Issues between competing interest groups, power differentials, existing or emerging alliances, social divisions or conflicts within or among social groups, are not referred to.

The Project has received significant media attention and has been the centre of a number of protests (Miskelly & Daniel 2017), particularly in relation to concerns over water, dust, and community health impacts. Research undertaken by the Gas Industry Social and Environmental Research Alliance (GISERA) (Walton et al. 2017) describes the community as polarised and fragmented on the issue of CSG development. The report describes several cases of ‘boycotting’ where businesses were avoided because of the owner’s position on CSG. The SIA does not engage issues of conflict. Instead, the Proponent considers such conflict as ‘out of scope’ of the SIA (Chapter 9, p. 25).

Questions:

- 20) Has the Proponent considered strategies to avoid or manage conflict and build community cohesion?
- 21) How will ongoing tension and levels of tension and conflict be monitored and if necessary managed?

2.8 Ongoing community engagement

General points:

- Research confirms the importance of positive contact for establishing relationships built on trust (Hewstone & Swart 2011).
- In the context of extractive industries, research confirms that it is the *quality of contact*, rather than quantity, between a company and project-affected people determines levels of trust (Moffat & Zhang 2014).
- Companies are encouraged to focus on establishing and maintaining high quality contact with affected communities and stakeholders (ICMM 2015), as opposed to a strategy focused only on a high frequency contact.
- Community engagement processes that involve the public in decision-making processes across the entire life of a project (not just the planning phase) is considered to be a crucial component of SIA (IAIA 2015; IAP2 2014).

The Narrabri Gas Project SIA and Chapter 09 (Community and stakeholder consultation) identifies and provides details on a range of consultation activities undertaken as part of the

social baseline for the Project. However, an indication of the perceived level of participant satisfaction is not provided. Moreover, proposed strategies for ongoing engagement with stakeholders beyond affected landholders, on key issues of concern (e.g. water impacts, air pollution, impacts on the Pilliga forest etc.) are not clearly described.

Questions:

- 22) Did the Proponent assess levels of satisfaction with the information provided, or the effectiveness of community consultation? If so, what were the results?
- 23) To what degree have different community groups had direct input into the development of the management measures to address identified risks?
- 24) Chapter 09 of the EIA states that 'various forums initiated by Santos will be used to monitor change' (e.g. Landholder information, Aboriginal stakeholder and Community information forums). These seem to be for the purposes of the EIA. Would these forums continue post-approval, or will other forums will be used?
- 25) How will non-agreeing landholders be engaged and/or notified of project impacts that may impact them (e.g. activities occurring on adjoining property)?
- 26) What is the Proponent's commitment to staffing and resourcing the community engagement/social performance function for this project, during construction, through operation and in to closure?

2.9 Impact monitoring

General points:

- A core component of an SIA is the development of socially acceptable systems for monitoring impacts and issues of concern over the course of the project (IAIA 2015).
- Planning for monitoring and management as part of an adaptive management process is necessary to detect and address unanticipated consequences and inaccurate predictions made in the SIA.

Section 7 of the Narrabri Gas Project SIA outlines proposed strategies to mitigate potential negative impacts and strategies to enhance opportunities presented by the Project. While a range of measures are proposed, no information is provided about how these measures and their effect on the identified impacts would be monitored post-approval. A comprehensive social monitoring and reporting framework would align with the NSW Chief Scientist and Engineer's (2014) vision for a world-class regulatory regime for CSG extraction.

Questions:

- 27) The EIA Executive Summary refers to an environmental management and monitoring plan. Has an equivalent social monitoring plan or framework been considered to monitor social change and impact?
- 28) What data will the Proponent gather to demonstrate the 'high to very high' social benefits that the Proponent claims it will achieve through the life of the project?

- 29) The EIA mentions 'emergent social impacts'. How will these impacts be proactively detected through social monitoring?
- 30) How will the Proponent monitor issues of community concern (e.g. impacts on water, dust and community health) over the life of the project?

2.10 Information transparency

General points:

- Community acceptance of extractive activities depends on the extent to which individuals perceive the decision making process for a development to be fair, and whether they perceive they have had access to information about the process and the outcomes (IFC 2012).
- People do not feel respected when companies decide what a community needs, and how these needs should be addressed, as well as how project impacts are likely to be experienced by community members (Zandvliet & Anderson 2009).
- Procedural fairness is enhanced when information sharing, deliberation, and decision-making processes are transparent, and affected stakeholders have a level of control over the process (IAIA 2015).

The Narrabri Gas Project SIA and Chapter 09 (Community and stakeholder consultation) identify and provide details on an extensive range of consultation activities undertaken as part of the development of the social baseline for the Project. However, beyond affected landholders, strategies for ongoing communication with stakeholders are not clearly outlined. Likewise, the level of information disclosure as the Project progresses is not clear.

The SIA provides little detail on the monitoring arrangements for the Project. There is a lack of clarity in the SIA about the governance of proposed mitigation mechanisms, particularly concerning the extent to which the affected community will be offered opportunity to provide input on the design of mitigation measures and feedback on the effectiveness of a mechanism as it is rolled-out.

Questions:

- 31) Will there be a public reporting protocol for the Project and a commitment by the Proponent to disclose information on impacts and key issues of concern (e.g. water impacts, air emissions, and impacts on the Pilliga Forest)?
- 32) What consideration is being given to different modes/mechanisms for monitoring (e.g. participatory monitoring, independent expert monitoring etc.)?

References

Australian Bureau of Statistics (2011) *Health Outside Major Cities: 4102.0 - Australian Social Trends, Mar 2011*.

<http://www.abs.gov.au/AUSSTATS/abs@.nsf/Lookup/4102.0Main+Features30Mar+2011>

Agrawal, A. and C.C. Gibson (1999) Enchantment and disenchantment: the role of community in natural resource conservation. *World Development* 27(4) pp.629-649.

Department of Industry, Innovation and Science (DIIS) (2017). *Resources: Community development in the context of mining*. (Australian Government)

Ennis, G., M. Finlayson and G. Speering (2013) Expecting a boomtown? Exploring potential housing-related impacts of large scale resource developments in Darwin. *Human Geography* 7(1) pp. 33-42.

Esteves, A. M. (2008) Mining and social development: Refocusing community investment using multi-criteria decision analysis. *Resources Policy* 33(1) pp. 39-47.

Esteves, A.M., D. Brereton, D. Samson and M.A. Barclay (2010) *Procuring from SMEs in local communities: a good practice guide for the Australian mining, oil and gas sectors*. (Brisbane, Queensland: CSRM, University of Queensland).

Haslam McKenzie, F., E. Phillips, S. Rowley, D. Brereton and C. Birdsall-Jones (2009) *Housing Market Dynamics in Resource Boom Towns: Australian Housing and Urban Research Institute Final Report No. 135*. (Perth, WA: Housing and Urban Research Institute).

Haswell, M.R., A Bethmont and M.H.A Bethmont (2016) Health concerns associated with unconventional gas mining in rural Australia. *Rural and Remote Health* 16(3825) pp. 1-9.

Hewstone, M. and H. Swart (2011) Fifty-odd years of inter-group contact: from hypothesis to integrated theory. *British Journal of Social Psychology* 50(1) pp. 374-386.

House of Representatives Standing Committee on Regional Australia (HoRSCORA) (2013) *Cancer of the bush or salvation for our cities? Fly-in, fly-out and drive-in, drive-out workforce practices in regional Australia*. (Canberra: The Parliament of the Commonwealth of Australia).

Lai, P.H., K.D. Lyons, S.P. Gudergan and S. Grimstad (2017) Understanding the psychological impact of unconventional gas developments in affected communities. *Energy Policy* 101(1) pp.492-501.

