

Social Impacts Review Report: Narrabri Gas Project

Prepared by Alison Ziller PhD with assistance from Gemma Viney BA (Hons)

4 August 2020

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Contact details:

Alison Ziller alison.ziller@mq.edu.au

Gemma Viney gemma.viney@sydney.edu.au

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Abbreviations

ABS	Australian Bureau of Statistics
CSRМ	Centre for Social Responsibility in Mining
CSRМ 1	A preliminary review and high-level gap analysis of the Narrabri Gas Project SIA by CSRМ dated July 2017
CSRМ 2	Expert Review and Independent Advice to the NSW DPIE re. the Narrabri Gas Project SIA, dated August 2018
DAR	DPIE Final Assessment Report dated June 2020
DPIE	Department of Planning, Industry and Environment
EIS	Environmental Impact Statement
EXS	Executive summary
FTE	Full time equivalent
GCBF	Gas Community Benefits Fund
LGA	Local government area
nd	no date
NLALC	Narrabri Local Aboriginal Land Council
NRW	Non-resident worker
NSW	New South Wales
NW	North west
NWA	North West Alliance
PHIDU	Public Health Information Development Unit, Torrens University
RAA	Rural Assistance Authority
RtS	Proponent's Response to Submissions
SIA	Social impact assessment
SIMP	Social impacts management plan
T1	EIS Technical Appendix 1: Social impact assessment
T2	EIS Technical Appendix 2: Health impact assessment
WHO	World Health Organisation
VPA	Voluntary Planning Agreement

Introduction

I have been briefed by the Environmental Defenders Office, acting on behalf of the North West Alliance (NWA), to provide a social impact assessment review report regarding the proposed Narrabri Gas Project.

This Social Impacts Review Report: Narrabri Gas Project is an independent expert report based on:

- A review of documentation about the project available on the NSW Department of Planning (DPIE's) major projects website;
- A number of documents that form part of the Environmental Impact Statement (EIS) and the Response to Submissions (RtS) submitted by the project proponent (Santos);
- Eleven expert reports prepared for NWA in response to the EIS and associated material;
- Submissions to DPIE regarding this project, particularly the submission from the NWA;
- Narrabri Gas Project Supplementary RtS by Santos nd
- Narrabri Shire Council, Response to Submissions Narrabri Gas Project, 24 May 2018
- Narrabri Shire Council, Response to Supplementary RtS dated 14 May 2019
- Santos response to Narrabri Council's response to the Supplementary RtS dated 16 October 2019
- A preliminary review and high-level gap analysis of the Narrabri Gas Project SIA by the Centre for Social Responsibility in Mining (CSR1) dated July 2017
- Santos reply to CSR1, dated 24 April 2018
- Expert Review and Independent Advice to the NSW DPIE re the Narrabri Gas Project SIA (CSR2) dated August 2018
- The DPIE Final Assessment Report dated June 2020, and
- DPIE Development Consent Recommended Conditions nd.

This report considers the likely social costs and benefits of the proposed project to the local area around the proposed gas wells and other infrastructure. Generally, this has been taken to be the Narrabri local government area (LGA). The report is an assessment of the social impact claims made in the EIS and RtS. It takes into account the aims and requirements of a social impact assessment (SIA), the available literature and other evidence. My presentation

during the IPC's public hearings is included at Attachment 4. A reference list is provided.

I am a sociologist with eighteen years' experience reviewing social impact assessments on behalf of non-profit agencies and the public sector. I have read and agree to be bound by Division 2, Part 31 of the *Uniform Civil Procedure Rules 2005* and the Expert Witness Code of Conduct. My curriculum vitae is attached. I have been assisted by Gemma Viney in the preparation of this report. Gemma Viney has read and agrees to be bound by Division 2, Part 31 of the *Uniform Civil Procedure Rules 2005* and the Expert Witness Code of Conduct. Her CV is also attached.

The report which follows expresses my professional opinion about the likely social consequences which would accrue to residents of the Narrabri LGA should this project proceed.

A handwritten signature in black ink that reads "Alison Ziller". The signature is written in a cursive style with a large initial 'A'.

Alison Ziller
4 August 2020

Overview

The Narrabri Gas Project, hereafter ‘the project’, will provide little social benefit to the town of Narrabri and the surrounding LGA, but at the same time will threaten the basis of its wellbeing by creating new and additional risks to current livelihoods, cultural and recreational practices and public health. In part these risks arise from unresolved concerns about the public health risks of the project, the dispersed distribution of the large number of proposed wells, and from the fact that this resource extraction proposal adds to 8 existing mines and several others which are awaiting approval or commencement (Table 2 below). The Narrabri gas wells and pipeline are *another* resource extraction project, not a one-off. Therefore, the project will have a cumulative effect.

In my view, the social impacts of the project are inadequately specified in the available documentation from the proponent (EIS Ch 26 and EIS Technical Appendices T1 and T2, the RtS and Supplementary RtS) and the social risks it entails are inadequately identified or addressed. This means that the precautionary principle is inadequately addressed.

These inadequacies and the shortfalls of information that they represent currently affect, and if the project is approved will continue to affect, the social cohesion and wellbeing of the town through distributional inequity, stress, anxiety, disappointment, recriminations, social conflict and other public health impacts.

As discussed in this report, the very fact that the region is divided about this project is an indication of these adverse social impacts. It cannot be assumed that polarisation of views will disappear with approval of the project since the level of concern is high and of many years’ standing.

Further, if the project is approved and some residents benefit, in my opinion this will be a minority of residents. The majority will not benefit. This will result in on-going perception and experience of distributional inequity.

A summary of these likely social costs and benefits is provided in Table 1.

The SIA proposes mitigations which address some, but not all, of the above social costs identified in this review. For reasons set out in this report, the proposed mitigations are not considered adequate or likely to be durably effective.

Table 1: Summary assessment: Likely social costs and benefits of the project

Likely local social benefits	Likely local social costs and risks
Approximately 130 construction jobs or 10% of anticipated construction jobs	Inconsistent management of risks and hazards by a large number of sub-contractors affecting quality of life
Small number (20-40 see Table 7) of ongoing operational jobs	Risks arising from operation of financial conflicts of interest
Opportunities for skills training for Aboriginal residents	The limited social benefits are ineffectively managed
Slight increase in job diversity, if at all	Decline in key public health indicators
Minor increase in local procurement in the short term	Decreased housing availability and affordability
Possible gradual increase in population	Masculinisation of the town
Compensation payments to land holders for the duration of the project	Interruption to farming practices due to construction / loss of agricultural land to well pads and infrastructure
CGBF grants of no more than \$500 000 per event or activity	No strategy or mechanism for improvements in social infrastructure for the town
21% (\$3m) of VPA funds for community initiatives or local infrastructure	Continuing social conflict and polarisation
	Lack of distributional equity
	Poor prognosis for inter-generational equity
	Increased traffic and related incidents

Project description

In brief, the Narrabri Gas Project to develop natural gas in the Gunnedah Basin would comprise:

- Up to 850 new exploration, appraisal and production wells located on up to 425 new well pads within the project area.
- The construction of new access tracks.
- Installation of water and gas gathering lines and supporting infrastructure.
- A central gas processing facility for the compression, dehydration and treatment of the gas, to be located south of Narrabri.
- A water management facility.
- An in-field gas compression and water management facility.
- Installation of gas and water pipelines, and power and communication lines.
- An optional power generation facility and a power line.
- An expansion of the workers' accommodation. (EIS EXS pp1-2).

Resource extraction context

The Narrabri Gas project is one of many large-scale developments, current and proposed, in the northwest NSW region.

Table 2: Current and approved / proposed projects in the region

Project	Description	LGA	Project life	Construction workforce Approx.. FTE	Operation workforce Approx. FTE
Existing mines					
Werris Creek	Open cut coal mine	Liverpool Plains	2005-2032		70
Tarrowonga Coal	Open cut coal mine	Narrabri	2006-2029		120
Rocglen Coal	Open cut coal mine	Gunnedah	2008-2020		55
Narrabri North Coal	Underground coal mine	Narrabri	2010-2031		330
Boggabri Coal	Open cut coal mine	Narrabri	2012-2033		600
Maules Creek Coal	Open cut coal mine	Narrabri	2013-2034		450
Sunnyside Coal	Open cut coal mine	Gunnedah	2009-2020		40
Whitehaven CHPP (Gunnedah)	Coal handling plant	Gunnedah	2002-2022		10
Total					1675
Approved projects					
Watermark coal project	Approved open cut coal mine	Gunnedah	30 years	600	600
Vickery Coal	Open cut coal mine	Narrabri / Gunnedah	not yet commenced		
Proposed projects					
Whitehaven CHPP	proposed extended operation of coal handling plant	Gunnedah			
Narrabri Gas project	Proposed natural gas development	Narrabri	20-25 years	1,300	345
Vickery extension project	Proposed open cut coal mine	Narrabri / Gunnedah	24 years	500	450
Narrabri South Solar Farm, Canadian Solar	Proposed 60MW solar facility	Narrabri	30 years	200	4
Gunnedah solar farm			30 years	150	6-10
Inland Rail (2 projects Narromine to Narrabri and Narrabri to North Star)	488 km new and upgraded rail track and associated facilities	Narrabri and others	24 months to 2025	180	0
Narrabri North Underground mine	proposed expansion to underground mine				
Maules Creek Coal	proposed expansion planned for 2021	Narrabri			
Boggabri Coal	mooted expansion	Narrabri			
APA pipeline	Proposed gas pipeline	Narrabri			
Tarrowonga	Two recent modifications sought, not yet approved				
Total				2930	3080

Key elements of Narrabri’s social profile

A social profile documenting the relative position of Narrabri LGA vis-à-vis NSW as a whole on a number of social quantitative and qualitative indicators is provided at Attachment 1. Key elements of the profile are as follows.

Population

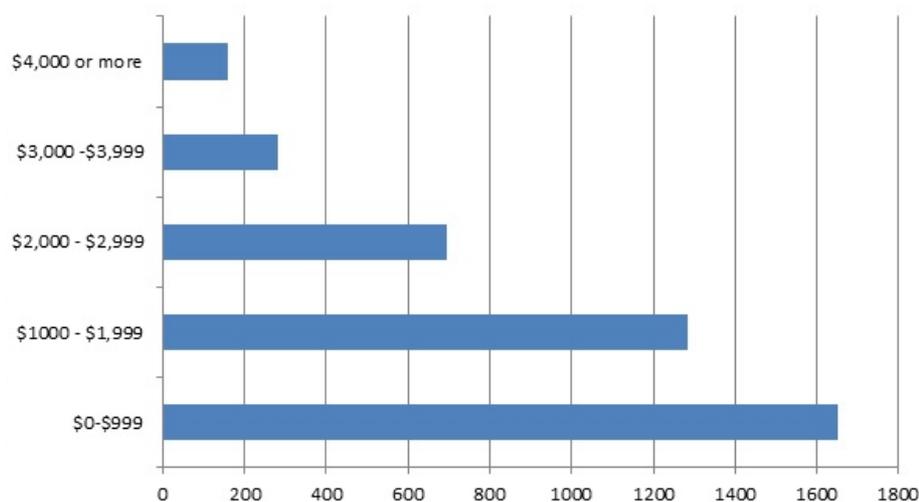
Narrabri LGA is experiencing a slight decline in population mainly in the working age groups 15-64. The median age of the population as a whole is 40, but the median age for Aboriginal residents is 22.

Household income

Table 3 : Household income (weekly) Narrabri LGA, 2016

Income	# all households	% all households
\$4,000 + per week	160	3.4%
\$3,000 + per week	283	6.1%
\$2,000 - \$2,999 per week	696	15.0%
\$1,000 - \$1,999 per week	1284	27.8%
\$0-999 per week	1652	35.8%
Partially or inadequately stated	559	12.1%
Number of households	4,625	

Figure 1: Weekly income x number of households, Narrabri LGA, 2016



Source table and chart: ABS, 2016 Census, Community profile for Narrabri (A) (LGA 15750)¹

The household income data demonstrate a steep social gradient in Narrabri LGA. Fewer than 10% of households have a weekly income of \$3,000 or more.

¹ Please note that ABS makes small random adjustments to all cell values to protect the confidentiality of data. These adjustments may cause the sum of rows or columns to differ by small amounts from table totals

The largest proportion of households (35.8%) have a weekly income of less than \$1,000 per week.

The median weekly personal income was \$629 in Narrabri compared with \$664 for NSW as a whole. Median household income was \$1,209 compared with \$1,486 for NSW.

Table 4: Weekly household income, 2016, Aboriginal and non-Aboriginal households

Income	# Aboriginal households ²	% Aboriginal households	# non-Aboriginal households	% non-Aboriginal households	% all households
\$3,000 + per week	58	8.7%	402	10.2%	9.5%
\$2,000 - \$2,999 per week	77	11.5%	622	15.7%	15.0%
\$1,000 - \$1,999 per week	186	27.8%	1099	27.8%	27.8%
\$500 - \$999 per week	141	21.1%	731	18.5%	18.9%
\$0-499 per week	136	20.4%	641	16.2%	16.8%
Partially or inadequately stated	90	13.5%	462	11.7%	11.9%
Number of households	668		3958		4,625

Source: ABS, 2016 Census, Community profile for Narrabri (A) (LGA 15750)

In 2016, there was no difference between the proportion of Aboriginal and non-Aboriginal households with a weekly income of \$1,000 - \$1,999. Proportionately fewer Aboriginal households than non-Aboriginal households had an income of more than \$2,000 per week and proportionately more had an income of less than \$500 per week. However, in terms of numbers, there were almost five times more non-Aboriginal households as Aboriginal households with incomes of less than \$500 per week.

Personal income and unemployment

The distribution of personal income similarly shows a steep gradient. In 2016, ten percent of income earners earned 32% of total income³ earned. Aboriginal residents are disproportionately represented in the lower income brackets.

This difference may partly be accounted for by the difference in unemployment rates which was 18.9% for Aboriginal residents in the labour force in Narrabri in 2016 compared with 6% for the labour force overall. In 2016, 98 Aboriginal residents were enumerated as unemployed.

Aboriginal residents in Narrabri are less likely to have completed year 12. They are more likely to be renting their homes and to need an extra bedroom for the

² Defined by the ABS as 'a household that had at least one person of any age as a resident at the time of the Census who identified as being of Aboriginal or Torres Strait Islander origin.'

³ Defined by the ABS as 'the sum of income received from all sources before any deductions such as income tax, the Medicare Levy and Medicare Levy Surcharge or salary sacrificed amounts are taken out (excl. Government pensions and allowances)'. (Source: 1287.0 - Standards for Income Variables, 2015)

number of residents in the household. Median weekly rent in Narrabri is the same for Aboriginal and non-Aboriginal households.

Public health

A number of key indicators of public health are less favourable in Narrabri than for NSW as a whole, including life expectancy, circulatory disease hospitalisations and deaths, smoking hospitalisations and deaths, alcohol attributable death, diabetes hospitalisation and chronic obstructive pulmonary disease hospitalisations.

Narrabri LGA has higher rates of intentional self-harm hospitalisations, and other mental health issues.

Crime

Rates of domestic assault and apprehended violence order breaches have increased over the last five years. Narrabri also experiences higher rates of malicious damage to property, disorderly conduct, theft and sexual offences than state averages.

Motor vehicle accidents

Since 2015 Narrabri LGA has experienced an increase in the rate of casualties as a result of traffic accidents.

Social position of Aboriginal residents in Narrabri LGA

The social profile (Attachment 1) reveals the relative disadvantage of Aboriginal residents in Narrabri which is also summarised in the following table taken from the ABS (Table 5).

Table 5: Selected medians and averages, Narrabri LGA

Item	Aboriginal and/or Torres Strait islander persons / households with Indigenous persons	Non-Indigenous persons / other households
Median age of persons	22	43
Median total personal income (\$/weekly)	456	660
Median total household income (\$/weekly)	1,035	1,298
Median mortgage repayment (\$/monthly)	1,300	1,408
Median rent (\$/weekly)	200	200
Average number of persons per bedroom	1.0	0.8
Average household size	3.0	2.4
Proportion of dwellings that need 1 or more extra bedrooms	7.4	1.8

Source: 2016 Census of Population and Housing, Aboriginal and Torres Strait Islander Peoples Profile, Narrabri (A) (LGA15750)

The social position of Aboriginal people in the town and region is not addressed in the Cultural and Heritage Assessments of this project. There is one paragraph

(# 26.2.5) in Santos' SIA in which the size of the Aboriginal population is noted. This represents a very substantial omission in documentation and a failure to consider likely social impacts affecting Indigenous communities.

Community perspectives

Submissions, surveys and alliances

There is substantial evidence of opposition to this project among residents of the LGA and region. The EIS attracted an exceptional 23,000 submissions which as Santos notes in its Response to Submissions, were 98% in opposition to the project.

There were 103 submissions from special interest groups. Of these, 91 (88.3%) opposed the project, two (1.9%) raised concerns and 8 (7.8%) were in support (see Attachment 2). DPIE also classified 158 submissions from organisations (including the 103 special interest groups) according to whether they were in opposition, in support or were making a comment. According to DPIE's classification, 109 of 158 submissions were in opposition (69%). Only 18 submissions (11.4%) were in support with 31 recorded as making a comment (19.6%) (see Attachment 3).

The GISERA Social Baseline Assessment: Narrabri Project – Final Report states:

The research project was undertaken over a 15 month period with the survey conducted in March- April 2017 following a qualitative study investigating expectations and perceptions of the CSG sector, which was used to inform the survey questions. The interviews conducted as part of the qualitative study, along with later feedback sessions on the survey findings, both helped with interpreting the overall findings for this final report...

