To: Executive Director, Resource Assessments Department of Planning and Environment GPO Box 39 Sydney NSW 2001

SUBMISSION TO THE NARRABRI GAS PROJECT EIS

Submission by: Mr Brendan Shoebridge PO Box 174 Alstonville NSW 2477 21 May 2017

Dear Sir / Madam,

I hereby submit my objection to the Narrabri Gas project, proposed by Santos via its EIS.

I strongly object to this project. I believe the case against unconventional gas development is now so well documented that any proposed development approvals should and will be viewed as negligence.

As part of my submission I wish to submit a film I worked on entitled 'Fractured Country – An Unconventional Invasion' .

It can be viewed freely here via youtube: https://www.youtube.com/watch?v=XrE7LzZCn1E

The section relating to the Pilliga Forest can be seen at the 28 minute mark but I urge all concerned to watch this short documentary in its entirety.

If further information is required, please consider the following:

- 1. The SANTOS EIS claims that they will not interfere with the GAB recharge zone. The project plans to extract over 35 billion litres of water, much in the first five years. Government hydrogeological mapping of the GAB shows the project will straddle the most important inflow zone into the GAB in NSW (Hydrogeological Atlas of the Great Artesian Basin (2016) Department of Water Resources (NSW) Hydrogeological Series Sheet SH 55-12; NSW Department of Water & Energy April 2009 PN00799 WR2008-089).
- 2. Coal seam gas (CSG) production can have an impact on groundwater quality and quantity in adjacent or overlying aquifers.

The EIS provides no evidence that shows there is no connectivity between aquifer strata. Recent studies document migration of coal bed methane to the surface (https://www.nature.com/articles/srep15996).

3. All well casings will fail eventually.

There is no comprehensive strategy to ensure long-term well integrity. We will have 850 leakage time-bombs through the GAB

(http://www.pnas.org/content/111/30/10955.full).

- 4. Santos want to release treated water into Bohena Creek during high and moderate flows. The EIS ignores that Bohena Creek is a recognised surface groundwater ecosystem (Australian GDE Atlas). Treated water must not be released into Bohena Creek.
- 5. Recent work has shown that the levels of methane emissions from CSG operations are high enough to pose significant risks to greenhouse gas levels (http://www.resourcesandenergy.nsw.gov.au/ data/assets/pdf file/0010/559549/Fugitive-Greenhouse-

(http://www.resourcesandenergy.nsw.gov.au/ data/assets/pdf file/0010/559549/Fugitive-Greenhouse-Gas-Emissions-from-Coal-Seam-Gas-Production-in-Australia-CSIRO-report.pdf;

http://energy.unimelb.edu.au/ data/assets/pdf file/0019/2136223/MEI-Review-of-Methane-Emissions-26-October-2016.pdf).

- 6. Recent work has shown that the levels of methane emissions from CSG operations are high enough to pose significant risks to greenhouse gas levels (http://www.resourcesandenergy.nsw.gov.au/ data/assets/pdf_file/0010/559549/Fugitive-Greenhouse-Gas-Emissions-from-Coal-Seam-Gas-Production-in-Australia-CSIRO-report.pdf; http://energy.unimelb.edu.au/ data/assets/pdf_file/0019/2136223/MEI-Review-of-Methane-Emissions-26-October-2016.pdf).
- 7. The region is an astronomy destination providing jobs, business and tourism. Flaring gas and increase in airborne dust pose a significant risk. The impact of high level flares must be assessed (https://www.aao.gov.au/news-media/media-releases/warrumbungles-declared-australias-first-dark-sky-park).
- 8. Fragmenting the bush of the Pilliga forest will add to pressure from fox predation on threatened species. No control program will compensate for the increased fox activity along new tracks and easements (Meek and Saunders 2000 http://www.publish.csiro.au/wr/WR98030).
- 9. The project will clear close to 1,000 hectares of the Pilliga Forest fragmenting the largest temperate woodland in New South Wales. The Pilliga Forest is a remnant forest, a significant genetic repository with a complex interrelationship with recharge and inflow of ground water to the Great Artesian Basin and other acquirers closer to the surface. More research is needed.
- 10. The proposal fails to adequately address concerns by the Gamilaraay people about further destruction of significant social, cultural and spiritual sites.

This project should not proceed. Construction and exploration already undertaken has had a significant impact on the communities and the environment. The proposal to massively elevate drilling has a residual catastrophic risk to the immediate environment, the integrity of the Great Artesian Basin and other aquifers, and the communities dependant on them.

In conclusion, I wish to state that it should be abundantly clear to all our political leaders that we need all available resources to be committed to developing a clean energy future. I believe this decision will be a defining moment. We are rapidly running out of time, some researchers say its already too late. But heaven help us all if we continue down the disastrous path we are heading. I urge all concerned to act now and be on the right side of history, for the sake of our children, and indeed all life. The true cost of failing to act is hard to imagine.

For a safe clean future for all,

Mr Brendan Shoebridge