

Response to Additional Material provided by DPIE

I strongly object to the NGP. I am submitting responses to the additional material provided by the DPIE.

In the Section-**Chief Scientist & Engineer Review**

The DPIE states “The Government has subsequently **responded** to 15 of the 16 recommendations and is currently finalising its response to the last recommendation (cost recovery for regulatory)”

The DPIE is trying to mislead the IPC into believing that “responded” means the same thing as “implemented”, which is incorrect.

27th February, 2020 the NSW Legislative Council tabled a **Report on the Implementation of the recommendations contained in the NSW Chief Scientist's Independent Review of Coal Seam Gas Activities in New South Wales. The Council concluded that only 2 of the 16 original recommendations had been fully implemented.**¹

The Committee concluded that although, with the two outstanding recommendations (Recommendations 4 and 9) considered as ‘in progress’... *‘for all other inquiry participants the recommendations have not been implemented fully or, in some cases not at all, further exacerbating fears and concerns about the impact of the coal seam gas activities*

The Government accepted all the Chief Scientists Recommendations. The Recommendations were supposed to underpin the NSW Governments Gas Plan.

*“The NSW Gas Plan will secure safe and sustainable gas supplies for future generations by:
- Accepting all the recommendations made by the NSW Chief Scientist & Engineer’s independent review on coal seam gas activities”*²

“In addition, the Department notes that the scale of the gas industry in NSW is likely to be substantially smaller now than was envisaged during the Chief Scientist’s review”

Regardless of the size of the gas project- the Chief Scientist Recommendations remain the same, for CSG development. The DPIE is trying to manipulate the recommendations into saying- something it did not say.

The NSW Gas Plan was designed to be the guiding blue print on how the NSW CSG Industry could go ahead in a totally manageable to everything type way and is based around the Chief Scientists Recommendations.

¹ <https://www.parliament.nsw.gov.au/lcdocs/inquiries/2557/Final%20Report%20-%20Implementation%20of%20the%20recommendations%20of%20the%20NSW%20Chief%20Scientist%20on%20CSG%20activities%20-%2027%20February%202020.pdf>

² https://www.resourcesandgeoscience.nsw.gov.au/__data/assets/pdf_file/0005/534830/NSW-Gas-Plan.pdf

“Consistent with the principle of ensuring the regulatory response to any matter should be proportionate to the risk of the matter, **the Government is likely to implement some of the specific recommendations of Chief Scientist** – particularly those recommendations relating to cumulative or basin-wide impacts using complex automated systems and a standing expert advisory body – **in stages, starting on a project by project basis and expanding this to an industry-wide basis should the scale and nature of the industry warrant it at some stage in the future.**”

It is not appropriate to do the recommendations on a project by project basis, and later when industry wants it. The people and the Chief Scientist have recommended that they are in place beforehand.

“Finally, it should be noted that many of the Chief Scientist’s recommendations were directed to the broader regulatory and policy framework for gas development in NSW, and **in many cases are not directly applicable to the assessment of individual gas projects such as the Narrabri Gas Project.**”

All of the Chief Scientists Recommendations are relevant to the NGP.

2014 Recommendation 1³³

That Government make clear its intent to establish a world-class regime for extraction of CSG. This could be articulated in a clear public statement that covers:

- the rationale/need for CSG extraction
- a clear signal to industry that high performance is mandatory, compliance will be rigorously enforced and transgressions punished
- a fair system for managing land access and compensation
- a mechanism for developing a clear, easy-to-navigate legislative and regulatory framework that evolves over time to incorporate new technology developments
- mechanisms for working closely and continuously with the community, industry, and research organisations on this issue.

The Parliamentary Inquiry found **“Recommendation 1 has not been implemented in full.**

Dot points four and five have not even been commenced, despite the passage of more than five years since the final report of the Chief Scientist was delivered. In addition, it is arguable whether NSW Government policy and actions to date have carried dot point two into effect.”

- **There is still no clear rationale/need for CSG extraction. Gas usage for power generation is at its lowest level in a decade, at just 7.9% of the National Energy Market (NEM) in 2018 (AEMO).** Wind and solar have increased from less than 0.5% to 11.9% over the last decade, while gas usage has fallen.³ South Australia and Queensland have experienced regular negative electricity pricing, due to strong

³ www.ieefa.org Towards a Domestic Gas Reservation in Australia, Bruce Robertson, July 2019

development of renewable infrastructure.⁴ Australia is the biggest exporter of gas in the world- so there is no need for new CSG projects, or the NGP.

- **The Intent of this recommendation is that there would be communication, transparency and fairness between both Santos, Govt and the community.** This certainly not happening, in the “real lived experience”.
- **Research by GISERA- isn’t independent** or accepted by community. There is no mechanism for the community’s findings to be incorporated into research, for the CSG industry. At this point, communities’ views are discarded.
- **“Compliance being rigorously enforced and transgressions being punished” - is a joke. A paltry fine of \$1500 for Santos contaminating the surrounding groundwater with uranium at levels 20 times higher than safe drinking water guidelines is hardly a clear signal to industry that high performance is mandatory.**⁵ **Any regime that has been introduced to try regulating the industry has been largely symbolic and has been unable to be enforced.**

The DPIE is misleading the IPC, into accepting that this recommendation is done, when that is incorrect.

2014 Recommendation 2³⁹

That Government ensure clear and open communication on CSG matters is maintained at all times. This includes:

- simplicity and clarity in legislative and regulatory requirements
- ensuring openness about CSG processes in line with an open access approach; publishing all relevant approval requirements, decisions and responses, and compliance and enforcement outcomes on appropriate government websites and making CSG data from companies, Government and research organisations available through a centralised Government data repository
- measurable outcomes to track performance against commitments to reform.

The Parliamentary Inquiry found **“Recommendation 2 has not been fully implemented by the NSW Government**

Given that members of the public are lodging GIPA applications as a means to access information, it is evident that government communication about coal seam gas matters is lacking. The committee is therefore of the view that the government should be clearer and more forthcoming in its communication to the public about coal seam gas.”

⁴ <https://www.afr.com/companies/energy/the-winners-from-negative-electricity-prices-20190905-p52o7r>

⁵ <https://www.amsj.com.au/santos-fined-contaminating-groundwater-uranium/>

The relevant legislation does not meet the test laid down by the Chief Scientist in dot point 1, that there be ‘simplicity and clarity in legislative and regulatory requirements.’ No submission to the inquiry made the case that this had been achieved, **nor was there any indication from government that it was likely to be achieved in the foreseeable future.”**

- The SEED portal- is only partially useful. CSG data from Santos is not currently available to the community. **Everything the community requests to see for accountability of Santos is “commercial in confidence”**. If Santos had nothing to hide- then why can’t the community be shown the data they have requested.
- **Community consultation with Santos is a farce**- resulting in our representative on the Narrabri CCC withdrawing their participation- due to no openness, transparency, or questions being answered regarding the NGP.

The DPIE is misleading the IPC, into accepting that this recommendation is done, when that is incorrect.

2014 Recommendation 3⁵³

That Government investigate as a priority a range of practical measures for implementation (or extension of current measures) to allow affected communities to have strengthened protections and benefits including fair and appropriate:

- land access arrangements, including land valuation and compensation for landholders
- compensation for other local residents impacted (above threshold levels) by extraction activities
- funding (derived from the fees and levies paid by CSG companies) for local councils to enable them to fund, in a transparent manner, infrastructure and repairs required as a consequence of the CSG industry.

The Parliamentary Inquiry found **“Recommendation 3 of the Chief Scientist’s report has not been fully implemented by the NSW Government.**

However, no evidence has been presented to the committee that establishes, or even seeks to make the case, that dot points two and three have been implemented. Of particular concern to the committee is that the **issue of compensation for other local residents who may be impacted by extraction activities does not appear to be even in the process of being addressed by the NSW Government.”**

- There is no adequate compensation mechanism currently in place for those impacted by CSG extraction. Any compensation claims are silenced by confidentiality clauses in landholder agreements. There is no compensation for the collateral damage to the surrounding communities.

Contrary to what the DPIE believes-The NGP is expected to result in significant impacts on community and the environment- as shown by all the EDO experts.

The DPIE is misleading the IPC, into accepting that this recommendation is done, when that is incorrect.

2014 Recommendation 4⁶⁴

That the full cost to Government of the regulation and support of the CSG industry be covered by the fees, levies, royalties and taxes paid by industry, and an annual statement be made by Government on this matter as part of the Budget process.

The Parliamentary Inquiry found **“Recommendation 4 has not been implemented by the NSW Government.**

The committee further notes that close to \$3.75 million is being paid each year by taxpayers to in effect subsidise the CSG industry. Since the Chief Scientist's report was delivered, this amounts to nearly \$20 million dollars of tax payers money

Ms Tracey Winters, Strategic Advisor, External Affairs, Santos, confirmed that as Santos was not currently producing enough gas to offset deductible costs, no royalties have been paid: ‘we are not in a tax paying position according to the New south Wales royalty regime’. Santos confirmed that ‘Since 2014 the Wilga Park Power Station has beneficially used 5 petajoules of gas’.”

The DPIE is contradicting itself from what it itself stated at the Parliamentary Inquiry.

Department of Planning, Industry and Environment, at the Inquiry stated it had undertaken work to ‘determine the cost of regulating the NSW gas industry and how these costs compare to those in other national and international jurisdictions’. It is anticipated that the ‘options for a cost recovery framework that is flexible and accounts for the scale and maturity of the industry’ will be provided within the 2019-2020 financial year.”

If the full cost of subsidising and regulating Santos can’t be seen by the public- how are we to know whether this industry is worthwhile, or just for Santos own benefit? Transparency is needed to see if Santos is truly paying proper taxes, royalties- or just abusing the system.

It is not economically beneficial for the NSW Govt, who are supposed to represent the people of NSW, if there is no royalties or taxes being paid, or if Santos is not contributing what it is supposed to.

The DPIE is misleading the IPC, into accepting that this recommendation is not applicable, when that is incorrect.

2014 Recommendation 5⁷⁸

That Government use its planning powers and capability to designate those areas of the State in which CSG activity is permitted to occur, drawing on appropriate external expertise as necessary.

The Parliamentary Inquiry found **Recommendation 5 has not been implemented**

“That the NSW Government apply the Strategic Release Framework to the consideration of renewals for the 12 expired Petroleum Exploration Licence areas in the North West of the state given the long period that has passed since those licences were active.”

In 2013 the NSW Government Gas Plan announced some regulation of the CSG industry in NSW, including the introduction of exclusion zones to apply in relation to identified Critical Industry Clusters – viticulture and the equine industry. They also implemented a hold on exploration and extraction of natural gas from coal seams in the ‘Special Areas’ zone within Sydney’s drinking water catchment. The NSW Government developed The Aquifer Interference Policy to protect aquifers and groundwater by setting objective criteria to assess the potential impact of all activities, including gas activities, on our valuable water resources.⁶ **By doing this, the Government have acknowledged that there are substantial risks from CSG, to ruining aquifers .Using these guidelines not only should the GAB be under special protective legislature from the CSG industry, but also the Agricultural land surrounding it.**

The Govt’s 'use it or lose it' policy was 'not being complied with or enforced for expired petroleum exploration licences in the north west' .The North West of NSW should be protected from an industry that will seriously deplete and contaminate groundwater.

External expertise- which the DPIE used were the WEP (see Philip Mills submission), GISERA (see Melinda Mills submission) who have been proven to not be independent advice.

The DPIE is misleading the IPC, into accepting that this recommendation is done, when that is incorrect.

2014 Recommendation 6⁹¹

That Government move to a single Act for all onshore subsurface resources (excluding water) in the State, constructed to allow for updating as technology advances. This will require a review of all major Acts applying to the resources sector.