The research found that three broad groups of attitudes towards CSG development in the shire could be identified from the data: those opposed (30.5% of residents who 'reject'), lukewarm (41.7% of residents who would 'tolerate' or be 'ok with it'), and those very supportive (27.8% of residents who 'approve' or 'embrace' CSG development). These attitudes towards CSG were more negative than in Qld CSG regions with a higher percentage of residents rejecting CSG development (30% Narrabri NSW, 13% Western Downs QLD, and 8% Eastern Maranoa QLD). (Walton et al. 2018 p5)

Lock the Gate Alliance, in its submission to DPIE, stated:

Over the last 4-5 years, community-based, neighbour to neighbour, surveys have been diligently conducted by local communities across the North West region. Survey teams visited every house in their district, inviting residents to respond to the question, “Do you want your land/road gasfield free?” Across the North West, 101 communities in the North West have overwhelmingly rejected gasfield expansion on their lands and rural communities and declared themselves gasfield free by this process.

Community survey teams were diligent in visiting every house in their locality and the results are overwhelming: on average, 96% of respondents want their homes, farms and communities to be gasfield free across an area covering 3.28 million hectares surrounding the Pilliga. (Lock the Gate submission dated 22 May 2017, p 18)

A North West Alliance (NWA) survey of 839 residents of Narrabri town found 52% opposed, 28% in favour but 20% chose to abstain or said they didn't know.

No CSG Gilgandra District Inc reported their survey results as follows:

The Gilgandra Shire survey area covered 483,600 hectares. There are approximately 1750 dwellings in the Gilgandra Shire with a confidence rate that 96% of those dwellings had at least one or, in most cases more, participating in the survey. The results were:
98.09% of the residents over the age of 16 have answered YES to wanting their roads and lands Gasfield Free,
1.54% answered Not Sure, and 0.37% answered No'
(No CSG Gilgandra District Inc 14 May 2017 p 2, emphasis in original)

In its Response to Submissions, Santos notes:

The majority of submissions received (98 per cent) expressed objection to the project while the remaining submissions either expressed support (1 per cent) or made neutral comments (1 per cent). The significant number of form letters had a large influence on overall support.

Around one third of all submissions from the Narrabri local government area were in support of the project. When the influence of form submissions was removed, support for the project in the

Narrabri local government area was around 58 per cent. (Santos RtS n.d. p ii)

Table 6 provides a summary of submissions and surveys regarding the proposed project.

Table 6: Summary of survey sources of opposition/support for the proposal

Source	Oppose %	Comment / not sure or lukewarm / abstain %	Support %
Submissions from 103 special interest groups (Attachment 2)	88.3%	1.9%	7.8%
DPIE Analysis or submissions from 158 organisations (Attachment 3)	69%	19.6%	11.4%
SANTOS RtS analysis of submissions	98%	1%	1%
SANTOS RtS analysis of submissions (excluding form letters)	Not stated	Not stated	58%
GISERA	30.5%	41.7%	27.8%
Lock the Gate Alliance regional surveys (submission)	98%	Not stated	Not stated
Lock the Gate survey results for NW NSW communities	96%	0	4%
NWA Narrabri town survey	57%	20%	28%
No CSG Gilgandra District Inc	98.09%	1.54%	0.37%

Submissions and surveys are not the only indicators of community opposition. The gas field proposals have also generated organisational responses including the formation of several alliances or peak community organisations such as [Lock the Gate Alliance](#) with more than 120,000 supporters and more than 450 local groups, [CSG Free North West NSW](#) which has 30 group memberships, and [Knitting Nanas against Gas](#) with groups in four localities. The number of submissions in opposition, the proportion of submissions which are in opposition, and the development of organisations and alliances which are leading a sustained level of response all indicate that opposition to CSG extraction is likely to be long lasting.

The views of Aboriginal communities

In addition, there is under-representation of Aboriginal perspectives on social impact issues in the consultation feedback. Indeed, none of the surveys identified above explicitly reported the views of Aboriginal groups in the Narrabri or neighbouring LGAs.

Chapter 20 of the EIS reported:

Approximately 550 Aboriginal people expressed an interest in being involved in consultation in relation to cultural heritage for the

project – the ‘Registered Aboriginal Parties (RAPs)’. The proponent has fully complied with the NSW Government’s consultation requirements for RAPs. Eleven meetings were held with RAPs in the towns of Wee Waa, Gunnedah and Narrabri. In addition, a site visit was also undertaken for RAPs wishing to attend. All information was mailed to RAPs that could not attend meetings.

... three meetings were held between 2 and 4 September 2014 in Wee Waa, Narrabri and Gunnedah. All Registered Aboriginal Parties received written invitations to attend these meetings. Additional project information was provided at meetings... a second series of meetings was held in Gunnedah, Wee Waa and Narrabri from 15 to 17 September 2014. A field trip was also undertaken on 17 September 2014 with Registered Aboriginal Parties ... the 28-day comment period for the assessment methodology closed on 7 October 2014. A register of the submissions issues and responses is provided in Appendix N1. (EIS ch20 p 3)

Chapter 20 of the EIS concerns Aboriginal culture and heritage.

It appears from Technical Appendix T1 to the SIA that only the Narrabri Aboriginal Land Council was consulted about social impact issues. This consultation took place in February 2014 and concerned ‘Baseline information, existing issues, potential impacts and management measures related to local Indigenous community’ (EIS T1 p20).

What these issues and potential impacts were is not disclosed. The Technical Appendix T1 goes on to say that unemployment among Aboriginal residents in Narrabri LGA was 26.3% in 2011, which is five times the rate of 5.4% for the total Narrabri population and one and a half times greater than the unemployment rate for Indigenous persons in the labour force in NSW as a whole (16.9%) (EIS T1 p34).

Further, Aboriginal residents’ individual weekly income was significantly lower in Narrabri LGA as compared with non-Aboriginal individuals, and as compared with Indigenous persons in NSW as a whole. Aboriginal persons living in Narrabri were twice as likely to rent their accommodation than residents as a whole and almost three times less likely to fully own their home (EIS T1 p35).

This information is quite out of date. Five years have elapsed since the original SIA was written which would seem to have provided more than enough time to

complete an adequate consultation with more Aboriginal groups. As far as can be ascertained from the documents, this has not happened.

The concerns of Aboriginal residents are a central issue in this social impact assessment. This is due to the size of the local Aboriginal population (12.2% of the population of the LGA in 2016), their socio-economic position, and their standing as cultural guardians of their traditions and heritage which is inextricably bound up in land. As the Narrabri Local Aboriginal Land Council (NLALC) noted:

‘As we have 95% of land within this project the impact on Culture and Heritage protection within this boundary is of the utmost importance.’ (NLALC Submission 2017 p 1)

The Land Council went on to say it fully supports the proposal because

‘it gives us the opportunity and a focus to be able to be negotiating better outcomes for protection of our Culture and Heritage.’

And further

‘we feel that we as the Narrabri Local Aboriginal Land Council will become a commercial business within this project this will give us the opportunity of assisting the local Gomerioi Narrabri Aboriginal Corporation. (NLALC Submission 2017 p2)

However, the NLALC’s submission concerns cultural heritage issues not social impact issues – except indirectly via the possible business outcome for the LALC. The Dharriwaa Elders Group, the Gomerioi Traditional Custodians and a representative of Yarn, Support, Connect (Coonabarabran) oppose the project in their written and verbal submissions to the IPC.

It appears therefore that the social impacts of this project have not been canvassed or adequately canvassed with Aboriginal groups in the region. While brief references in the EIS (EXS p11) and the RtS (6-243-4) to opportunities for employment and training for Aboriginal residents might indicate some conversations have taken place with some Indigenous persons or groups, this is entirely unsatisfactory as a basis for social impact assessment of the project on these communities. The views of these and other Aboriginal groups are critical because this population group is at particular risk of distributional inequity.

Summary: community perspectives

Clearly the weight of opinion in these consultation results and organisational responses is in opposition to this CSG extraction proposal, although in the case of the GISERA survey, the largest group of respondents reserved their opinion.

There is not enough information to evaluate the impartiality of survey methods used, nor the manner of their administration. It should be noted that form letters, individual, group and organisation letters of support or opposition are all vulnerable to manipulation and should be seen in the context of both the public relations efforts of the proponent as well as community campaigns. Further, while all consultation methods have their limitations, there appears to have been a significant and avoidable failure on the part of Santos to consult with Aboriginal groups in the town, LGA and region on social impact issues.

Notwithstanding these qualifications, there is clear evidence of substantial opposition to, and concern about, this project among residents of the local and regional communities, as well as across NSW. This level of concern is in itself a social impact. The degree of opposition and its institutionalisation in several organisational arrangements in the local and regional communities is such that it is likely to have continuing flow-on social impacts, and these will be exacerbated if the project is approved and social benefits claimed for the project do not eventuate. This is discussed below.

Social benefits

Santos has provided an assessment of likely social benefits for the local and regional communities (see EIS Executive Summary). The social benefits identified are:

- construction jobs
- operational jobs
- job and training opportunities for Aboriginal residents
- increase in job diversity
- local procurement
- potentially a gradual increase in resident population
- additional income, where agreed, for affected landowners, and
- a Gas Community Benefit Fund.

Each of the proposed social benefits is dealt with in turn.

Construction jobs

Santos' SIA proposes that construction of the gas wells and pipeline will generate 1300 jobs for a period of 3-4 years. About 130 of these construction jobs (10%) will be filled by people living in Narrabri or within a one-hour drive of the project (EIS 26-11). That is, the economic benefit of these jobs will largely accrue to people living in other parts of NSW or Australia (viz. 90% of workers). The economic benefit to the town arising from construction jobs will last at most for four years (till construction is completed) and largely accrue to the operators of the non-resident workers (NRW) hostels (which will accommodate and cater for the 90%). These operators may procure additional supplies locally, but see the section below on local procurement.

Operational jobs

The documents attached to the EIS provide three different statements about the operational jobs for the remainder of the 20-25 years of operation. This is summarised in Table 7 below as follows.

Table 7: Estimates of operational jobs

Source: EIS ch. 26 p12	Source: EIS Appendix T1 p 51	Source RtS 6 pp 253 & 261
345 jobs of which 55 are expected to employ existing residents. Another 25 jobs are estimated to be taken by people relocating to Narrabri. 220 jobs in other parts of the state or Australia	'General operations workers 200 FTE <input type="checkbox"/> 25% (approximately 50 workers) existing Santos Narrabri operations team <input type="checkbox"/> 20% (approximately 40 workers) existing Narrabri residents or residents within 1 hour driving distance <input type="checkbox"/> 25% (approximately 50 workers) workers based in Sydney / Brisbane / Adelaide <input type="checkbox"/> 5% (approximately 10 workers) Fly-in-fly-out workers (FIFO) <input type="checkbox"/> 25% (approximately 50 workers) workers relocating to Narrabri from elsewhere'	'average direct and indirect employment over the 25-year assessment period of 512 full time equivalent jobs in NSW, including: – 127 full-time equivalent jobs in the Narrabri LGA – 161 full-time equivalent jobs in the wider region – 224 full-time equivalent jobs in the rest of NSW.'

These lists may refer to the same data sources, but it is not possible to tell this from the information provided. Further, the EIS sources refer to employment in CSG jobs, whereas the Response to Submissions includes indirect or flow-on employment. – that is, the data is not comparable with that provided in the EIS. There is no information about the kinds of jobs (relative to skill components) that would be available to local residents with limited schooling and/or certificate level qualifications.

However, each list does make clear that most of the on-going operational jobs generated by this project would be held by people not living in the Narrabri LGA or within a one-hour drive of the project, but living elsewhere. This again means that the economic benefit to the town will be limited and will derive mainly to the operators of the NRW hostels.

Santos does not provide the basis for these job estimates.

Another version of these estimates is provided by DPIE in its Final Assessment Report which anticipates

- 95 operational workers will be already resident in the (1 hour) region (DAR para 564), and
- 50 operational workers are expected to move to the LGA (DAR para 569)

This is a total of 145 operational workers already in the region or expected to move there from somewhere else.

DPIE also anticipates 127 FTE jobs in the LGA (DAR para 544) and 162 FTE jobs in the wider region (15 LGAs⁴) (DAR para 544). This information not only uses unclear geographies (the LGA is not the same as the region defined as within 1 hour of the project) it presents a picture in which

- the number of workers (already resident and incoming) exceed the anticipated FTE jobs in the LGA and fill 90% of these in the wider region
- not enough operational workers are able to be recruited locally and so some 50 workers will be recruited from elsewhere.

And this in turn suggests that most local recruits will be skilled and thus already employed and will change jobs to work on this project.

There are a number of ways a community can benefit from job creation. These are: unemployed people obtain work, employed people improve their income and local businesses benefit from the increased spend in the local area. But for this project all of these potential benefits seem unlikely or at risk.

The SIA does not provide an estimate of the number of currently unemployed people who might obtain work at this project. There is no estimate of the number of vacancies likely to result from people changing jobs and the extent to which these vacancies might provide work for people currently unemployed.

⁴ Narrabri Shire Council submission to DEP re Santo Narrabri Gas Project SSD 6456 dated 18 May 2019 P15: <https://majorprojects.planningportal.nsw.gov.au/prweb/PRRestService/mp/01/getContent?AttachRef=SSD-6456%2120200611T032553.183%20GMT>

There has been no attempt to match the skill profile of the unemployed in Narrabri with jobs that may become available.

The estimate that 50 operational workers will be recruited from elsewhere is actually only an estimated shortfall of local recruits. Some of these workers, or their families, may prefer the FIFO option. This would reduce the increase in permanent residents and the anticipated local spend.

There is also a risk that competition for skilled local residents creates flow-on effects on local businesses and residents and those flow-on effects are not socially beneficial.

‘When regional towns become service centres for the gas industry, existing businesses often lose their skilled staff, have to compete with inflated gas industry wages and face higher costs for rent and services. Workers work long shifts in self-contained camps and have little opportunity to spend money locally, and companies often bypass local suppliers’ (Ogge 2015 p17).

However, Santos advised in response to a report prepared by the Centre for Social Responsibility in Mining (CSRM 1)

‘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.’
(Santos Reply to CSRM 1 p4)

And

‘Often socio-economically disadvantaged groups in a community are unable to take advantage of economic benefits’
(Santos Reply to CSRM 1 p10)

The EIS estimates of 55 or 40 new operational jobs for local residents (Table 7) is consistent with this estimate by Santos. It would mean some 40-55 consequent local vacancies and limited flow-on social costs in terms of higher rents and prices. The Department offers an estimate of 95 local workers. But the reason for arriving at a different estimate is unclear.

Summary

The case for social benefits for the local community from this project (summarised above) largely relies on anticipated jobs and their flow-on benefits

in terms of population increase and expenditure benefits for local businesses. However, the material relied on is presented using different geographies and estimates which have not been related to the social and employment situation of the LGA. Because the assessment of social benefit to the locality is so reliant on local jobs, inconsistency and lack of transparency regarding this information is critical. As it stands, however, it is unclear on what basis the Department says

The project would generate a range of major positive social impacts in the local community through job creation (DAR para 556)

A more realistic interpretation of the operational jobs benefit of this project would seem to be that most jobs would be located elsewhere. The small number of local jobs would marginally increase the town's current reliance on resource extraction industries⁵, but not contribute a noticeable reduction to unemployment rates in Narrabri nor provide major positive social impacts.

Job and training opportunities for Aboriginal residents

The 2016 Census recorded that 98 of 518 or 18.9% of Aboriginal residents in the labour force in Narrabri LGA were unemployed, compared to 6% of the Narrabri population as a whole. However, the unemployment rate for Aboriginal residents has decreased since the previous Census in 2011 (26.3%). The median total personal weekly income was \$456 for Aboriginal residents compared to \$660 for non-Indigenous residents, but the median weekly rent was the same at \$200 per/week for both Indigenous and non-Indigenous households. In 2016, twenty three percent (22.9%) of Indigenous residents of Narrabri had completed year 12 at school, compared to thirty eight percent (37.6%) of non-Indigenous residents.

These data indicate a level of social and economic disadvantage among the Aboriginal residents of Narrabri LGA, but their position in the local community is not described in the SIA, even though they currently comprise 12.2% of the population. The proposed social benefit of the project for Aboriginal persons described in both the Santos SIA and the RtS should be read in the context of this substantial omission. The SIA and the RtS simply say

'There will also be opportunities for employment and training provided under the project.' (EIS EXS p 11; RTS 6-243-4)

With the fullest description being found in Technical Appendix 1:

⁵ 18% of Narrabri residents in the workforce currently work in mining. Another 55 local jobs would increase this to 19%

‘To encourage Indigenous participation in the development of Santos projects and operations, a *Diversity and Equal Opportunity Policy* would be implemented to maximise Aboriginal employment including for contractors (refer to Appendix A of this report). The 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.’ (EIS T1, p70)

These words describe a policy, not a commitment to an outcome. There are numerous barriers to relative social equality for this large population group. These barriers should be addressed with tangible initiatives which are likely to achieve results, and to which the proponent is committed. Without this level of detail and commitment, these social benefits have the status of unenforceable assurances.

For example, to achieve parity of unemployment rates for Indigenous and non-Indigenous residents via this project, Santos would need to provide Aboriginal residents with training for placement in $(98-31=)$ 67 jobs. – This is the number of jobs which would reduce Aboriginal unemployment to 6%. But this would mean offering all 55 local operational jobs (or 40 jobs according to Appendix T1) to Aboriginal workers which is unlikely to happen when there are also 254 non-Indigenous residents unemployed. This simple calculation illustrates the difficulty and the inadequacy of the assurances offered.

Finally, it is also unclear whether (for example) some places on training programs will be reserved for Aboriginal residents or it is intended to provide training for Aboriginal workers separately to other training programs and for which jobs. The lack of clarity about each of these important issues undermines the assurances provided.

Summary

There is not enough information about employment and training opportunities for Aboriginal residents to give credibility to the one-line assurance in the documents.

