## Submission form: environmental impact statement(EIS)

## Name of project

Narrabri Gas Project - SSD 6456 (Santos EIS)

Full name	Organisation (if relevant)
HELEN BENDER	NOT APPLICABLE
Postal address	
GPO BOX 5003	Phone number 0417 628 608
BRISBANE QUEENSLAND	
	Email address
Postcode 4001	helsbender@gmail.com
Signature A submission by more than one person must be signed by <i>each</i> submitter	Date 20 MAY 2017

**Comments on EIS – Chapter 26** 

Section – Ch.26	Describe the issue within the EIS	Objection for Granting Approval – Additional Comments
	George Bender 1947 - 2015	This submission is dedicated in loving memory of the late George Bender; who stood his ground for more than a decade to protect landholder rights and for the protection of our underground water system against CSG activities

Section - Ch.26	Describe the issue within the EIS	Objection for Granting Approval – Additional Comments
26 – Introduction	The summary of the key findings as presented as a one-sided, bias opinion into the assessment of social and health impacts. There is no truth presented in this summary and is reflective of a very narrow view has been taken on the issues which industrialisation brings to any rural community. Reference to the <i>Independent Review of Coal Seam Gas Activities in NSW</i> (NSW Chief Scientist and Engineers 2013 and 2014) – is irrelevant due to being out of date on socio-economic aspects. Santos has stated that field development would only occur on private property if there is a LAA and a FMP in place, this does not go far enough. Santos has assessed their REAL impacts to human health is a <i>low</i> risk. This is completely disgraceful, and an indication to the extreme level of disrespect Santos has towards landholders, whose homes, livelihood, families and lifestyle will be seriously harmed. This is also an admission that Santos view of suicide is unimportant. Their presence in the community increases the stress and anxiety to many landholders who will be directly affected.	<ul> <li>EIS did not address the adverse impacts to the community. Such impacts include:</li> <li>Local businesses will struggle to find people to employ due to the adverse impacts Santos will bring to the community. The cost of living will result in mass movements away from the community. Local businesses will not be able to afford to pay employees to stay in the community</li> <li>There WILL be increased demand on housing and accommodation as developers move in to transform a rural town into a 'developers special' based on maximizing yields and their own profits</li> <li>There WILL be ADVERSE changes to land use, lifestyle and amenity for landholders in the project area. The impacts to the locals can never be fully appreciated by any person who has NEVER lived in a gasfield. The lifestyle and amenity must be protected at all costs. There is no price (compensation) to your privacy, air/water/land quality, personal safety on your own property and local roads, the quietness of rural living, clean and green food and fiber.</li> <li><i>Independent Review of Coal Seam Gas Activities in NSW</i> – this is a paper dated 2013 and 2014 and is outdated when it comes to assessing Social and Health Impacts. Santos intentionally avoided independent research into the Social and Health impacts of CSG to assist with substantiating a 'low' impact assessment of their project. The low assessment of the risks to health and wellbeing is an insult – this is true emission of ignorance and seeing profit before people.</li> <li>Santos lacks the ability to understand their direct impacts to landholders – only the person whose home is being targeted has the right to determine what the real impacts are. I suggest that only the opinions of landholders be weighted 10 fold over any verbal spin by Santos or industry based research.</li> <li>Santos summary of the Social and Health is one that sees the community as a barrier to their project and profits.</li> </ul>
26.1 Methodology	There is no explanation as to how the quoted guidelines are relevant, simply stating that they are relevant does not make it so. There is insufficient explanation into the relevant guidelines – specifically the Health Impact Assessment Guidelines (enHealth 2001)	Santos to provide a detailed methodology as to how the guidelines have been used within their EIS. The guideline is a 206 page document and it is only reasonable that a detailed explanation and methodology be provided within the EIS for the community to be able to comment on.
26.2 – Existing Enviro	prment	
26.2.1 Overview	Incomplete pathways for health impacts provided	Additional pathways include; Landholder Engagement (bullying and threats etc.), Traffic (increased volume = increased risk). Santos to provide a complete list of pathways.
26.2.2 Population	No evidence provided to support the 6% increase to Narrabri's population; Table 26-1 only provided 2011 statistics. The April 2014 are not referenced to its validity. Statement that the increase in population is attributed to the resource sector is not supported with any evidence – it is an opinion only.	Of the 6% increase in population, what is the portion of that 6% who are not permanent residents and were only located in Narrabri for short term employment opportunities due to the resource industry? This statement by Santos indicates the lack of rigor applied to support their statement.