The Parliamentary Inquiry found **Recommendation 6 has not been implemented.**

The NSW Government has also “not provided any reason why it has failed to do so.”

⁶ https://www.resourcesandgeoscience.nsw.gov.au/__data/assets/pdf_file/0005/534830/NSW-Gas-Plan.pdf

“Mr Wright gave evidence that due to the 'complexities of the statutes' the government chose not to put a single statute in place. He further advised that **the government had no intention of moving to a single onshore Act at this point in time.**”

The Govt Acts are not keeping up with the progression of Santos and the NGP, so they are not able to be interpreted in the current climate, of what is proposed. It means they are unable to regulate Santos and the NGP, as they are outdated.

The DPIE is misleading the IPC, into accepting that this recommendation is not applicable, when that is incorrect.

2014 Recommendation 7¹⁰⁰

That Government separate the process for allocation of rights to exploit subsurface resources (excluding water) from the regulation of the activities required to give effect to that exploitation (i.e. exploration and production activities); and that it establish a single independent regulator. The regulator will require high levels of scientific and engineering expertise, including geological and geotechnical ability, environmental and water knowledge and information, and ICT capability including data, monitoring and modelling expertise; and will be required to consult – and publish details of its consultations – with other arms of Government and external agencies, as necessary. The regulator will also require appropriate compliance monitoring and enforcement capability.

The Parliamentary Inquiry found **Recommendation 7 has not been fully implemented.**

“Although the Environment Protection Authority was the 'lead regulator for gas activities', it did not regulate 'other resource extraction as this recommendation proposed', with grants activity approvals administered by the Division of Resources and Geosciences in the Department of Planning, Industry and Environment.”

The DPIE is misleading the IPC, into accepting that this recommendation is done, when that is incorrect

2014 Recommendation 8¹⁰⁹

That Government move towards a target and outcome-focused regulatory system, with three key elements:

- regularly reviewed environmental impact and safety targets optimised to encourage uptake of new technologies and innovation
- appropriate and proportionate penalties for non-compliance
- automatic monitoring processes that can provide data (sent to and held in the openly accessible Whole-of-Environment Data Repository) which will help detect cumulative impacts at project, regional and sedimentary basin scales which can be used to inform the targets and the planning process.

The Parliamentary Inquiry found **Recommendation 8 has not been implemented.**

“The NSW Government has failed, in its evidence to this inquiry, to explain what ‘environmental impacts and safety targets’ it has established in response to Chief Scientist recommendation 8. It has also failed to explain how those ‘impacts/targets’, assuming they exist, are designed to optimise or even to encourage the uptake of new technologies and innovation, as the Chief Scientist also recommended.”

“The relevant penalties do not appear to have been reviewed or changed since the Chief Scientist delivered her report in September 2014. Accordingly, the NSW Government has also not implemented this aspect of the recommendation.”

“The evidence from the NSW Government also does not establish that it has ‘automatic monitoring processes’ in place that are sent to and held in an openly accessible Whole of Data Repository. The evidence also does not establish that it has effective processes in place that enable the detection of cumulative impacts at project, regional and sentimentally basin levels which can be used to inform the targets and the planning process.”

There is no proper and comprehensive baseline study with which to compare the ongoing monitoring to and then the ongoing automatic monitoring.

The DPIE is misleading the IPC, into accepting that this recommendation is done, when that is incorrect

2014 Recommendation 9¹²⁰

That Government consider a robust and comprehensive policy of appropriate insurance and environmental risk coverage of the CSG industry to ensure financial protection short and long term. Government should examine the potential adoption of a three-layered policy of security deposits, enhanced insurance coverage, and an environmental rehabilitation fund.

The Parliamentary Inquiry found **Recommendation 9 has not been implemented.**

The EPA released in February 2020 the document *Safeguarding future environmental liabilities from Coal Seam Gas Activities in NSW*.⁷

This document outlines a response to the issue of insurance coverage: The availability of adequate environmental impairment liability for coal seam gas activities in the insurance market is not straightforward. **The local Australian insurance market is less willing to provide these products than at the time of the Chief Scientist and Engineer’s review.** A requirement that allows for alternative financial arrangements (for example, asset

⁷ NSW Environmental Protection Authority, *Safeguarding future environmental liabilities from Coal Seam Gas Activities in NSW*, February 2020, p 7.

provisioning or parent company guarantees) where environmental impairment liability insurance policies are not readily available is recommended.

In relation to security deposits, the document indicates: The existing security deposit framework is robust, but it is not used to cover environmental liabilities that may arise after rehabilitation activities have been completed and the security deposit is released. Despite potential residual risks being considered low due to current regulatory and operational practices, **future liabilities may still arise; for example, where the integrity of a decommissioned well is compromised. Retaining a further financial assurance is beneficial to safeguard against these potential ongoing residual risks.**

There is still no option for insurance against future risks, including financial loss as well as environmental damage, potentially leaving landholders to carry this risk.

The committee notes that the government has indicated that it is not feasible to establish an environmental rehabilitation fund in the New South Wales gas sector, given there are only two active gas projects and the existence of the Legacy Wells program.

To the extent the NSW Government is undertaking work in connection with aspects of recommendation 9 outside insurance to protect other landowners, **it has not provided any timeframe in which the community may expect this work to be completed.**

Landholders that host coal seam gas operations and infrastructure are not covered by insurance that can protect surrounding landholders, or landholders that host CSG wells, from immediate or long term environmental damage from, for example, water contamination, weed infestation, water depletion or health damage.

The committee therefore finds that:

- **the enhanced insurance coverage as envisaged by the NSW Chief Scientist is not available;**
- **the conclusion is that these risks are uninsurable; and**
- **landholders are left to bear the risks posed by coal seam gas activities.**

The DPIE is misleading the IPC, into accepting that this recommendation is done, when that is incorrect

2014 Recommendation 10¹⁴¹

That Government commission the design and establishment of a Whole-of-Environment Data Repository for all State environment data including all data collected according to legislative and regulatory requirements associated with water management, gas extraction, mining, manufacturing, and chemical processing activities. This repository, as a minimum, would have the characteristics that it:

- is accessible by all under open data provisions
 - has excellent curatorial and search systems
 - houses long-term data sets collected as part of compliance activities
 - can accept citizen data input
 - can be searched in real time
 - is spatially enabled
 - is able to hold data in many diverse formats including text, graphics, sound, photographs, video, satellite, mapping, electronic monitoring data, etc., with appropriate metadata
- is the repository of all research results pertaining to environmental matters in NSW along with full details of the related experimental design and any resulting scientific publications and comments
 - is the repository of historical resources data with appropriate metadata

Various legislative amendments or other incentives will be needed to direct all environment data to the Repository.

The Parliamentary Inquiry found **Recommendation 10 has been partially implemented.**

“That the NSW Government expedite its work for including coal seam gas industry data on the SEED portal and ensuring the portal has all the elements and functionality recommended by the Chief Scientist.”

SEED is not user friendly, does not possess the functions required; does not allow for health data or citizen data to be included and **does not provide the community with access to monitoring data collected by Santos.**

The DPIE is misleading the IPC, into accepting that this recommendation is done, when that is incorrect

2014 Recommendation 11¹⁵⁸

That Government develop a centralised Risk Management and Prediction Tool for extractive industries in NSW. This would include a risk register, a database of event histories, and an archive of Trigger Action Response Plans. The tool would be updated annually based on Government and company reporting and would include information on risk management and control approaches and draw on data from the Whole-of-Environment Data Repository for the State. The risk tool would be reviewed and commented on by relevant expert and regulatory bodies. The risk tool would be used to assist with:

- assessing new proposals
- assessing compliance
- improving prediction capability for consequences of incidents in risk assessments
- improving prediction capability of risk likelihoods
- informing project design amendments to decrease risk levels (such as undertaken in the Dam Safety Committee)
- informing the calculation of cumulative impacts
- flagging issues or risks that require a higher level of regulatory protection such as inclusion in legislation.

The Parliamentary Inquiry found **Recommendation 11 has not been implemented.**

“The NSW Government was unable to identify a centralised Risk Management and Prediction Tool for extractive industries which it had developed after the Chief Scientist’s report or was otherwise in use.”

The Namoi Cumulative Risk Assessment Tool (NCRAT) was not supported by the government in the assessment of risks, which is essential to help identify areas that are suitable for mining and areas that should be made off-limits to mining by overlaying maps of natural resource assets.

The current risk management and prediction tools do not incorporate the growing evidence of adverse health impacts from CSG extraction in order to give an accurate assessment of risk.

The DPIE is misleading the IPC, into accepting that this recommendation is done, when that is incorrect

2014 Recommendation 12¹⁷³

That Government establish a standing expert advisory body on CSG (possibly extended to all the extractive industries). This body should comprise experts from relevant disciplines, particularly ICT and the earth and environmental sciences and engineering, but drawing as needed on expertise from the biological sciences, medicine and the social sciences. The prime functions of this expert body would be to advise Government:

- on the overall impact of CSG in NSW through a published Annual Statement which would draw on a detailed analysis of the data held in the Whole-of-Environment Data Repository to assess impacts, particularly cumulative impacts, at project, regional and sedimentary basin scales
- on processes for characterising and modelling the sedimentary basins of NSW
- on updating and refining the Risk Management and Prediction Tool
- on the implications of CSG impacts in NSW for planning where CSG activity is permitted to occur in the State
- on new science and technology developments relevant to managing CSG and when and whether these developments are sufficiently mature to be incorporated into its legislative and regulatory system
- on specific research that needs to be commissioned regarding CSG matters
- on how best to work with research and public sector bodies across Australia and internationally and with the private sector on joint research and harmonised approaches to data collection, modelling and scale issues such as subsidence
- on whether or not other unconventional gas extraction (shale gas, tight gas) industries should be allowed to proceed in NSW and, if so, under what conditions.

The Parliamentary Inquiry found **Recommendation 12 has not been implemented.**

The NSW Government has not established its own expert body, as was recommended.

GISERA research is not independent of industry.

No members of the IESC have specific expertise in the petroleum and gas sector. The functions listed here are beyond the scope of the IESC.

“The Department has also reviewed and applied the relevant findings of the following to its assessment of the Narrabri gas Project: the findings of the research on the potential health impacts of unconventional gas development in different jurisdictions across Australia and overseas.”

If the DPIE had truly reviewed the health impacts then it would know that Overseas and Queensland evidence shows significant health impacts from coal seam gas, including asthma exacerbations⁸, cancers and blood/immune disorder⁹, increased preterm births¹⁰, cardiovascular illness and respiratory disease.¹¹

⁸S.G Rasmussen, et.al, Asthma Exacerbations and Unconventional Natural Gas Development in the Marcellus Shale <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5424822/>

⁹ A.K. Werner, et.al, Examination of Child and Adolescent Hospital Admission Rates in Queensland, Australia, 1995–2011: A Comparison of Coal Seam Gas, Coal Mining, and Rural Areas <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6096510/>

¹⁰ Drilling and Production Activity Related to Unconventional Gas Development and Severity of Preterm Birth. <https://www.ncbi.nlm.nih.gov/pubmed/29578659>

Unconventional Natural Gas Developments affects “human health and well-being not only through direct exposures to toxic chemicals in air, water and soil, but also through many stressors introduced into communities. These include excessive noise and light pollution, increases in traffic accidents and fatalities, increases in domestic violence, alcohol and drug use, crime and disruptions of family and community relationships.”¹²

Where is the DPIE evidence that they documented to prove that these known health impacts were taken into account?

The DPIE is misleading the IPC, into accepting that this recommendation is done, when that is incorrect.

2014 Recommendation 13¹⁹⁶

That Government establish a formal mechanism consisting of five parallel but interacting steps. The five steps are given below.