Increased job diversity

The claim of increased job diversity appears to be focused on the current resident population which the SIA anticipates to benefit from the project (Table 7 above). The actual number varies from document to document (Table 7), and ranges between 55, 40 and 127 (FTE) jobs for local people. Taking the upper and most recent estimate, this would add 127 jobs to 6303 jobs (2016 Census), making a 2% difference overall. If all 127 were classified as mining jobs, this would increase mining jobs from 18% to 20% of occupations in the LGA. However, as these jobs would be mining dependent, they would not change the position of mining as, marginally, the largest source of employment in the LGA.

In presenting her submission to the Commission, the mayor of Narrabri Councillor Redding said

This project, in conjunction with Inland Rail and our proposed inland port, has the potential to deliver jobs and opportunities well into the future for our people. (IPC Meeting 20.7.20 p41)

These two projects should not be confused. The prospectus for the proposed port is for a proposed freight and logistics terminal servicing the eastern states of Australia. It is intended to benefit from a proposed inland rail route. There is nothing in the prospectus⁶ to suggest that the port would rely on the gas project for its viability or be constructed prior to exhaustion of the gas supply.

Summary

Only a small impact on local job diversity from the gas project is likely.

Local procurement

There are two NRW camps in the region.

The CIVEO workforce accommodation villages in Narrabri and Boggabri have a combined capacity of over a 1000 beds at present,

⁶ Narrabri Shire 2019, Northern NSW Inland Port, Prospectus, September:
<http://www.narrabri.nsw.gov.au/files/uploaded/file/Media%20Centre/Narrabri%20Shire%20Council%20Prospectus.pdf>

and are approved for a combined capacity of over 1,500 beds.
(EIS Appendix T1 p 48)

As the camps consist of demountable buildings, it is expected that they will be able to cope with accommodation requirements for both construction and operational workforces, taking account of the fact that usually 25% of the workforce would be rostered off at any one time.

The low number of beds required for operational workers is based on an estimate that 90 workers will already be living in Narrabri or within 1 hour's drive of Narrabri and another 50 workers will relocate to Narrabri and rent or buy a house there. No evidence is provided to support this assumption. However, as the numbers are low, the NRW camps could, if necessary, also accommodate these workers.

Table 8: Estimated NRW bed requirements in construction and operational phases

Accommodation requirements for rostered on NRWs at peak construction	Accommodation requirements for rostered-on ongoing construction workers	Accommodation NRW requirements for rostered-on on-going operational workers
740 general construction NRWs at peak period + 188 drilling and completions NRWs (250 x 75%=188)	131 ongoing construction NRWs (145 x 90%non-local) x7 5% rostered on = 98 beds	10 FIFO operational workers
Total additional NRW bed requirements each roster = 928	Total NRW bed required in operational phase:	108 beds

Source: EIS Appendix T1 pp48-49

While the basis for these estimates is unknown, they indicate that CIVEO might need to bring in some demountables to accommodate NRWs over the 3-4 year construction period. During this time requirements for provisions, house-keeping, cleaners and other provisions or needs would increase. After 3-4 years this effect would cease.

The Executive Summary of the SIA states that one of the policies proposed to be implemented to minimise negative social impacts arising from this project is

a procurement policy directed at local businesses, suppliers and labour to enable them to participate in the project (EIS 26 p ii)

However, at p70 of the same document, it is apparent that this system is already in place:

A procurement and contracts officer is employed locally who works closely with local businesses to assist them to become compliant with the levels required for environment, health and safety under the

contractor and supplier management standards. Local business and contractor forums are also held annually to promote local vendor participation in project activities and it is envisaged that this will continue. (EIS 26 p 70)

This paragraph describes the hurdles faced by local businesses if they wish to supply goods and services to CIVEO.

And in T2, it is noted

... it is envisaged that the project will be serviced by the wider region from a point of view of supply of workforce, goods and services. (EIS Appendix T2, p26)

The wider region extends to large regional towns with larger retail outlets able to meet procurement requirements.

Summary

A system which is already in place is not a social benefit of a project which has yet to happen. At most, some local businesses may provide more supplies of some items to CIVEO for three to four years, but this will be a short-lived increase in trade. The increased demand will not even last for the duration of the project's life.

Potential gradual increase in the resident population

This potential increase seems to be dependent on 50 operational workers deciding to relocate to Narrabri, potentially bringing other members of a household with them. If each such household comprised three people, this would add 150 people to the resident population of 13 084, or an increase of 1%. The main problem with this proposed social benefit is that it is speculative and may not occur. A second problem is that it assumes there is no loss of population due to the project. A third problem is that the operational workers who move to Narrabri to work on this project may leave when the supply of gas declines or is exhausted.

Summary

This proposed benefit is both speculative and temporary.

Additional income, where agreed, for landowners

Santos states: 'An additional income stream in the form of compensation provided by Santos to landholders who agree to host gas field infrastructure' (EIS Appendix T2 p 61). At EIS Appendix K Agriculture Impact Statement, GHD estimates, on behalf of Santos, that this would amount to \$33,600 in the first year of operations for a land holding of 3 hectares, and \$50,000 each year from year two onwards. It is not clear whether the 'operation phase' includes the construction years. However, in year two onwards, the financial benefit to the landowner includes a \$20,000 'share of Santos' royalty payments'. This amount is notional and will be affected by gas price.

There is no doubt that an annual fee will be welcome in the currently drought-affected agriculture areas. It is less clear whether this relatively small fee will offset perceived risks and other adverse impacts from the point of view of landowners. For example, Farmers for Climate Action in submission to the DPIE noted:

Potential damage to ecosystem services including healthy soils and access to safe ground water is a high concern for Farmers for Climate Action. Local and international studies demonstrate that contamination of underground aquifers poses a genuine risk to underground water supplies. (Farmers for Climate Action May 2016)

Further, the EIS does not envisage a situation in which a significant number of landowners do not agree to having a gas well on their land and what the consequences might be for those landowners who do. In effect, the EIS proceeds as if refusals will be rare. There is no evidence for this.

Summary

There is no analysis of the relationship between the compensation fee and costs experienced by landowners who agree to permit wells on their land. It is also not clear what the situation would be if a significant proportion of landowners refused.

Gas Community Benefits Fund

Gas Community Benefits Funds (GCBF) are administered by the Rural Assistance Authority (RAA). Santos states that a key benefit of the project can be:

... The establishment of a regional community benefit fund equivalent to five per cent of the royalty payment made to the NSW Government within the future production licence area. If matched by the NSW Government, the fund could reach \$120 million over the next two decades. (EIS Appendix T2 p 1).

The figure of \$120 million is no more than a possibility.

The Fund is intended to facilitate a beneficial relationship between a gas extraction company and its host communities, by funding projects and promoting community development. The RAA describes the role of the Fund as follows:

The principal objective of the Fund is the provision of benefit to the local community. The other benefits are to ensure that:

- lasting and mutually beneficial relationships are developed between gas companies and the communities in which they operate;
- local communities are involved in decisions to fund projects in the local communities;
- funding decisions promote community development projects that support local and social enterprise, are transparent and there is accountability for these decisions; and
- efficient, effective and transparent governance and administration arrangements for the Fund.⁷

Specifically, Santos proposes:

Santos will continue to work in partnership with local communities and invest in social infrastructure and economic development opportunities that address impacts created by the project and/or leave a positive legacy for the local communities with these benefits being applied across the local community in the areas of health, education, environment, economic development, heritage and sport, arts and culture (also refer to Section 6.3.1). Santos will continue to engage with Narrabri Council and the State Government to finalise the Gas Community Benefit Fund arrangements including administration and governance and the process for identifying projects.

⁷ <https://www.raa.nsw.gov.au/grants/gas>

In addition to generating local employment, business and training opportunities, Santos will participate in community events and activities and will provide support through community sponsorships. Sponsorship investment initiatives will contribute through:

- supporting natural environment initiatives that protect and enhance land and water, this will include supporting activities such as research and educational programs, sustainable agricultural projects, water preservation projects, land conservation, disaster preparedness, community clean ups, reforestation and cultural heritage.
 - providing a range of training and employment opportunities for young people and regional communities this will include activities such as traineeships, apprenticeships, regional skills training programs, rural leadership programs, partnerships with charities focused on young people.
 - helping local towns to be healthier and more vibrant and enriching the lives of those who live there, including support for activities such as arts and community festivals, health charities and events.
 - Santos has developed an eligibility and non-eligibility criteria for the sponsorship investment which will be available of [sic] Santos' website. Santos would report on its community investment initiatives and outcomes as part of the annual Sustainability Report.
- (EIS Appendix T1 p76)

Although the Minister for Resources and Geoscience can approve a local Community Benefit Fund, details about how a local Fund would differ from other GCBF's administered by to the RAA are not available. The Department's Final Assessment Report notes that Narrabri Council has asked for changes to the proposed Community Benefit Fund, but the final form of the Fund has yet to be determined (DAR p45). As a result, this review points out several aspects of the general GCBF rules that undermine its use as an effective community development tool. Namely:

- 1 Under current rules, 'a maximum of \$500 000 is available per project'.
- 2 Distribution of Fund monies rests with the RAA, not the local CGBF committee.
- 3 The CGBF operates reactively, that is, it considers applications for funding of short-term projects. It is not a pro-active funding arrangement to meet infrastructure needs determined by the local community.
- 4 Although the above statement opens with an intention on the part of Santos to invest in social infrastructure, the examples provided are short term or ephemeral. They include activities, events, festivals, training opportunities,

community clean-ups, education and research programs. It does not appear to be the intention of the RAA or Santos to use this Fund to pay for enduring social infrastructure, such as a building or a child care centre.

- 5 The extract quoted above (EIS Appendix T1 p76) that Santos intends to use the Fund to meet its commitments to providing apprenticeships and training. This appears to be double counting its contribution.
- 6 The amount per project is limited, and guidelines published by the RAA state that only in exceptional circumstances approved by the Minister will projects with a life of more than 2 years be considered.
- 7 Although Santos states that there will be a local Community Benefits Fund Committee, this Committee can only make recommendations. Fund disbursement decisions are made by a Panel, that is, the decision is not made locally.
- 8 The description in the EIS does not make clear that while Santos will benefit by being able 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' (EIS Appendix T1 p 59), and these amounts may not be returned fully to the host community, in this case Narrabri LGA.
- 9 Applications for project funding are competitive and proposals for funding may be rejected by the Panel.
- 10 The RAA also does not provide any guarantee that the Panel's decisions will give priority to, say, health and education over, say, sport and recreation. In fact, the Fund Guidelines' nine evaluation criteria are silent about the relationship between projects and their outcomes.⁸
- 11 The RAA states

Each Committee shall consist of an Independent Chair and at least 5 (but no more than 6) representatives with:

At least 2 representing different interests of the local community (not already holding a position on the existing Community Consultative Committee (CCC)), 1 from the gas titleholder, 1 from the local government, and 1 from the NSW Government⁹

And the EIS appears to envisage that the local GCBF Committee would be largely managed between Santos and Narrabri Council.

Santos will continue to engage with Narrabri Council and the State Government to finalise the Gas Community Benefit Fund

⁸ https://www.raa.nsw.gov.au/_data/assets/pdf_file/0009/660861/Guidelines.pdf

⁹ <https://www.raa.nsw.gov.au/grants/gas>

arrangements including administration and governance and the process for identifying projects (EIS Appendix T1 p 59).

- 12 There is no mention in any of the Santos documentation of an intention to include an Indigenous representative on this committee or a representative of any other relatively disadvantaged community group or to ensure that its decisions address the distributional equity of the project's impacts.

Narrabri Council in submission to the Department on 24 May 2018¹⁰ raised a number of concerns re. the proposed GCBF including

- Council believes the guidelines will not achieve ... the intended benefit for the Narrabri Shire Community
- There needs to be greater local government representation on the GCBF committee
- The maximum of \$500,000 per project needs to be increased to \$2,000,000 to ensure that impactful projects can be funded.
- Operational costs of new infrastructure need to be funded, and
- The 'geographical area for the Fund' should be based on where the most significant impact on the community occurs, not the footprint of PELS or Projects and requires a definitive definition to ensure certainty of eligibility of applications.

While it may be assumed that these issues are under negotiation, the Department advises (DAR p 45) merely that discussions continue. Council's list and the list of issues identified above indicate that there are many critical issues to be resolved before this Fund can be considered a suitable and effective community development tool. Further it appears that the local council does not have a suitable community development or social infrastructure plan already prepared¹¹ to manage the impacts of this project on vulnerable local groups for which it might seek funding, As a result there is a risk of ad hoc funding decisions.

Due to its limited scope and ephemeral focus, the expenditure of tax royalty money via the CGBF risks being neither a social benefit for the town or region, nor a mitigation of serious social risks and hazards.

¹⁰ Narrabri Shire Council 2018, Response to Submissions Narrabri Gas Project, 24 May: <https://majorprojects.planningportal.nsw.gov.au/prweb/PRRestService/mp/01/getContent?AttachRef=SSD-6456%2120200611T024350.122%20GMT>

¹¹ That is, such plans are not referred to in Council submissions and do not appear on Council's website

The SIA and the Department's recommendations rely, in part, on the use of \$120m over 20 years to deliver community development outcomes. But it is clear that the reliability of this strategy cannot be demonstrated because it is still under discussion, there are numerous barriers to effective use of the Fund for this purpose, and existing rules and policies would not provide the financial support the Council is seeking for social infrastructure. Further, a local Community Benefit Fund is not included in the recommended conditions of consent despite the fact that the availability of CBF monies appears to be a basis for initiatives included in the Social Impact Management Plan (SIMP).

Summary

As it stands, a Community Gas Benefits Fund provides tax relief and a public relations benefit to gas titleholders, but is not established in ways which ensure that the amount of tax relief rebounds to the benefit of the local (host) community. This is indicated by the following factors:

- there is a cap on the amounts that can be disbursed to any one project;
- the Fund may not be used for long-term social infrastructure provision except in exceptional circumstances;
- administration of the Fund is not required to consider or redress distributional inequity; and
- the capacity of local community groups to influence the recommendations of the local CGBF Committee or the decisions of the Panel is effectively nil.

Community Gas Benefits Funds may function effectively for the gas titleholder's public relations but are not set up to deliver tangible or durable benefits for local communities.

Voluntary Planning Agreement

The Department's Final Assessment Report advises that Santos and Narrabri Shire Council have agreed a Voluntary Planning Agreement (VPA). With regard to the VPA, the Department notes

57. Santos and Narrabri Shire Council have agreed to the terms of a Voluntary Planning Agreement (VPA) for the project, involving the payment of \$14.5 million in contributions.
58. These contributions would be used to fund the delivery of local infrastructure and services in the Narrabri LGA, including:
 - \$10 million for special projects to help drive economic development;

- \$3 million for community initiatives or local infrastructure; and
- \$1.5 million towards local roads maintenance. (DAR p 18)

Thus only \$3 million across the life of the project is for community initiatives or local infrastructure (but not both). In this regard it should be noted:

- There is no readily apparent economic development plan or local infrastructure plan or community initiatives plan on the Council website.¹²
- There is no apparent basis for allocating \$10 million (69%) of VPA funds to economic development but only \$3 million (21%) to community initiatives or local infrastructure.
- As these terms would be usually understood, local infrastructure is not the same as community initiatives. The latter are ephemeral while the former is longer term.
- There is no outline or statement from the council as to how \$3m could be spent so as to offset the adverse impacts of this project on local residents.
- It would appear possible for local infrastructure to be given a broad interpretation (e.g. street lights).
- \$3m would be insufficient to pay for most built items of social infrastructure but might pay for one community hall.
- There is no provision in the VPA for the operational costs of social infrastructure.¹³

Summary

While a VPA provides Narrabri Shire Council with greater certainty about funds to be received for the benefit of local residents, only 21% of these funds are earmarked for social purposes. This is likely to be insufficient for many social infrastructure purposes.

Summary of likely social benefits

In summary:

- The economic benefits of construction jobs for this project will be short lived and largely accrue to people living in other parts of NSW or Australia.

¹² Council's Community Strategic Plan 2017-2027 lists 8 community development strategies of which the most tangible is a meeting place for each town and village. There are 15 economic development strategies. The most tangible of these is to promote the Shire as a state significant manufacturing and logistics hub in regard to which the Council's role is Advocate.

¹³ In the case of a community hall lack of operational funds often means that a hall becomes a hall for hire – available to those who can afford to hire it

- The number of operational and on-going construction jobs for local residents will be relatively few and again, relatively short lived.
- Proposed job and training opportunities for Aboriginal residents lack detail and commitment and thus, credibility.
- Increased job diversity will be marginal, if at all.
- Local procurement is already in place and so cannot be claimed as a social benefit of the project. Any increase in level of local procurement is likely to be limited and largely confined to the construction period.
- An anticipated potential gradual increase in the resident population is speculative and likely to be temporary.
- Compensation paid to landowners who agree to host gas field infrastructure has not been assessed against some of the risks of concern to many landowners.
- There does not seem to be an assessment of what will happen if a significant number of landowners refuse to host this infrastructure.
- A Community Gas Benefits Fund will provide tax relief and public relations benefits for the gas titleholder but is not set up to deliver tangible long-term benefits for local communities.
- Council has agreed a VPA with Santos but the amount allocated for social infrastructure appears inadequate and its purpose unclear.

Overall, the list of social benefits described in the SIA lacks significant substantive benefit for the residents of the town and LGA. As well, the SIA appears to assume that all social benefits from this project will derive from economic or financial benefits experienced locally.

Since the SIA presented by Santos purports to advise the likely social benefits arising from the proposed project – that is, to present the best case scenario - it is reasonable to assume that the authors did not consider there would be other, purely social benefits. While jobs, income and profits are important if and when they occur and are related to social impacts, the absence of any social benefits of the project not tied to jobs, income or compensation payments, for example an absence of improvements to public health, is noteworthy.