Section – Ch.26	Describe the issue within the EIS	Objection for Granting Approval – Additional Comments
26.2.6 Employment and Income	Note that the MAJOR employment industries in Narrabri LGA are AGRICULTURE, FORESTRY AND FISHING (21.4%), and are also the major employment industries in the wider region.	GISERA research (2014) shows that for every new job in the resource sector, there has been a REDUCTION of 1.7 jobs in agriculture, <a href="https://gisera.org.au/wp-content/uploads/2016/04/reversing-rural-decline-factsheet.pdf">https://gisera.org.au/wp-content/uploads/2016/04/reversing-rural-decline-factsheet.pdf</a> Therefore, the resource sector WILL have an ADVERSE impact to the current major employment sector to the region.
		Therefore, the resource sector will have an ADVERSE impact to the current major employment sector to the region.
26.2.7 Housing and accommodation	Irrelevant data used in the EIS, 2014 are not current numbers. Having witnessed the direct adverse impacts in the regional	There is no good explanation as to why Santos has not provided relevant housing and accommodation statistics – the data is 3 years out of date.
	communities of Queensland, it is ignorant of Santos to have ignored this evidence and attempted to address these impacts of creating a boom and bust outcome in Narrabri.	The only explanation as to why an emerging resource industry increases demand for short-term accommodation, is due to the resource industry in its own nature is SHORT TERM and is unable to provide any long-term benefit to the community.
26.2.8 Social Infrastructure and Services	The EIS confirms that there are limited education and training programs to train local people for employment in emerging industries	Santos to confirm what local employment opportunities will be provided for local residents in the potential Narrabri Gas Project? This statement confirms that Santos has ZERO intentions in providing local residents with any employment opportunities. Local residents (as similar to residents in Qld) were provided opportunities to clean toilets and facilities, as locals were not employed where they could be witness to the environmental damage being done in their own community.
26.2.9 Health and Wellbeing	Santos was only able to provide 3 short paragraphs on the existing health and wellbeing, <i>There are limited data available that specifically deal with health and wellbeing in the Narrabri region</i> .	The requirement to conduct extensive baseline studies is highlighted as Santos have no knowledge on the community. Without extensive baseline data, there can be no approval of any extractive industry commencing
26.2.10 Recreational Values	The existing recreational values known as the gateway to 'the Pilliga' have been acknowledged within the EIS. These values will certainly be at serious risk, resulting in a major adverse impact to the community due to the loss of tourism, and or local community travelling elsewhere to camp. Why – gasfields are not a place that can be enjoyed either day or night.	The serious adverse impacts to the community's recreational value is unable to be protected by this project being approved. https://www.facebook.com/john.jenkyn/videos/1932294667003796/
		0:33 ♥》 ✿ ₽

Section – Ch.26	Describe the issue within the EIS	Objection for Granting Approval – Additional Comments
26.3 - Potential Impa	acts	
26.3.1 – Project Workforce	<ul> <li>The peak workers employed of 1,300 is put into question.</li> <li>Construction occurs over stages, and it is more likely that the real employment numbers will be much less than 1,300. This is due to the same 'man' is employed across the stages, however is counted multiple times across the construction period.</li> <li>Table 26-7 Workforce after the initial 3 to 4 years indicates the limited employment opportunities to the local residents:</li> <li>25% (50 roles) are existing roles ALREADY in Narrabri (how many of these were existing Narrabri residents??)</li> <li>20% (40 roles) Narrabri and immediate region (New)</li> <li>10% (4 roles) Narrabri and immediate region (New)</li> <li>Total 94 roles, of which 44 new roles may be made available to the local residents out of 345 workers. This represents only 12.75% of the ongoing workforce will be made available to local residents.</li> </ul>	The extremely low numbers of ongoing employment opportunities made to local residents is unacceptable, and is just another reason why this project is does not add up. 12.75% of the ongoing workforce will be locals – this is an insult to Narrabri, when the community will loss so much more, and lose a unique way of life.
26.3.2 Community Characteristics	The EIS makes references to Coote (2013): https://thesourcenews.com/2013/08/29/researcher-soon-to-release- findings-on-csg-mental-health-impacts/ and also made claims of no clear evidence that stressors were diving existing communities. This is FALSE and MISLEADING, in reading this article (see below), no statement could have been deduced from the link. However, the article could be interpreted to read the complete opposite. Gavin Coote was not the researcher leading this study. The study was being undertaken by Dr Methuen Morgan. GAVIN COOTE A psychology researcher is nearing completion of a comprehensive study into the mental health impacts coal seam gas exploration may have on farmers. University of New England PhD candidate Methuen Morgan, formerly a farmer at Condamine in Queensland, has spent the past two years surveying over 400 farmers on their feelings of coal seam gas explorations. Mr Morgan said he was nearing the end of his thesis titled 'David vs Goliath'. "It looks like we're seeing some interesting profiles occurring with regards to stress," he said. "Most of the stress constructs within our measure are usual stressers, so they're things that farmers are familiar with like droughts, floods, bank managers, and commodity price fluctuations but my speculation is that coal seam gas, or extractive industries in general, is a unique man-made stresser. "They don't feel like they have any control over it, rightly or wrongly, and this has come from out of left field and they're not equipped to deal with it."	<ul> <li>It is appalling that the EIS has ignored the release of the research findings from the article reference within the EIS as 'Coote' (2013).</li> <li>This research paper '<i>Fracked: Coal seam gas extraction and farmers' mental health</i>', Journal of Environmental Psychology https://www.research.gate.net/publication/301760969_Fracked_Coal_seam_gas_extraction_and_farmers'_mental_health was accepted on 23 April 2016 and made available online on 24 April 2016. Appalling effort by Santos!</li> <li>In Morgan's own words to myself in November 2016 ', wou must remember that my research averages the data, however the individual data on some farmers dealing with CSG is very scary?'. Morgan's comments are consistent with 4 other landholders who have personally declared that they have considered taking their lives due to the external stress that CSG is having on their daily lives within the Queensland gasfields.</li> <li>Key points from the research paper:</li> <li>Exploratory factor analysis revealed that CSG items added two unique dimensions to the Edinburgh Farming Stress linventory (EFSI)</li> <li>Off-Farm CSG Concerns (concerns about possible impacts of CSG extraction on human health, communities and the environment)</li> <li>On-Farm CSG Concerns (potential CSG impacts on farm profitability, disruption of farm operations and privacy)</li> <li>Farmers in the CSG-Stressed and Globally-Stressed profiles exhibited clinically significant level of psychological morbidity</li> <li>Potentially harmful impacts, the primary burden for which will be borne by agricultural communities, may constitute an additional significant stressor facing farmers – many of whom already carry a substantial stress burden associated with agricultural production</li> <li>Although not all stress is detrimental, severe or prolonged stress can have serious impacts on the physical and mental health for farmers</li> <li>While there is empirical research examining psychological impacts of extractive industries such as coal mining, we were unable t</li></ul>