- Companies or organisations seeking to mine, extract CSG or irrigate as part of their initial and ongoing approvals processes should, in concert with the regulator, identify impacts to water resources, their pathways, their consequence and their likelihood, as well as the baseline conditions and their risk trigger thresholds before activities start. These analyses and systems should be incorporated in project management plans to meet regulator-agreed targets. Appropriate monitoring and characterisation systems would be developed as part of these project management plans and then installed. The monitors would measure baseline conditions and detect changes to these, as well as providing data on impacts and triggered risk thresholds.
- Data from the monitors should be deposited (either automatically or in as close to real time as possible) in the State Whole-of-Environment Data Repository by all the extractive industries. Increasingly automated tools to interrogate data in the Repository should be developed, and these used to search data for discontinuities and compliance alerts.
- As a separate process, the expert advisory body would examine on a frequent basis all data relevant to a region or a sedimentary basin. This data would come from a range of sources (the companies’ monitoring data along with triangulation/crossvalidation data such as that from satellites, reports from local councils, seismic data, subsidence maps, information from cores, etc.). The expert body would use this data review to check for any factors signalling problems in that region and, if any are found, recommend to Government the appropriate action to be taken with regard to the relevant parties.
- In a parallel process, the Government should commission, construct and maintain a variety of models of each region and in particular one that seeks to address cumulative impacts. These models should feed into the land use planning process and the activity approvals processes, and should assist in target setting for new projects.
- Government, working with other appropriate Australian governments, should commission formal scientific characterisation of sedimentary basins starting with the East Coast basins, and concentrating initially on integration of groundwater with the geological, geophysical and hydrological context. Viewing these integrated systems in models and in interpretation could be described as a ‘Glass Earth’ approach to understanding the dynamics of activities and impacts in the basins.

¹¹ G. McCarron-Air Pollution and human health hazards: a compilation of air toxins acknowledged by the gas industry in Queensland’s Darling Downs

<https://www.tandfonline.com/doi/full/10.1080/00207233.2017.1413221>

¹² <http://www.marcellushealth.org/final-report.html>

The Parliamentary Inquiry found **Recommendation 13 has not been fully implemented.**

Only one of the five parallel measures of recommendation 13 has been implemented, that being mechanisms to identify impacts to water resources through the Review of Environmental Factors and/or Environmental Impact Statement process.

The DPIE stated “Given the limited scale of coal seam gas activities in NSW, there is no justification for the Government to develop detailed models of each subregion at this stage, particularly because no cumulative impacts are expected to occur as a result of the Narrabri Gas project or other resource projects in the Gunnedah basin”

It is not appropriate of the DPIE to have no detailed models of the subregions. No data- means no idea of whether cumulative impacts will occur, and just how bad they will be.

Throughout the assessment process for the Narrabri gas project, Santos has flatly refused to:

- **commit to installing the additional groundwater monitoring bores requested by the Department of Industry Water**
- **provide information, analysis and commitments ... to various government agencies such as the Environment Protection Authority ... Rural Fire Service, the Water division of the Department of Planning, Industry and Environment, the Office of Environment and Heritage and Narrabri Council**
- **calibrate its groundwater model as requested, and refused to respond to recommendations to undertake uncertainty analysis or worst-case scenario modelling**

The DPIE is misleading the IPC, into accepting that this recommendation is done, when that is incorrect.

2014 Recommendation 14²⁰⁸

That Government ensure that all CSG industry personnel, including subcontractors working in operational roles, be subject to ongoing mandatory training and certification requirements. Similarly, public sector staff working in compliance, inspections and audits should be given suitable training and, where appropriate, accreditation.

The Parliamentary Inquiry found **Recommendation 14 has been implemented.**

2014 Recommendation 15²¹⁶

That Government develop a plan to manage legacy matters associated with CSG. This would need to cover abandoned wells, past incomplete compliance checking, and the collection of data that was not yet supplied as required under licences and regulations. There will also need to be a formal mechanism to transition existing projects to any new regulatory system.

The Parliamentary Inquiry found **Recommendation 15 is not yet fully implemented.**

Legacy issues is a 'massive problem which does not appear to be addressed by the NSW Government.

The Petroleum Wells Investigation Project, as part of the Derelict Mines Project, which completed a report on the status and potential issue of legacy petroleum wells across the State. However, no information from this project has been made public.

“The government needs to be open and transparent with the community with regard to legacy issues that may arise and the government's responses to them in the future.”

This matter is applicable to the NGP contrary to what the DPIE suggests. Decommissioned wells leak.

In 2016- a UK Study *Fugitive emissions of methane from abandoned, decommissioned oil and gas wells*- reported that **even with proper decommissioning some 30 % of wells had leaked within a decade of well decommissioning.**¹³ Leaks were caused by well integrity failure. Best industry practice is still just concrete and steel- which corrode and fail over time.

The DPIE is misleading the IPC, into accepting that this recommendation is not applicable, when that is incorrect.

2014 Recommendation 16²³⁴

That Government consider whether there needs to be alignment of legislation and regulation governing extraction of methane as part of coal mining and the application of buffer zones for gas production other than CSG with the relevant legislation and regulation provisions governing CSG production.

The Parliamentary Inquiry found **Recommendation 16 has not been implemented.**

No information was publicly available concerning the government's consideration of the application of buffer zones for gas production.

¹³ <https://www.sciencedirect.com/science/article/pii/S0048969715312535>

The DPIE is misleading the IPC, into accepting that this recommendation is not applicable, when that is incorrect.

There is no possible hope of regulating Santos' NGP without the Recommendations being done. The Government has had long enough to implement them and shows lack of political will to do the them, or to regulate the industry. It also proves that the extraction of gas cannot be done in a safe and manageable way as stated by the Chief Scientist. The Government's failure to complete and implement the Chief Scientist's recommendations is worsening public distrust and fear, transparency and concern about the coal seam gas industry. The NGP should be refused developmental consent.

In the Section-Salt Management

The DPIE states "Currently in Queensland, brine from the treatment of produced water is currently being stored in appropriately engineered storage ponds in accordance with Queensland's regulatory requirements. As the brine is predominantly a chloride-based salt there are fewer beneficial reuse options than is the case for carbonate-bicarbonate salts that would be generated by the Narrabri Gas Project. **The CSG companies.....**"

This DPIE section appears to be unfinished- as the sentence stops midway. This is not complete information- given by the DPIE. This is a poor-quality document and hardly confidence inspiring for the community- that the DPIE knows what it is talking about, or what it is being misleading about.

The DPIE states "The Department has **recommended conditions consistent with Queensland's approach** to the management of waste and the waste management hierarchy outlined in the NSW Government's Waste Avoidance and Resource Recovery Act 2001 which **promotes avoidance, followed by resource recovery, followed by disposal options.**"

The DPIE is misleading the IPC, into believing that the CSG salt management is able to be beneficially re-used, when in fact the default management position of the CSG industry is majority of waste goes to landfill. If there had been a beneficial re-use by now- then, it would be happening in QLD.

According to Prof. Chris Fell with an excerpt from his Discussion Paper to Chief Scientist, **2014 WATER TREATMENT AND COAL SEAM GAS**. "There is a possible market for specific chemicals extracted from salt (valuable metals, heavy metals, rare earths) but the extraction costs are high." "Scale of operation is important in determining the final cost of treatment of produced water, with a figure of \$2/m³ being representative. " "The problem of disposal of treatment concentrates remains the elephant in the room. For the large plants envisaged in northern NSW and Queensland the quantity of salts to be disposed of is substantial. Currently they are being stored in brine ponds awaiting resolution of the

disposal issue. While there is an international market for salt and processes available to win valuable components from the concentrated saline liquor, **operators have been reluctant to commit to further treatment, choosing as a last resort to store the concentrate or solid salt in landfill cells. However, the quantities involved are substantial and the storage potentially environmentally hazardous.**" ¹⁴

Even Prof. Chris Fell acknowledges- there is no commercially viable solution for the copious amounts of toxic waste, despite this project having years to sort out a solution. Which means you have a ridiculous amount of waste, with no plan, then storage in plastic liners- which is a poor management plan- prone to more contamination. In a company in financial trouble, with Santos writing down another asset impairment of up to \$1.1 billion (July 2020) how much will they be looking to cut costs and do less than the famed "industry best practice"??



The NuGrow facility, Kogan, Queensland, 2018

According to the website:- NuGrow is one of Australia's leading full service recycling and re-vegetation innovators. Here is their approval from local government and their Site Based Management Plan. According to the NuGrow website: "NuGrow's Kogan facility primarily

¹⁴ http://www.chiefscientist.nsw.gov.au/data/assets/pdf_file/0005/56858/Water-treatment-and-CSG_Final.pdf

accepts green waste, **CSG muds and fluids**, food waste, effluent, **bio solids** and manures. These are recycled into **land additives** or NuGrow's **high-grade compost**.¹⁵

NEGOTIATED DECISION NOTICE FOR DEVELOPMENT APPLICATION (030.2015.77.001) MATERIAL CHANGE OF USE TO ESTABLISH A HIGH IMPACT INDUSTRY (COMPOST MANUFACTURE) AND ENVIRONMENTALLY RELEVANT ACTIVITY 53 (COMPOSTING AND SOIL CONDITIONER MANUFACTURING WITH AN ANNUAL THRESHOLD OF MORE THAN 200 TONNES OF MATERIAL PRODUCED) ON LAND DESCRIBED AS LOTS 3 & 8 ON DY117 AND EASEMENT AJ ON SP265381, SITUATED AT 3387 TARA-KOGAN ROAD AND MILLBANK BOUNDARY ROAD, KOGAN¹⁶

This still looks like CSG stockpile and landfill to the community. This still has potential to leak and contaminate land and both surface and groundwater.

If you can find any "land additive or high grade compost" that contains uranium, cadmium, lead, other heavy metals, BTEX, toxic salt, etc, please let us know- as the community would like to avoid purchasing it!

It is complete rubbish of the DPIE- to be suggesting "avoidance" is a possible management strategy. There is no avoidance measure for the CSG industry- as the toxic salt is the by product, of the industry.

Prof. John Carter states-"How the operators of such activities will manage the potential large volumes of poor quality saline water they will bring to the surface requires detailed investigation. Clearly, the solution should be presented before the CSG operation commences. It should not be a work in progress"¹⁷

All Santos has, is an MOU with Natural Soda pending that it is commercially viable- which isn't a legally binding contract, for such a huge waste problem, so this is nothing more than a last minute attempt, to try and get the NGP approved. This is no solution at all.

The DPIE states "[The recommended conditions include:](#)

- [Condition B35 – Water Management Performance Measures for Salt Management requiring the proponent to:](#)

- [maximise beneficial reuse of produced salt, as far as reasonable and feasible;](#)

¹⁵ <https://nwprotectionadvocacy.com/western-downs-council-nugrow-approval-for-the-kogan-facility/>

¹⁶ https://nwprotectionadvocacy.com/wp-content/uploads/2018/10/ECM_3034179_v2_Approval-Negotiated-Decision-Notice-Development-Ap.pdf

¹⁷ http://www.chiefscientist.nsw.gov.au/_data/assets/pdf_file/0014/35330/Horizontal-Drilling_John-Carter.pdf

-dispose salt waste not able to be beneficially reused to appropriately licenced waste facility”

Where is this licenced waste facility? and why is it secretive and not transparent to be telling the community? The community don’t believe such a facility within the 150Km radius. actually exists. It is more probable that Santos will purchase land with “adaptive management” and acquire a waste disposal facility licence and then stockpile this toxic waste in an inappropriate hazardous manner, to potentially allow it to leach in to the recharge of the GAB.