Adverse social impacts

According to the proponent

The key potential social impacts of the project would be the impact of the project workforce on community values and housing, and the impact of project infrastructure on landholders and recreational uses of the project area. (EIS Appendix T2 pii)

However, at Table 22 of Appendix T1 (pp66-69), it is apparent that there are other adverse social impacts to consider. Table 22 provides a summary of these and their significance. Four negative social impacts are given a medium significance rating:

- i Potential changes to land use due to locations of wells, flow lines and access tracks on private land;
- ii Potential additional demand on time of landholders hosting project infrastructure, loss of privacy due to presence of workforce on property and uncertainty about the project;
- iii Reduced housing availability and affordability; and
- iv Increased traffic on Newell Highway, Kamilaroi Highway, Tibbereena Street, Old Gunnedah Road, Mooloolbar Street, Yarrie Lake Road and internal property roads.

Additionally in Table 22, seven additional negative social impacts are rated of low or very low significance:

- i Potential for reduced productivity of land and associated livelihoods;
- ii Construction impacts on amenity;
- iii Change to lifestyle and amenity of neighbouring landholders;
- iv Potential competition for skilled labour with other industries in the region potentially creating labour shortfalls and increased labour costs;
- v Potential impact on community values due to the presence of non-resident single male workforce;
- vi Noise, dust and visual impacts of construction on recreational activities at Yarrie Lake; and
- vii Minor increase in demand on health and medical services.

No negative impacts are rated highly significant. All negative impacts, except traffic, are rated as having minor or negligible consequences. This assessment

seems inconsistent with the fact that 23,000 submissions have been made, 98% of which Santos has assessed as opposed to the project.

It is not within our expertise to assess claims and counter-claims regarding air pollution, noise, water quality or contamination, the effects of dust on crops and other effects on agriculture, visual amenity, impacts on bird and other wildlife, the risk of fire and other hazards or damage to farm infrastructure. However, we note that for each of these issues, the proponent has provided assurances which are vigorously contested by other experts.

It is within our expertise to address the following adverse social impact issues which this project appears to raise, namely:

- management of risks, hazards;
- the precautionary principle;
- public health;
- housing;
- masculinisation of the town and its camps;
- distributional equity;
- inter-generational equity;
- social conflict and community polarisation; and
- traffic accidents.

We deal with each of these in turn.

Management of risks and hazards

It is clear from the submissions, survey results and development of alliances that, while the proponent believes the risks to health, agriculture, water supply and air quality associated with the proposal are low or negligible and can be managed, a large number of local and regional stakeholders are not persuaded.

There are a number of factors contributing to this lack of confidence:

- i There seems to be one response applied to many issues, namely that the project will meet current standards.
- ii The proponent relies on the company's good behaviour as an effective response to anything which might or does go wrong, for example, saying:
 - a The company will establish quick and effective emergency responses in the event of incidents (EIS EXS p25).

- b There will be effective management of lifestyle and amenity issues ‘through project Field Development Protocol and commitments which will provide net benefits’ (EIS ch26 pp23-6).
- c A raft of potential impacts will be managed via 20 plans viz.:
- Produced Water Management Plan
 - Erosion and Sediment Control Plan
 - Noise and Vibration Management Plan
 - Soil Management Plan
 - Air Quality Management Plan
 - Cultural Heritage Management Plan
 - Biodiversity Management Plan
 - Pest, Plant and Animal Control Plan
 - Historic Heritage Management Plan
 - Traffic Management Plan
 - Waste Management Plan
 - Bushfire Management Plan
 - Community and Stakeholder Management Plan
 - Decommissioning Management Plant
 - Rehabilitation Plan, and
- The individual monitoring plans that will drive the adaptive management process will include:
- Surface and groundwater (refer to Appendix G3 of the EIS)
 - Biodiversity (refer to Appendices J1 and J2)
 - Rehabilitation (refer to Appendix V)
 - Air quality (refer to Appendix L)
 - Noise and vibration (refer to Appendix M)
- (RTS 6-275 and RTS 6 - 283)

None of these plans are written or available for inspection.

- iii Not included in the above list is the Social Impact Management Plan, although the RtS states that

‘The proponent has also committed to ongoing social impact monitoring and reporting under a Social Impact Management Plan.’
(RtS 6-233-4)

This management plan would appear to be dealing with the benefits described in the SIA, as most of the costs have been described as negligible or of low or very low significance. Again, this plan has yet to be

written. There is no information, for example, to indicate that it would not continue omission of social and health impact issues affecting the Aboriginal population.

- iv 'The proponent has developed a robust Stakeholder Engagement Plan which, along with continued engagement with the Community Consultative Committee, would provide suitable ongoing mechanisms to understand and address community issues.' (RtS 6-234) However, this is hardly reassuring given the limited consultation that informed the SIA.

This list of 21 plans demonstrates the breadth of potential impact that this project, with its dispersed distribution of wells and infrastructure, would have on ways and quality of life in the town and region. The sheer number of plans calls into question the likelihood of universal and consistent efficacy in their content or implementation. Many of the plans are not within the apparent skill range of a resource extraction company which means that some 21 teams of specialists would require coordination at both planning and implementation stages. This would create numerous opportunities for inconsistency and ineffectiveness.

The proponent's response to stakeholder concerns is to say in effect 'we will manage it' and 'any (unlikely) adverse effects will be within approved or acceptable limits'. The one basic response is applied across all issues. However, there are three critical issues which the proponent has not addressed:

- i The project would affect multiple intersecting areas of life and livelihood in the town and region because of its size and dispersal, with therefore, overlapping impact.
- ii The proponent is a mining company. It has outsourced its social impact assessment to another company. Social impacts would seem to be outside its expertise, and as noted, to be addressed with assurances.
- iii While an Emergency Response Plan is proposed (T1 p78 also not included in the above list of plans) it is unclear what will happen if approved limits are exceeded repeatedly, or the criteria by which repetition would be recognised as a risk to public health.

In this context, there is a reasonable concern that the financial interests of the proponent may take priority over the local community's social and public health. Further, it is likely that many of the 22 plans will be prepared and subsequently managed or monitored by consultants. They too will have a financial conflict of

interest, and therefore an incentive to encourage a finding that mishaps can be managed and the project can continue. This too has not been mentioned.

The precautionary principle

These issues are also revealed by the way in which the proponent addresses the precautionary principle with regard to social impacts. A widely accepted definition of this principle applied to social issues is as follows:

In order to protect the environment, a concept which includes peoples' ways of life and the integrity of their communities, the precautionary approach shall be applied.

Where there are threats or potential threats of serious social impact, lack of full certainty about those threats should not be used as a reason for approving the planned intervention or not requiring the implementation of mitigation measures and stringent monitoring. (Vanclay 2003)

With regard to the precautionary principle, the RtS states:

In summary, the project is consistent with the Precautionary Principle on the basis of:

- the location of the project area
- incorporation of rules and constraints for the siting of field infrastructure whereby environmental impacts are systematically avoided, minimised and managed
- the conservative nature of the impact assessments across the disciplines
- the adoption of avoidance, control and impact minimisation processes including through adoption of relevant standards and Codes of practices
- extensive management and mitigation measures that will be applied together with a comprehensive monitoring framework
- the proponent's commitment to implement the project in accordance with the project commitments (RtS 6-284).

The precautionary principle is concerned with preventing adverse outcomes, whereas this list details inputs and provides assurances about which it is difficult to have confidence. The management and mitigation measures proposed are generalised and seem likely to be vulnerable to conflicts of interest.

Specifically, the management of social impacts seems to be in the hands of a committee and a panel whose roles, budget and scope of responsibilities are limited. There is no impartial agency available to provide stringent monitoring of their efforts or efficacy, nor has one been proposed. As a result, it is not possible to say that exercise of the precautionary principle will satisfactorily address the social risks arising from this project.

Public health

Public health concerns the health of the population. Public health can be undermined through infection, poor sanitation, contamination and pollution, accidents and assaults, inadequate health services and practices - to name some commonly identified contributors. However, it is widely understood that the social environment contributes substantially to public health. This is called the social determinants of health.

According to the World Health Organisation (WHO) and leading epidemiologists, the key social determinants of health are the social gradient¹⁴, stress, experiences in early life, social exclusion, workplace stress, unemployment, lack of social support and addiction to alcohol and/or other drugs (Wilkinson and Marmot 2003, Wilkinson and Pickett 2004).

As noted in the social profile, Narrabri LGA is a community which has a number of adverse health indicators. There is a steep social gradient in the LGA, with a significant proportion of the population experiencing more than one of the adverse determinants identified by the WHO. These include unemployment and low income, which are associated with social exclusion, addiction to tobacco and alcohol, and indicators of stress. Rates of life expectancy and several causes of potentially avoidable death – basic indicators of public health – are less favourable for Narrabri than NSW as a whole.

Thus, this project is proposed to be introduced to an area in which public health is already challenged. This has not been acknowledged in the documents accompanying the EIS.

The Health Impact Assessment (HIA) prepared by Enrisks (Technical Appendix T2) for the proponent notes

¹⁴ Institute of Health Equity, Social Gradient, definition: 'The social gradient in health is a term used to describe the phenomenon whereby people who are less advantaged in terms of socioeconomic position have worse health (and shorter lives) than those who are more advantaged.' <http://www.instituteoftheequity.org/in-the-news/articles-by-the-institute-team-/social-gradient> accessed 21 3 2020.

‘Narrabri LGA has a higher rate of alcohol attributable hospitalisations, body mass attributable hospitalisations, diabetes attributable hospitalisations, cardiovascular disease deaths and death rate (all causes) when compared with the population of NSW as a whole.’
(T2 p30)

However, there is no comment on the implications of this data for public health in the LGA. This is a significant shortcoming.

Technical Appendix (T2) assesses the likely impacts of the project on general air quality, water, contamination of soils, noise and hazards, concluding on the basis of secondary studies:

Table 9: summary of estimated impacts on public health

Issue	Potential for impacts on community health	Page
Air quality	‘estimated to be negligible’	35
Water	Impact of concern ‘not identified’	49
Contamination of soils	Low or negligible level of risk	52
Noise	Noise mitigations may be required but ‘The project would meet the noise criteria at all occupied sensitive receivers unless a private negotiated agreement is entered into.’	55,56
Hazards	‘assessed as being low or very low’	58

Source: EIS Appendix T2

Technical Appendix T2 also presents information from the SIA (T1). It notes that the project may be stressful for some residents but concludes that stress could be minimised by the adoption of the policies and strategies proposed, including a procurement policy, workforce management strategies, housing and accommodation strategies, an Aboriginal engagement policy, agreed principles of land access and fair and reasonable compensation to landholders (T2 p62). No evidence is presented for the likely efficacy of any of these strategies.

The Social Impact Assessment (T1) also does not deal with public health or the social determinants of health. The SIA, in contrast to the HIA, focuses on the availability of health services, concluding that any increase in demand on these services would be minor (T1 p 69). The SIA also accepts the assurances of other studies that the impacts of the project on noise, vibration, air quality, traffic would be minimal or could be mitigated (T1 pp 56, 57).

Thus, neither Technical Appendix (T1 and T2) appear to consider the project’s impact on public health in Narrabri taking account of the current health status of its residents. Neither assessment is undertaken in a social determinants of

health framework¹⁵. Neither assessment takes adequate account of the accumulation of impacts affecting many areas of life (work, housing, stressors etc.) Each potential health effect is treated as a stand-alone issue. Both assessments appear to assume that the population currently has no health issues of particular local significance and none will eventuate.

An overview of the public health indicators for Narrabri however, reveals that in addition to a steep social gradient, there is a portion of the population experiencing multiple disadvantages and vulnerabilities to negative experiences arising from higher rents, continuing unemployment, as well as loss of aspects of culture and lifestyle which are cherished and valued. Neither document addresses these issues in a public health context.

Further, since the social benefits of the project will be limited for local residents, they are unlikely to act as an offset to the risks to public health arising from social and economic impacts which include:

- most CSG-related jobs will go to non-residents;
- agricultural livelihoods already vulnerable to drought will be further disrupted by a project contributing to climate change; and
- the likely realisation that any local benefits which do eventuate are short term and ephemeral.

These factors are an unlikely basis for good public health outcomes.

Some specific health impacts of this project (e.g. air or water pollution) are a source of disagreement among stakeholders and submission writers. This disagreement adds to the level of social conflict in the LGA about this project. Social conflict is likely to add to the adverse health effects of a steep social gradient. This is likely to be revealed in a worsening of existing adverse public health indicators.

Finally, neither document considers the adverse health impacts on NRWs who will constitute the majority of workers on this project. There is an established literature on the loneliness, mental health and social risks these workers face (Bowers et al. 2018, Gardner et al. 2017, House of Representatives 2013, Perpetch 2018). In effect, there is a documented risk that NRWs export adverse social and health impacts to their place of residence (T1 p62). The failure to

¹⁵ i.e. by taking account of the impacts of social factors such as social gradient, stress, social exclusion, workplace stress, etc. on public health

mention this in the SIA does not mean that these adverse health impacts are of no concern.

Housing

Increased cost of housing is a known impact on resource extraction communities (House of Representatives ch 3 p 81)

Currently housing is less expensive in Narrabri than NSW as a whole and proportionately fewer households are in housing stress. Median weekly rent in Narrabri was \$200 per week in 2016 (NSW \$380) and median monthly mortgage payments were \$1,395 (NSW \$1,986). The proportion of households in rental stress in Narrabri in 2016 was 8.5%, less than the rate for NSW as a whole (12.9%); 4.2% of households were in mortgage stress (NSW 7.4%). However, there is housing stress among low income and Indigenous residents.

The SIA (EIS Appendix T1) notes that other mining activities in the region have already put pressure on house availability in Narrabri.

Rental vacancy in town has been extremely low and existing house sales are limited (Narrabri Shire Council 2011a). Property values have been making steady gains over the last few years and a need for new affordable housing has been identified. (T1 p 41)

The SIA goes on to note that there is land available for new housing and a need for affordable housing. At T1 p 63, three new developments are reported but at the same time the SIA notes that increased demand for housing may impact affordability. The impact on affordability is likely to arise both from the influx of some 50 new residents and because as CSG workers they will be able to pay more for their housing than low income Narrabri residents. The SIA states that adverse impacts on housing affordability and availability are almost certain to happen but the consequence will be 'negligible' (T1 p86). The basis for this conclusion is unclear.

The SIA also states that

Santos will engage with the Narrabri Shire Council and service providers on an ongoing basis to monitor change in demand on housing and accommodation from the project.

Implement an approach to accommodation management that is transparent and flexible to changing housing conditions during

project planning phase through to the commencement of construction (T1 p 86).

Santos is not primarily a housing provider. This description of the project's response to the pressure on housing is vague and weak. Monitoring does not build houses or ensure their affordability.

The SIA anticipates an adverse impact on housing affordability and availability arising from this project. This is not an impact on bricks and mortar or property prices, but an impact on people's lives, particularly on levels of overcrowding and stress.

Housing is basic to quality of life so pressures on affordability will have social significance.

Masculinisation of the town and its camps

At present there is a gender balance in the age groups 20-59 in Narrabri, except for a slight over-representation of men in the age range 40-59. However, during the construction period, when Santos estimates there will be 928 NRW per roster (Table 7 above), and assuming the NRWs are 97% male (House of Representatives ch 2, p 19), the gender balance becomes 56% male to 44% female. Although the NRWs will mostly be accommodated in camps, this does not mean that they will not visit the town including to make purchases or spend some off-roster leisure time. Their presence will noticeably change the gender balance of the town.

Table 10: Gender balance among adults, Narrabri LGA, 2016 and with construction NRWs

Age group	Men	Women	Total	Men as % of age group
20-29	685	727	1412	48.5%
30-39	730	747	1477	49.4%
40-49	795	766	1561	50.9%
50-59	996	957	1953	50.9%
Ages 20-59	3206	3197	6403	50.1%
NRWs per construction roster*	901	27	928	98%
Residents 20-59 + NRWs per construction roster	4107	3224	7331	56%

Source: ABS 2016 Census and T1. * this proportion is assumed as likely

The literature refers to the gender imbalance described above as increased masculinisation. Masculinisation of a town is reported to include an increased sense of vulnerability among female residents; increased experiences of sexual harassment, including propositioning; increased presence of sex workers; gender-based discomfort or lack of security on the street; and a reluctance to

socialise in pubs due to these factors. (Carrington et al. 2102; Lozeva and Marinova 2010; Scott, MacPhail and Minchiello 2012; Shandro et al 2011).

The House of Representatives Standing Committee on the use of FIFO workforce practices noted

‘FIFO practices change community demographics, typically injecting a large number of young men living in temporary accommodation and with no community connection and little to do when off shift.’ (House of Representatives, 2013, p49)

The presence of young, well paid male NRWs in the town can also have a negative impact on young male residents who are unemployed or on low wages.

‘... frontline communities experience intense adverse impacts from FIFOs/DIDOs. NRWs have little or no attachment to workplace communities. They are not regulated by informal social controls that traditionally characterise rural communities. Hence their existence gives rise to suspicion and concerns. Sudden boosts to numbers of ‘outsiders’ exacerbate levels of antagonism. Perceptions of inequities affect acceptance of these workers, fostering an ‘us/them/ mentality. Stark contrasts often exist between well-paid industry workers with high disposable incomes and others.’ (McIntosh 2012)

‘Compared to local men, non-resident workers were perceived as invaders and not authentic bearers of frontier masculinity...They are compensated by high incomes, which some spend excessively on alcohol, gambling and prostitutes...These patterns of consumption contrast significantly with those regarded as respectable among civic-minded rural family men... Where men’s place, status or territory is threatened, however, violence can become a way of re-enforcing boundaries, exercising power, asserting male honour and re-establishing social status with other groups of men.’ (Carrington et al 2010 p402)

The House of Representatives Standing Committee report stated:

‘There were many reports over the course of the inquiry about violence, predatory behaviour and high alcohol and drug use. This indicates serious problems with FIFO work practices.’ (p50)

The gender imbalance created particularly during the construction period is likely to bring a number of social risks into play. These have to do with social

hierarchies and inequalities on the one hand and mental health, loneliness and depression on the other.