Section – Ch.26	Describe the issue within the EIS	Objection for Granting Approval – Additional Comments
	Mr Morgan said the empirical data this would produce makes the project quite unique. "The survey comprised of 378 questions looking at a range of behaviours in relation to coal seam gas," he said. "We looked at trust, resilience, coping, and place attachment so it was a fairly comprehensive survey. "The vast majority of participants have been Queenslanders and New South Welshmen which is quite unsurprising given that that's where most of the coal seam gas action's been taking place." A difference of opinion Methuen Morgan said farmers have a profound sense of tolerance for differing opinions on the issue of coal seam gas. "That particular scenario has the potential of actually dividing communities," he said. "The fact that it hasn't to any great extent at this point in time is probably as a result of a level of tolerance that farmers have to others and to differing opinions and attitudes, and the decision to be at each end of the spectrum has a certain element of logic. "There is nonetheless a certain amount of concern amongst the farming community about the impacts, this industry is still in its infancy and the full ramifications are yet to be seen." Despite having previously been a farmer, Mr Morgan said he's tried to keep his own feelings about coal seam gas aut of the process, and has focussed on producing objective, unbiased findings. "As an ex-farmer from Condamine, which is right smack in the middle of the coal seam gas fields up there, I obviously have some concerns," he said. "But having moved to the Tablelands down at Armidale and given that none of our funding is from anything apart from the usual university sources, there's no influence or bias there." Methuen's not ready to pencil in a date just yet for when he'll release the findings but he gave assurances that it would be well worth the wait. "It's kind of a watch this space with the coal seam gas research," he said.	<ul> <li>Section 3.6 Farm stress typology. CSG-Stressed farmers constituted the third largest segment. The main distinguishing feature of the CSG-Stressed group was the elevated scores related to Off-Farm and On-Farm CSG Concerns. The Globally-Stressed farmers included mean scores for Off-Farm and On-Farm CSG Concerns that fell within the "thigh to very severe" range. In terms of mental health, members of the Globally-Stressed segment on average were characterized by "clinically significant" levels of psychological morbidity for depression, anxiety and stress reactivity</li> <li>Section 4.2 Farmer stress profile: Our results suggest that, even in the absence of such traditional stressors, new stressors associated with merging industries, such as CSG, may adversely affect farmers' mental health. Thus, the elevated symptoms of depression in this segment may reflect demoralization (feelings of uncertainty, helplessness or hopelessness) associated with these specific stressors</li> <li>CSG operators could assist in reducing the stress burden on farmers by specifically addressing farmers' concerns during negotiations and is now regretful as he is watching his property being trashed and agreement. The results suggest the need for proactive identification and early intervention for farmers stressed by multiple factors, including unknown issues associated with the CSG industry</li> <li>Globally-Stressed was considered from a mental health perspective was the most worrisome segment. The results suggest the need for proactive identification and early intervention for farmers stressed by multiple factors, including unknown issues associated with the CSG industry</li> <li>Insights about the association between CSG concerns and farmers' mental health may assist regulators and industry to review and adjust their practices to reduce unintended community impacts</li> <li>Santos have FAILED to address this section of the EIS and confirms that Santos does not care about the impacts to the affected landhol</li></ul>
26.3.4 Social Infrastructure and Services	EIS claim that 1,300 works will be required during the construction of the project in a regional community MAY place additional demand on health and emergency social infrastructure. A statement by a company that it is ANTICIPATED that the non- resident workforce would GENERALLY address their regular health needs at their place of permanent residence brings into question workplace rights for employees.	This is a huge assumption that workers will wait till they return to their permanent place of residence for medical attentionThis may be true for on-going and pre-existing conditions, however if a worker is ill, they should not be forced to wait for medical attention. How do Santos intend on policing this? This would not pass any employment agreement. Therefore, the EIS must readdress the impacts on social infrastructure if the project was to proceed as the impacts on the locals will be adverse and unexpected.