Miskelly, G. and S. Daniel (2015) *Pilliga coal seam gas project at crossroads as NSW Government considers environmental impact*. ABC News Online (10 April 2017)

Moffat, K. and A. Zhang (2014) The paths to social licence to operate: An integrative model explaining community acceptance of mining. *Resources Policy* 39(1) pp. 61-70.

Morgan, M.I., D.W. Hine, N. Bhullar, D.A. Dunstan W. Bartik (2016) Fracked: Coal seam gas extraction and farmers' mental health. *Journal of Environmental Psychology* 47(1) pp. 22-32.

NSW Chief Scientist & Engineer (2014) Final Report of the Independent Review of Coal Seam Gas Activities in NSW. (Sydney, NSW: Office of the Chief Scientist & Engineer).

Prenzel, P.V. and F. Vanclay (2014) How social impact assessment can contribute to conflict management. *Environmental Impact Assessment Review* 45(1) pp.30-37.

Walton, A., R. McCrea, B. Taylor and T. Jeanneret (2017) *Understanding local community expectations and perceptions of the CSG sector: Social baseline of the Narrabri project*. (Brisbane: CSIRO Australia).

Zandvliet, L. and M.B. Anderson (2009) *Getting it Right: Making Corporate-Community Relations Work*. (Sheffield, UK: Greenleaf Publishing).

Santos Ltd
ABN 80 007 550 923
Santos Centre
GPO Box 1010
Brisbane Queensland 4001
Telephone: 61 7 3838 3000
Direct: 61 7 3838 3861
www.santos.com



24 April 2018

Mr Mike Young
Director Resource Assessments
NSW Department of Planning and Environment
GPO Box 39
Sydney NSW 2001

Dear Mr Young

Thank you for the opportunity to provide a response to the Centre for Social Responsibility in Mining's (CSRM) questions in relation to the Narrabri Gas Project. Attached is the responses that have been prepared in consultation with the relevant technical consultants for the project.

Santos would be happy to meet with the CSRM to discuss the responses or provide further information as considered necessary.

Yours sincerely,

A handwritten signature in black ink, appearing to read "Neale House".

Neale House
Manager, Environment and Water
Santos Limited

Att. 1

Introduction and background

CSRM's review requests that further information be provided about potential social impacts and / or asks questions of the proponent regarding the management and mitigation of potential social impacts identified in the Narrabri Gas Project Environmental Impact Statement (EIS).

As background, the *Social Impact Assessment Draft Guidelines for State significant mining, petroleum production and extractive industry development projects in NSW* (NSW DP&E 2016) were released in December 2016, which was during printing and production of the EIS. In the absence of local guidelines, the SIA (GHD 2016) was developed using alternate leading practice guidelines as described in Section 2.1 of the SIA. Notwithstanding this, the SIA has been completed using methodology that is broadly reflective of the guidance provided by NSW DP&E (2016). We note the finalisation of the NSW guidelines in September 2017 (NSW DP&E 2017), which would be used to guide the content of the project's proposed Social Impact Management Plan, including a monitoring framework.

Overview of Santos operations in Australia

Santos has been a long-standing oil and gas operator across many Australian communities. This has required Santos to identify and closely manage and mitigate potential social impacts arising from its activities, including developing practical strategies, engaging with communities, working with landholders and investing in regional communities.

Santos has significant experience in working with local communities to establish and maintain enduring and mutually beneficial relationships through the preparation and implementation of project-specific Social Impact Management Plans. Since 2010, Santos has contributed more than \$200 million across its project regions to support community infrastructure.

Additional information may be found at <https://www.santos.com/santos-in-the-community>

Local economic development

How does the proponent plan to enhance local economic development?

As stated in Section 6.3.1 of the SIA (EIS Appendix T1 – GHD 2016), it is estimated that over its productive life, the project will increase the real economic output of:

- the Narrabri local government area by \$11.0 billion
- the wider region by \$572 million
- NSW as a whole by \$11.9 billion.

Over the same period (the project's productive life), it is predicted that the project will increase the real income of:

- the Narrabri local government area by \$526 million
- the wider region by \$690 million
- NSW as a whole by \$6.0 billion.

The regional and community economic benefits will include:

- Direct and indirect employment generation: Over the life of the project it is predicted that an average of over 512 full time equivalent (FTE) direct and indirect jobs will be created in NSW. More specifically, over the period of financial year (FY) 2018 to FY 2042, it is estimated that the project will increase employment (by place of residence) in:
 - Narrabri region by an average of 127 FTE jobs
 - the wider region by an average of 161 FTE jobs
 - the rest of NSW by an average of 224 FTE jobs
 - NSW as a whole by an average of 512 FTE jobs.
- Business development through local purchasing and flow on benefits via supply chain revenues: The project, in both the construction and operational phases, will purchase goods and services from Narrabri, Narrabri surrounds

and the wider NSW economies. This increased demand for NSW production will provide a stimulus to businesses throughout the state.

- **Payment of taxes and royalties:** The EIS reported that the project would generate slightly over \$3 billion dollars in taxes and royalties, being a net present value of around \$1.2 billion.
- **Contribution to the Gas Community Benefit Fund:** A Gas Community Benefit Fund would be established which would 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 into an authorised Gas Community Benefit Fund, the company is entitled to claim a one dollar rebate on its gas royalties, up to a maximum of 10 per cent of the royalty due in each year.

A review was undertaken of Narrabri Shire Council's strategic plans identified by CSRM to understand local aspirations related to economic development, and therefore, the potential for the project to achieve these. The review is summarised in Table 1 below.

Table 1 Review of Narrabri Shire economic development aspirations

Narrabri Shire strategic plan	Aspirations related to economic development	Relevance to the project
<i>Narrabri Shire Economic Development Strategy (AEC 2011)</i>	<p>The strategy outlines four opportunity areas for growing and diversifying the economy including:</p> <ul style="list-style-type: none"> • Expanding target industry sectors including mining services; machinery and equipment manufacturing; agricultural processing and food manufacturing; professional services; transport and logistics; and hospitality and tourism. • Attracting and retaining labour including improving services / facilities that make a region attractive for new residents. • Climate change industrial opportunities including targeting industries that are likely to experience growth in order to reduce greenhouse gas emissions including coal seam gas. • Infrastructure provision to support business expansion and attraction. 	<p>The project aligns with all of these aspirations, particularly regarding the diversification of the economy and growing the industry.</p> <p>Significant opportunities for direct employment as well as service and ancillary businesses and industries. Due to the relatively long period of the project's operation this will contribute to labour attraction and retention in Narrabri.</p> <p>Natural gas has the lowest carbon intensity among fossil fuels, emitting less carbon dioxide (CO₂) per unit of energy generated. It burns cleanly and efficiently, with very few non-carbon emissions. It is seen as a 'transition' fuel that supports the increasing use of renewable energy.</p>
<i>Narrabri Shire Economic Social Plan 2010-2015 (Narrabri Shire 2010)</i>	<p>The Plan outlines the Shire's economic opportunities and the facilities and services required to support these for the future.</p> <p>The opportunities include industrial diversification; transport, child and aged care; expanding the capacity of existing businesses; and expanding opportunities for marginalised groups including women and Indigenous persons.</p> <p>These opportunities would be supported through upgrades to services and facilities including aged care and health services / infrastructure and initiatives targeting youth employment and retention.</p>	<p>The project directly supports the goals of the Plan in terms of industrial diversification and provision of long term employment opportunities and opportunities for business development through procurement of goods and services. Economic development opportunities are likely to offer regional growth through retention of younger population in the region.</p> <p>Additionally, the project will support the Plan's goal of expanding opportunities for marginalised groups through the establishment of the Gas Community Benefit Fund, which is likely to fund a range of training and employment opportunities.</p> <p>The Gas Community Benefit Fund would be established under Section 24AB of the NSW</p>