In the Section-[Ecologically Sustainable Development](#)

The DPIE states **“Under Section 4.15 of the Environmental Planning & Assessment Act 1979, a consent authority **must consider the public interest** of a development proposal when it determines the development application.”**

“Throughout the assessment process, the **Department has consulted extensively with key stakeholders and sought to encourage community participation “**

The public have continually said “No” to the NGP over the last 10 years. A record 23,000 submissions to the Santos EIS- with 98% objecting to the project, means the public interest is refusal of NGP. A record 400 speakers, and 10,000 written submissions to the IPC hearing with overwhelming majority objecting the NGP- means the public interest is refusal of the NGP.

The DPIE is misleading the IPC, into believing that the NGP is beneficial to the public, when in fact that is incorrect. The well informed, educated public, who have to bear the burden of the NGP and it’s toxic legacy for the generations to come have asked for refusal of the NGP. If community participation, means the community can’t have their “No NGP” heard and acknowledged, by DPIE what is the point, of community participation? Instead it is becoming dictatorship.

The DPIE states **“Based on this assessment and subject to the recommended conditions, the Department has concluded that the project:**

- represents a safe and sustainable use of the State’s natural gas resources that would promote the social and economic welfare of the community without compromising the needs of any future generations (**Object a**);**
- represents ESD (**Object b – see below**);**
- is a permissible land use under the relevant planning controls and can be carried out in an orderly and economic way subject to the recommended conditions (**Object c**);**

- would not significantly affect the environment, including protected conservation areas such as the Brigalow State Conservation Area and Brigalow Nature Reserve and listed threatened species and communities (**Object d**); and
- would not significantly affect the cultural heritage of the region, including Aboriginal cultural heritage, and that the culturally significant resources within the project area can be managed in a sustainable way in consultation with key Aboriginal stakeholders under the recommended conditions of consent (**Object j**).”

This DPIE section appears to be unfinished- as where are the Objects listed below? This is not complete information- given by the DPIE. This is a poor-quality document and hardly confidence inspiring for the community- that the DPIE knows what it is talking about, or what it is being misleading about.

The DPIE states “represents a **safe and sustainable use** of the State’s natural gas resources that would **promote the social and economic welfare of the community without compromising the needs of any future generations**”

How is this a safe and sustainable industry? Santos legacy is spills and contamination of soil, air and groundwater.

The NGP is the crudest of projects- being “rape, pillage, pollute and leave”

The dictionary “Definition of sustainable. 1 : **capable of being sustained.**

2a : of, relating to, or being a **method of harvesting or using a resource so that the resource is not depleted or permanently damaged.**”

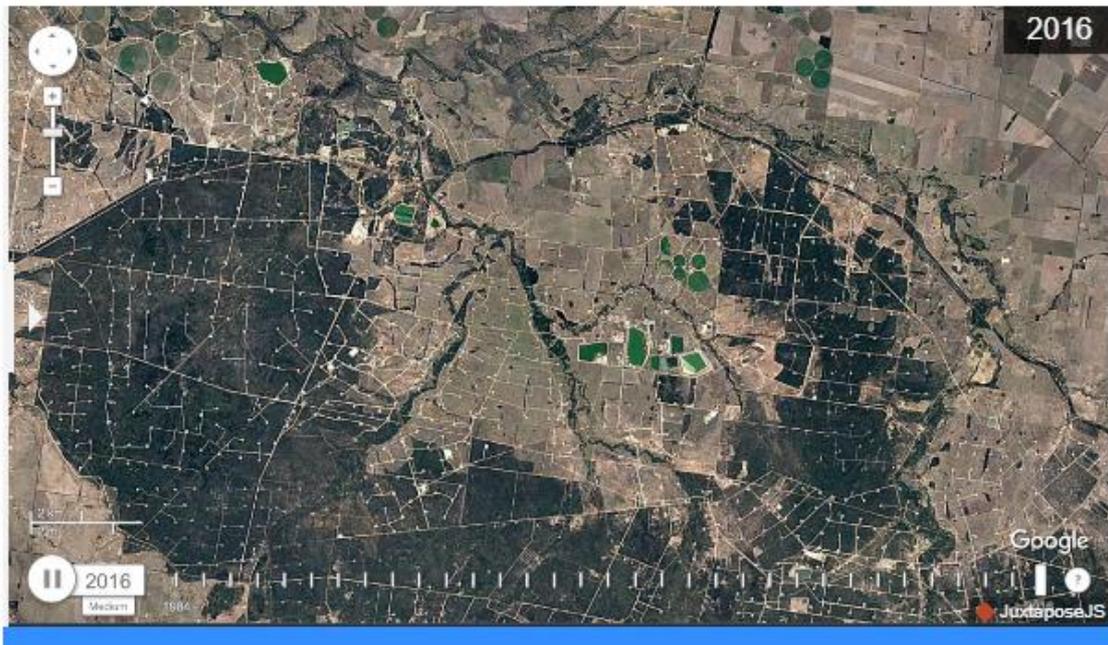
This doesn’t appear sustainable to community- from above the ground, let alone what irreversible damage is happening below the ground, that you can’t see. Please attached before CSG industry and after CSG in 2016, in QLD.¹⁸

¹⁸ https://www.csgfreenorthwest.org.au/qlds_story

1. Condamine State Forest and farmland, Qlds (slide bar <-> to reveal before & after)



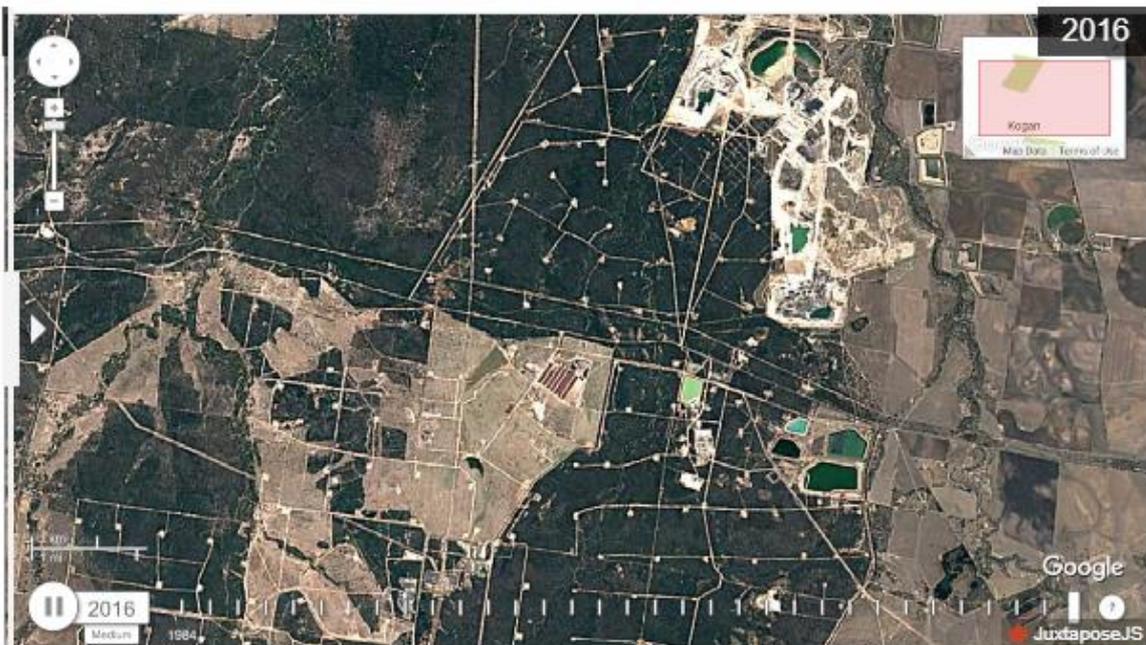
1. Condamine State Forest and farmland, Qlds (slide bar <-> to reveal before & after)



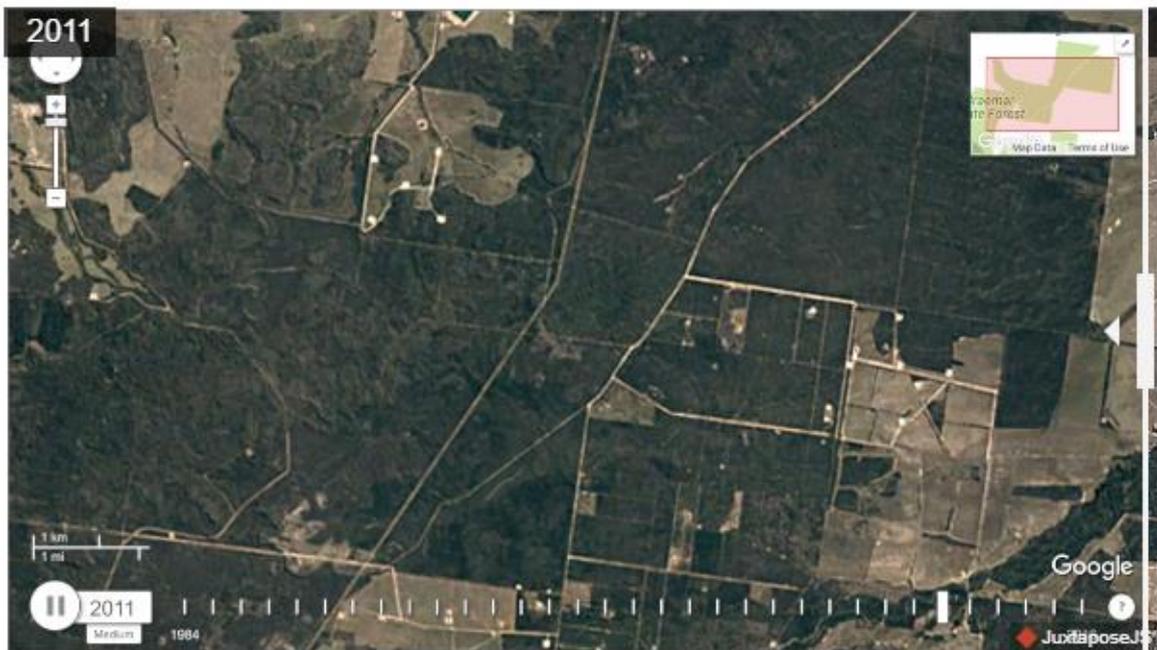
2. Dalby State Forest, Qlds (slide bar <-> to reveal before & after)



2. Dalby State Forest, Qlds (slide bar <-> to reveal before & after)



3. Braemar State Forest, Qlds (slide bar <-> to reveal before & after)



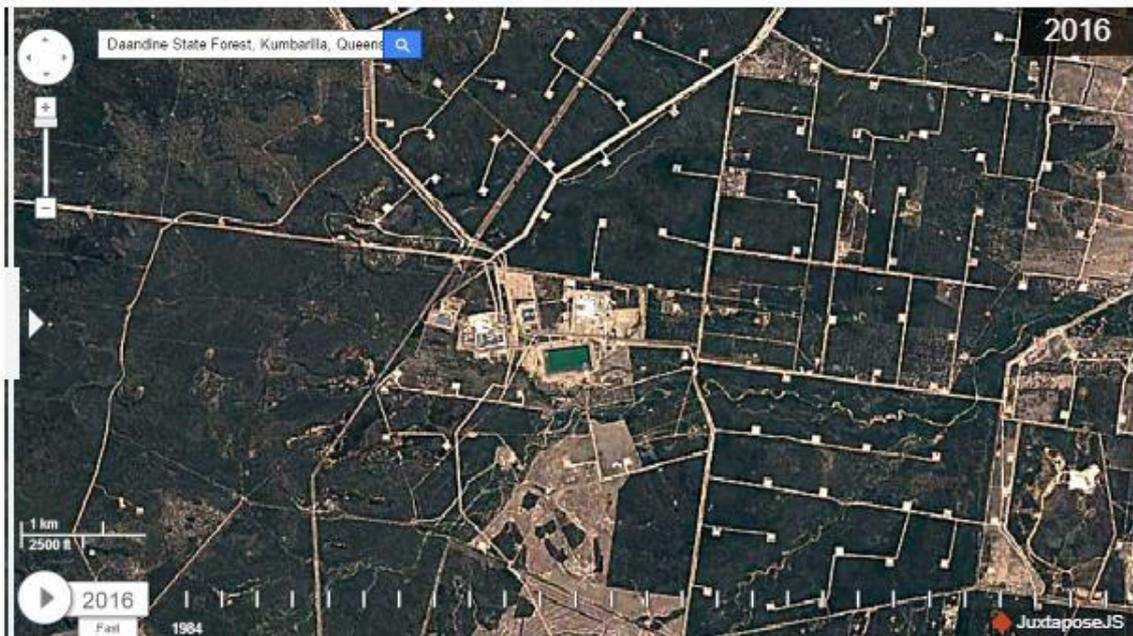
3. Braemar State Forest, Qlds (slide bar <-> to reveal before & after)