Section – Ch.26	Describe the issue within the EIS	Objection for Granting Approval – Additional Comments
26.3.5 Recreational Values	A surface development exclusion zone of 200m to be established around Yarrie Lake and its reserve area is INSUFFICENThaving lived in the gasfields of Old, full impacts of pollution (light, noise, air, water, health) are witnessed 60km+ away. The use of the term 'diffuse' nature is misleading – a more accurate	Visual impacts of a gas flare is clearly visible from 60km+ away. The intensity of the gas flares will have significant adverse impact to the recreational values of the region. Santos are again misleading the extent of the potential impact – to downplay the impacts in order to obtain approval. Any agreement to meet environmental sensitive receptors requirements will only be amended at a later date to the approved Environmental Authority (or the like in NSW)
	term is CONCENTRATED nature of the development. The development of a gasfield has extensive infrastructure with wells, network of pipes, roads, High Point Vents, Low Point Drains, compressor stations, telecommunications infrastructure, signage, land clearing, etc is not to be underestimated by the use of the term DIFFUSE.	
	The project either will or will not have impacts on the Siding Spring Observatory – Santos is not in the position to make a determination on the impact, however this final decision must be provided to the 'Observatory Committee' alone.	
26.3.6 Health and Wellbeing	I am concerned that Figure 26-2 is illegible, an ability to read this table has hindered the ability to provide comments. Checked this figure in Appendix T2, and again it illegible.	Figure 26-2 is to present in a form that is about to be read to allow comments to be provided. This is direct indication that Santos is <i>not willing</i> to be open, honest and transparent.
	Reviewing Appendix T2, Section 2.4 Specialist/Technical Reports – I made attempts to locate some of these reports, however it would	As the saying goes, 'he who pays, wins' – GHD and specialist consultants are paid by Santos to supply reports with a desired outcome. This desired outcome is to support the project proceeding, otherwise the consultants' work will not be paid.
	seem that these reports are not for public viewing. EIS would need to provide all this information to enable community	A project such as this, requires third party, independent and peered reviewed studies – the research needed must not have any form of conflict of interest to ensure that the desired outcomes are neutral and best for the future. This has not occurred within this EIS and all statements made are biased to favour Santos.
	comments.	Appendix T2 – Section 2.5 Limitations; this defines the scope of the health impact assessment has been limited to discussion of the potential effects of health due to only those matters covered/introduced in the specialist studies listed in Table 2-1. This clear admission of narrowing the studies to only include (in majority) of the cases to research that Santos has commissioned, is a FLAWED approach and a clear warning to EPA that there are serious information gaps being presented in this section of the EIS (amongst the other Chapters).
		The solution is to engage independent 3 <sup>rd</sup> party researchers to conduct long term studies (baselines) and consult with the seriously impacted community residents to provide a truly neutral and unbiased report and outcomes. Anything less than this is unacceptable for the community and this EIS should not be approved.
		George Bender:
		The following explanation has been researched from A page from Bully Online, website of the UK National Workplace Bullying Advice Line:
		<ul> <li>Whilst some people decide to end their life because of despair, others take their life because they see it as a "logical step". It is thought that the former category (despair) is the result of "mental illness", whilst the latter (logical step) is because of "psychiatric injury". The difference is important because injury has an external cause - in other words, something - or someone - is liable. The differences between mental illness and psychiatric injury are often not recognised; understanding the differences could alter the verdict, perhaps from suicide to manslaughter.</li> </ul>

Section – Ch.26	Describe the issue within the EIS	Objection for Granting Approval – Additional Comments
		<ul> <li>Psychiatric injury:</li> <li>Over time, the symptoms as a result of psychiatric injury is very different to the symptoms of mental illness. Despite superficial similarity, and comments (both direct and implied) from those around you, there are many distinct differences between psychiatric injury and mental illness including: <ol> <li>mental illness is assumed to be inherent (internal) whereas psychiatric injury is caused by something or someone else (external) – who is liable;</li> <li>an injury is likely to get better (if the cause is removed);</li> <li>the person suffering mental illness exhibits a range of symptoms associated with mental illness (paranoia, schizophrenia, delusions, etc.) but not with psychiatric injury, whereas the person suffering psychiatric injury will typically exhibit a range of symptoms (e.g. hypervigilance, hypersensitivity, obsessiveness, irritability, fatigue, sleeplessness). Those symptoms are only associated with psychiatric injury and not with mental illness.</li> </ol> </li> <li>(Obsessiveness is emphasised, as the invasion of the unconventional gas industry became a living and breathing entity of its ownGeorge had to feed this entity order to control itthe industry possessed George's mind, it slowly consumed him and George obsessed over it)</li> </ul>
		<ul> <li>Consequently, there is strong believe that there is one cause of suicide which has been overlooked – Abuse! This can be abuse in all its forms - bullying, harassment, stalking, domestic violence, sexual abuse etc. It causes prolonged negative stress which cumulatively amounts to psychiatric injury. A prominent symptom of psychiatric injury is "reactive depression", which then gives rise to thoughts of suicide.</li> <li>The number of adults who commit suicide because of bullying, harassment and violence is unknown, but our guess is that bullying is a significant factor in the number of suicides by adults. In Australia, the 2013 ABS state that for men (age group 65-69), there were 86 deaths, representing 1.3% of all deaths.</li> </ul>
		How many adult suicides are caused by bullying? Given the above background, consider the following:
		bullying (an abdication and denial for the effect of one's behaviour on others) causes prolonged negative stress (psychiatric injury) which includes
		reactive depression (the cause is external - <b>someone is responsible and liable</b> ) which results in fluctuating baseline of one's objectivity (balance of the mind disturbed) which leads to
		contemplated suicide (being viewed as suffering mental illness) culminating in attempted suicide (cry for help) which may end in suicide ( <b>manslaughter – causation</b> )
Air Quality	The information provided in this section of the report is incomplete and not extensive to adequately meet the requirements of an EIS.	This EIS has failed to also include in the list of air emissions VOCs (100s), Formaldehldye, BTEX, Hydrocarbons (100's) and the remaining emissions. EPA are encouraged to review both Santos and Industry pollution emissions at: <u>http://www.npi.gov.au/npidata/action/load/browse-search/criteria/browse-type/Company/year/2016</u> A Complete list of emissions include; Arsenic & Compounds, Benzene, Beryllium & Compounds, Cadmium & Compounds, Carbon Monoxide, Chromium (III) Compounds, Copper & Compounds, Cumem (1-methylethylbenzene), Cyclohexane, Ethylbenzene, n-Hexane, Hydrogen Sulfide, Lead & Compounds, Mercury & Compounds, Methanol, Nickel & Compounds, Oxides of Nitrogen, Particulate Matter 10.0 um, Particulate Matter 2.5 um, Phenol, Polychlorinated dioxins and furans (TEQ), Polycyclic Aromatic Hydrocarbons (B[a]Peg); Sulfur Dioxide, Toluene (methylbenzene), Total Volatile Organic Compounds,