Narrabri Shire strategic plan	Aspirations related to economic development	Relevance to the project
		<p><i>Petroleum (Onshore) Act 1991</i>. Its purpose is to share the benefits of coal seam gas production with the local communities where gas is extracted. The principle objective of the Gas Community Benefit Fund is the provision of benefit to the local community.</p> <p>The NSW Rural Assistance Authority has been appointed under the NSW <i>Petroleum (Onshore) Act 1991</i> to administer the fund.</p> <p>The project's operations phase is expected to contribute to the residential population and provide job opportunities, which may assist in retaining youth, which is a key target of the Plan.</p>
<i>Narrabri Shire Extractive Industries Policy</i> (Narrabri Shire 2013)	The Policy outlines the Shire's approach to capturing the benefits of extractive industries while ensuring the protection of key assets, such as cultural heritage and Native Title, community wellbeing and environmental values. The Shire recognises that the development and exploration for the extractive industries has significant benefits for the region and will continue to occur. In terms of economic development, the Shire is responsible for encouraging the establishment of service industries to the extractive sector.	<p>The Policy recognises the economic benefits of extractive industries like the project, while needing to ensure the potential impacts are managed and mitigated. The SIA and EIS as a whole have provided an assessment and management framework for understanding, reducing and managing the risks involved as part of the project while capitalising on its opportunities.</p> <p>The project, in both the construction and operations phases, will purchase goods and services from Narrabri, Narrabri surrounds and the wider NSW economies. This increased demand for NSW production will provide a stimulus to businesses throughout the state.</p> <p>The project will benefit the services industry through the demand for accommodation and other services generated as a result of project workforce and increased levels of income at the local, regional and state levels.</p>
<i>Narrabri Shire Community Strategic Plan 2017-2027</i> (Narrabri Shire 2017)	<p>The Plan outlines Council's and the wider community's vision and approach to achieving a vibrant and sustainable community over the next decade.</p> <p>Narrabri Shire recognises that the resources industry is a core component of the local economy. Looking towards the future, the Council seeks to expand and diversify the Shire's economic base into logistics, value adding and innovation for established industries.</p>	<p>As a major extractive industry project, the project is recognised by the Plan as part of the ongoing industrial base in the Shire. In addition, the project will generate employment and business development opportunities within the Shire resulting in the expected real economic output, income and employment (FY 2018-FY2040).</p> <p>The project, in both the construction and operations phases, will purchase goods and services from Narrabri, Narrabri surrounds and the wider NSW economies. This increased demand for NSW production will provide a stimulus to businesses throughout the state.</p> <p>The EIS's Economic Impact Report (ACIL Allen Consulting, 2016; EIS Appendix U2) identifies that both employment and economic output of the project are positive on most industry sectors such as construction, utilities, trade, transport and services, mainly due to demand from the project though also from flow on benefits such as increased levels of income at the local, regional and state levels.</p>

Note: two strategic planning documents were identified in addition to those discussed above: the *Narrabri Business Retention and Expansion Program* (2006) and *Narrabri Community Economic Development Strategic Plan* (2007). These plans were not reviewed as they are largely superseded: in the case of the former due to economic change over the last ten years and the latter being formally superseded by the *Narrabri Shire Community Strategic Plan 2017-2027* (2017).

In addition to alignment with the various plans and strategies summarised in Table 1, Santos has engaged and will continue to engage with the Narrabri Shire Council and other relevant stakeholders for their input and feedback into the project's regional and local employment and business development initiatives and workforce management strategies (refer to SIA Sections 7.2 and 7.6).

How will the project affect other sectors given the potential for competition over skilled labour during project construction (as stated in the SIA)?

As stated in the SIA (Section 6.3.1 of EIS Appendix T1), the project may compete with economic sectors such as agriculture and forestry, mining and manufacturing and construction for skilled and unskilled labour supply. According to the Economic Impact Report (ACIL Allen Consulting, 2016; EIS Appendix U2) the mining sector may experience the largest reduction in output, because workers in the existing mining industry possess skills that match the needs of the project. The existing mining industry will therefore face strong competition for labour from the project.

However, peak levels of construction labour demand will be short lived (three to four years). According to the Economic Impact Report (ACIL Allen Consulting, 2016; EIS Appendix U2) the much longer operations phase represents a relatively minor impact on the local labour supply, because of the large labour pool and existing unemployment levels in Narrabri Shire and surrounding region.

According to local government area data sourced from the (then) Commonwealth Department of Employment's Small Area Labour Markets publication and NSW data sourced from Australian Bureau of Statistics Catalogue 6202.0, The Economic Impact report (ACIL Allen Consulting, 2016; EIS Appendix U2) shows that in 2013, Narrabri Shire's workforce stood at 7,700 (with an unemployment rate of 5.5 per cent). When Narrabri and Narrabri surrounds are added together this rose to 123,750 jobs (with an unemployment rate of 6.5 per cent). The job opportunities created by the project will be highly skilled and well paid, but they are of a low magnitude, particularly in the long lasting operations phase, and will therefore not cause a significant impact on local businesses access to skilled labour.

Does the proponent have an Indigenous Engagement Plan, or strategies targeting indigenous economic participation in project-related opportunities?

To encourage Indigenous participation in the development of Santos projects and operations, a Diversity and Equal Opportunity Policy would be implemented to achieve representative Aboriginal employment, including for contractors (refer to Appendix A of EIS Appendix T1). The Diversity and Equal Opportunity Policy outlines capacity building strategies for Aboriginal peoples including specific employment, training and procurement initiatives to:

- increase the number of Aboriginal employees within Santos and service providers
- develop partnerships with Aboriginal peoples, government and community organisations in the delivery of Aboriginal employment and training outcomes
- create, where possible, enterprise development and procurement opportunities within Santos projects and operations for Aboriginal companies
- facilitate the development of the community to build capacity which is aligned with Santos operations and activities.

Further, Aboriginal employment opportunities would be part of ongoing Native Title negotiations with the Gomeroi Applicants, with final details subject to the finalisation of a Native Title agreement.

Community investment

As background to the response, the Santos-led GLNG project alone has invested \$15.4 billion in materials and services from across Australia. Of that, \$8 billion has been spent in Queensland alone, with more than \$1 billion spent in regional areas. In the community, GLNG has invested \$65 million in regional projects including aeromedical services, airports, hospitals, schools, housing, training, infrastructure, pest and weed management, community events and organisations.

How will contributions into the fund be calculated over the life of the project?

A Gas Community Benefit Fund would be established which would 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 into an authorised Gas Community Benefit Fund, the company is entitled to claim a one dollar rebate on its gas royalties, up to a maximum of 10 per cent of the royalty due in each year.

Details on the NSW Government's website regarding the fund's establishment and administration include (refer to: <https://www.resourcesandenergy.nsw.gov.au/landholders-and-community/coal-seam-gas/community/community-benefits-fund>):

- From 1 July 2016, gas companies in NSW can apply to the Minister to establish an authorised local Community Benefits Fund covering the local area in which they are undertaking gas exploration or production.
- Individuals, organisations or enterprises that deliver local and social community development initiatives in the areas of health, education, environment, economic development and heritage and sport, arts and culture are eligible to apply for funding grants.
- The Government has appointed the Rural Assistance Authority to administer the Fund. The Rural Assistance Authority will manage the establishment of a local Community Benefits Fund Committee whose role will include to set the strategic direction of the Fund and to determine the successful grant applications.

The Fund will be established as per the NSW Government's *Gas Community Benefits Fund - Funding Guidelines* (NSW Government 2016) and will be administered by the NSW Government Rural Assistance Authority and the Community Benefits Fund Committee, as gazetted under the *NSW Petroleum (Onshore) Act 1991*.

How will funds be distributed across the life of the project (i.e. will there be disbursements during the higher impact construction period, before earnings)?

As noted above, the Fund will be established as per the NSW Government's *Gas Community Benefits Fund - Funding Guidelines* (NSW Government 2016) and will be administered by the NSW Government Rural Assistance Authority and the Community Benefits Fund Committee, as gazetted under the *NSW Petroleum (Onshore) Act 1991*.