Santos has a Code of Conduct (T1 p 73) for its workers. Codes of Conduct help but they are not an adequate or sufficient response to these larger social processes.

Distributional equity

Distributional equity is sometimes referred to as intra-generational equity – the question of who benefits and who experiences the costs in the present generation. An accepted definition of intergenerational equity states:

‘The benefits from the range of planned interventions should address the needs of all, and the social impacts should not fall disproportionately on certain groups of the population, in particular children and women, the disabled and the socially excluded, certain generations or certain regions.’ (Vanclay 2003 p10)

This issue is not dealt with as such in EIS ch 26 or the Technical Appendix T1.

The case made in the EIS in favour of this project is that extraction of gas from this source will benefit the state, providing jobs and security of supply. As has been shown, most of the jobs will be held by people resident outside the Narrabri LGA or more than 1 hour’s drive from the project. This raises the question of distributional equity – What is the risk that the benefits of the project will be experienced by people who do not live close to the resource extraction sites, while the immediate town and locality will bear the social costs of the project?

While the proponent claims that people in Narrabri or within 1 hour’s drive of the project will benefit from jobs, training, compensation and grants for activities and events, as discussed above these are unlikely to be substantial, significant or long term benefits for the people of the township.

While burning coal seam gas will add to world-wide impacts of fossil fuel – and thus affect everyone – the concerns of local people are with the local impacts of the extraction process. People in other parts of the state or nation will not be affected by these local impacts. However, many local people fear that their livelihoods, quiet enjoyment of home and place, health, access to affordable housing and cultural affinity with their heritage and/or rural lifestyle will be affected. That is, the perceived benefits accrue to the gas operator, the state government and remote or non-resident workers, while a number of likely

adverse social impacts will accrue to local residents. This is a classic example of distributional inequity and a fundamental omission in the SIA.

In its Final Assessment Report the Department notes

581 ... the benefits and impacts would not necessarily be distributed equitably, and some groups within the community may be disproportionately impacted.

582 In particular, landholders hosting infrastructure are likely to be specifically affected, as the infrastructure would potentially impact landholder's use, access and management of the land, and the productivity and economic viability of the land. Other potential impacts to landholders include loss of privacy due to the presence of the project workforce, uncertainty related to the timing of project activities, and amenity impacts. The sum of these impacts has the potential to disrupt the values that contribute to the lifestyle of landholders. (DAR p 113)

These impacts are proposed to be addressed via landholder agreements and limits to the proximity of well infrastructure to residences or privately-owned land (DAR para 584). Distributive inequity of impacts on other social groups is referred to but not described and assumed to be mitigated by financial means including sponsorships and donations, community projects and a diversity and equal opportunity policy (DAR para 585).

The Department is also satisfied that wage inflation, anti-social behaviour, gender imbalance and social conflict can be adequately addressed via a workforce management plan, a code of conduct and the SIMP (DAR para 589). Effectively this lumps a number of social issues into a one-size-fits-all container for which there is no evidence of an effective response.

It is particularly concerning to read that concerns about health and amenity impacts are assessed by the Department as 'intangible' and able to be mitigated by 'transparent information sharing and stakeholder involvement' (DAR para 592). Were this the case, the level of community opposition – which is clearly tangible – would not exist.

Inter-generational equity

Inter-generational equity considerations are met when

‘the needs of the present generation are met without compromising the ability of future generations to meet their own needs’ (Vanclay 2003 p10).

This issue was not dealt with in the original SIA (T1) but the RtS noted concerns raised in submissions that ‘intergenerational equity considerations were not considered in the Aboriginal Cultural Heritage Assessment Report’ (RtS 6-189). In response the RtS noted

‘The issue of intergenerational equity is expressly addressed through the use of offsets which guarantee, in perpetuity, access to and management of areas to which Aboriginal people currently have limited, or no, access. In addition intergenerational equity is addressed by the project being required to settle a Native Title agreement including compensation, and by the incremental development of the project where the precautionary and avoidance principles would be applied throughout’ (RtS 6-190).

While Aboriginal cultural and heritage issues may be fully addressed through the use of offsets and Native Title guarantees and the effective and consistent use of precautionary and avoidance principles, there is no statement about any assessment of likely social impacts on future generations in the town and region, whether Aboriginal or non-Aboriginal. The RtS merely says:

‘The assessment found that when balanced against its demonstrable social and economic benefits, it is considered that the project would be consistent with the principles of intergenerational equity’ (RtS 6-281).

It is one thing for the proponent to claim that the project would be consistent with intergenerational equity principles. It is another thing to show why this conclusion is reasonable or likely in the long term. This has not been done.

Not only are the proposed social benefits slight and fragile, the proponent has not claimed that they will persist past the extraction period, that is, for more than 20 years. On the negative side, the concerns are that risks to public health, and adverse impacts on community cohesion and social wellbeing are likely to endure well beyond the extraction period. These concerns cannot be dismissed simply by asserting that current regulatory standards will always be met.

The SIA (T1) and RtS have not made the case for inter-generational equity.

Social conflict and community polarisation

The section on community perspectives in this report documents the considerable extent of local and regional opposition to the project. In this context, the paucity of social benefits and the unequal distribution of adverse impacts are likely to give rise to enduring polarisation of opinion in the town and region. As a recent systematic review of social conflict associated with mining concluded:

In terms of the socio-economic determinants of social conflict, we confirm that poverty intersects with distributional struggles in a complex way. It is not household poverty per se that increases the likelihood of conflict, but rather, the combination of poor households in poor communities underserved by the state. In this regard, we see that individual deprivation interacts with collective deprivation and restricted opportunities for material benefits to create the conditions for social conflict. We also confirm the validity and generalizability of the role of livelihood concerns in mine-community conflict. The regressions show that it is not simply the overlap of agricultural and mining geographies that causes social conflict, but rather the increasing scarcity of agricultural opportunities. As resources such as arable land become scarcer, competition becomes more acute, and the likelihood of social conflict increases (Haslam & Tanimoune 2015 p 415)

The NW NSW region suffers from increasing scarcity of agricultural resources (due to drought as well as mining – Table 2) and a relatively large number of low-income households. Further, the dispersed location of 425 new gas well pads means that some acreage will be lost across a wide area and many landholders will have their farming practice interrupted or inconvenienced particularly in the construction period.

Evidence also suggests that opposition to the project is likely to persist even if the project is approved (Davis et al. 2014 pp16-18). This social conflict will primarily be experienced locally, it is likely to divide the local community and be a lasting adverse social impact.

Traffic

The proponent anticipates that most workers will fly in and fly out or will drive for up to an hour in order to reach a CSG workplace. The SIA (T1) notes that this will increase traffic on the roads. Since most workers will be employed on 12 hour

shifts, there is likely to be an increased risk of fatigue related accidents. A traffic management plan is proposed, including better signage, intersection improvements and speed restrictions (T1 p 64). However, these are indirect responses to fatigue.

Summary of likely adverse impacts

The sheer number of areas of risk and hazard is an indication of the potential reach of adverse impacts of this project. The suggestion that these can be managed via a raft of 22 plans is not convincing given the financial and other conflicts of interest present.

The precautionary principle has been addressed with a series of assurances and proposed strategies. With regard to social impacts, the assurances and strategies are weak and limited and there is no independent agency available to provide stringent monitoring of their implementation or efficacy. The precautionary principle does not appear to have been met.

The paucity of social benefits, the likely increase in rents and prices, the fact that most jobs will go to non-residents and the continuing local opposition to the project are likely to have an adverse effect on key public health indicators. The effects on the health of NRW has not been considered.

There will be a decrease in housing availability and affordability.

Particularly during the construction period, the town is likely to experience adverse social impacts due to the influx of large numbers of relatively well-paid male workers.

The SIA has not addressed the distributional inequity of the project, that is, the expectation that most of the social and economic benefits accrue to people outside the region while most of the social costs will accrue locally.

The long-term adverse effects of the project are also likely disproportionately to affect the local area.

Social conflict and polarisation arising from this project is likely to persist.

Summary of social costs and benefits

Summary of likely social costs and benefits of the project identified in this report:

Likely local social benefits	Likely local social costs and risks
Approximately 130 construction jobs or 10% of anticipated construction jobs	Inconsistent management of risks and hazards by a large number of sub-contractors affecting quality of life
Small number (20-40 see Table 7) of on-going operational jobs	Risks arising from operation of financial conflicts of interest
Opportunities for skills training for Aboriginal residents	The limited social benefits are ineffectively managed
Slight increase in job diversity, if at all	Decline in key public health indicators
Minor increase in local procurement in the short term	Decreased housing availability and affordability
Possible gradual increase in population	Masculinisation of the town
Compensation payments to land holders for the duration of the project	Interruption to farming practices due to construction / loss of agricultural land to well pads and infrastructure
CGBF grants of no more than \$500 000 per event or activity	No strategy or mechanism for improvements in social infrastructure for the town
21% (\$3m) of VPA funds for community initiatives or local infrastructure	Continuing social conflict and polarisation
	Lack of distributional equity
	Poor prognosis for inter-generational equity
	Increased traffic and related incidents

Mitigations and management

A mitigation of adverse social impacts should meet certain criteria, namely, the action to be taken should be

- tangible, that is, substantially real;
- deliverable, that is, fall within the capacity and responsibility of the proponent to deliver; and
- durably effective, that is, likely to be effective in the longer term (Ziller 2012, Preston 2019).

The following actions do not meet these criteria:

- Good intentions, aspirations, promises;
- Suggestions about what another party could do; and
- Short term and ephemeral initiatives.

Following is a summary of proposed mitigations of adverse impacts as set out in EIS Appendix T1 and assessed against the three criteria set out above.

Table 12: Proposed mitigations assessed against three criteria

Issue	Description of mitigating action	Criteria		
		Tangible	Deliverable	Durably effective
Impacts on landholder	Agreed principles of land access	√	√	
	Payment of reasonable financial costs for legal advice	√	√	
	Compensation payments	√	√	
	Farm management plan	Contents unknown		
	Mitigation measures and management strategies outlined in chapters on agriculture, noise and vibration, air quality, landscape and visual impact, traffic and transport	Contents unknown		
	Working with Landholders Fact Sheet	√	√	
	On-going engagement with landholders	√	√	
	Training, up-skilling, apprentice and traineeship programs	√	√	
	Source workers from wider regional area and the State	√	√	
Impact on community values	Santos project workforce management plan	√	√	
	Santos Code of Conduct	√	√	
Impact on recreational activities	200 metre no-go zone around Yarrie Lake	√	√	
Impact on social infrastructure	Santos will engage with service providers and monitor changes in demand for health emergency services		√	
	Santos will invest in community infrastructure through the Gas Community Benefits Fund			
Impact on housing and accommodation	Monitor change in demand on housing and accommodation arising from the project		√	
	Implement a flexible approach to accommodation management		√	
Traffic safety	Traffic management plan	√	√	

Source: Table 25 in T1 pp 80-86

Assessment of mitigations

The above assessment of the proposed mitigations listed in T1 shows that for the most part, the proponent could deliver the proposed action(s), but they do not meet the criterion of durable efficacy. For example, it is not clear whether the proponent will meet on-going or continuing legal costs of land holders. The proponent can deliver community engagement, but it is not clear whether the community will agree that the engagement is adequate and there is no indication as to how adequacy will be achieved.

The limitations of the GCBF and of the VPA are described in detail earlier in this report.

As a general observation, management plans do not meet the criteria for tangibility or durability. Most management plans have a short life in practice – say 5 years. The plan itself is not tangible. A plan’s impact is entirely dependent on its content and the quality of its implementation. As these plans have, as far as we are aware, yet to be written, there is no basis for claiming them as mitigations. To claim a management plan as a mitigation, each plan would have to achieve tangible outcomes that are both deliverable and durably effective. Some concerns about these issues are also raised in the earlier section of this report about the management of risks and hazards.

Similarly policies and strategies are only as good as their implementation. To be treated as a mitigation, effective implementation should be built into the policy (e.g. via an accompanying financial bond and operational procedure) and be subject to stringent monitoring by an impartial independent agency. Neither financial bonds, operational procedures nor independent monitoring appear to be proposed or included for social impact concerns.

Although an explanation is provided about levels of significance of impact (T1 pp 17-19), the assessment of significance appears to be dependent on expectations that standards (e.g. of emissions etc.) will be met and that management plans will effectively address any accidents, mistakes or unexpected events. It is noted that these expectations are vigorously disputed. For the reasons set out above, management plans are weak enforcement devices.

The summary table in the SIA (EIS ch 26 p26-24) says that an Aboriginal engagement strategy will be implemented to maximise Aboriginal employment including for contractors. Generally speaking, an engagement strategy is a communications strategy whereas elsewhere in the EIS (T1 p70) it is proposed that Aboriginal persons be offered skills training. Either way, an aim to ‘maximise Aboriginal employment’ is unclear. It could mean one job. The summary table at T1 pp 80-86 does not mention impacts on Aboriginal workers or any program to assist them.

The proponent assesses a medium risk of an adverse impact on housing affordability and availability in Narrabri. The summary Table in the EIS 26-24, reports this impact as ‘almost certain’, notes that the residual risk will also be ‘medium’ but says that the consequence will be ‘minor’. No clear basis is provided for concluding that pressures on housing affordability and availability are minor. If the pressures on housing affordability and availability are assessed as minor due to the small number of new CSG residents in the town, then some

other claimed social benefits come into question. For example, if there are few new CSG residents, the increase in the local population and local job diversity will be slight.

In light of these considerations, we are unable to conclude that the proposed mitigations adequately address the likely adverse social impacts of this project.

The Social Impacts Management Plan (SIMP)

One of the social impacts management strategies proposed in the SIA is a SIMP. According to the RtS the SIMP is concerned with

ongoing social impact monitoring and reporting under a Social Impact Management Plan. (RtS 6-233-4)

The review of the SIA undertaken for the Department by CSRSM (CSRSM 2) also relies heavily on the efficacy of a SIMP in delivering social benefits and addressing social costs. At the beginning of this review CSRSM 2 states

The review highlights the limitations to making informed judgements about social impact on the basis of the information provided by the proponent. However, on available evidence, and given the nature and scope of the NGP as outlined in the submission, the review concludes that the social risks and impacts posed by the NGP can be adaptively managed, with specific conditions. (CSRSM 2 p1)

In effect this opening paragraph means that the reviewer has relied on the proponent to fully scope the social consequences of the project and, while noting information shortfalls in the assessment of risk (CSRSM 2 p3) as well as omissions (CSRSM 2 p 6), has nonetheless concluded that all consequences can be 'adaptively managed'. However, given the noted inadequacy of information there are insufficient grounds for this conclusion.

The CSRSM2 review also says that it

... proposes ways to manage identified risks through: (i) strengthening the Social Impact Management Plan (SIMP) that the proponent has committed to develop, and (ii) regulatory measures (notably licence conditions). (CSRSM p1)

Examination of the CSRSM2 report reveals that only 2 recommendations are for licence conditions (recommendations 6 and 33) and these both concern

information giving¹⁶. The remaining 32 recommendations rely heavily on a SIMP.

While the reviewer says ‘This report recognises that the proponent is conscientious about meeting regulatory requirements.’ (CSRM 2 p6) and this may be the case, the report in effect sanctions the postponement of a large number of issues on the unjustified assumption that everything can be sorted out through adaptive management. According to CSRM 2, the SIMP is expected to address, social conflict, community cohesion, community development, housing, medical services and mental health, inclusiveness and diversity.

This assessment does not take account of the fact that the SIMP is to be managed and, therefore, paid for by the proponent. The proponent is not a social planning or community development agency. Merely to prepare strategies to address the above list of issues will require expenditure, presumably on consultants. The proponent will have an interest in how much money is spent. At the same time, every dollar spent on consultants is money not spent on community initiatives. The review does not consider this aspect of reliance on a SIMP, nor the possible use of GCBF monies to pay for it.

The implications of this reliance on a SIMP is made clear in the Recommended Conditions submitted by DPIE:

B81. This plan must:

- (a) be prepared by a suitably qualified and experienced person/s;
- (b) be prepared in consultation with Council, the CCC, and representatives the local community in the Narrabri LGA;
- (c) identify negative social impacts resulting from the development both locally and regionally;
- (d) specify adaptive management and mitigation measures to avoid, minimise, and/or mitigate negative social impacts;
- (e) identify opportunities to secure and enhance positive social impacts of the development, including opportunities to:
 - (i) assist in maintaining community services and facilities; and

¹⁶ 6) Conditions could require the proponent to work with the NSW Government to support workshops, forums and information sessions about the GCBF to develop capacity of potential applicants in grant-writing, needs analysis, program evaluation and other relevant skills.

33) A public reporting protocol should be a condition of the NGP and require the proponent to disclose information about monitoring arrangements and impacts and key issues (including water impacts, air emissions, project timing, local employment and economic benefits, Aboriginal participation, social impacts including housing affordability and impacts on the Pilliga Forest – see Appendix D, p. v). This could be achieved through public reporting of monitoring included in the SIMP

- (ii) improve the way of life, wellbeing, and social cohesion within the local community;
- (f) include a program to monitor, review, and report on the effectiveness of these measures, including:
 - (i) identifying representative parameters or indicators to be monitored, how and when data is to be collected, and who is responsible for collecting it;
 - (ii) ongoing analysis of social risks; and
 - (iii) undertaking additional research, if necessary, to reduce uncertainties; and
- (g) include a Stakeholder Engagement Plan to guide the evaluation and implementation of social impact management and mitigation measures. (Recommended Conditions p 38)

These requirements indicate that the negative social impacts of the project still require identification (item c) whereas these should have been identified before determination not at some unspecified date afterwards. The draft conditions say that the role of the SIMP is to identify opportunities and to monitor effectiveness (items d, e and f), but there is no mention of the possibility that some social costs may not be avoidable or able to be mitigated, nor how adaptive management measures will be paid for, particularly if these are expensive. The Council, the community consultative committee and representatives of the local community are given an advisory role, but the decision making role about what actions to take rests with Santos, not the local community. As noted, Santos will have financial interests in that decision. There is no deadline for preparation of the SIMP. There are no penalties for non-compliance or weak and inadequate actions under the SIMP.