Section – Ch.26	Describe the issue within the EIS	Objection for Granting Approval – Additional Comments
		Xylenes (individual or mixed isomers).
		EIS statement that the main air emissions during construction was assessed to be fugitive DUST (what contaminates are found in this DUST?), while the main air emissions during operation was assessed to be oxides of nitrogen is again MISLEADING and FALSE. The gap between this statement and the current reporting to the NPI is so big that we could fit another universe through – what planet is Santos living on??
		This EIS is not able to be approved based on this misleading and inaccurate assessment of the health impacts due to Air Quality.
		Photo: Flaring in Queensland gasfields
	Interconnection of groundwater sources: EIS made some claim that registered groundwater extraction boresare separated from the target groundwater units by numerous, relatively impermeable geological layersI do not believe	The Namoi Water Catchment Study Phase 2 by Schlumberger includes a table (Table 7.11 Summary of parameters for each geological unit) showing there is no such impervious layer. Santos are to supply all evidence and research that enabled them to make this claim before any approval is able to be provided.
	this statement/claim to be correct. Without reading Chapter 11 – however from evidence seen in Queensland with now 3 water bores having to be decommissioned	The current groundwater modelling completed in Queensland used a model software that is not able to accurately predict the impacts of the groundwater – therefore, it is also very likely that NSW/Santos have used the same groundwater modelling software that will under-predict the groundwater draw-down.

Section – Ch.26	Describe the issue within the EIS	Objection for Granting Approval – Additional Comments
	<ul> <li>on 1 property owned by my family, capped by Origin Energy due to gas migration as a DIRECT impact of CSG activities and the depressurization of the aquifer, there WILL BE SEREVE IMPACTS TO GROUNDWATER due to Santos gas activities.</li> <li><i>Loss of chemicals including drilling fluids:</i> The industry is self-regulated and the loss of any drilling fluids will never be reported. The industry cannot be trusted. The fact that there is no visual verification of what losses are actually occurring below ground indicates that this statement in the EIS is made in a PERFECT IDEAL WORLD, a world that is not based on reality. How can the balance of drilling fluids be determined when the drilled hole is of an unknown volume? (the sides of the hole are never perfectly smooth) Once the loss of drilling fluids is registered – the damage has already occurred and there are no corrective actions to retrieve those loss drilling fluids. Salt – this is a real concern for agriculture. Any increase in TDS, or other salts require to be fully assessed. <i>Loss of Produced Water</i> ABC recently reported that there has been major spills of CSG wastewater in the last month near Roma and one in the Cooper Basin by Santos – full disclose is needed to determine if Santos has the competency to be granted an approval to drill another single well. This section of the EIS is all based on this wishful thinking and misleading the public that Santos is able to conduct their activities without causing harm – Santos will cause harm, serious harm. <i>Loss of fuels or other chemicals from storage</i> Accidents will always happen, and there is no means that Santos can avoid these risks.</li></ul>	
Land Contamination	What is the long term economic impact to the loss of land due to CSG activities. It will take another 50years+ for the soil to return to 90% of its production (at best).	Contaminated land will also contaminate the food that is produced on that land. The air contaminates will also impact the land as these contaminates settle across the land. EIS did not address other issues with the land, including loss of topsoil due to the inadequate management during construction,
	Due to the water bore kicking, Origin Energy were responsible to	ongoing pipeline subsidence and impacts to overland flow paths due to the extensive network of roads, pipelines and well pads.

Section – Ch.26	Describe the issue within the EIS	Objection for Granting Approval – Additional Comments
	carry out soil remediation works and the long term impacts to that soil is still unknown.	Photos: Pipeline subsidence in prime agricultural farmland, and construction that hindered overland flow paths due to the pipeline creating a 'contour bank' creating extensive erosion issues