How will the proponent and the fund administration authority work together ensure that the fund offsets or enhances the impacts identified in the SIA?

As noted above, the Fund will be established as per the NSW Government's *Gas Community Benefits Fund - Funding Guidelines* (NSW Government 2016) and will be administered by the NSW Government Rural Assistance Authority and the Community Benefits Fund Committee, as gazetted under the *NSW Petroleum (Onshore) Act 1991*.

The Fund will be available for individuals, organisations or enterprises that deliver local and social community development initiatives in the areas of:

- health
- education
- environment
- economic development and heritage
- sport, arts and culture.

The role of the Community Benefits Fund Committee includes:

- setting the annual strategic direction of the fund;
- setting the specific focus of each funding round;
- determining the successful grant funding project applications; and
- providing annual reports on finances and funded projects to the Minister.

Each Committee shall consist of an Independent Chair and at least five (but no more than six) representatives with:

- At least two representing different interests of the local community (not already holding a position on the existing Community Consultative Committee;
- One from the gas titleholder;
- One from the local government; and
- One from the NSW Government.

Appointment of members for a Committee will be made by the Minister of Industry, Resources and Energy in accordance with the *Appointment Standards - Boards and Committees in the NSW Public Sector* (Public Service Commission 2013).

Additional information is available at:

- <https://www.resourcesandenergy.nsw.gov.au/landholders-and-community/coal-seam-gas/community/community-benefits-fund>
- <https://www.raa.nsw.gov.au/assistance/gas>

Housing

The housing and accommodation baseline is presented in Section 4.4.6 and Section 6.3.6 of the SIA. The baseline was informed by data sources from 2011 (ABS census data – the latest census data available at the time of writing the SIA) and data from web searches completed in 2014 (available properties for rent and sale). The SIA predicted low or no impact on the accommodation and housing facilities in Narrabri from the direct workforce employed on project (refer to Sections 5 and 6.3.6 of the SIA), because:

- Non-resident workers during the construction and operations phases will generally be housed in private workers' accommodation in the Narrabri region and at Westport workers' accommodation – i.e. in purpose built accommodation camps.
- During the operations phase it is anticipated that 50 workers may relocate into Narrabri to pursue long term employment opportunities with the project. These workers are likely to relocate into the region over a period of time from 2018 to 2021 and are expected to be accommodated in the open housing market within Narrabri.
- As reported in Section 4.4.6 of the SIA, Narrabri has had a low rental vacancy rate (32 properties in September 2014, 32 properties in September 2017¹), but had higher availability for purchase (195 properties in September 2014, 341 properties in September 2017). Consultation with Narrabri Shire Council and real estate agents in Narrabri identified three new housing developments in town which are likely to increase housing availability for both rent and purchase. It is expected that a combination of vacancies, availability for purchase and future developments will accommodate demand from the project.

What is the projected impact on housing and accommodation if ancillary workers and their families are included?

We understand 'ancillary workers' to be indirect workers taking the indirect jobs created by the project. Predicting impacts of ancillary workers on housing and accommodation is deemed to be out of scope for the SIA and EIS as it pertains to meeting the Secretary's environmental assessment requirements. While the Economic Impact Report (EIS Appendix U2 – ACIL Allens 2016) modelled the indirect employment generated by the project, it is considered out of scope for the EIS to speculate on how many indirect / ancillary workers residing outside of Narrabri would choose to move to reside permanently or temporarily in the project area and by when.

Consistent with the assessment approach taken for similar projects the Secretary's environmental assessment requirements did not require an assessment of the impact of ancillary workers and their families on housing and accommodation.

However, as mentioned in the SIA, to measure and manage potential direct or cumulative impacts on the availability of private workers' camp style accommodation, in addition to the availability and affordability of private housing in Narrabri, the proponent will implement construction workforce housing and accommodation strategies that monitor and adapt to requirements as needed. The following management measures will be included in the strategies:

- Monitor regional housing conditions through consultations with key housing stakeholders in Narrabri, the project's Community Consultative Committee and industry networks.

¹ Based on searches from www.reasestate.com

- Monitor availability of private camp accommodation through early engagement with accommodation providers.
- Implement an approach to accommodation management that is transparent and flexible to changing housing conditions during the project planning phase through to the commencement of construction.

Monitoring activities could be extended to include workforce housing and accommodation demand from businesses providing goods and services to the project.

How do the proposed ‘construction workforce housing and accommodation strategies’ address projected impacts?

As detailed in Sections 6.3.6 and 7.7 of the SIA (EIS Appendix T1), to manage impacts on housing and short term accommodation facilities, the proponent’s housing and accommodation strategy has been developed to accommodate non-resident workers during construction in private workers’ accommodation in the Narrabri region and Westport workers’ accommodation.

As discussed in Section 4.4.6 of the SIA, such demand from the project can be met through the existing and future capacity of the CIVEO workforce accommodation in Narrabri and Boggabri, and through additional capacity in the proposed upgrade of Westport workers’ accommodation.

A small number of fly-in fly-out workers may be accommodated in short term accommodation in Narrabri. As stated in the SIA (Section 4.4.6), Narrabri has a number of hotels, motels, bed and breakfast, caravan parks and camping grounds; totalling over 300 beds cumulatively. The demand from a small number of fly-in fly-out workers is, therefore, unlikely to create a significant impact. Reliance on local accommodation will be monitored in order not to affect local tourism and trade; however, positive contribution to local businesses can be expected.

Will the housing strategy consider levels of vulnerability amongst the 30 per cent of residents (or 61 per cent of the indigenous population) who rent? What measures will be put in place to prevent displacement of vulnerable groups?

The workforce peak is expected to result in approximately 740 non-resident workers during construction: this accounts for the proportion of the workforce that is expected to be sourced locally and those who are rostered off. The construction workforce is expected to be housed in workers’ accommodation facilities. As discussed in Section 4.4.6 of the SIA, construction accommodation demand from the project can be met through the existing and future capacity of the CIVEO workforce accommodation in Narrabri and Boggabri, and the proposed expanded capacity at Westport workers’ accommodation. During operations, it is expected that approximately 50 workers will relocate to Narrabri who would be housed within the private market (i.e. would rent or buy).

As discussed in the SIA (Section 6.3.6), Narrabri has had generally a low rental vacancy rate since 2009, that is balanced by a higher availability of houses for purchase i.e. in September 2017 there were 32 properties for rent and 341 properties for purchase² (compared to 32 properties for rent and 195 properties for purchase in September 2014).

Further, consultation undertaken for the SIA identified three housing developments which were likely to increase housing availability around Narrabri. While it is possible that operations staff relocating to Narrabri may increase demand, given the current availability of properties to rent and buy, along with proposed housing developments and considering that demand from the project would be over a period of years, it is unlikely that housing demand from 50 workers would affect the housing needs of vulnerable groups.

In addition, project workers seeking rental accommodation would likely be competing for a different market sector than the vulnerable groups referred to in the question, thereby further lowering the likelihood of conflicting demand.

Medical services

On what basis does the SIA assume that non-resident workforce will address their regular health needs in their place of permanent residence?

Project workers will be required to provide a ‘fit for work’ certificate. The assumption is therefore that non-resident workers will be in generally good health and will have their regular health checks at their usual place of residence. However, the SIA does acknowledge (in Section 6.3.5) that there will be an increase in demand on local health services as a result of workers accessing services for non-routine medical issues or in emergencies; though this is not expected to be significant.

The SIA does present mitigation measures for managing the potential for additional demand on medical and health services, including:

² Based on a search of www.realestate.com.au

- The proponent will engage with service providers on an ongoing basis through various forums initiated by the proponent to monitor change in demand on services from the project.
- In consultation with key stakeholders, the proponent will invest in community infrastructure services through the Gas Community Benefit Fund.