In effect, reliance on a SIMP by the CSRM2 review has been used by the Department to sanction postponement of identification of adverse social impacts, postponement of identification, costing and implementation of suitable programs or actions to address these, and places identification of the issues and selection of suitable responses in the hands of the proponent without a timeline or a penalty for poor or inadequate compliance.

This approach fails the people of Narrabri whose social wellbeing deserves due and proper consideration.

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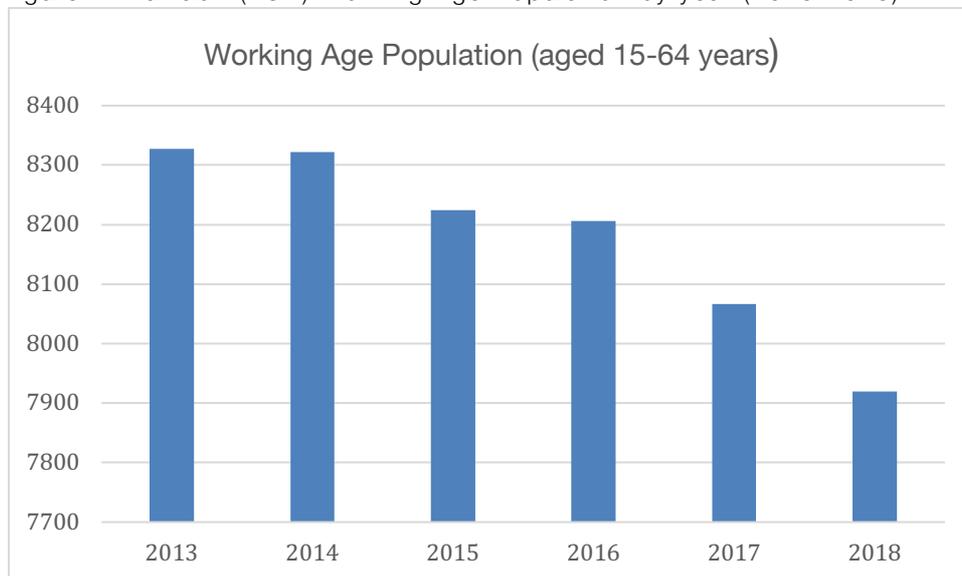
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Attachment 1: Social profile

Population

Narrabri Local Government Area has a population of 13,231 according to 2018 ABS regional data (ABS 2018), a decrease in 51 persons from 2017, and having experienced an incremental decline in population every year since 2013 (when the population was 13,489). The decline has been mainly in the working age population (15-64 years). Since 2016 the number of working age residents has declined by over 100 people each year (Figure 1).

Figure 1: Narrabri (LGA) Working Age Population by year (2013-2018)



Source: 2016 Census of Population and People, Regional Statistics, Narrabri (A) (LGA15750)

ABS Census data for 2016 shows that by far greatest proportion of Narrabri residents were born in Australia and Narrabri has a large Indigenous population, at 12.2% (or 1,595 total). In comparison Indigenous people comprised 2.9% of NSW residents overall and 2.8% of Australia's population.

The position of Aboriginals in Narrabri LGA is clearly revealed in a list of selected medians and averages provided by the ABS (Table 1).

Table 1: Selected medians and averages, Narrabri LGA

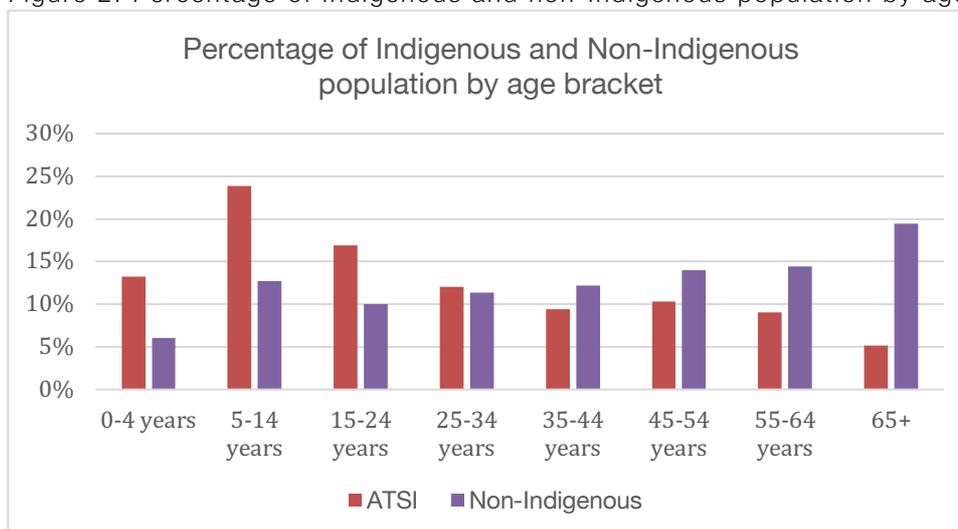
Item	Aboriginal and/or Torres Strait islander persons / households with Indigenous persons	Non-Indigenous persons / other households
Median age of persons	22	43
Median total personal income (\$/weekly)	456	660
Median total household income (\$/weekly)	1,035	1,298
Median mortgage repayment (\$/monthly)	1,300	1,408
Median rent (\$/weekly)	200	200
Average number of persons per bedroom	1.0	0.8
Average household size	3.0	2.4
Proportion of dwellings that need 1 or more extra bedrooms	7.4	1.8

Source: 2016 Census of Population and Housing, Aboriginal and Torres Strait Islander Peoples Profile, Narrabri (A) (LGA15750)

Age structure

ABS data from the 2016 Census shows the median age in Narrabri LGA as 40. The median age for Aboriginal residents is 22, while the median age for non-Indigenous residents is 43. Sixty-one percent (61%) of Narrabri residents are aged 15-64, but only 57% of Aboriginal residents are in this age group. 5.1% of the Indigenous population are aged 65 and over compared with 19% of the non-Indigenous population and 18% of the population as a whole.

Figure 2: Percentage of Indigenous and non-Indigenous population by age



Source: 2016 Census of Population and Housing, Aboriginal and Torres Strait Islander Peoples Profile, Narrabri (A) (LGA15750)

Personal income

The 2016 Census shows the median employee income in Narrabri was \$43,518, while the mean employee income was \$50,952. This is indicative of some

disparity in the distribution of income within the community, further demonstrated by Census data regarding income share within Narrabri.

2016 Census data also demonstrates that within Narrabri, the top 1% of individual income earners currently earn 7.8% of the region's income share. This then extends to 20.7% of income share for the top 5% of earners, and 32.7% for the top 10% (Table 2)

Table 2: Percentage share of income earnings held by top income earners in Narrabri (LGA)

Percentage of top income earners	% share of earnings
1%	7.8%
5%	20.7%
10%	32.1%

Source: 2016 Census of Income (Including Government Allowances), Regional Statistics, Narrabri (A) (LGA15750)

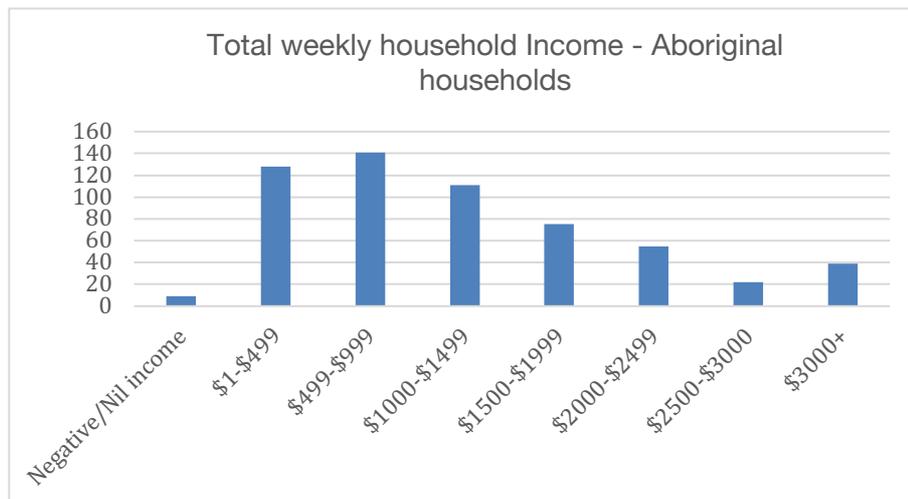
Thirty percent (30%) of individual Narrabri residents within the workforce had an individual income of between \$1-\$499 a week, suggesting that these individuals are near or below the poverty line. Over 50% of Aboriginal residents' income was between \$1-\$499 a week.

Household income

Sixteen percent (16%) of non-Indigenous households and of all households in the LGA had a weekly income in 2016 of \$1-\$649 per week (Figure 3). The median income for non-Indigenous households was \$1,298. By contrast, (25%) of Indigenous households¹⁷ had a weekly household income of \$1-\$649 per week and the median Indigenous household income was \$1,035.

¹⁷ A household with Aboriginal and/or Torres Strait Islander person(s) is any household that had at least one person of any age as a resident at the time of the Census who identified as being of Aboriginal and/or Torres Strait Islander origin, and that non-indigenous households included individuals who did not state their Indigenous status.

Figure 3: Total Household Income (weekly) by ATSI Households, Narrabri (LGA)



Source: 2016 Census of Population and Housing, Aboriginal and Torres Strait Islander Peoples Profile, Narrabri (A) (LGA15750)

As can be seen in Table 3, the trends in percentages of low income households were similar across Aboriginal and non-Aboriginal households. Forty-one percent (41%) and 34.5% of Aboriginal and non-Aboriginal households respectively earned less than \$999 total household income per week according to 2016 Census data. Aboriginal households comprised 16.8% of low-income households in Narrabri, slightly higher than their presence in the population (12%). However, in terms of numbers of households, there are almost five times more non-Aboriginal households as Aboriginal households with incomes of less than \$500 per week.

Table 3: Number and percentages of low income households by Indigenous household status

	<i>Households with Aboriginal and/or Torres Strait Islander person(s)</i>	<i>Other households</i>	<i>Total Households</i>
Negative/Nil income	8 (1.2%)	60 (1.5%)	69 (1.5%)
\$1-\$149	9 (1.3%)	26 (0.6%)	34 (0.7%)
\$150-\$299	28 (4.2%)	96 (2.4%)	123 (2.6%)
\$300-\$399	38 (5.7%)	131 (3.3%)	174 (3.8%)
\$400-\$499	53 (7.9%)	328 (8.3%)	383 (8.3%)
\$500-\$649	34 (5.1%)	175 (4.4%)	209 (4.5%)
\$650-\$799	54 (8.1%)	289 (7.3%)	340 (7.3%)
\$800-\$999	53 (7.9%)	267 (6.7%)	320 (6.9%)
Total number of low-income households	277 (41.4%)	1372 (34.5%)	1652 (35.6%)
% of total number of low-income households	16.80%	83.10%	100%

Source: 2016 Census of Population and Housing, Aboriginal and Torres Strait Islander Peoples Profile, Narrabri (A) (LGA15750)

Employment

In the 2016 Census, the unemployment rate in Narrabri LGA was 6%, 0.9% lower than the state average.

However, the unemployment rate for Indigenous Narrabri residents was significantly higher, at 18.9%, while the non-Indigenous unemployment rate was 4.7%. To reduce the Indigenous unemployment rate to 4.7% would require 74 Indigenous persons to be employed.

In 2016, 30.4% of the Narrabri population were recorded as 'not in the labour force' (32.2% of non-Indigenous and 43.7% of Indigenous residents)¹⁸.

Education

As can be seen in Table 4, the rates of Indigenous residents reporting years 8 and 9 as their highest year of school completed was around 10% more than non-Indigenous residents, and around 15% less than non-Indigenous residents when reporting year 12 as their highest year of school completed. However, those reporting year 10 as their highest year of school completed were at similar rates for both Aboriginal and non-Aboriginal residents, at approximately 34% each.

It should be noted that Narrabri LGA statistics on the highest level of year of school completed are lower than both state and national percentiles at all stages past year 11. Narrabri residents with years 9 and 10 as their highest level of educational attainment are 5% and 7% respectively, higher than the state percentile. Twenty (5%) Indigenous residents were recorded as having a degree or other post graduate qualification compared with 25% of the non-Indigenous population. However, the most frequent qualification category held by both Indigenous and non-Indigenous residents was Certificate III and IV level.

¹⁸ 'Not in the labour force' is defined as residents over 15 years of age who do not meet the criteria to be listed as employed or unemployed, reasons for which can include; retirement, students not actively looking for work, stay-at-home parents without attachment to a job, anyone permanently unable to work or those who are voluntarily inactive (i.e. not wanting to work) (Vandenbroek 2018).

Table 4: Highest level of year of school completed by region, Narrabri (LGA), New South Wales (STE), Australia (STE)

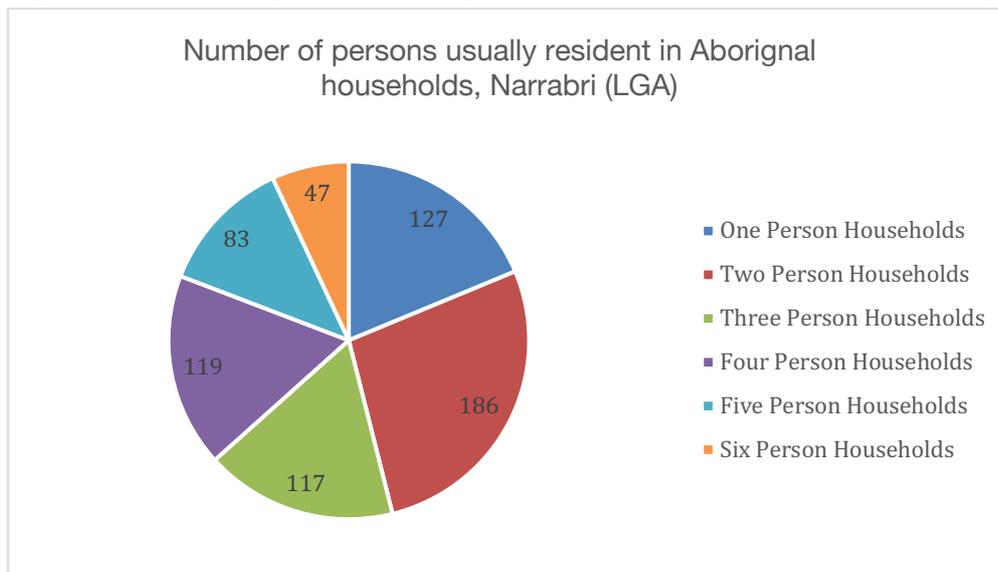
	Year 9 and below	Year 10	Year 11	Year 12
Non-indigenous	16.5%	34.2%	6.8%	37.6%
ATSI	25.2%	34.3%	8.6%	22.8%
NSW	11.9%	21.6%	5.8%	52.1%
Australia	11.3%	19.2%	9.1%	51.9%

Source: 2016 Census of Income (Including Government Allowances), Regional Statistics, Narrabri (A) (LGA15750), New South Wales (STE) (1), Australia (STE) (0),

Housing

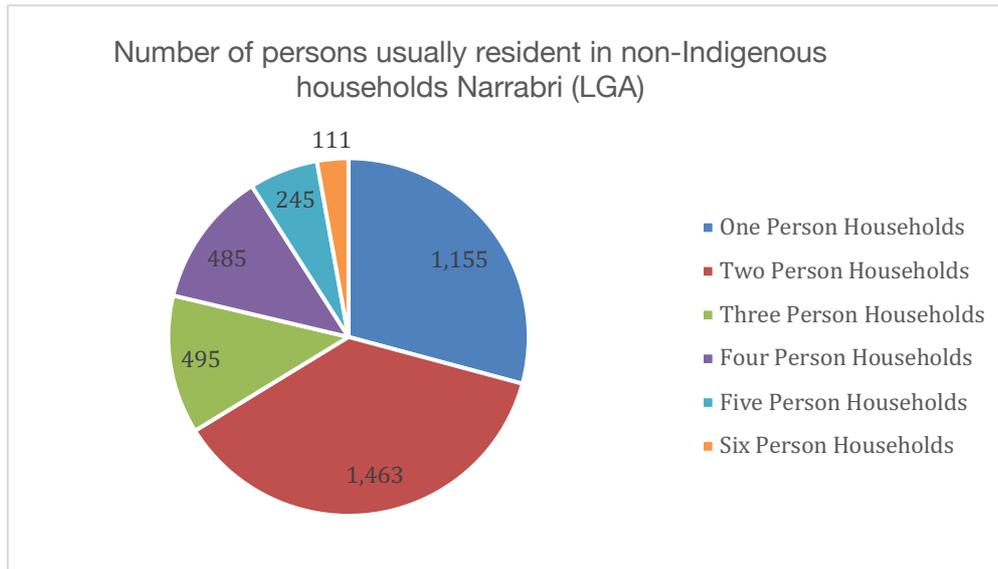
21% (841 of 3958) of non-Indigenous households in the LGA had four or more family members, compared with 37% (249 of 668) of Indigenous households. Thus Indigenous households in Narrabri are more likely than non-Indigenous households to have more persons resident in the house and to be on lower incomes (Figures 4 and 5).