Section – Ch.26	Describe the issue within the EIS	Objection for Granting Approval – Additional Comments
Noise	EIS has claimed that their activities will exceed the relevant noise criteria – the means that CSG Companies get around this by forcing landholders into signing 'Opt-Out' Clauses. This means that the landholder is unable to make any complaints about breaches against the Environmental Authority (EA) or similar for NSW.	It is best to use real evidence from residents who have had the CSG industry forced upon them, as this is evidence that cannot be disputed. Below is a message from a resident in the Qld gasfields, who lives approximately 19-20km away from the Kenya Compressor Station. This lady 'Julie', (name and profile picture has been withheld due to the high risk of being harassed by QGC and the Qld Government for speaking out about the real impacts and truths)Copies of the message from 11 March 2017:
	In the first para, the EIS states that the operation has the potential to	MAR 11TH, 7:28AM
	exceed the relevant noise criteria, and then in the second para, the EIS says it will manage the noise limitshow? with the above stated 'Opt-Out' clause? This is evidence that Santos is unable to operate within the approved limits.	Hello Helen.:)you don't know mebut I'd appreciate your adviceI live 19 km to the south of Kenyaand can't tolerate this constant noise any longerbeen here 20 years nowbut.I did not sign up for thisand just want to live in peace:)any advice would be greatly appreciated 🙂 Cheersjulie
	This is of a serious concern, as if a landholder agrees to an Opt-Out clauseother landholders who are not party will be adversely impacted without any compensation! Unacceptable.	Thank you Helen Have no wells on my property And nodon't talk to neighbours as I pretty much keep to myself herejust easier to not get involved
		Have had noise monitors heremany years agoand apparently noise levels here are quite acceptable according to QGC anyway
		Like I saidthank you for your helpcan not imagine how crazy busy your life is
		It is very likely that the company noise monitoring is inappropriatealso, the company don't need to report to government about your complaintyou do! 1 will forward your message to Sharon tooI recommend you at least speak with h
		Thank you
		You're welcome. It is a low frequency noise?
		MAR 11TH & 150PM Yes.;just the incessant drone of compressors on Kenya Some days worse than othersovercast days are
		worst of all
		I'm 20 km to the south of Kenya on the south of the south of Kenya on the south of Kenya
		I speak with the provident deserve this speak up time to time
		MAR 13TH, 9:SIPM
		Ask for advice.
	Have thought of that alreadyI do appreciate your help and advice	
		Also note in the above, the community divide, 'no longer speaks with her neighbours', due to the division and previous neighbour that were a support were paid out by QGC, signed up on confidentially agreements.
		Further research into monitoring in Qld has revealed that 80%+ of monitors are upstream of the gasfields and hence the result are not reflective of the impacts to residents and the community.

Section – Ch.26	Describe the issue within the EIS	Objection for Granting Approval – Additional Comments
		This link below is also evidence of the noise impacts experienced by a landholder who receives zero compensation, and has to listen to compressor stations, water pipelines, drilling rigs, traffic that is in breach of Environmental Authorities – yet the government are corrupt and colluding with the industry and refuse to do real-time monitoring. What is the chances of the NSW government will follow the same crooked path – and if approval is provided to this EIS, at least the landholders will know where they stand. https://www.facebook.com/john.jenkyn/videos/1937834689783127/
Hazards	A biased EIS would expect nothing less than a statement that hazard risks are nil or low	Third party, independent consultant to provide a true assessment on the hazards that the industry will cause to the community. There is only one chance to get this right – the risks are too serious, the long-term consequences are not worth the short-term sugar hit (if that) of approving this project.
Community	It is very concerning that the EIS for dealing with community health is so misinforming, that again indicates that Santos does not care about the adverse impacts they will have on the community. As noted above under 26.3.2 – Coote was not the researcher who completed the study, the research was completed by Dr Methuen Morgan. This research paper " <i>Fracked: Coal seam gas extraction and farmers' mental health</i> ", Journal of Environmental Psychology https://www.researchgate.net/publication/301760969_Fracked_Coal_seam_gas_extraction_and_farmers'_mental_health was accepted on 23 April 2016 and made available online on <i>24 April 2016</i> . The research paper concluded that; Exploratory factor analysis revealed that CSG items added two unique dimensions to the Edinburgh Farming Stress Inventory (EFSI). The Queensland Health (2013) review is the most corrupt and collusive investigation that will in due course be the undoing of the Queensland Government – a major class action will cripple the government to their knees. As an example, Recommendation 7 (d) was made: - 7 (d) - That a strategic ambient air monitoring program be established by DEHP to monitor overall CSG emissions. This could be	See evidence above under 'Noise', for the division within the community. The Chinchilla Community Facebook page has rules that the 'C' is not able to be discussed. The 'C' word is CSG. Why? If the industry was such a success and a was providing wide spread benefit to the community, it would be very unusual to ban the use of the word within a community forum. CSG within Chinchilla divided the community, as the industry rolled up with an open cheque book to buy their way into specific community groups. This is not obtaining a social license through organic means. The mere fact that companies can only obtain a partial social license via donations is an indication that the industry is not widely accepted and until such time, the industry should not proceed. The EIS failed to assess the impacts of CSG on farmers as concluded in the research paper by Morgan (2016), and hence there can be no approval provided given that CSG was the sole reason that George Bender committed suicide. Even the terms 'stress' and 'anxiety' are sum-up terms used to describe a range of physical sensations experienced by individuals. It would seem that the industry and the government would prefer to classify individuals as having pre-existing disorders to transfer the blame than to accept that their own activities and behaviours are fully responsible. The EIS has used flawed investigations and misleading articles to present that the industry will have a potentially low risk to the communities health and wellbeing. Unfortunately, the consequences of this industry is potentially deadly and all activities by a CSG company cannot be considered low risk when the mental health of community members are so unique and specific to an individual.
	<ul> <li>based on consolidation of existing air monitoring undertaken by DEHP and industry, with supplementation where insufficient data exists. This would allow improved identification of any current and future impacts of CSG activities on ambient air quality. The Department of Health would provide health-based guidance on the design of the program and participate with other agencies in the review and Department of Health reporting of results. Key elements to include are: <ul> <li>identification of analytes that are known or reasonably likely to be associated with CSG activities</li> <li>identification of relevant health-based reference criteria for each analyte prior to determining sampling and analysis</li> </ul> </li> </ul>	