4. Daandine State Forest, Qlds (slide bar <-> to reveal before & after)



4. Daandine State Forest, Qlds (slide bar <-> to reveal before & after)



5. Farmland adjacent to Kumbarilla State Forest, Qlds (slide bar <-> to reveal before & after)



5. Farmland adjacent to Kumbarilla State Forest, Qlds (slide bar <-> to reveal before & after)



The CSG industry does not have a small carbon footprint and requires vast areas of land, that are forever more destroyed and unproductive. Land that was agricultural, sustaining generations to come, has now been turned into permanently irreversible damaged war zone of destruction holding a potential time bomb of hazardous material to leach its way into ground and water. Santos NGP is exactly the same- and once you start these projects, there appears to be no way of moderating or stopping the cancerous growth. The community does not accept this as a safe or sustainable industry.

The DPIE states “Based on its detailed assessment and subject to the recommended conditions, the Department has concluded that the Narrabri Gas Project represents ESD as it:

- is development that meets the needs of the present generation without compromising the ability of future generations to meet their needs;
- would **exploit a significant natural gas resource** in a sustainable way and provide substantial economic and social benefits for NSW and the Narrabri region;
- would not cause serious or irreversible environmental damage;
- would not adversely affect the biological diversity and ecological integrity of the region, including the Pilliga State Forest;
- is consistent with the principle of internalising the environmental costs of development as Santos would be liable for meeting all the costs associated with avoiding and/or minimising the impacts of the project, with monitoring and reporting on its environmental performance during operations, and with fully rehabilitating the site following operations.”

The only correct statement that the DPIE have made is that the NGP will exploit a significant resource for the benefit of Santos.

It is not appropriate to say it will only have localised effects and not look at the broader regional scale of the cumulative effects.

The present generation doesn't need the NGP, and renewables will be there for the next generation. What all generations need is healthy environment, with clean water, ground, and air- and not this toxic and polluting industry pitting community against a mega corporation.

The NGP will absolutely destroy the land, water, air, biodiversity, ecological and fragment the society of the communities surrounding The Pilliga for the current generation and generations to come. The economic benefits are purely for Santos, its employees and subcontractors, to the detriment of everybody else.

The Precautionary Principle

The DPIE states “Under NSW case law, there are two preconditions for the application of the precautionary principle: 1. Threat of serious or reversible environmental damage; and 2. Scientific uncertainty as to the nature and scope of the threat of environmental damage.”

“In summary, following detailed assessment the Department has concluded that the project:

- would have **negligible impacts on the quantity or quality of water** in the region's shallower aquifers, which are highly valued by the community and sustain the regional economy;"

The DPIE is misleading the IPC and trivialising the real lived experience of the impacts already documented and ignoring information that is already available.

It QLD it was **vastly underestimated the impact on water drawdown caused by the CSG industry on landholder owned bores**. Evidence from CSG fields in Queensland has found **hundreds of bores would be affected by CSG development in the Surat Basin**. The **2019 *Underground Water Impact Report for the Surat Cumulative Management Area*** by the Department of Natural Resources, Mines and Energy (DNRME) reported that a total of **571 water bores are predicted to be impacted in the long term of which 80% are in the CSG target formations**. This is an increase of about **10% since the last report**. The numbers could potentially increase, as the potential for geological faulting to increase connectivity between the coal formations and overlying and underlying aquifers is still poorly understood.¹⁹

Prolonged deep draw down of aquifers under the GAB (associated with CSG) may eventually lead to a permanent loss of head to large areas of the GAB and as such this needs to be considered a very high risk activity extending far beyond the bounds of an individual gas field or mining activity. CSG extraction may significantly affect groundwater resources and groundwater resource access within the GAB if bores or springs begin to fail as a result of depressurisation caused by dewatering of recharge zones.²⁰

All wells fail at some stage. 5% of wells fail immediately, 30% fail within 5 years, and within the lifespan of the well- most had failed by maturity.²¹ Wells leak either methane into ground water, or into atmosphere to be greenhouse gas emitters. Well leak increases with age. Coal seam methane wells are riskier, from the point of view of contamination of drinking water, because of methane migration"²²

"As pointed out by Eco Logical Australia (2013), groundwater may be at risk from well failure such as radial leaks (movement of contaminants through casing into rock formation) or annular leaks (vertical movement of contaminants between casings, or between casing and rock formation). However as Eco Logical Australia further indicate in their report to the Review, **'casing failure is more common as cement is known to shrink over time**, causing hairline cracks in the well casing which can result in annular or radial leakage (The Royal Society and the Royal Academy of Engineering, 2012)" "The very long-

¹⁹https://www.dnrme.qld.gov.au/__data/assets/pdf_file/0019/1461241/uwir-full-report.pdf

²⁰ <http://www.gabpg.org.au/wp-content/uploads/2014/11/GAB-Report.pdf>

²¹ <https://www.slb.com/-/media/files/oilfield-review/p62-76>

²² <https://www.youtube.com/watch?v=WJ0cBZxpghg>

term integrity of a cemented and plugged abandoned well (beyond 50 years) is a topic where more information will be essential. **Cement and steel do not have the very long term integrity of geological materials.**²³

“Extracting groundwater or perturbation of groundwater pressure gradients could change the hydrology of wetlands (including Ramsar wetlands) and other groundwater-dependent ecosystems (Hatton & Evans, 1998; National Water Commission, 2012) particularly in arid regions.²⁴

“suggests the following **possible contamination impacts**: • **impacts to aquatic ecosystems from contamination of land and surface water, and potentially groundwater** via surface route, arising from: - spillage of hydraulic fracturing additives - **spillage/tank rupture/storm water overflow from liquid waste storage, lagoons/ pits containing cuttings/drilling mud or flowback fluid**. • **impacts to groundwater dependent ecosystems** (Richardson, et al., 2011) and subsurface fauna as a result of contamination of groundwater by hydraulic fracturing fluids or mobilised contaminants arising from: - **wellbore/casing failure - subsurface migration**. • **loss of vegetation, habitat and landscape function from**: - **drill rig and well pads, - storage ponds or tanks - access roads**. ongoing impacts arising during construction and preproduction: - **noise** (Blickley, et al., 2012), **light pollution during well drilling/completion** (Moran, 2013), **local traffic impacts**. • **emissions to air, of methane and volatile compounds from drilling, hydraulic fracturing, high pressure compressors, etc**. • **new access roads and infrastructure are liable to be subject to erosion, adding dust and sediment movement to existing levels in that area**. **Noise** (Blickley, et al., 2012) and **light pollution** (Moran, 2013), as well as **traffic movement, will also contribute to loss of intactness in the landscape**. In the USA, Broderick et al, (2011) have estimated that **over the lifetime of a project, noisy surface activity associated with each well pad will occur on 800 - 2,500 days**. **Drilling is likely to produce the single greatest noise (24 hours continuous noise for 8 - 12 months, for a well pad containing 10 horizontal wells)** (Eco Logical Australia, 2013).²⁵

“Surface water and groundwater are connected components of the one hydrological system”²⁶

“Furthermore, the time for gas extraction to have a significant impact on the groundwater can be long, perhaps even decades or more, so that once a problem is detected it could be too late to do anything to rectify the problem. Thus there is the potential for the short-term benefits of gas production obtained by one generation to have long-lasting impacts on future generations (Kelly, 2011)”²⁷

²³ <https://acola.org/wp-content/uploads/2018/08/saf06-engineering-gas-report.pdf>

²⁴ <https://acola.org/wp-content/uploads/2018/08/saf06-engineering-gas-report.pdf>

²⁵ <https://acola.org/wp-content/uploads/2018/08/saf06-engineering-gas-report.pdf>

²⁶ <https://acola.org/wp-content/uploads/2018/08/saf06-engineering-gas-report.pdf>

²⁷ http://www.chiefscientist.nsw.gov.au/__data/assets/pdf_file/0014/35330/Horizontal-Drilling_JohnCarter.pdf

“According to Kelly (2013), research from the USA has suggested that methane contamination of groundwater can occur up to one kilometre away from gas production sites”²⁸

Dr Matthew Currell said pumping the produced water created by 850 wells posed major challenges in engineering and ongoing site monitoring.

"Every one of those points is a potential point of an accident or spill in the produced area," he said.

"You've also got the network of gathering lines and pipelines which gets that produced water to the treatment plant.

"And in doing that, pipelines may never be 100 per cent perfect, there may be engineering failures. So there are a lot of pathways over a long period of time for that potential contaminant to be released somewhere."²⁹

This is an unacceptable risk where you have a very large number of wells(850), in a relatively small area. Even if the risk is small of irreversible damage but has dire consequences- like GAB contamination and depressurisation then it isn't a worthwhile project, or a risk that the community is prepared to have to bear. This has been shown not only in QLD, but also in USA where communities have completely lost their underground drinking water, from CSG contamination and now rely on trucked in water, for household use.

“• would not result in any significant impacts on listed threatened species or communities, principally because Santos can avoid and/or minimise the impacts of the project on these species and communities during the detailed design and implementation of the project, and that any residual impacts can be significantly reduced by the progressive rehabilitation of the site and offset in accordance with the requirements in the NSW Government's Major Projects Offsets Policy; and”

The DPIE is misleading the IPC and trivialising the real lived experience of the impacts already documented and ignoring information that is already available.

As you can easily see from the “lived experience” of the CSG industry in QLD – there is vast amounts of above ground infrastructure, roads, pipes, drill sites, holding ponds, compressor stations, RO Plants, pipe laydown yards, etc that will severely fragment The Pilliga. It has already been stated by experts that the NGP will severely affect the

²⁸ http://www.chiefscientist.nsw.gov.au/__data/assets/pdf_file/0014/35330/Horizontal-Drilling_JohnCarter.pdf

²⁹ <https://www.abc.net.au/news/2017-04-06/nsw-csg-project-sparks-fierce-debate-over-energy-future/8418102>

biodiversity, impact communities and threatened species, by increasing traffic, noise, dust, particle emissions, light, etc

The Federal Government has advised that the threats posed by Santos Narrabri Gas Project to these endangered communities and species are “likely” and “significant”, owing to habitat clearing and fragmentation, increased access to pest and invasive species, and disruption or prevention of breeding cycles.³⁰

“• project would not generate significant greenhouse gas emissions either incrementally or in a cumulative sense, particularly when you consider that it would be used to sustain existing gas use in East Coast gas market which has been occurring for decades, and is likely to be more than offset by a range of other initiatives in NSW that are being pursued by the State and Commonwealth governments as well as the private sector.”

The DPIE is misleading the IPC and ignoring information that is already documented.

Fugitive emissions are a huge source of emissions during gas production. These are emissions of greenhouse gas that occur during everyday operations of CSG Mining including the extraction, processing and transport of gas: Venting, Flaring, Leaks.