Figure 4: Number of persons usually resident in ATSI households, Narrabri (LGA)



Source: 2016 Census of Population and Housing, Aboriginal and Torres Strait Islander Peoples Profile, Narrabri (A) (LGA15750)

Figure 5: Number of persons usually resident in Non-indigenous households,



Source: 2016 Census of Population and Housing, Aboriginal and Torres Strait Islander Peoples Profile, Narrabri (A) (LGA15750)

The median weekly rent in Narrabri is \$200, and Census data shows that 30% of the total Narrabri population currently live in rented households. This increases to 56.2% when considering Aboriginal residents. This means that the over 50% of Aboriginal residents renting their homes in Narrabri spend a significantly higher portion of their weekly income on housing. Data from PHIDU shows that 18% of households in Narrabri LGA received rent assistance from the Australian government (in June 201), however this compares with 35.6% of Aboriginal households in the LGA.

38.1% of non-Indigenous houses are owned outright, and 29.5% are owned with a mortgage (median monthly mortgage payment is \$1,300 for Aboriginal and \$1,408 for non-Indigenous households).

Table 4: Income and housing expenses for Aboriginal and non-indigenous Narrabri residents

Item	Median individual Income (weekly)	Median Household Income (weekly)	Median rental payments (weekly)	Median mortgage payments (monthly)
Non-Indigenous	\$660	\$1289	\$200	\$1408
Indigenous	\$456	\$1035	\$200	\$1300
NSW	\$664	\$1486	\$380	\$1986

Source: 2016 Census of Population and Housing, Aboriginal and Torres Strait Islander Peoples Profile, Narrabri (A) (LGA15750)

Family Structure

Within a consideration of the relative housing availability, affordability and vulnerability of Indigenous and non-Indigenous residents, there are also important differences in family structure. The two most prominent family structures within the non-Indigenous Narrabri community are couple families with no children, and couple families with children. Single parent families are significantly less common amongst non-Indigenous households, at just 8.4% of household structures. By comparison, couple and single parent families with children are almost equally frequent amongst Aboriginal families, making up 28.1% and 27.8% of households respectively.

Table 5: Household Composition and Family Composition by Indigenous Status of Household

	Couple family no children	Couple family with child(ren)	Single parent with child(ren)
Non-indigenous	30.5%	27.6%	8.4%
Indigenous	15.4%	28.3%	28%
NSW	36.6%	45.7%	17%

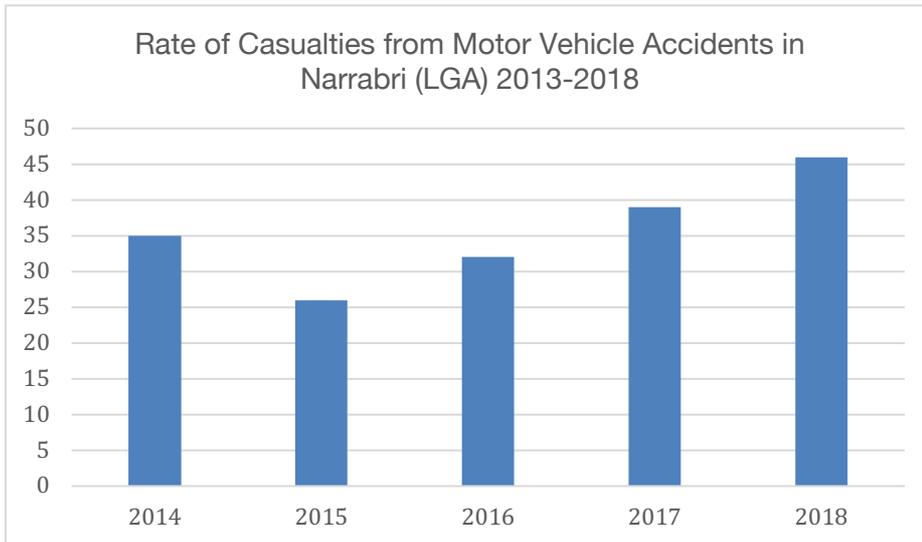
Source: Source: 2016 Census of Population and Housing, Aboriginal and Torres Strait Islander Peoples Profile, Narrabri (A) (LGA15750), New South Wales (STE) (1)

The current rent and mortgage pricing within Narrabri, compared with the median income, suggests that single parent families are under considerably more stress than couple parent families. This family structure is more common amongst Aboriginal households.

Motor vehicle accidents

According to PHIDU Social Health Atlas 2016 data (2019), Narrabri LGA is in second the highest quintile of avoidable mortality by transport accidents in NSW. Since 2014 the region has had 248 traffic accidents resulting in casualties (ranging from minor injuries to death of one or more persons). Figure 6 (below) shows the rates of casualties as a result of accidents per annum, showing a 37 increase in incidents since 2015.

Figure 6: Rates of Casualties as a Result of Motor Vehicle Accidents in Narrabri (LGA) 2013-2018

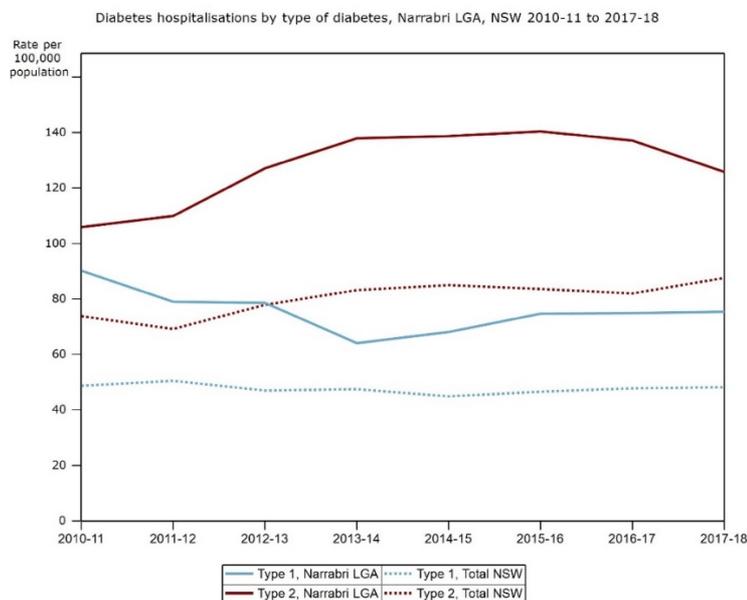


Source: 2018 NSW Centre for Road Safety, Crash and casualty statistics, Narrabri (LGA)

Health

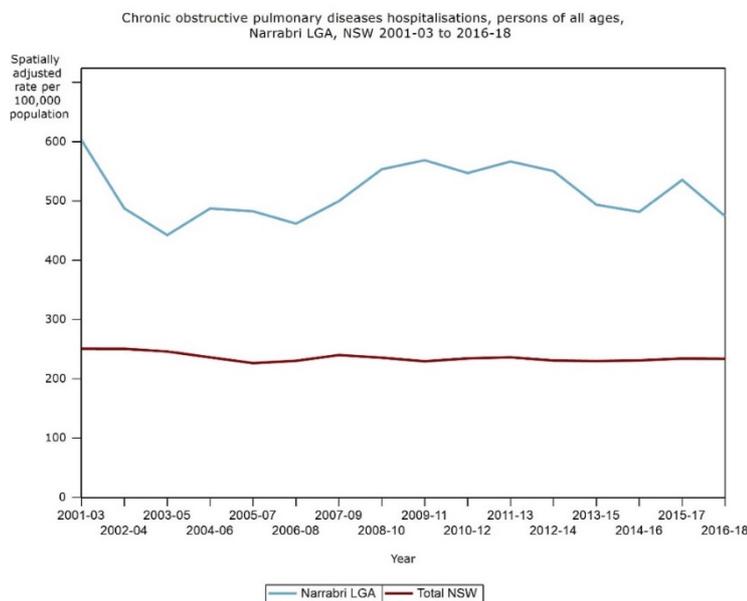
HealthStats NSW data reveal that the population of Narrabri has experienced higher rates of potentially preventable hospitalisations than NSW since 2001 as well as higher rates of potentially avoidable deaths. Life expectancy for residents of the LGA is consistently lower than for NSW as a whole, remaining below 80 years. The LGA records higher rates of circulatory disease hospitalisations and deaths as compared with NSW. The LGA has higher rates of smoking attributable hospitalisations and deaths than NSW. Alcohol attributable deaths in Narrabri are rising in contrast to the lower rate for NSW as a whole which is falling. HealthStats NSW data also demonstrates that Narrabri experiences significantly higher rates of Types 2 Diabetes Hospitalisations, and Chronic obstructive pulmonary disease (associated with long term breathing problems and low air quality), than NSW averages. This is illustrated in figures 7 and 8, below.

Figure 7: Diabetes hospitalisations by type of Diabetes, Narrabri LGA



Source: HealthStats NSW, NSW Combined Admitted Patient Epidemiology Data and ABS population estimates (SAPHaRI). Centre for Epidemiology and Evidence, NSW Ministry of Health.

Figure 8: Chronic obstructive pulmonary diseases hospitalisations, Narrabri LGA



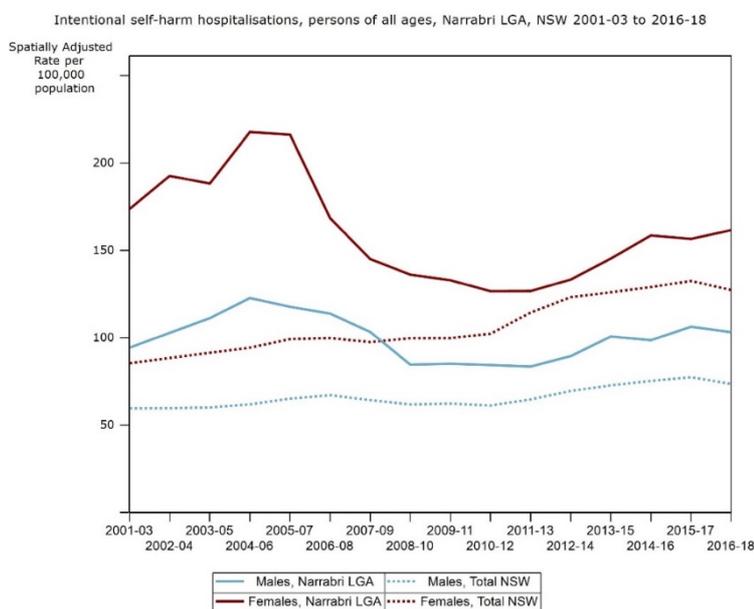
Source: HealthStats NSW, NSW Combined Admitted Patient Epidemiology Data and ABS population estimates (SAPHaRI). Centre for Epidemiology and Evidence, NSW Ministry of Health.

Rates of intentional self-harm are higher for both men and women in Narrabri compared with NSW. Rates of high body mass attributable hospitalisations are higher in Narrabri than for NSW as a whole, although the difference has narrowed since 2013. Fall-related hospitalisations, have also fallen below the NSW rate since 2010 – though both rates have also risen since then. Residents of Narrabri LGA have higher rates of influenza and pneumonia hospitalisations and deaths than NSW as a whole. Rates of asthma hospitalisations have been higher than for NSW for most of the past 20 years. Rates of maternal smoking are much higher in Narrabri than NSW as a whole and rates of first antenatal visit before 20 weeks of pregnancy are lower in Narrabri than for NSW as a whole.

Mental Health

Social Health Atlas data additionally shows that Narrabri LGA is in the highest quintile for excessive alcohol consumption, premature mortality by suicide and self-inflicted injuries relative to other NSW Local Government Areas. This is in addition to high rates of mental health and mood affective disorders being diagnosed in hospitals (PHIDU Social Health Atlas 2018). NSW Healthstats further demonstrates that Narrabri region experiences higher rates of intentional self-harm hospitalisations than NSW for both men and women (Figure 9).

Figure 9: Intentional self-harm hospitalisations, persons of all ages, Narrabri LGA



Source: HealthStats NSW, NSW Combined Admitted Patient Epidemiology Data and ABS population estimates (SAPHaRI). Centre for Epidemiology and Evidence, NSW Ministry of Health.

Crime

According to NSW Bureau of Crime Statistics and Research, Narrabri LGA experiences significantly higher rates of domestic assault than the state average, and has done consistently for the past 5 years (Table 6). The majority of offenders are men, aged 20-39, and the majority of assaults are occurring in residential areas.

Table 6: 5 year trend of Domestic Assault rates in Narrabri LGA and New South Wales 2015-2019

Year	to Sept 2019	to Sept 2015	to Sept 2015	to Sept 2016	to Sept 2016	to Sept 2017	to Sept 2017	to Sept 2018	to Sept 2018	to Sept 2019	to Sept 2019
	Trend: 5 year	Count	Rate								
NSW	Stable	29066	383.1	29326	380.8	28423	363.2	29213	371.6	30950	393.7
Narrabri LGA	Stable	79	586.7	94	701.6	92	691.1	81	610.0	90	677.8

Source: NSW Bureau of Crime Statistics and Research 2019, NSW Crime Tool, Offenders of Assault (Domestic assault) from October 2014 to September 2019, accessed 27/1/2020

On the other hand breaches of apprehended violence orders have increased in Narrabri LGA by 10.4% over the last 5 years. This rate is significantly above the state average (Table 7). In the year to September 2019, 17 apprehended violence orders were granted a rate of 151.7 per 100 000 population more than twice the rate for NSW as a whole (62.6 per 100 000 population)¹⁹.

Table 7: Rates of apprehended violence order breaches in Narrabri LGA compared with state average

Year	to Sept 2019	to Sept 2015	to Sept 2015	to Sept 2016	to Sept 2016	to Sept 2017	to Sept 2017	to Sept 2018	to Sept 2018	to Sept 2019	to Sept 2019
	Trend: 5 year	Count	Rate								
NSW	Up 4.7% per year	13923	183.5	15312	198.8	14827	189.5	15647	199.0	17348	220.7
Narrabri	Up 10.4% per year	45	334.2	49	365.8	57	428.7	54	406.7	66	497.1

Source: NSW Bureau of Crime Statistics and Research 2019, NSW Crime Tool, Offenders of Against justice procedures (Breach AVO) from October 2014 to September 2019, accessed 27/1/2020

Narrabri also experiences higher rates of malicious damage to property, disorderly conduct, theft and sexual offences than state averages.

The SEIFA Index of Relative Disadvantage is 954 for Narrabri LGA which is slightly lower than the NSW median score of 1000. However, this score obscures the social, economic and health differences within the LGA.

¹⁹ https://www.bocsar.nsw.gov.au/Pages/bocsar_pages/Apprehended-Violence-Orders-.aspx

Attachment 2: Special interest group submissions

101 special interest group submissions to DPIE

	Opposed	Not sure, it depends, equivocal	Support
1	Armidale Action on Coal Seam Gas and Mining	Cotton Australia	Narrabri Cycle and Triathlon Club
2 3 4	Artesian Bore Water User Asscn Inc	CWA	Narrabri Local Aboriginal Land Council
5	Australian Air Quality Group	2	NSW Business Chamber
6	Australian Beef Group		Regional Development Northern Inland
7	Australian Plants Society Northern Beaches		Think Brick Australia
8	Bayside Climate Change Action Group		Yarrie Lake Flora and Fauna Trust, Narrabri
9	Birding NSW		Yes2Gas
10	Birdlife Australia		Narrabri and District Chamber of Commerce
11	Birdlife Northern NSW		8
12	Blacktown & District Environmental Group		
13	Blue Mountains Bird Observers		
14	Clarence Environment Centre		
15	Clarence Valley Astronomical Society		
16	Clarence Valley Conservation Coalition Inc		
17	Climate change action network		
18	Climate Rights Newcastle and Hunter, Warners Bay NSW		
19	Coal & csg free Mirboo north, south gippsland		
20	Collectif Causse Méjean – Gaz de Schiste NON!		
21	Concerned communities of Falkirk		
22	Coonabarabran Residents Against Gas		
23	CountryMinded Boggabilla NSW		
24	CSG Free Shoalhaven, Basin View NSW		
25	Cumberland Bird Observers Club		
26	CWA Maules Creek		
27	Dharriwaa Elders Group		
28	Doctors for the Environment Australia		
29	Dubbo Field Naturalist and Conservation Society		
30	ECCO Orange NSW		
31	Evans Head Residents for Sustainable Development		
32	Farmers for Climate Action		
33	Farmers for Climate Action		
34	Friends of Siding Spring Observatory		
35	Friends of the Earth Sydney		
36	Friends of the Koalas Inc		
37	Friends of the Pilliga		
38	Gas Field Free Dubbo Region		
39	Gomeri Traditional Custodians		
40 41	Great Artesian Basin Protection Group		
42	Greens Armidale-Tamworth		
43	Greens Northern Beaches		
44	Groundswell Gloucester		
45	Hastings Birdwatchers Inc		
46	IEEF_Narrabri Gas Project		
47	Kalang Progress Asscn		
48	Knitting Nannas Dubbo		

	Opposed	Not sure, it depends, equivocal	Support
49	Knitting Nannas Gloucester		
50	Knitting Nannas Grafton		
51	Knitting Nannas NENSW		
52	Koala Action Inc Narrabri		
53	Kyogle Group against Gas		
54	Lismore Community Sustainability Forum		
55	Lismore Environment Centre		
56	Lock the Gate Alliance		
57	Mulgoa Valley Land care group		
58	Mullaley Gas and Pipeline Accord		
59	Namoi Water		
60	National Parks and Wildlife Asscn Armidale		
61	National Parks and Wildlife Asscn S Sydney		
62	National Toxics Network		
63	Nature Conservation Council		
64	No CSG Gligandra District Inc		
65	North Coast Environment Council		
66	North West Alliance		
67	North West Alliance Appendix, Kuskie review		
68	North West Plains Sustainability Group		
69	Northern Inland Council for the Environment		
70	NSW Bush Carers		
71	NSW Health Hunter New England LHD		
72	NSW Nurses & Midwives Asscn		
73	Orange and Region Water Security Alliance		
74	People for the Plains		
75	Pets and wildlife of Pottsville Beach		
76	Protect our water, environment and rights		
77	Residents for Environment and Character Conservation		
78	Rivers SOS		
79	Running Stream Water Users Asscn		
80	Ryde Gladesville Climate Change Action Group		
81	Ryde Hunters Hill Flora and Fauna Preservation Society		
82	Securing Australia's Future for our Kids		
83	SOS Liverpool Plains		
84	Stop Coal Seam Gas Blue Mountains		
85	Stop CSG Sydney Inc		
86	Sustainable Living Armidale		
87	The Colong Foundation for Wilderness Ltd		
88	The Wilderness Society		
89 90	Upper Mooki Landcare Inc		
91	Wando Conservation and Cultural Centre		
101	91	2	8

Source: <https://www.planningportal.nsw.gov.au/major-projects/project/10716>

Attachment 3: Submissions categorisation

DPIE categorisation of submissions from 158 organisations

DPIE Page #	Objects	Comment	Supports
1	7	3	2
2	12	0	0
3	8	1	3
4	10	0	2
5	8	1	3
6	2	9	1
7	4	8	0
8	7	5	0
9	11	1	0
10	10	0	2
11	8	2	2
12	12	0	0
13	8	1	3
14	2	0	0
Total	109	31	18

Source: <https://www.planningportal.nsw.gov.au/major-projects/project/10716>

Attachment 4: Submission to the IPC on 23 July 2020

Good morning Commissioners

My expertise is in social impact assessment and I would like to draw your attention to the likely social impacts of this project.