How will the proponent manage the health and well-being of its workers and contractors' workers while on site, without placing pressure on local services?

First aid facilities will be provided at the project site commensurate with the nature and intensity of work being conducted. Accommodation facilities for workers regularly provide gymnasiums and recreation facilities and, as identified in Section 4.4.7 of the SIA, there are a number of sport and recreational facilities and sporting clubs in Narrabri, which could be accessed by the workers. Santos is actively involved in providing donations and sponsorships for various sports and recreational facilities in Narrabri.

As part of workforce management and community cohesion strategies, it is noted from Walton *et al.* (2018) that overall people within Narrabri Shire and Narrabri town and surrounds are satisfied with the medical and health services. To maintain these satisfaction levels, the proponent will engage with some of the medical service providers to explore possibilities for arranging access for their workers. Engagement with such service providers will include consideration for existing capacities of the facilities and ensure that access for locals is not compromised.

Mental health services

As background, the specific assessment of mental health was not required to meet the Secretary's environmental assessment requirements for the EIS, which sought the following in regard to health as reported in Appendix T2 – Health Impact Assessment (EnRiskS 2016). Specific wording from the Secretary's environmental assessment requirements is provided below.

It is recommended that the Environmental Impact Statement (EIS) includes a human health risk assessment that considers the potential adverse effects from human exposure to project-related environmental hazards. This assessment should be conducted in accordance with the approach described in the enHealth document Environmental Health Risk Assessment: Guidelines for assessing human health risks from environmental hazards (2012).

The assessment should include, but not be limited to, assessment of the risks associated with human exposure to noise, air pollution and contamination of ground and surface water. The assessment should consider risks during both the construction and operational phases.

When assessing health risks, both incremental changes in exposure from existing background pollution levels and the cumulative impacts of project specific and existing pollutant levels should be addressed at the location of the receptors.

Exposure should be assessed at the location of the most affected receptors and also for other sensitive receptors such as childcare centres, schools, hospitals, and aged care facilities. Consideration should also be given to the size of the population exposed to environmental hazards.

What are the most significant set of project uncertainties that may cause stress or anxiety, and which groups are most at risk?

The SIA recognised that landholders are likely to experience the most direct impacts from the proposal, including impacts to land use and, potentially, temporary access impediments. Recent qualitative research within the Narrabri Shire concerning land use change has highlighted that uncertainties around the project interact with wider uncertainties in the agricultural industry in regards to changes in farming practices and succession planning, including farm size and increases in technology that place pressure on smaller, family based traditional farming (University of Newcastle 2016).

Other project uncertainties that may cause stress and anxiety to landholders were identified to be:

- Uncertainty of the timing of the project commencement on their land.
- Uncertainty of what project activities will be carried out on their land and the preparation and involvement required from the landholders.
- Uncertainties about impact on the future property values of landholders that do not participate in the project, but were surrounded by farms that did, and concerns about groundwater and the safety and effectiveness of the decommissioning process (Walton *et al.* 2017).

In regards to landholder relations, Santos' operations over more than 60 years have required it to develop strong working relationships with landholders across numerous project areas containing variable land uses. The landholder liaison team for the project live regionally and the team is comprised of locals who know the area and the people who live there. They understand the landholder's perspective, what it means to run a farming business, and the impacts natural gas activities can have.

For the current exploration and appraisal activities, landholders were engaged early so that the proponent had time to understand the unique characteristics of each landholder's property and the surrounding area. Exploration and appraisal development plans were then developed in agreement with the landholder to minimise impacts from infrastructure as much as possible. Any specific requirements of landholders were included in the Conduct and Compensation Agreement made with the landholder.

It is also recognised that well organised and funded protest groups, comprising predominantly non-residential members, may negatively impact community wellbeing when present in the project area. On the other hand, there are business groups who are anticipating the approval of the project who may be suffering anxiety and stress due to approval uncertainty. Significant investment has been made by some individuals in ramping-up capital spend in business interests in anticipation of increased demand from the proponent and contractors, should the project be approved.

In the event that landholders/farmers (including non-agreeing landowners) experience impacts on mental health as a result of project activities, what existing support / counselling services are available in the local government area?

Error! Reference source not found. below lists the support services currently available in Narrabri local government area which can be accessed by the local / regional community.

Table 2 List of support services available in Narrabri local government area

Organisation / service provider	Address
Narrabri Community Health	66 Gibbons Street Narrabri NSW 2390
Wee Waa Community Health	Alma Street Wee Waa NSW 2388
HealthWISE, Narrabri	93-95 Barwan Street Narrabri NSW 2390
*Sharon Philpott – Psychological empowerment	6/115 Maitland Street Narrabri NSW 2390
Lifeline North West	76 Maitland St Narrabri NSW 2390
Anglicare Outreach (fortnightly on Tuesday Centacare Office)	116 Baron Street Narrabri NSW 2390
Anglican Counselling Service	12 Church Street Wee Waa
*Kecks Counselling	16 Goobar Street Narrabri NSW 2390
*Acacia Psychology, Counselling & Life Management	3 Doyle Street Narrabri NSW 2390
Salvation Army Community Services	(02) 6792 5519
Narrabri Men's Shed	211 Reid Street Narrabri, NSW 2390
Wee Waa Men's Shed	48 Cowper Street Wee Waa, NSW 2388
Online and telephone based counselling services such as BeyondBlue, 1800 Respect	-

* Private provider.

Is it possible for a landholder to re-negotiate or dissolve an agreement if they feel that the impacts upon their property, their household, or their mental health are too great, or that the compensation is not commensurate with the impact?

As discussed in section 6.2.1 of the SIA, Santos was one of the original signatories to the NSW *Agreed Principles of Land Access*, which states that a landholder is at liberty to say 'yes' or 'no' to the conduct of well drilling on their land and that gas companies will respect the landholders wishes.

Santos' Working with Landholders Fact sheet sets out details of how the landholder agreement process works, the compensation framework and the matters to be considered prior to undertaking activities. Landholders are encouraged to have agreement documents reviewed and Santos will pay the landholder's legal costs to finalise an agreement.

The compensation framework set out in the fact sheet allows landholders to clearly understand the compensation that would be payable in exchange for hosting activities on their property. Compensation for production to landholders includes an annual fee of \$30,000 for service as well as a share of a royalty based component proportionate to the amount of their land being utilised for the project.

The investment associated with drilling a well or locating infrastructure is significant. As such, clear advice about the period of time infrastructure and activities will occur on a landholder's property is provided to assist landholders to understand the length of time of the impact.

Ongoing consultation and communication occurs between Santos and the landholder throughout the period of the agreement, providing opportunities for landholders to express any concerns and provide feedback. This approach to open, honest and ongoing communication is the foundation of building solid relationships with the landholder.

What mitigation measures (i.e., services and facilities) are proposed to support mental health and well-being of different groups?

As per discussions above, the proponent is committed to developing and maintaining strong working relationships with landholders and other stakeholders and is committed to contributing to community cohesion, evidenced by its approach in GLNG and other operations.

As set out in **Error! Reference source not found.** above, there are a wide range of mental health facilities in the Narrabri region to support the local and regional community.

Inclusiveness and diversity

Did the proponent collect gender disaggregated baseline / consultation data, or any other data disaggregated by demographic grouping? If so, what were the findings?

The purpose of such data disaggregation is not clear in the context of this SIA. Gender issues are generally not considered in SIAs in the Australian context unless specifically identified through consultation. In this case, these issues were not raised during consultation, and therefore, such data disaggregation was not considered.

Does the proponent have targets for female or indigenous employment?

