

Attn: Executive Director, Resource Assessments
Department of Planning and Environment
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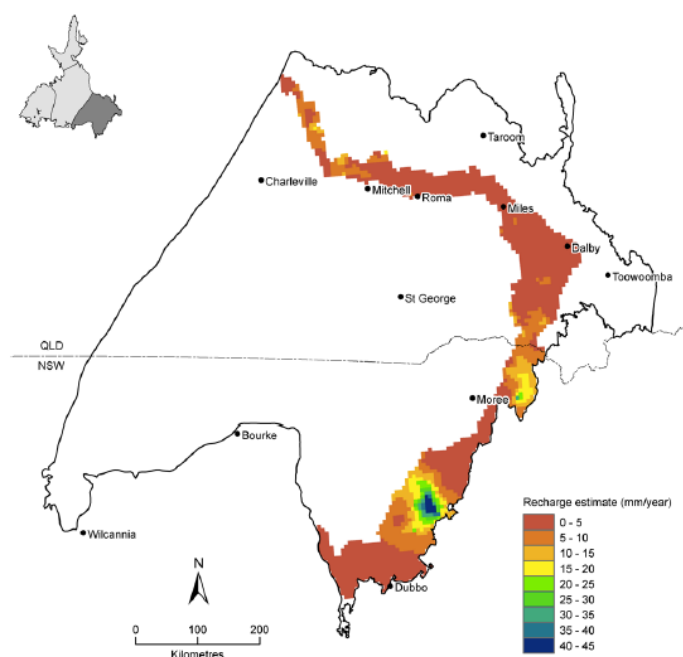
This is a submission to the Narrabri Gas Project Environmental Impact Statement.

My name is Anne O'Brien. I am a member of Parramatta Climate Action Network and am a PhD candidate. My research focused on how farmers and other land stewards are developing methods to care for soil biodiversity. Several innovative farmers producing high quality products while developing carbon and water-sensitive farming practices who I either interviewed or otherwise learned about in my research are located near the Narrabri Gas Project and would be affected by it.

The Pilliga Forest is located at the Eastern edge of the Great Artesian Basin, and is considered to be one of the most important areas for pressurising and recharging water in the entire underground basin. A report prepared by Soil Futures Consulting outlined its significance as follows:

Approximately 2.1% of the total area of the GAB provides than 5 – 30 mm/yr recharge to the basin, and only 0.2% of the GAB provides greater 30 - 80 mm/yr of recharge.... These very critical recharge areas are rare and widely separated. The main recharge area in NSW is in the East Pilliga Forest between Narrabri and Coonabarabran. (Soil Futures Consulting, 2015: 4).

Further to this, in 2012, the CSIRO prepared a map showing these limited zones of hydrological recharge in the Surat area of the Great Artesian Basin. This can be seen as follows:



Recharge estimate by chloride-mass-balance of the Surat region for the Cadna-owie – Hooray Aquifer and equivalents. CSIRO 2012: 113

The basin is a finite source of mostly ancient water upon which much of Australia's agriculture has become dependent. Coal Seam Gas extraction would also involve the depressurising of the coal seam which in turn requires extraction of water from the Basin. Considering how important the reliability of this water resource is to rural and remote communities, it would be irresponsible to compromise the availability of water in approving 800 gas wells.

Further to the Pilliga's important position as a recharge site, the ecological integrity of the Pilliga forest itself makes it extremely important. Clearing 1000 hectares would devastate the ironbark forest, which is very important for birdlife, other wildlife and for industries such as beekeeping. Coal Seam Gas production also brings the added hazards of BTEX and other toxic undisclosed chemicals could impact upon both surface waters and the waters of the Great Artesian Basin.

I urge the NSW Government to reject this project and make the Great Artesian Basin recharge off-limits to gas mining.

Regards

Anne O'Brien

References

Smerdon, B.D. and Davies, P.J., "Regional water budget," in *Water resource assessment for the Surat region*. Australian Government: CSIRO/ National Water Commission, 2012.

<https://publications.csiro.au/rpr/download?pid=csiro:EP132644&dsid=DS4>

Soil Futures Consulting/ Robert Banks, "Great Artesian Basin Recharge Systems and Extent of Petroleum and Gas Leases," 2015: 4. Available at http://www.gabpg.org.au/wp-content/uploads/2014/11/GAB-Report-Second-Edition_Final10032015.pdf