Section – Ch.26	Describe the issue within the EIS	Objection for Granting Approval – Additional Comments
	<ul> <li>methods. these should include short-term and/or long-term criteria (i.e. criteria for short-term peaks and longer term averages) as appropriate for each specific analyte</li> <li>use of sampling and analysis methods that will achieve limits of reporting that do not exceed the health-based reference criteria for each analyte.</li> </ul>	
	To date, the Queensland Government have not fulfilled this requirement and recommendation – why, because without monitoring there will be nothing found. If monitoring was to happen and something is found, the government would have to act.	
	This report is flawed for the following reasons:	
	<ul> <li>Gas company undertook the air monitoring data for 1 week only. Hence conflict of interest and the company was able to shut down that particular gasfield</li> <li>No health assessment was undertaken on any resident</li> <li>Recommendation – no follow up by the department even with more evidence of serious health concerns</li> <li>Additional evidence can be sourced here http://www.ntn.org.au/wp/wp- content/uploads/2013/05/Symptomatology-of-a-gas-field-An- independent-health-survey-in-the-Tara-rural-residential- estates-and-environs-April-2013.pdf and http://www.ntn.org.au/wp/wp-content/uploads/2013/12/CSG- Health-Impacts-Dr-W-Somerville.pdf</li> </ul>	
	The Queensland Government are GUILTY of corruption and significant evidence is being collected to expose all individuals involved in this crime.	
26.3.7 Socio- economic impacts	This is just total rubbish. EIS has not completed a real cost-benefit analysis on the socio-economic impacts. There has been nil assessment on the 'cost impact' caused by this industry, the long term negative costs across all aspects of agriculture, manufacturing, health and environmental (air, water, land).	This chapter claims that the cost-benefit analysis is presented in Chapter 27. In reviewing Chapter 27, the analysis appears to be poorly researched and limited on the negative cost impacts caused by the project. The analysis provided by Santos would require a high level of scrutiny into the such elements:
	<ul> <li>Coal seam gas mining costs farmers millions, CSIRO study finds (2016): http://www.abc.net.au/news/2016-12-16/coal-seam-gas-mining-costs-farmers-millions-csiro-study-finds/8124834</li> <li>According to the model used by the CSIRO, a sample area averaged a loss of \$2.17 million over 20 years when CSG mining activity was present.</li> </ul>	<ul> <li>has been adequate allowance to comply with all Acts, Legislation and guidelines</li> <li>has there been allowance for the large rehabilitation costs at the end of the project, when the gas wells are no longer producing</li> <li>how accurate are the production costs used (too low?)</li> <li>what baseline gas price has used – what level of sensitivity analysis has been used</li> <li>has the data been independently verified or not</li> <li>what level of costs has been used for the loss to water, land, health</li> <li>what level of costs has been used for the damage to the environment due to GHG emissions</li> </ul>

Section – Ch.26	Describe the issue within the EIS	Objection for Granting Approval – Additional Comments
	<ul> <li>"Coal seam gas mining is a multi-faceted research area, and it requires critical research as it is a new, rapidly expanding industry," Dr Marinoni said.</li> <li>"This model does not assess the impact to groundwater, greenhouse gas emissions, or socioeconomic impacts,"</li> <li><i>Old CSG emissions damage bill to cost an eyewatering \$23 billion a year (2015):</i> https://independentaustralia.net/environment/environment-display/qld-csg-emissions-damage-bill-to-cost-an-eyewatering-23-billion-a-year,8353</li> <li>After thirty years, CSG will have earned A\$45-60 billion for Queensland.</li> <li>But, meanwhile, the burning of this gas will have wreaked A\$600+ billion of damage</li> <li>The above articles are just a start.</li> </ul>	
26.3.8 Landholder Impacts	As witnessed in Queensland, hostile landholders have to undergo ongoing pressures by CSG companies, and as a result the companies simply trespass on landholder's land – as it easier to pay a small penalty than to obtain landholder's agreement. These statements made by Santos are an echo of the statements made to Queensland landholders, and there is endless proof that CSG companies treat landholders will zero respect. There is no statement made about work-over drills, however often the wells will require work-over and the disruption caused to landholders. There is no statement made about infill drilling, and the impacts of the same, or the true numbers of wells that will be created across the landscape. It is evident that there are many gaps in the statements that have been made by Santos and there is no trust in this company.	Santos stating that any landholder is freely able to express their view, and is at liberty to say "yes" or "no", does not imply that Santos will not bully, harass, intimidate, threaten a landholder. Santos must also be able to announce publicly that they will never return to that landholder, or have any additional communications with that landholder, ever again. Are Santos willing to agree to walking away from numerous wells? This project must not be approved unless Santos agree to walk away from wells (forever) if a landholder says "no". Santos must pay all landholders time during negotiations, regardless if an agreement is reached. The significant amount of time that a landholder is required to provide to negotiate with these companies, is time not spent on their business and this MUST be compensated. Santos to provide full insurance to all landholders – no insurance no access. Santos are also to consider compensation agreements to landholders without gas wells who will be directly impacted. That is, gasfield development do not consider the cadastral boundaries, hence a well or associated infrastructure can be located at a distance that is closer to a neighbours house than the house of the landholder whose land the well is drilled on. Is this considered fair or reasonable? No. So essentially, all landholders who are surrounded by gas infrastructure and received zero compensation as not 1 well is located on their land, however there are 275 wells within an 8km radius of their home, numerous compressor stations and treatment plants.