Santos has a Diversity and Equal Opportunity Policy (refer Appendix A of EIS Appendix T1) that states a commitment to providing an inclusive workplace and organisation culture that embraces diversity. Actions to achieve this include that it will promote diversity in the workforce including the representation of women and Aboriginal and Torres Strait Islander peoples, set objectives for achieving gender diversity and annually assess and report on the company's performance against these objectives.

Aboriginal employment opportunities would be part of ongoing Native Title negotiations with the Gomeroi Applicants, with final details subject to the finalisation of a Native Title agreement.

The proponent is aiming for a "net positive economic impact". What groups are least able to benefit, and how will opportunities be extended to these groups?

Often socio-economically disadvantaged groups in a community are unable to take advantage of economic benefits.

The key economic benefits from the project would be through the generation of direct and indirect employment and business development opportunities. To ensure that benefits are extended to all groups within the community, Santos has proposed a number of mitigation measures in the SIA including:

Engaging with Indigenous and non-Indigenous local recruitment agencies to optimise local employment on the project.

Training and up-skilling opportunities. There are adequate and relevant training opportunities available and accessible for potential workforce in the region. Appropriate training for technical skills is available at Tamworth TAFE. In addition,

Federal and State Government programs are available to assist with fees and other expenses. To provide long-term career pathways for locals and ensure that an appropriately skilled workforce is employed, Santos would provide scholarships and develop suitable training and apprenticeship programs in consultation with local TAFE and other training institutions.

To avail additional opportunities, local groups and organisation will also be able to apply for funding for projects and initiatives through the Gas Community Benefit Fund.

Will a negotiated agreement with the Gomeroi Native Title applicants be in place prior to the commencement of construction to enable these groups to maximise economic and community development opportunities?

Santos is currently negotiating with the registered Native Title Applicant, the Gomeroi People, on a Native Title agreement. These negotiations include discussion on what can be done to avoid or minimise any impacts, and how the Gomeroi People can be compensated where impacts cannot be avoided.

A Native Title agreement is required to be in place prior to the issue of petroleum production leases.

Conflict and community cohesion

Has the proponent considered strategies to avoid or manage conflict and build community cohesion?

Santos has been operating across Australia for over 60 years and thus has significant experience working with landholders and communities. Embedded in the approach to working with local communities is its commitment to establish and maintain enduring and mutually beneficial relationships. A key part of this is employing locally. Santos employees live and work in many of the communities that it operates in and are actively involved in the community's programs and activities.

Santos recognises that open and transparent communications are critical to being a responsible and trusted community member, with community concerns and expectations routinely being integrated into business planning. In addition to generating jobs and positive economic benefits through operations, Santos aims to invest in programs that help local communities.

Santos has a shopfront on Maitland Street in Narrabri that is open to the public. This presence assists to provide accessible and responsive service to community members who have comments or are seeking information or advice. A complaints and feedback telephone line is also available. Activity updates are regularly published in the local paper and regular email updates distributed to any person wishing to receive these. Site tours of the current exploration and appraisal operations with local team members are also offered regularly to allow people to access the operations and ask any questions about the project.

Acknowledging the findings and recommendations of the Walton *et al.* (2018) study on community cohesion and long standing sub-regional rivalries, the proponent has adopted an approach to open and collaborative communication, its demonstrated respect for the communities in which it operates and its commitment to the NSW Agreed Principles of Land Access are likely to minimise the potential for conflict. Also as relevant, the proponent will further inform its approach to avoiding and minimising community conflict and supporting community cohesion through the findings of the Walton *et al.* (2018) research.

Santos is a member of the project Community Consultative Committee. This Committee is comprised of nominated representatives of community groups that have a large membership base and broad representation of the community throughout the Narrabri area. In addition to the proponent, the Committee has representatives from key industry and community organisations, and State and local government. It provides for all community members through representatives from across the community including interest groups, with the opportunity to learn about, provide input to, and raise concerns about the proponent's activities and to help facilitate the distribution of information about Santos' work and plans back to the community. The Committee is independently chaired by the NSW Land and Water Commissioner and generally meets monthly. In addition, the proponent would:

Continue to demonstrate its support for the wellbeing of local communities by sponsoring local events and community outreach activities, e.g. shows, festivals, Agquip, as per Santos' current involvement in Narrabri and participation in Queensland communities such as Roma.

Invest in social infrastructure and economic development opportunities to leave a positive legacy for the communities in which it operates.

Ensure local businesses get the maximum opportunity to bid for, and win, contracts. To achieve this, the proponent provides full, fair and reasonable opportunity for local industry to compete for work. The proponent will work with government, industry representative bodies and communities to improve local industry participation, capability and competitiveness.

Remain committed to protecting and enhancing the liveability of rural communities by maximising opportunities for local employment, building new skills and offering apprenticeship programs.

Develop and implement an employee assistance program for support to employees.

In addition, the proponent would develop a grievance mechanism that would act as a strategy to avoid and / or manage conflict, including:

The mechanisms by which a grievance is received from the community. The following initiatives are currently in place and would continue:

- a 1800 free call service (1800 071 278)
- letter or email: Energy.NSW@santos.com
- community shopfronts in Narrabri and Gunnedah
- direct feedback to project personnel (staff or contractors)
- referral from other regulatory organisations or peak bodies.

How a grievance is responded to. Currently, upon receiving the complaint, an initial assessment is carried out to determine if the complaint is legitimate or merely vexatious. When a complaint is assessed as legitimate, it is registered in the complaint management system and investigated. The community member (or group) making the complaint is contacted to discuss the matter. Correspondence outlining the steps being undertaken to address the matter is provided and the proponent seeks to resolve the complaint within 30 business days.

The complaint management system is actively monitored to ensure timely resolution of complaints with regular internal reporting to the business.

How will ongoing tension and levels of tension and conflict be monitored and if necessary managed?

The Stakeholder and Community Consultation Report (EIS Appendix D) states that the issues and concerns of stakeholders and the community will remain focus areas for the proponent's ongoing commitment to open and transparent communication with stakeholders and the community.

The proponent will continue to monitor and address these matters through existing communication channels. These channels are described in the SIA (Section 7.4 of EIS Appendix T1).

It is also recognised that well organised and funded protest groups, comprising predominantly non-residential members, may negatively impact community wellbeing when present in the project area.

Ongoing community engagement

Did the proponent assess levels of satisfaction with the information provided, or the effectiveness of community consultation? If so, what were the results?

A Stakeholder and Community Engagement Plan was developed and stakeholder groups identified and categorised according to their level of perceived impacts and interests in the project. The aim of the consultation activities has been to engage with landholders, community members and other key stakeholders regarding the project and the development of the EIS; identify potential issues; minimise the risk of conflict; and provide additional information in relation to the project such that wider community awareness and understanding is achieved and issues are resolved early in the planning process.

The proponent consults with, and provides regular updates to, stakeholders on activities being undertaken within the project area. These include petroleum exploration and appraisal activities; environmental studies and activities; community activities; specific projects; future planned work and tenure development; EIS progress; and other initiatives and industry news.

Due to the extensive community consultation activities undertaken in relation to the submission of the EIS, a Stakeholder and Community Engagement Plan was developed to support the delivery of the EIS program and is revised from time to time to reflect progression in project deliverables. The Plan is complementary to the broader petroleum exploration licence (PEL) 238 Community Consultation Plan and focuses on the commitment to stakeholder and community engagement activities for the EIS.

Community engagement activities from late January 2017 have focussed on providing information to the community relating to the preparation and submission of the development application that includes the EIS for the project. The development application was submitted to DP&E on 1 February 2017.

Activities have been undertaken to provide effective and genuine community consultation on the project and the information contained within the EIS. Community information sessions and other consultation tools and activities have been utilised to proactively provide information to key stakeholders and the community to assist in understanding the project and respond to issues of concern.