Fugitive emissions in Australia have risen 46% since 2005.³¹ New gas is an unnecessary and dangerous step in Australia’s efforts to tackle climate change.³² The rapid development of battery storage technology makes renewables backed by batteries a cheaper, cleaner option than developing more gas-fired generators as we shift from coal-fired power.³³

New research, on *The Global Methane Budget 2000–2017* has documented that **global emissions of potent greenhouse gas methane have surged to new record levels and are on track for some of the worst global warming scenarios.** The researchers singled out the growth in gas exploration in Australia, which has occurred rapidly over the last decade and which the Morrison government has encouraged to grow even further, as something that must be addressed if there is to be a change of limiting warming to below 2 degrees³⁴

³⁰ Australian Government: Department of Environment Statement of Reasons on Santos Pty Ltd. referral [http://www.environment.gov.au/cgi-](http://www.environment.gov.au/cgi-bin/epbc/epbc_ap.pl?name=current_referral_detail&proposal_id=7376)

[bin/epbc/epbc_ap.pl?name=current_referral_detail&proposal_id=7376](http://www.environment.gov.au/cgi-bin/epbc/epbc_ap.pl?name=current_referral_detail&proposal_id=7376)

³¹ Department of Environment and Energy, “Australia’s Emissions Projections 2019,” 2019, <https://publications.industry.gov.au/publications/climate-change/climatechange/publications/emissions-projections-2019.html>

³² Tim Baxter, “Scott Morrison’s Gas Transition Plan Is a Dangerous Road to Nowhere,” The Conversation, February 4, 2020, <http://theconversation.com/scott-morrison-gastransition-plan-is-a-dangerous-road-to-nowhere-130951>

³³ CSIRO, “Annual Update Finds Renewables Are Cheapest New-Build Power” (CSIRO, December 2018), <https://www.csiro.au/en/News/News-releases/2018/Annual-updatefinds-renewables-are-cheapest-new-build-power>

³⁴ <https://essd.copernicus.org/articles/12/1561/2020/>

New research in May 2020 by Global Energy Monitor, *Gas Bubble 2020 TRACKING GLOBAL LNG INFRASTRUCTURE*, documented that as competition from renewables intensifies for power sector applications of fossil gas, the longer-term outlook for LNG infrastructure continues to worsen. Hundreds of billions of dollars in sunken investments for LNG infrastructure face the risk of becoming underutilized or stranded assets long before their useful life of 30–40 years. Fossil gas has been touted as a stopgap measure until renewable energy becomes cheaper. However, due to the consequences of further locking in fossil combustion rather than transitioning to renewable power, switching from coal to gas does not appear to offer a useful strategy to achieve rapid cuts in greenhouse gas emissions to achieve carbon neutrality. Shipping fossil gas as LNG significantly increases the greenhouse gas footprint. Cooling gas to the very low temperatures needed to turn it into a liquid (LNG) requires huge energy inputs to run compressors. Factoring in the large methane leakage found in recent studies should further tip the balance away from fossil gas³⁵ **CSG Gas is not a stop gap measure from coal, and renewables have already become cheaper.**

The DPIE states “• all the land disturbed by the project would be progressively rehabilitated to a high standard and returned to its previous use;”

Santos stresses the success of rehabilitation of well sites and sites contaminated with coal seam gas waste water during spills, yet ecologist David Paull, disagrees and says it is obvious to anyone who looks that the sites have not recovered.³⁶

In the Bibblewindi Spill area -All vegetation in the area has died or remained severely retarded for the past 9 years, resulting in further ridicule of Santos’ response.³⁷

³⁵ https://globalenergymonitor.org/wp-content/uploads/2020/07/GasBubble_2020_r3.pdf

³⁶ <https://www.echo.net.au/2018/07/santos-ignores-pilliga-wildlife-csg-plans/>

³⁷ https://d3n8a8pro7vhmx.cloudfront.net/lockthegate/pages/3157/attachments/original/1564717325/190701_Home_Truths.pdf?1564717325



An area of the Pilliga Forest where a CSG wastewater spill occurred in 2011. Nothing has grown back. Photo David Saunders

“You can see the results of ‘regeneration work’ carried out by Santos in these areas”, he said. “The company attempts to grow plants, and they die. The dead zones grow bigger every year, as the poison spreads.”³⁸

³⁸ <https://www.greenleft.org.au/content/pilliga-eyewitness-forest-under-threat-santos>



Efforts to regenerate spillage sites have all died. Photo: Coral Wynter



A rehabilitation site in the Pilliga State Forest. (ABC News: Kerrin Thomas)

Tony Pickard states "Well I've noticed that where the spill has occurred there has been a definite killing of not only the ground cover, but also the cypress, the bull oak, and eventually the older eucalypts trees," he said.

He said the local track-record proved contamination may not be quickly detected.

"There is lots of little spills out there and the environment is just suffering because of it," he said.³⁹

An initial review of the Santos Leewood proposal by the Department of Primary Industries in 2015 assessed the project as a "*high risk of having significant adverse impacts and the potential loss of the agricultural capacity of the lands affected by the proposal*" and stated that the "*soils are highly sodic and currently unsuitable for irrigation and unlikely to be remediated*"⁴⁰

The DPIE is misleading the IPC and ignoring information that is already documented that you cannot rehabilitate poisoned land or aquifers. It is irreversible damage that can't be undone.

The NGP should be refused in its entirety.

Thank you for considering my submission.

Dr Melinda Mills B.VSc (Hons IIA) N6730

³⁹ <https://www.abc.net.au/news/2017-04-06/nsw-csg-project-sparks-fierce-debate-over-energy-future/8418102>

⁴⁰ <https://search.geoscience.nsw.gov.au/report/R00070789>

Response to Additional Material provided by Santos

I strongly object to the NGP. I am submitting responses to the additional material provided by Santos.

Santos **incorrectly** claims “The Narrabri Gas Project is in the public interest, critical for energy security and reliability in New South Wales”

The NGP is not in the public interest and the public are opposing this project by the thousands. No public are going to benefit from this project, only a small minority that have vested interests, or are directly employed by Santos. All the public will get, will be destruction long term, of biodiversity, water, health, social fabric of community, climate change. That will be the real lived experience of what the public will have of Santos project to live with. Nothing beneficial.

Nowhere has Santos proved that it is critical for energy security and reliability. Quoting the NSW Gas Plan- is meaningless when only 2 out of the 16 Chief Scientists Recommendations have been implemented. There is no legislation to hold Santos accountable for anything.

How can the NGP be critical- when Australia is the world’s largest exporter of gas and has loads of gas for generations to come- without developing this project. **The only thing the NGP is strategic for is helping Santos to fill their LNG contracts.**

According to Santos *Sustainability Report 2020* “Our target is to grow liquefied natural gas exports to at least 4.5 million tonnes per year by 2025.”¹ The NGP is hardly for public benefit, but for benefit purely of Santos.

It is counterproductive of the Government to have both the NSW Renewable Energy Zones and the NGP, as we don’t need the gas.

Santos themselves have acknowledged they are looking at lowering emissions and using cheaper alternatives such as renewables, battery and solar power. So it is counterproductive, to be proposing the NGP. It would be better to refuse the NGP and encouraging Santos to continue on the focussed renewable pathway quicker, without the distraction of the NGP.

If Santos was truly interested in a lower carbon future and public benefit- then they would scrap the NGP and do what the public are asking for- work on renewables.

Interestingly **Santos has become a partner with CO2CRC in the Moomba Carbon and Capture storage Program** .Santos became a member company of CO2CRC about the 2 March 2020. CO2CRC CEO, David Byers, said “Santos is an Australian natural gas company and **one of the leading LNG producers** in the Asia-Pacific region with a strong commitment

¹ <https://www.santos.com/wp-content/uploads/2020/02/SAN14875-Performance-Report-Full-1.pdf>

to a lower carbon future.² **Professor Peter Cook** was named a Distinguished Scientist 2019 by CO2CRC 2019.³ On 21st March, 2019 CO2CRC has been awarded funding to conduct important research into reducing greenhouse gas emissions in steel production. The year-long study has been made possible by a grant from the **NSW Department of Planning and Environment** (Coal Innovation NSW Fund)⁴ 7th November 2016 .

A definition of a **conflict of interest (COI)** is a situation in which a person or organisation is involved in multiple interests, financial or otherwise, and serving one interest could involve working against another. Typically, this relates to situations in which the personal interest of an individual or organization might adversely affect a duty owed to make decisions for the benefit of a third party.

Professor Peter Cook's interests as a researcher who has in the past received (and maybe still does receive?) significant funding from various companies in the petroleum industry, including Santos, and the Govt, it would perhaps conflict with his role as Chair of the WEP. If the WEP potentially found that water would be detrimentally affected by the Narrabri Gas Project it would harm the interests of both the Govt and Santos.

Particularly as in the past Peter Cook has chaired an Expert Working Group through ACOLA, in 2013- found that indeed found that surface water and ground water are connected components of the one hydrological system. Relationships between deep aquifers, faults, fractures, and over- and under-lying gas shales (or coal) are poorly understood, as are permeability, porosity and groundwater quality and flow direction. Impacts such as long-term reductions in adjacent aquifer pressures and levels, and impacts on environmental assets are not adequately protected by current 'make good' mechanisms. Groundwater may be at risk from well failure such as radial leaks (movement of contaminants through casing into rock formation) or annular leaks (vertical movement of contaminants between casings, or between casing and rock formation). Cement and steel do not have the very long- term integrity of geological materials. Contamination impacts were likely to both surface and ground water by multiple routes. Light, noise, traffic, dust pollution were significant issues.⁵ Baseline surveys of air quality, surface and ground waters, greenhouse gas emissions, flora and fauna, seismicity, fragmentation of the landscape and abandoned wells were crucial. A holistic approach with cumulative impacts needed to be taken.⁶

Santos **incorrectly** claims **“Santos has more than 2000 land access agreements in place throughout the Bowen and Surat regions in Queensland and we have safely drilled and operated more than 2300 coal seam gas wells since 2006, without harm to water resources or the environment.”**

² <http://www.co2crc.com.au/santos-joins-co2crc/>

³ <http://www.co2crc.com.au/co2crc-appoints-distinguished-scientists/>

⁴ <https://www.co2crc.com.au/co2crc-investigate-greenhouse-gas-emissions-reduction-steel-manufacturing/>

⁵ <https://acola.org/wp-content/uploads/2018/08/saf06-engineering-gas-report.pdf>

⁶ http://www.questevents.com.au/sites/default/files/Peter_Cook_ADGOINVEST2014.pdf

In fact this is a blatant lie and the opposite is true.

Incidents and spills

		2010	2011	2012	2013	2014	2015
Uncontained hydrocarbon volume	m ³	18.7	65.9	66.7	385.5	20.0	382.4
Total number of hydrocarbon spills	> 10L	73	85	161	30	42	39
Uncontained non-hydrocarbon volume	m ³	-	-	873	1,426	2,957	2,279
Total number of non-hydrocarbon spills	> 10L	-	-	46	47	52	36
Number of fines for non-compliance with environmental regulations		3	6	14	17	12	3
Value of fines for non-compliance with environmental regulations	\$	6,000	12,000	35,000	34,800	72,000*	34,155

Notes: This includes \$52,500 imposed by the New South Wales Land and Environment Court for incidents that occurred at the Bibblewindi Water Treatment facility in 2011 while the site was under previous ownership and management.

Santos has a poor track record of complying with regulations, and environmental management.

