

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

Submission by:
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By email: narrabrigas@planning.nsw.gov.au

Dear Sir/Madam

RE: Submission to the Narrabri Gas Project EIS

I object to this project.

1. The SANTOS EIS claims that they will not interfere with the Great Artesian Basin (GAB) recharge zone.

The project plans to extract over 35 billion litres of water, much of this 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 the fact 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-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. 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>).

7. Fragmenting the bush of the Pilliga forest will add to pressure from feral animal predation on, and will remove critical habitat for, 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>).

8. 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.

9. 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.

Yours sincerely,

A handwritten signature in dark ink, appearing to be 'C. Sheed', written on a light-colored background.

Chris Sheed