Key outcomes of the proponent's ongoing community consultation and engagement have been:

- Raised awareness of the project, including that the EIS was submitted to DP&E in February 2017, the various avenues for the community to view the document and make a submission during the public exhibition period.
- Raised awareness of the information contained within the EIS document and access to technical specialists to assist in understanding and interpreting information.
- Strengthened relationships with stakeholders, decision makers, potential champions and opponents to the project.
- Implemented strategies to assist managing and minimising the risk of conflict, and resolved issues as they arose.
- Provided timely, accurate and credible information to stakeholders and the broader community; and provided opportunities for interaction and feedback.
- Facilitated positive Aboriginal cultural heritage outcomes by consulting with relevant parties and encouraging them to participate in decision making regarding the management of their cultural heritage.

In addition, the proponent has hosted around 35 site visits to operational sites since January 2017 that included more than 150 participants.

Research by Walton and McCrea (2017) for the Commonwealth Scientific and Industrial Research Organisation (CSIRO) in the Narrabri LGA in relation to community expectations and perceptions of CSG looked into how community members source of information about the project. The research found that:

Four main ways of learning were identified in the data including: sourcing information on the internet; word of mouth and talking to people in their social network; attending information sessions, hosted by service clubs, Santos, local Chambers; and attending a site visit. For many participants 'seeing was believing' with site visits proving to be a very effective way of becoming more informed about the industry and understanding 'what was going on'.

Walton and McCrea (2017) identified that 42.1 per cent of survey participants sourced coal seam gas related information from industry sources and 26.8 per cent from attending a site visit to Santos facilities. The research found that people who identified they had a higher self-rated knowledge of the coal seam gas industry had lower perceptions of concern towards coal seam gas development and that residents of Narrabri and surrounds held significantly more positive views than those from Wee Waa or Boggabri areas. Walton *et al.* (2018) shows that at one end of the spectrum 30 per cent of residents indicated they 'reject' CSG development in the Narrabri shire and at the other end of the spectrum 15 per cent of residents indicated they 'embrace' it. However, of the remaining respondents (55 per cent) indicated they would either tolerate (27 per cent), be ok with (15 per cent), or approve of (13 per cent) coal seam gas development in the shire. The research also indicated that some people in the community were initially sceptical about the industry but over time and as they found more information their concerns were satisfactorily addressed.

The proponent will utilise the research findings from Walton and McCrea (2017) and Walton *et al.* (2018) to further inform its stakeholder engagement strategy where relevant.

To what degree have different community groups had direct input into the development of the management measures to address identified risks?

The project's Stakeholder and Community Consultation Report (EIS Appendix D) outlines the consultation approach established for the EIS. In addition to the project Community Consultative Committee, local community groups had opportunities to be consulted through the various tools detailed in the Community Consultation Report. Specific examples of community feedback considered by the proponent and included in the project are (from Section 9.2.3 of Chapter 9 of the EIS):

- 'Landholder compensation information was ambiguous'. The landholder compensation information was subsequently reviewed in consultation with the project Community Consultative 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 2016a). Generally, lighting would be designed to minimise off-site light spill.

In addition, the proponent has reviewed the submissions and has made the decision to extend the designated Yarrie Lake surface development exclusion zone to include a 50 m buffer from Yarrie Lake reserve. Yarrie Lake reserve is defined as lots 51, 52 and 53 on DP 43308. The reserve, in places, extends about one kilometre from Yarrie Lake itself.

Further, the SIA (EIS Appendix T1), Stakeholder and community consultation report (EIS Appendix D) and Agricultural Impact Assessment (EIS Appendix K) included specific consultation with key stakeholders on identifying issues raised and inform potential mitigation and management strategies.

The proponent has committed to avoid all currently known Aboriginal cultural heritage sites and the most sensitive site types following consultation with registered Aboriginal parties.

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.

Chapter 9 of the EIA states that 'various forums initiated by Santos will be used to monitor change' (e.g. Landholder information, Aboriginal stakeholder and Community information forums). These seem to be for the purposes of the EIA. Would these forums continue post-approval, or will other forums will be used?

As discussed in the response above, the project Community Consultative Committee will continue beyond the duration of the EIS. This is in addition to regular updates in local paper regarding activities, newsletters and community forums and information sessions at key milestones and site tours as required, which will also continue post-EIS.

The proponent's shopfront in Narrabri and feedback mechanisms put in place as part of the stakeholder engagement strategy will also remain beyond the duration of the EIS.

In addition, the proponent is committed to preparing a Social Impact Management Plan including a monitoring framework. The framework of the Social Impact Management Plan is provided below.

How will non-agreeing landholders be engaged and/or be notified of project impacts that may impact them (e.g. activities occurring on adjoining property)?

Based on the impact assessment findings, where impacts above relevant guidelines are predicted to occur at an occupied sensitive receptor (e.g. noise or dust), the proponent will approach the landholder to discuss the activity and mitigation and management measures. Communication with non-agreeing landholders will be maintained in a respectable manner using communication tools preferred by the landholders. It should be noted that due to the location of the project, the relatively localised impacts predicted as a result of activities and the low density of sensitive receptors across the project area, the predicted number of impacted receptors is likely to be relatively small.

What is the proponent's commitment to staffing and resourcing the community engagement / social performance function for this project, during construction, through operation and in to closure?

The proponent's shopfront in Narrabri and its community and landholder relations team will continue to support community engagement throughout the life of the project. As discussed above, this would include activity updates through newspaper, information sessions and site tours as required, in addition to the provision of a website and the accessible shopfront in Narrabri. The project's community engagement team will include staff with appropriate qualifications and/or experience in social impact assessment and monitoring. The team will be supported by the proponent's experienced Community Managers from other advanced projects such as GLNG.

Impact monitoring

The EIA Executive Summary refers to an environmental management and monitoring plan. Has an equivalent social monitoring plan or framework been considered to monitor social change and impact?

The proponent is committed to preparing a Social Impact Management Plan including a monitoring framework. The framework of the Social Impact Management Plan will likely include:

- A list of identified impacts and issues
- Targets and outcomes sought

- A monitoring strategy, including:
 - Responsibility—documenting the party responsible for the implementation of each monitoring strategy
 - Sources of data and timing and frequency— how data will be collected to understand the status of impacts and inform monitoring, and how often this data would be collected and analysed
 - Key performance indicators—informative, relevant, measurable, useful, widely recognised, simple to report and easily understood.
 - Reporting – identify methods for reporting on each of the impacts and mitigation measures.

The Social Impact Management Plan will also include details on a grievance management mechanism that will be put in place for the project. It will include information on how feedback will be received, recorded, actioned, responded to and closed out.

Key sources of information to monitor social change and impacts over the life of the project will include the register of ongoing feedback that is gathered from tools such as the proponent's shopfront in Narrabri, project email address and telephone and engagement with Community Consultative Committee.

What data will the proponent gather to demonstrate the 'high to very high' social benefits that the proponent claims it will achieve through the life of the project?

Data that will be gathered on an annual basis to measure benefits would include:

- Number of local employees.
- Number of local trainees and apprenticeships.
- Number of local businesses engaged.
- Spend on local employment.
- Spend on local businesses.
- Spend on sponsorships and donations.
- Information on beneficiaries of sponsorships and donations.
- Spend on community infrastructure projects (from the Gas Community Benefit Fund).
- Positive community interactions with the project.

The EIA mentions 'emergent social impacts'. How will these impacts be proactively detected through social monitoring?

As noted above, the proponent is committed to preparing a Social Impact Management Plan including a monitoring framework. Emergent impacts will be identified through periodic review and update of the Plan. The review process will be undertaken by the project's community and landholder relations team and if required an independent specialist will be engaged. The impact identification process will be informed by the ongoing feedback mechanism that is put in place as part of the project's Stakeholder and Community Engagement Plan including tools such as the proponent's shopfront in Narrabri, project email address and telephone and engagement with project Community Consultative Committee.

How will the proponent monitor issues of community concern (e.g. impacts on water, dust and community health) over the life of the project?