For the 6 years from 2010-2015, in Santos own Sustainability Report ⁷ Santos recorded 611 spills, which involved 939,200 litres of hydrocarbons and 7,535,000 litres of non hydrocarbons and received 55 fines for non-compliance with environmental regulations in at least three states. The types of spills include oil, wastewater, salt, release of sewage and produced water with heavy metals to contaminate both land, groundwater and surface aquifers. There has been unauthorised clearing and erosions issues- absolutely harming both water and the environment.

From 2017-2019 Santos track record isn't any better.

Fines for non-compliance with a Soils Management Plan, unauthorised release of contaminants, effluent, hydrocarbons, produced water to both land and watercourses.

Fines in 2017- \$12,190 (pg 29)⁸,

Fines in 2018 -\$82,115(pg 29)⁹

Fines 2019- \$65,315 (pg 29)¹⁰

Pretty much Santos pollutes, pays the measly fine, then continues on business as usual. Codes of Practice and Management Plans- have no "real lived" meaning.

⁷ https://www.santos.com/wp-content/uploads/2020/02/2015_sustainability_report.pdf

⁸ <https://www.santos.com/wp-content/uploads/2020/02/2017-annual-report.pdf>

⁹ <https://www.santos.com/wp-content/uploads/2020/02/2018-annual-report.pdf>

¹⁰ <https://www.santos.com/wp-content/uploads/2020/02/2019-annual-report.pdf#page=1&zoom=auto,-485,780>

“Santos submits that the Narrabri Gas Project can be developed **safely and sustainably, without harm to people, water resources or the environment.**”

This is what Santos “worlds best practice” looks like in reality- CSG Drill pond that overflows toxic waste, when it rains, dead kangaroo at gas well site



Toxic sludge stored in skip bins, animal skeletons at bottom of CSG waste pond¹¹



¹¹ <https://www.flickr.com/photos/lockthegatealliance/sets/72157644814078323>



The “real lived” well integrity test- salt laden, disintegrating, rusting out well, leaking something toxic to kill the frogs



Unlined drill ponds. Water flowing off drill pads and out of overflowing ponds- taking toxic material with them



CSG drill Pond- lined with cheap plastic liners- that tear, rip and leak toxic sludge.

CSG wastewater being discharged into local creek- doesn't look like a high flow time



Unlined CSG drill ponds. Active CSG well site- pond line with cheap plastic liner. Hardly OHS or stock proof fencing- around the pond.

4. Consistency of the Project with the principles of ecologically sustainable development

Santos referred to the principles of ecologically sustainable development (ESD) with Opinion of Richard Lancaster SC(Appendix B). Richard also gave an opinion regarding the projects “social licence”

Part A- Social Licence to Operate (SLO)

Richard Lancaster states “The term ‘social licence’ does not appear in any statute or legislative instrument that the IPC is called upon to consider or apply for the purposes of determining the development application for the Project. It does not have any special or accepted meaning in planning and environmental law.”

There are lots of widely accepted terms in today’s society, allowing society to function- that don’t necessarily have a legislative term or legal acceptance to it, including Social Licence to Operate(SLO). Both industry(including Santos) and Government- including Department of Planning, recognise SLO- and that the industry needs to gain it, for a successful project.

For Santos to get legal opinion to try and discount the term SLO- is an admission, by Santos, that they in fact don’t have the SLO that they need, for this project to go ahead.

Santos themselves- know exactly what an SLO is, what they need to do to achieve SLO, as stated in their own *Sustainability Report 2015*.¹²

According to Pg2 *In Conversation* with Peter Coates, Chairman, Santos

“How does Santos balance sustainability considerations with economic returns?”

CHAIR: It’s a very straightforward equation; you simply can’t have one without the other. For me, maintaining our social licence to operate is central to our long-term success— without the support of our shareholders, governments and the community we will not be able to deliver on Santos’ significant potential.”

Pg 33 “Transparency and disclosure

At Santos we recognise the importance of transparency to our stakeholders and shareholders. **It is an integral part of maintaining our social licence to operate.”**

In June 2012 The Australian Council of Learned Academies(ACOLA) formed an Expert Working Group for Project 6- *Securing Australia’s Future- Engineering Energy: Unconventional Gas Production-A study of shale gas in Australia*.¹³

¹² https://www.santos.com/wp-content/uploads/2020/02/2015_sustainability_report.pdf

Professor Peter Cook was the Chair of the Expert Working Group, and author, as well as Dr Brian Fisher, and others.

It was described as a **“A three-year research program funded by the Australian Research Council** and conducted by the four Learned Academies through the Australian Council of Learned Academies for PMSEIC, through the Office of the Chief Scientist. Securing Australia’s Future delivers research-based evidence and findings to support policy development in areas of importance to Australia’s future.”

“Securing Australia’s Future delivers research-based evidence and findings to support policy development in areas of importance to Australia’s future.” It Published its Report In May 2013.

On Page 156- the Report looks at “What is a Social Licence?”

They defined SLO as-“ A Social Licence to operate(SLO) goes beyond regulatory approval and consent conditions to incorporate wider publics who can affect the profitability of a project.”

The concept of ‘social license to operate’ (SLO) first emerged at World Bank convened meetings about mineral projects in developing countries in the late 1990s in response to campaigns from newly mobile, networked and professional environmental organisations that publicised chemical spills, dam failures and conflicts. The language of SLO is now widely used in the resources industry and, increasingly, other sectors, although it has so far received only limited attention in the academic research literature (Gunningham, *et al.*, 2004; Nelson, 2006; Thomson & Boutilier, 2011; Lacey, *et al.*, 2012; Owen & Kemp, 2013).

Central to the SLO concept is the proposition that successful resource developments require not only the formal approval of government, but the broad acceptance of local communities and other key stakeholders who can impact on project profitability. Without this acceptance, projects are likely to experience disruption and delays and, in some cases, may not proceed at all. Companies associated with unpopular projects risk significant reputational damage and may find it more difficult to obtain access to other resources in the future. Furthermore, as the experience of CSG has shown, where there is significant stakeholder dissatisfaction governments are likely to respond by imposing more onerous regulatory requirements on the sector, and may even block some developments altogether.

Securing and retaining

¹³ <https://acola.org/wp-content/uploads/2018/08/saf06-engineering-gas-report.pdf>

a social licence

There is a body of practice-based knowledge about what companies and industries need to do in order to establish and maintain a SLO (Thomson & Boutilier, 2011; Zandvliet & Anderson, 2009). Drawing on this work, and the experience to date of the CSG sector and mining industry in Australia, four key requirements must be met to secure a broad-based social licence.

1. Industry and government need to be able to provide a *reasonable level of assurance* that gas extraction can be undertaken without causing any long term environmental harm.

This includes being able to demonstrate that: **(a) aquifers will not be depleted or contaminated; (b) surface water availability and quality will not be impacted to the extent that it cause detriment to other users or the environment more broadly; (c) harmful emissions will be controlled; and (d) ecologically important landscapes will not be destroyed or damaged.** Actions required to provide this level of confidence are discussed elsewhere in this report.

2. Local communities and the broader society will need to be *receptive* to the message that gas extraction can be done responsibly and without causing environmental harm. This is the critical element of *trust*.

If influential stakeholders do not accept the science, have a deeply held belief that gas companies are irresponsible, and/or do not trust government to exercise effective regulatory control, it does not really matter what the ‘reality’ is of the industry’s performance.

3. Individuals and communities who are potentially exposed to adverse social and economic impacts from projects will need assurance that these concerns will be *recognised and addressed* in a timely way. As the rapid growth of the CSG industry in Queensland has shown, projects can bring with them a range of other impacts apart from environmental ones. These include increased traffic, damage to roads, more pressure on services, landscape and lifestyle changes, housing shortages, local price inflation, disruption to farming practices, a perceived loss of control, and concerns about impacts on land values. A failure to respond to these concerns will add to distrust of companies and government and

creates fertile ground for building 'coalitions of opposition' to projects.

4. People living in and near areas where gas is to be extracted will generally be more supportive of development if they see evidence of *net benefits*, and not just an absence of environmental harm or the minimisation of adverse social impacts. Even if a project can be shown to be environmentally safe, it will not necessarily be welcomed by a community; understandably, communities also want to know if and how they will be better off as a result of a project going ahead. Resource extraction activities create wealth but usually not in an evenly distributed way, so it is important to build a broader value proposition.

According to, The School of Mineral Resources Engineering, June 2020- *Social License to Operate in Mining: Present Views and Future Trends*, "The concept of SLO was first developed in the late 1990s, when the mining industry failed to meet societal and community expectations but it can easily be applied in any other industrial sector. SLO is also based on the principles of the Global Mining Initiative, which was developed in 1998 by major mining and metals companies and aimed to advance the industry's role in the transition to sustainable development. Since then the concept of a SLO has been widely accepted by the industry as an essential tool of success and has prompted companies to look well beyond their self-interest. SLO aims to bridge the gap among the views of the most important stakeholders involved in mining activities and in particular to take into account the views of the general public, even from the design phase of a project, before any important decision is taken. The existence of a SLO means that the project has sufficient social approval, which is a prerequisite for its sustainability in the long term. "
"In the mining sector, the concept of SLO was first developed as a result of the criticism to mining projects and as a mechanism to ensure sustainable mining, environmental protection, cooperation with the local communities, preservation of the quality of life in the affected regions and finally the viability of the mining sector¹⁴

According to the Parliament of Australia Website, 2018¹⁵

6. Social licence to operate

¹⁴ file:///C:/Users/PJ&MJM~1/AppData/Local/Temp/resources-09-00079.pdf
¹⁵

https://www.aph.gov.au/Parliamentary_Business/Committees/House/Industry_Innovation_Science_and_Resources/MiningSector/Report/section?id=committees%2Freportrep%2F024209%2F26615

As well as needing a license to explore and extract the resources, **mining companies must secure a 'social license to operate'**. **Social license to operate has been defined as an ongoing acceptance of a project by the community and other important stakeholders.**

According to The Australasian Institute of Mining and Metallurgy(AusIMM), 2018¹⁶

"The Minerals Council of Australia (MCA) has said that SLO amounts to an 'unwritten social contract' between companies and the communities in which they operate. This contract is based on both company performance and the amount of trust the local community has for the company (Lacey, 2013).

SLO has again been identified in 2018 by Ernst & Young as one of the top ten risks. There is often an expectation gap between what a mining and metals company offers and what a community wants, and, as a result, **several mining companies have had to abandon projects.**

The future of SLO will continue to evolve. I believe key changes will include:

- Societal participation (beyond local communities)
- Mushrooming disclosure regimes
- Governance founded on an accountability framework
- **Minority voices amplified – rights of indigenous and other minority communities facing not just direct impact, but generational misgivings, will block project proposals due to the cumulative impacts of ongoing expansions and new tenements.**
- A focus on ownership
- **Litigation increasing** – there will be more litigation, especially for past damages. Provisioning will therefore become a key issue for companies and regulators.
- **Risk accumulation**

Even the **Department of Planning, *Social impact assessment guideline For State significant mining, petroleum production and extractive industry development*, 2017**, understands and acknowledges that companies need to have SLO to be able to operate.

"Applicants that undertake a robust Social Impact Assessment in accordance with this guideline and seek to minimise the negative social impacts and enhance the positive social impacts of their project may also experience the following benefits:

- **improved chances of achieving and maintaining a 'social licence'."**

Social licence to operate can be defined as broad community support and acceptance, and is related to the demands and expectations that people have for a company or operation. It can also be understood as **expression of the quality of the relationship and level of trust**

¹⁶ <https://www.ausimmbulletin.com/feature/evolving-nature-social-licence-operate/>

between a private sector project company and its neighbours over the life of the project.