The Department has put to you that

‘Narrabri Gas Project is likely to result in both positive and negative social impacts in the region. These impacts could be tangible, in terms of putting pressure on public infrastructure and services, adversely affecting the housing and rental market, and increasing labour costs; but they could also be intangible, in terms of affecting community cohesion, the mental health of certain people, and peoples’ sense of place.’²⁰

There are a number of things to say about this statement:

- 1 That there would be both positive and negative social impacts is not the point. The point is which would predominate.
- 2 The SIA says that 200 operational workers will be needed once construction is completed. But, it says, at best 90 of these workers will be already present in the region, another 50 might relocate but that is speculative and may not happen and the remaining 60 workers would live elsewhere. That is, the expected jobs benefit for the town is 50 current employees and 40 local residents who would get jobs on the project – a local effect of 40 additional jobs for current residents, not 200.

The Department noted that negative impacts on housing and labour costs would be marginal. But this is because the number of local jobs will be few.

And the applicant agrees noting in a response to a review by the Centre for Social Responsibility in Mining:

‘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

²⁰ DPIE Final Assessment Report p xvii

lasting operations phase, and will therefore not cause a significant impact on local businesses' access to skilled labour.'²¹

If the number of jobs is of low magnitude, the social and economic flow-on benefits to the town will be few.

- 3 This brings me to my third point. The Department believes that community cohesion, the mental health of certain people, and people's sense of place are intangible.

The World Health Organisation (WHO) states that the key social determinants of health are the social gradient²² - that is the size of the gap between rich and poor, stress, experiences in early life, social exclusion, workplace stress, unemployment, lack of social support and addiction to alcohol and/or other drugs.²³

There is a steep social gradient in the Narrabri LGA. A significant proportion of the population experiences more than one of the adverse social determinants of health identified by the WHO. These include unemployment and low income particularly, but by no means exclusively, among the Aboriginal population. Unemployment and low income are associated with social exclusion, addiction to tobacco and alcohol, and stress. Rates of several causes of potentially avoidable death²⁴ – basic indicators of public health – are less favourable for Narrabri than NSW as a whole. Rates of intentional self-harm, suicide, domestic violence and breaches of apprehended violence orders are all higher than for NSW as a whole. This is a population that is suffering measurable and tangible social harms.

The Department's assessment that these are intangible minimises the real effects on local people when they discover that actually the promised jobs are not for them. And again Santos notes

²¹ Santos Reply to A Preliminary Review and High Level Gap Analysis of the Narrabri Gas Project SIA by the Centre for Social Responsibility in Mining (p4)

²² Institute of Health Equity, Social Gradient, definition: 'The social gradient in health is a term used to describe the phenomenon whereby people who are less advantaged in terms of socioeconomic position have worse health (and shorter lives) than those who are more advantaged.' <http://www.instituteoftheequity.org/in-the-news/articles-by-the-institute-team/-social-gradient> accessed 21 3 2020.

²³ Wilkinson R and M Marmot (eds.) 2003, The Social Determinants of Health, The Solid Facts, 2nd edition, World Health Organisation Regional Office for Europe; http://www.euro.who.int/_data/assets/pdf_file/0005/98438/e81384.pdf?ua=1
Wilkinson R and Pickett K 2004, The Spirit Level, Allen Lane, London and New York

²⁴ Potentially avoidable deaths is based on an international classification and includes some infections, some cancers, diabetes and some accidents <https://meteor.aihw.gov.au/content/index.phtml/itemId/716490>

‘Often socio-economically disadvantaged groups in a community are unable to take advantage of economic benefits’²⁵

Not only are these consequences tangible, they are life threatening.

- 4 I also want to draw your attention to the big social impact picture. Most of the likely adverse social impacts derive from
- the social and economic exclusion of most of the town residents,
 - the high level of social tension and discord already present (and evident in the submissions to you) which approval of this project is unlikely to dissipate,
 - the serious public health issues present, and
 - the extreme distributional inequity of what is proposed. Most of the benefits of the project claimed by the Department accrue to the state and people living somewhere other than Narrabri, while the costs are experienced locally.

There is a lack of distributional equity in this situation which is not in the public interest. I am concerned that this is passed over by both the Department and the applicant. Distributional equity matters and the precautionary principle applies to social impacts just as much as it does to environmental impacts.

- 5 The Department and the applicant rely on four main strategies to offset these large social impact considerations. These are:
- i \$14.5m paid to Narrabri Shire Council through a VPA
 - ii Some 21 management plans
 - iii A Social Impacts Management Plan
 - iv A gas community benefit fund

Briefly:

- Only 21% (\$3m) of the VPA is for community initiatives **or** local infrastructure. This is not as much as it seems – it might pay for one community hall, maybe, but not if the money is spent on short term initiatives. As reported, the VPA does not appear to earmark any portion of the fund for actual social infrastructure. The Shire does not appear to have a social plan with tangible social infrastructure objectives awaiting implementation.

²⁵ Santos Reply to A Preliminary Review and High Level Gap Analysis of the Narrabri Gas Project SIA by the Centre for Social Responsibility in Mining (p10)

- Relying on 21 management plans that have yet to be written amounts to relying on assurances and assumptions that they will all be adequate, coordinated, timely, properly implemented and effectively audited. Failures in some of these plans will have social impacts, for example by affecting public health.
- The social impacts management plan places numerous strategies to promote social cohesion, address public health and community development in the hands of the mining company.
 - The mining company is not a social planning agency. It is not a community development organisation.
 - The draft conditions of consent state that Santos must engage people to prepare the plan – that is engage consultants who would write the plan and possibly implement part of it, such as data collection and on-going analysis. Expenditure on consultants is money not spent on actual initiatives.
 - The plan is required to identify negative social impacts – but these should be identified before determination not afterwards.
 - The plan is required to identify opportunities and monitor effectiveness of actions to address social impacts – but the Council, the community consultative committee and representatives of the local community would only play an advisory role about what should happen - not a decision making role which would rest with Santos.
 - There is no deadline for the preparation of the plan and no penalties for non-compliance, late compliance or ineffective compliance. There is no auditor.
- Finally the terms of the Gas Community Benefit Fund are unknown. However, if they are similar to others administered by the Rural Assistance Authority then this Fund will only support short term ephemeral projects for which the Shire and community organisations must compete via an application process. The amounts that will actually be disbursed each year is unknown – royalties may after all be quite small.

In short,

The likely social benefits of this Gas Project for the residents of Narrabri Shire are few. The distributional inequity of the project is substantial.

No work seems to have been done to identify how the adverse impacts of this project on an already disadvantaged Shire could be offset by social mitigation actions and as a result there is a strong likelihood that the available monies will

benefit consulting firms but not result in tangible and long term benefits to the local residents. This would add insult to injury. Adding insult to injury is a social harm.

Curriculum vitae: Alison Ziller

Current positions

Alison Ziller is a consultant social planner, and Lecturer in Social Impact Assessment. Department of Geography & Planning, *Macquarie University*, 2012 -

Qualifications

PhD, School of Urban and Regional Planning, *University of Sydney*, 2004

Thesis title: The role of planning in community building

Master of Arts (Sociology) *Columbia University, New York*, 1969

Bachelor of Arts, Honours (Sociology), *London School of Economics & Political Science*, 1966

Previous positions

2009 - 2017	Sessional lecturer in social planning, Faculty of the Built Environment, UNSW
1996 - 2017	Director, Australia Street Company
2002 – 2008	Member, Social Impact Assessment Panel, NSW Liquor Administration Board
1990 - 1995	Director, Community Resources, Warringah Council

Selected consulting projects: Assessments and evaluations

- Expert witness SIA review re. proposed Vickery Extension coal mine at Boggabri, for *Environmental Defenders Office*, 2019
- Expert witness re. proposed open cut coal mine at Rocky Hill, for *Department of Planning and Environment*, 2018
- Expert witness re. a proposed new hotel in Burwood, for *Burwood City Council*, 2018
- Review of DA and expert witness re. a proposed packaged liquor outlet, *Randwick City Council*, 2015 and 2017
- 'A creative and traditional industries hub in Sydenham': a preliminary SIA, for *Marrickville Council*, 2016
- Review of a DA for a proposed packaged liquor outlet, *Manly Council*, 2015
- Review of Draft SIA Policy, *Liverpool City Council*, 2015 and 2017
- Social impact assessment re. proposed packaged liquor outlet in South Sydney, *City of Sydney*, 2014
- Expert SIA witness re proposed general boarding house for *Lane Cove Council*, 2014
- Social and Health Impact Assessment re. 2018 Commonwealth Games, *Gold Coast City Council*, 2013
- Social impact assessment overview report and expert witness re. proposed FIFO/DIDO hostel at Gulgong, *Mid-Western Regional Council*, 2013
- Expert SIA Witness re. a proposed bottle shop for *Campbelltown Council*, 2013. Decision in favour of Council on 5 April 2013, *Cardno Pty Ltd v Campbelltown City Council* [2013] NSWLEC 1056,
- Expert SIA Witness in the NSW Land and Environment Court for *Shoalhaven City Council* re. proposed bulk discount liquor outlet at East Nowra, 2012
- SIA report re proposed BWS at Rennie Rd, Campbelltown, *Campbelltown City Council* 2012

- Portrait of Women and Girls in Greater Sydney for the *Sydney Women's Fund 2011-12*:
- Review and assessment of data on Boarding Houses for the *City of Sydney, 2011*
- Review of Rate Donation Policy for *Gold Coast City Council, 2011*
- Review of two SIAs re. proposed TAFE hostel for *Gold Coast City Council, 2010*
- Review of SIA re. Dan Murphy liquor outlet in East Nowra for *Shoalhaven City Council, 2010*
- Industry Development Framework for the Community Housing Sector, *Housing NSW, 2010*
- Review of Sydney Metro's SIA re. CBD Metro for *Leichhardt Municipal Council, 2009*
- Two peer reviews of forestry industry SIA for *GHD consultants, 2009*
- Review and advice re. location of community centres in Nowra, *Shoalhaven City Council, 2009*
- Preparation of *Fairfield City Council's* corporate submission and social impact assessment regarding the Redevelopment of Bonnyrigg, *2008*
- Review and evaluation of some 60 social impact assessments submitted to the NSW Liquor Administration Board, 2002 - 2008
- Social Sustainability Discussion Paper for the Sydney 2030 project, *City of Sydney, 2007*

Policies and Guidelines

- Social Impact Assessment policy, *City of Sydney, 2010*
- Principles for fees and charges for community facilities & services, and Advice re. review of Fees and Charges at Ian Thorpe Aquatic Centre, *City of Sydney, 2009*
- Social Impact Assessment Position Statement, *Planning Institute of Australia, 2009*
- Demonstration model and Guidelines: Social Housing for Older Residents (with Peter Phibbs) for the *NSW Department of Housing, 2007*
- Social Sustainability Policy Framework & Due Diligence Guidelines, *Landcom, 2005-6*.
- Pricing Policy for the hire of community facilities, *Marrickville Council, 2004*
- Preparation of 5 guidelines on SIA issues for NSW Liquor Administration Board, 2003-7.

Education and training

- Convenor and teacher: social impact assessment courses at UNSW (2009 - 2017) and Macquarie University (2012 -)
- Presenter: SIA Short Course (one day), Macquarie University, February 2019
- Preparation and delivery of short courses in social impact assessment for planning staff at Mid Coast Council in 2018, Hunter & Central Coast Regional Councils in 2016, Penrith City Council in 2016, Port Macquarie-Hastings Council and Shellharbour City Council in 2014 and Marrickville Council, Clarence Valley Council and the City of Lismore in 2013.
- Course convenor and teacher, short courses: Social Impact Assessment and Social Sustainability Planning, Urban Research Centre, University of Western Sydney, 2007 - 12

Pro bono

- Preparation and distribution of the *social impacts Alert!*, monthly, to subscription list: 2009 –
- Numerous pro bono workshops, reports and advice including for: the Foundation for Alcohol Research and Education, Environmental Defenders Office, NSW Drug and Alcohol Nurses Forum, NSW Health, Darlinghurst Residents Action Group, REDWatch.
- One day *Introduction to Planning* workshops for Local Aboriginal Land Councils on behalf of the NSW Department of Planning, 2018 and 2019.
- Chair, Social Planning Chapter, Planning Institute of Australia (NSW Division) 2007 – 9.

Selected publications and submissions

- Ziller, Alison 2019, The drinks are on us: the capture of the planning industry and how we know about it, Presentation, *Festival of Urbanism*, The University of Sydney, 10 September 2019: <http://www.festivalofurbanism.com/2019/2019/9/10/the-drinks-are-on-us-planning-and-the-alcohol-industry>
- Ziller, Alison and Tony Brown, 2019, Rational Social Impact Assessment of Alcohol Outlets: Slip Sliding Away, *J Law and Medicine*, 26, 786-799
- Ziller, Alison 2019, Letter to the Editor, SIA reviewers (in Australia) need a different set of guidelines. *Impact Assessment and Project Appraisal*, February: <http://dx.doi.org/10.1080/14615517.2019.1569193>
- Ziller, Alison 2018, Online retail of alcohol, some dilemmas for professional SIA practice, *Impact Assessment and Project Appraisal*, 36:5, 383-389, DOI: [10.1080/14615517.2018.1452368](https://doi.org/10.1080/14615517.2018.1452368)
- Ziller, Alison, 2017, Eroding public health through liquor licencing decisions, *J Law and Medicine*, 25/2
- Ziller, Alison, 2017, Submission to Newcastle City Council re s96 application for extended trading hours for The Delaney Hotel, September
- Ziller, Alison, 2017, Submission to the Independent Liquor and Gaming Authority re proposed liquor licence for ALDI at Brady St, Mosman, 8 March
- Ziller, Alison, 2016, The NSW Joint Expert Report Policy – an SIA practitioner’s reflection, *Local Government Law Journal*, December
- Ziller, Alison, 2016, Submission to the Independent Liquor and Gaming Authority re proposed Dan Murphy’s at 718-728 Military Road, Mosman, 21 February.
- Ziller, Alison, 2015, Submission to NSW Department of Planning and Infrastructure re. Housekeeping Review of the Exempt and Complying Development SEPP, November 16
- Ziller, Alison, Bonnie Rosen and Shaun Walsh, 2015, Alcohol is a planning issue, *Local Government Law Journal*, September
- Ziller, Alison, 2015, Submission to Sutherland Shire Council re. Review of DCP, Chapter 40 Social Impact
- Ziller, Alison, 2015, Submission to Treasury re. Review of the Competition Policy Review Final Report, April
- Ziller, Alison, 2015, Social infrastructure and A Plan for Growing Sydney, *New Planner*, 103, June,
- Ziller, Alison 2014, *Understanding alcohol as a social impact issue*, NSW Drug and Alcohol Nurses Forum, 5 September
- Ziller, Alison, Social impact assessment in alcohol related decisions, in Manton E, Room R, Giorgi C, Thorn M, eds. *Stemming the tide of alcohol: liquor licensing and the public interest*, Canberra: Foundation for Alcohol Research and Education in collaboration with The University of Melbourne, 2014.
- Ziller, Alison 2014, Decision-makers need more skills to assess social impacts of alcohol, Guest Editorial, *Of Substance, The National Magazine on Alcohol, Tobacco and other Drugs*, 12:1, p 2:
- Ziller, Alison 2014, The Road and the Gate, paper presented to *Turning up the Heat, A symposium for SIA practitioners and researchers*, Macquarie University, 21 February, <http://web.science.mq.edu.au/downloads/sia/alison-ziller.pdf>

Ziller, Alison, 2013, The question of locality: Case study - development application for a bulk discount liquor outlet at East Nowra, NSW, *Local Government Law Journal*, 18, 196-207

Ziller, Alison, 2013, *Presentation to the NAAPA and National Local Government Drug and Alcohol Committee Community Forum*, Parliament House, 24 October.

Ziller, Alison, 2012 *The new social impact assessment handbook*, Australia Street Company, reprinted 2013, 2014

Curriculum vitae: Gemma Viney

Qualifications

BA (Honours), First Class, International and Global Studies, Department of Government and International Relations, *University of Sydney*, 2016

Work and research

Gemma is a Research Assistant with the Sydney Environment Institute at the University of Sydney, working on the Faculty of Arts and Social Sciences 2018 Strategic Research Program Project *Developing the field of Multi Species Justice*. She is currently completing a PhD in the Department of Government and International Relations.

In 2017 Gemma was an Honours Research Fellow with the Sydney Environment Institute.