Impacts will be managed throughout the life of the project through the implementation of appropriate mitigation measures and monitoring framework.

Community concerns would be monitored through formal and informal channels. Formal channels would include engagement with Narrabri Shire Council, the project Community Consultative Committee and the project complaints management system. Information channels would include community consultation activities, regular contact with landholders, the proponent's shopfront in Narrabri and through social media.

All community consultation activities are recorded and tracked in internal database to ensure issues raised are addressed, communicated and closed out with follow up as necessary.

Chapter 30 of the EIS outlines the management and monitoring plans that would be developed and approved by DP&E prior to implementing the project. The Water Monitoring Plan for the project was provided as Appendix G3 of the EIS.

The project will operate under approvals from all three levels of Government that cover a broad range of matters. The proponent currently operates its Narrabri exploration and appraisal operations under an Environment Protection Licence issued by the NSW Environment Protection Authority (EPA), which would be amended to include the production project should it be approved. The licence includes conditions in relation to air, noise, surface water and groundwater and waste among other things and also includes monitoring and reporting conditions.

The EPA has assessed the proponent's current operations in Narrabri and designated it as Level 1 risk – being the lowest level of risk. This is based on the nature of operations at the site, the risk of a pollution incident and the high level of performance of the proponent as licensee.

As discussed in Section 0 of this memo, the Stakeholder and Community Consultation Report (EIS Appendix D) states that the issues and concerns of stakeholders and the community will remain focus areas for the proponent's ongoing commitment to open and transparent communication with stakeholders and the community.

The proponent will continue to monitor and address these matters through existing communication channels. These channels are described in the SIA (EIS Appendix T1 - Section 7.4).

Information transparency

Will there be a public reporting protocol for the project and a commitment by the proponent to disclose information on impacts and key issues of concern (e.g. water impacts, air emissions, and impacts on the Pilliga Forest)?

As discussed above, the proponent's current Narrabri exploration and appraisal operations occur in accordance with the Environment Protection Licence issued by the EPA under the NSW *Protection of the Environment Operations Act 1997*. A report on compliance with the licence is submitted annually (known as an annual return) to the EPA. It includes a summary of all monitoring results, statements of compliance, a complaints summary and information on environmental management systems. This annual reporting would continue to occur for the Environment Protection Licence for the project.

In addition to the above, the proponent has committed to implementing a comprehensive third party environmental audit program. Under the program, within three years of the first Plan of Operations and every three years thereafter, the proponent will facilitate a third-party environmental audit to ensure compliance with the following:

- Implementation consistent with the Field Development Protocol and Plan of Operations;
- Conditions of the Commonwealth and State Government approvals and relevant licences and plans.
- Relevant State and Commonwealth legislation.
- Management plans.
- The annual compliance review obligations for the period.
- The third-party auditor will be suitably qualified to conduct the audit.

The auditor will provide a report to DP&E and the Commonwealth Department of the Environment and Energy identifying non-compliances and recommendations to improve planning or implementation processes. The audit information would be a condition of approval and will therefore be made publically available. Similarly, Santos would need to report publically against its approval conditions at both State and Commonwealth levels.

Furthermore, if the project is approved under the NSW *Environmental Planning and Assessment Act 1979*, a Petroleum Production Lease (PPL) would be issued under the NSW *Petroleum (Onshore) Act 1991* for the four petroleum production lease applications (PPLAs) lodged in May 2014 covering the project area, being PPLAs 13, 14, 15 and 16. Annual reporting to comply with these conditions is a statutory requirement. Auditing of the PPL approval conditions, which would include a range of issues, particularly applicable to rehabilitation requirements, would also become a statutory requirement.

Therefore, there are various mechanisms under the relevant legislation that govern ongoing reporting for the project, noting that all reports to government under the legislative framework noted above are publically available.

What consideration is being given to different modes / mechanisms for monitoring (e.g. participatory monitoring, independent expert monitoring etc.)?

All monitoring plans would be developed in accordance with the approval conditions to meet all regulatory requirements and would be submitted for approval to the DP&E. A Social Impact Management Plan will be developed and include a monitoring framework for the social impacts of the project.

References

- ACIL Allen Consulting (2016). Economic Impact Report. Narrabri Gas Project Environmental Impact Statement. Appendix U2. 58 pp.
- AEC (2011). Narrabri Shire Economic Development Strategy.
- EnRiskS (2016). Narrabri Gas Project Environmental Impact Statement - Health Impact Assessment. 76 pp.
- GHD (2016). Narrabri Gas Project Environmental Impact Statement - Social Impact Assessment. 117 pp.
- Narrabri Shire (2010). Narrabri Shire Economic Social Plan 2010-2015. Retrieved from [http://www.narrabri.nsw.gov.au/files/uploaded/file/Economic Development/Narrabri Shire Economic Social Plan Public Exhibition Final \(1\).pdf](http://www.narrabri.nsw.gov.au/files/uploaded/file/Economic%20Development/Narrabri%20Shire%20Economic%20Social%20Plan%20Public%20Exhibition%20Final%20(1).pdf)
- Narrabri Shire (2013). Extractive Industries Policy. Retrieved from [http://www.narrabri.nsw.gov.au/files/uploaded/file/Your Council/Policy Register/Planning and Development/5_2 Extractive Industries Policy.pdf](http://www.narrabri.nsw.gov.au/files/uploaded/file/Your%20Council/Policy%20Register/Planning%20and%20Development/5_2%20Extractive%20Industries%20Policy.pdf)
- Narrabri Shire (2017). Narrabri Shire Community Strategic Plan 2017-2027. Retrieved from [http://www.narrabri.nsw.gov.au/files/uploaded/file/Planning and Development/Strategic Documents/Community Strategic Plan 2027.pdf](http://www.narrabri.nsw.gov.au/files/uploaded/file/Planning%20and%20Development/Strategic%20Documents/Community%20Strategic%20Plan%202027.pdf)
- New South Wales Department of Planning and Environment (2016). Social Impact Assessment. Draft guidelines for State significant mining, petroleum production and extractive industry development. 32 pp
- New South Wales Department of Planning and Environment (2016a). Dark Sky Planning Guideline. Protecting the observing conditions at Siding Spring.
- New South Wales Department of Planning and Environment (2017). Social Impact Assessment. Guidelines for State significant mining, petroleum production and extractive industry development. 55 pp
- NSW Government (2016). Gas Community Benefits Fund - Funding Guidelines. V2.0. 6 pp. Refer to: https://www.raa.nsw.gov.au/__data/assets/pdf_file/0009/660861/Guidelines.pdf
- Public Service Commission (2013). Appointment Standards - Boards and Committees in the NSW Public Sector. 10 pp.
- Walton A. and McCrea R. (2017). Community wellbeing and local attitudes to coal seam gas development. Social Baseline Assessment: Narrabri project – Phase 3 survey report. GISERA. Accessed at: https://gisera.csiro.au/wp-content/uploads/2017/11/Social-7-Narrabri_Phase3_survey_Oct17.pdf
- Walton A., McCrea R., Taylor B. and Jeanneret T. (2018). Social Baseline Assessment: Narrabri project – Final Report. Accessed at <https://gisera.csiro.au/wp-content/uploads/2018/03/Social-7-Final-Report.pdf>
- Walton A., McCrea R., Taylor B. and Jeanneret T. (2017). Understanding local community expectations and perceptions of the CSG sector: Social Baseline Assessment: Narrabri project -Phase 2. Accessed at https://gisera.csiro.au/wp-content/uploads/2016/07/S7-GISERA_Social-Narrabri_Phase2_FINAL.pdf
- University of Newcastle (2016). Local Attitudes to Changing Land Use - Narrabri Shire. Retrieved from <https://www.newcastle.edu.au/research-and-innovation/centre/csrrf/publications/local-attitudes-to-changing-land-use-narrabri-shire>