Section – Ch.26	Describe the issue within the EIS	Objection for Granting Approval – Additional Comments
26.3.9 Post-Closure	It is a very optimistic statement that has been made in the EIS that the closure of the project would represent the removal of a source of economic value-add and income – when the value-add is yet to be proven and that there is no physical or actual case/project that has been able to confirm that this will occur.	The destruction of this industry will be felt a long time after the industry has sucked all the gas out. There is no evidence that the industry will decommission the abandoned wells, rehabilitate the land, the long-term consequence of the loss of water, the health impacts to the humans and the risks to our food source. EIS to show proven evidence that this statement is without doubt true, otherwise it is just shooting for the stars but is really just
		throwing darts in the dark!
26.4 Mitigation and Management	All the management systems in the world will not mean anything once approval is provided. As witnessed in Queensland, CSG companies believe that Environmental Authorities are like elastic bands that can be stretched to an undefined elastic limit - that is, CSG companies will continue to operate outside the original environmental limits as it is easier to breach environmental limits than to improve their operations (due to increased costs to conduct their activities within the limits imposed).	Table 26-8 Environmental Risk Assessment must be completed by a third party that has no conflict of interest in the outcome of the project – as Santos would not produce an assessment that risks the approval process of their own project.
	As witnessed in Queensland, employees of CSG Companies breach their code of conduct and operate outside of their delegations of authorities in order to intimidate landholders. Santos words within this EIS provide zero confidence that landholders will be treated with respect.	
26.5 Conclusion	The project has real potential to generate a range of adverse socio- economic impacts in the Narrabri LGA, the wider region and NSW. The key social impacts of the project would be loss of jobs in agriculture, contaminated groundwater and surface water, health impacts due to air emissions, and long term risks to food security. The impacts on housing and accommodation will force a large proportion of the current population away from the region due to the boom and bust nature of the extractive industries.	No approval could ever be considered by a conscious government, only an approval could be granted by a corrupt governmen The approval of this project would signal the level of corruption within the NSW government.
	Santos has no ability to limit the impacts to landholders, they will cause health and wellbeing issues, such as high level of stress to landholders through unrelenting negotiations and pressure. Santos will resort to bribery, confidentially clauses, opt-out clauses to avoid compliance.	
	Santos are kidding themselves if they believe that there will be no risks or impacts to the community – this is typical of small narrow minds.	

This report has been assessed in addition to EIS to show additional evidence that Industry commissioned reports are biased, this includes reports by the CSIRO-GISERA

A statistical analysis was undertaken on the use of Community Members (CM) comments used within the report. The results demonstrate that the use of comments has significantly influenced the outcome of the report. This



Section – Ch.26	Describe the issue within the EIS	Objection for Granting Approval – Additional Comments
		Distribution of comments across the Report pages 11-35: first negative comment was not until page 14 of the report.
		Comment Type per Report Page
		9
		8
		Pg 11 Pg 12 Pg 13 Pg 14 Pg 15 Pg 16 Pg 17 Pg 18 Pg 19 Pg 20 Pg 21 Pg 22 Pg 23 Pg 24 Pg 25 Pg 26 Pg 27 Pg 28 Pg 29 Pg 30 Pg 31 Pg 32 Pg 33 Pg 34 Pg 35 ■ Negative to CSG ■ Positive to CSG ■ Neutral to CSG
		<ul> <li>An assessment on the top five community members (CM) whose comments were used within the report were:         <ul> <li>CM2 = 6 comments (all positive)</li> <li>CM12 = 5 comments (all positive)</li> <li>CM17 = 5 comments (all positive)</li> <li>CM25 = 4 comments (all positive)</li> <li>CM30 = 6 comments (all positive)</li> <li>CM30 = 6 comments (all positive)</li> <li>Total of 26 comments from only 5 community members, who are all positive towards the industry.</li> <li>Total of 51 comments used in the Report (page 11-35)</li> </ul> </li> </ul>
		No. of Community Members (CM) and the corresponding number of comments made within the report i.e. 16 member
		did not have their comments used within the report:
		0 Comments 1 Comments 2 Comments 3 Comments
		No. of Community Members (CM)     16     11     4     2
		No. of Community Members (CM) used in the report and their predisposition towards the CSG industry:
		Positive to CSG Neutral Unidentifiable CSG
		No. of Community Members (CM)138116
		<ul> <li>16 Community Member's predisposition was not able to be determined due to no comments being used within the report.</li> </ul>

Section – Ch.26	Describe the issue within the EIS	Objection for Granting Approval – Additional Comments
		<ul> <li>The Appendix includes an additional 14 comments, of which 13 comments were negative towards the CSG Industry, and 1 comment positive towards the CSG Industry. However, these negative comments were included within the Appendix and have limited weight than if the comments were used within the Report.</li> <li>In summary, the CSIRO-GISERA report was heavily biased towards the industry and did not attempt to present a fair and reasonable outcome. The distribution between using 72% positive comments across 13 community members, to 22% of negative comments across 8 members, while providing no comments from 16 other participants is grossly inadequate.</li> </ul>