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In the Departments Guidelines- *Community Engagement and Development: Leading Practice Sustainable Development Program for the Mining Industry, 2016*, pp. 38-39:

4.1 Social licence to operate

The social license to operate is an expression of the quality of the relationship between a private sector project company and its neighbours. In terms of mining, this begins with first contact at the initiation of exploration and continues through the entire life of a project, which, if successful, includes mine construction, mine operation, closure, and increasingly into post closure

Note that this definition focuses on the quality of the relationship and its endurance throughout the life of the mining project and beyond.

In brief, the **main features of the social licence to operate** is that it:

- **should be earned by the corporation or project through its actions**
- **should be 'granted' by the local community** in preference or **in addition to the national or wider community**
- **must be constantly renewed** through active, broad-based community engagement for the life of the mine, from exploration through closure
- **needs to be nurtured**, not just paid attention to at times of crisis.

In other words, a social licence to operate rests upon a good community relations foundation, including both community engagement and development.¹⁸

Richard Lancaster states "In that regard, the consideration of the 'public interest' operates at a "high level of generality" and does not require the consent authority to have regard to any particular aspect of the public interest."

Although Richard Lancaster may have a wealth of knowledge in legalities- the term SLO- is both an industry and government accepted term. Richard obviously does not understand the "real lived" experience of this industry and what it needs to operate and be an ecologically sustainable development. The "real lived experience" of "public interest" is a Social Licence to Operate.

¹⁷ https://www.planning.nsw.gov.au/~/_media/Files/DPE/Guidelines/social-impact-assessment-guideline-2017-09.ashx

¹⁸ <https://www.industry.gov.au/sites/default/files/2019-04/lpsdp-community-engagement-and-development-handbook-english.pdf>

The NGP has been plagued with delays, massive protests and the concern, far from abating, is only increasing both within Narrabri and the wider community. It is the most widely protested project in NSW Planning History, with 23,000 submissions to the EIS and 98% against. It is not in the public interest and the community do not accept this project. No amount of conditions can give the NGP a Social Licence to Operate.

The IPC has been shown by a record number of ~400 speakers and ~10,000 written submissions- with overwhelming majority against the NGP- that there is no SLO for this project. The NGP will end of a stranded asset, as the community will not allow it to proceed.

For the NGP to be a success on any level- it is crucial to have a Social Licence to Operate(SLO). It has clearly been shown that it does NOT have an SLO- so should be refused developmental consent.

Part B- Ecologically Sustainable Development(ESD)

Under s 1.3 of the EP&A Act, the relevant objects (relevant objects) applicable to the consideration of the NGP are:

- a) “to promote the social and economic welfare of the community and **a better environment** by the proper management, development and **conservation of the State’s natural and other resources,**
- b) to facilitate ecologically sustainable development by integrating relevant economic, environmental and social considerations in decision-making about environmental planning and assessment,
- c) to promote the orderly and economic use and development of land,
- d) to **protect the environment, including the conservation of threatened and other species of native animals and plants, ecological communities and their habitats,**
- e) to promote the sustainable management of built and cultural heritage (including **Aboriginal cultural heritage)**”

The Santos NGP is not in the public interest because it is contrary to the principles of ESD – namely intergenerational equity because the predicted economic benefits would accrue predominantly to Santos, employees, subcontractors but the long-term environmental, heritage and agricultural costs will be borne by the future generations.

The economic benefits, from the NGP last for approximately the life of the Project, but the environmental impacts on groundwater, biodiversity and productive agricultural land use last long after the life of the Project.

The distribution of costs and benefits over and beyond the life of the NGP is inequitable in that the economic benefits accrue to the current generation and the environmental, agricultural and heritage costs are borne by future generations.

Once Santos have the NGP approved- they can do whatever they want under adaptive management and modifications. This is what the CSG industry in QLD calls ESD.¹⁹ Why would a CSG gas field in QLD look any different to a CSG gas field by Santos in The Pilliga

Santos project is not ESD but Environmentally Destructive Development above and below the ground.

It is basic “rape, pillage, pollute, profit and move on” by Santos.

Richard Lancaster **incorrectly** states **“Surface infrastructure is minimal and will have relatively low visual impact;”**



RO Plant and holding pond. Compressors stations

¹⁹ https://www.lockthegate.org.au/queensland_coal_seam_gas



Pipelines and easement clearing of everything in its path. Chinchilla gasfield



Webs of pipelines and underground cables.RO Plant.



Processing plant. Pipeline corridor



High point vents. Flares



Drill site.



CSG gasfields in QLD





Pipe laydown yards





Santos states “Minimum depths of cover are specified for gathering lines. In rural locations, such as the Pilliga, the **minimum Depth of Cover (DOC) for the HDPE gathering pipelines is 750 mm.**”

Why is it ok or safe to bury HDPE only 750mm? Power has to be buried 1200mm, to minimise risk of machinery, or it coming to the surface, over time, with erosion, water runoff,etc. HDPE is far more dangerous, than power.

This is simply a cost cutting measure-decreasing safety to benefit Santos .

Richard Lancaster states “The NWA Submission also suggests that the objectors to the Project have been **denied procedural fairness to date because the IPC has met privately with supporters of the Project**, namely the proponent, the Department and Narrabri Shire Council, but has **not met with those groups, including NWA, its members, or members of the community who oppose the Project.**”

In my opinion, those facts do not demonstrate any denial of procedural fairness to the NWA, its members or other objectors.”

25/6/2020- IPC had **individual meeting with DPIE**

25/6/2020-IPC had **individual meeting with Santos**

29/6/2020 Santos got to take questions on notice, which they answered 17/7/2020

29/6/2020- DPIE questions on notice

6/7/2020 Santos gave the IPC a tour of the NGP and **members of community were not allowed to ask questions or make comments**

7/7/2020- IPC had **individual meeting with Narrabri Shire Council**

13/7/2020- Narrabri Shire Council questions on notice

20/7/2020- **60 minutes speaking time for DPIE to IPC**

20/7/2020- **30 minutes speaking time for Santos to IPC**

20/7/2020- **15 minutes speaking time Narrabri Shire Mayor to IPC**

28/7/2020- **IPC meeting with DPIE**

3/8/2020- **DPIE another 90 minutes speaking time**

3/8/2020- further questions to DPIE

14/8/2020-Santos final submission, plus new material added-Legal Opinion Richard Lancaster, and ACIL Allen Report

14/8/2020-DPIE answers to questions

Yet we the community- who are the main stakeholder, expected to bear the burden of the project- are denied an individual or group meetings, equal speaking time, denied to be able to take the IPC on a proper tour of the spills at NGP, chance for our experts to ask questions of DPIE & Santos experts, chance for questions on notice, and have to obey the rules for submitting on time, and speaking in allotted 5 minute slots.

Hardly Procedural fairness- but trying to silence the community.

ACIL Allen Consulting on NGP

According to the Economics Report [“The outlook for demand for natural gas in the eastern Australian gas market is driven by the demand from the three Queensland LNG projects”](#)

There is currently a global gas glut- with LNG ships cruising the ocean and no market to deliver to. We are the largest exporter of gas in the world- with the demand decreasing for gas.

Since 2014 Santos has written off close to \$7 billion on unconventional gas and its LNG plants at Gladstone Queensland which have never run at full capacity.

Santos on 21st July, 2020 wrote down another asset impairment of up to \$1.1 billion, which was a “lie of omission”, it neglected to mention to the IPC in it’s supposed

“transparency” to the IPC regarding its financial viability.²⁰ There is major likelihood that developing the NGP will result in stranded assets.

Even if Santos could decrease its well head cost, to \$6/GJ, it still can't produce gas that would land in Sydney at <\$5/GJ, which is what the current spot price is in Sydney.²¹ **Even Australian Petroleum Production and Exploration Association (APPEA) don't believe that Narrabri will be cheap gas.** July, 2020 Andrew McConville, chief executive, "It costs more than \$6 per gigajoule to produce gas from existing fields in eastern Australia and up to \$8.25 per gigajoule in new projects, before transport, distribution and other commercial costs," he said. **"The notion that any industry can survive selling its product lower than its cost of production is clearly out of step."²²**

According to the Economics Report **"The Australian Energy Market Operator (AEMO) suggests, in its 2020 Gas Statement of Opportunities report, that gas supplied from developed, undeveloped and anticipated fields will only be sufficient to meet demand until around 2026"**

AEMO has published its 2020 Integrated System Plan undertaken modelling and forecasting using less gas in future scenarios. Under the Central scenario, which assumes no new policy, Australia ends up at 76% renewable energy in 2042. Under the Step-change scenario, which assumes Australia will do its fair share under the Paris agreement, we hit 92% renewable energy in 2042, having slashed emissions in the electricity sector by 85%.²³

According to the Economics Report **"The major benefit from the NGP would be increasing competition in the eastern Australian gas market."**

This is ridiculous statement. How can the NGP possibly increase competition in the gas market, when Santos is already one of the major players of the gas cartel that run the gas market? That's a bit like saying that Woolies is opening another store to bring more competition into the grocery market- when the 2 biggest players are Coles and Woolies.

According to the Economics Report **"The negative impacts shown to agriculture and forestry are small and are mainly due to an assumed reduction in farmland, competition for labour and small increases in local costs."**

This is still a long term negative impact to sustainable industries.

²⁰ <https://www.smh.com.au/business/companies/bhp-dodges-the-write-down-bullet-striking-its-oil-and-gas-rivals-20200721-p55e3z.html>

²¹ <https://www.smh.com.au/business/companies/incitec-pivot-ceo-steps-up-push-for-cheaper-gas-amid-oil-market-rout-20200701-p557zx.html>

²² <https://www.smh.com.au/business/companies/incitec-pivot-ceo-steps-up-push-for-cheaper-gas-amid-oil-market-rout-20200701-p557zx.html>

²³ <https://www.aemo.com.au/energy-systems/major-publications/integrated-system-plan-isp/2020-integrated-system-plan-isp>

According to the Economics Report” [The rate of employment growth in the mining and manufacturing sectors is positive in the current assessment whereas it was slightly negative in the earlier assessment.](#)”

All the other positives employments are short term “boom-bust”.

New analysis from the Australia Institute has found that despite Australia being the world’s largest LNG exporter, less than 0.2 per cent of the workforce was employed in the gas industry. **“Investing recovery funds in virtually any other industry would be likely to create more jobs,”** Australia Institute climate and energy program director Richie Merzian said.²⁴

Chinchilla was also proposed in 2010 to become a booming CSG town- with population increases, jobs galore, etc. **The sad reality is that Miles/Chinchilla have become ‘ghost towns’ once the construction boom was over, in less than 10 years.**

This is not a long term industry or project.

The community knows and has seen enough to make an educated informed decision, that we do not want Santos and the NGP. We have seen the “real lived” experience of what the blithe words on paper of Santos’ so-called “management plans” actually mean. We have seen how little regulation there is or ability to prevent the damage happening, and by then it is irreversible and too late after the damage has happened. We have seen what has happened in QLD and understand the cumulative risks on a regional scale. 850 wells is not a small project. We know that adaptive management and incremental approach is not an appropriate means of regulating Santos. That approach always manages to benefit the proponent, not the community. We understand the real risks of what is at stake and don’t want a fractured community- that is “divided and conquered” by Santos. The community have seen the health impacts lived by the real people in these areas in QLD. They have seen the water, air, noise, dust, social impacts on Tara, Chinchilla, Miles communities. The community have said “No NGP”.

The NGP should be refused in its entirety.

Thank you for considering my submission.

Dr Melinda Mills B.VSc (Hons IIA) N6730

²⁴ https://www.news.com.au/finance/economy/australian-economy/coronavirus-australias-postcovid-economic-recovery-plan-doesnt-make-sense/news-story/35816ed0e92ae62bd9b5c971a0ed7a67?fbclid=IwAR02SSa4FusDiNNTJx70J6Rd-wrB9NEMniaD9QqBJneUoJWwIW__K4T7_IA#.qcxqh|p3cvc