Submission No 190

INQUIRY INTO COAL SEAM GAS

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Submission to NSW General Purpose Standing Committee No.5 of the Legislative Council in relation to Coal Seam Gas exploration and production.

Background

I live in the Baerami Valley ("the valley") in the Upper Hunter where I operate an Angus cattle breeding farm. The valley is about 25 kilometres long by about 1 kilometre wide and runs in a North/South direction bounded to the East, West and South by the Wollomi National Park, which is part of the Greater Blue Mountains World Heritage Area. About 100 people live in the valley. There are thoroughbred horse studs (2), olive plantations (2), Pecan nuts, lucerne hay producers, a dairy farm and beef farms in the valley. Life and farming in the valley depends heavily on the alluvial ground water from the Baerami Creek water source which is accessed by bores and spear points and is used for irrigation, livestock, domestic as well as drinking water. The valley is fully covered by coal seam gas ("CSG") exploration licences, in part by PEL 4 (AGL) and in part by PEL 468 (Leichhardt Resources is the licensee and Planet Gas Ltd the operator) and by PEL 460 (Dart Energy).

The first ever communication in relation to CSG activity to any valley resident was a "Dear Landholder" letter dated 10 June 2011 delivered to Rowan Smith, a dairy and beef farmer who lives at the top (south end) of the valley, by a representative of Planet Gas on 19 June 2011. A copy is attached (*1). The letter states:-"*Planet proposes to drill an exploration core hole on your property.*" The final paragraph of that letter states:- *"In accordance with Section 69E of the Petroleum (Onshore) Act 1991, Leichhardt gives notice that Planet wishes to obtain an access arrangement on your property. If, after 28 days of submission of this initial notice an agreement cannot be reached, an arbitrator will be appointed to resolve any issues relating to access after this period*." Whilst the facts and the law are accurately stated it is evident that the facts and law outlined in the letter are seen as conflicting with landholders' property rights.

Leading directly from this perceived conflict, and widespread ignorance of the impact of CSG extraction and the legal rights of landholders, several meetings were organised in July and August, including two large meetings in the Baerami Community Hall attended by 100 to 250 people as well as news media, and including presentations by local and state politicians, Planet Gas CEO, a professor of hydrology at Newcastle University, lawyers and local residents. Community feelings of concern are intense, with many people feeling threatened and powerless to stop the coming intrusion by CSG miners. Throughout NSW in rural communities across the state similar scenes are being played out.

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The present regulatory framework under the Petroleum (Onshore) Act 1991 ("the Act") and the Environmental Planning and Assessment Act 1979 ("EP&A Act") will result in

coal seam gas extraction that is environmentally and socially unsustainable. Planning legislation needs to be changed. Suggested changes include:-

1. **Access** arrangements.

Landowners should have the **right to refuse entry** to CSG explorers/producers. In the absence of an access agreement there should be no forced access arrangements by arbitrators or courts.

The present system in which there is ultimately no way a landowner can prevent an arbitrated or court ordered access arrangement is seen as threatening by rural landowners and leads to legitimate feelings of unfairness and outrage in rural communities, with resulting political activism, media attention, and disapproval by the majority of the population. Partly because there is the capacity by CSG licensees to enforce access, compensation offered to landholders is typically inadequate to compensate for the risks and disruption. In this respect there are differences in the practices of miners, including coal miners, and CSG operators, in relation to compensation offered to the land owners:– coal mining occupies a relatively concentrated land area and includes the surface of that land thereby excluding other land uses, the production of mined coal from that concentrated area is of high economic value, and consequently coal miners typically offer to purchase the land on, under or near where they intend to mine at a price somewhat over the market price. Whereas CSG operators drill a network of holes over a dispersed land area, their activities do not completely exclude other surface land uses (i.e. farming) and the economic returns from each drill hole are modest compared with conventional mining. Consequently CSG operators seek to pay only modest compensation to the landholder for access. If the landholder had a right to refuse entry to CSG operators then they would similarly be in a position of having to pay acceptable compensation set by the market, or else to purchase the land disrupted by their gas extraction activities, structures, discharges, vehicle traffic, and pipelines.

2. CSG exploration and production – **neighbours** should have a say:-

It is inevitable that in any petroleum exploration licence ("PEL") area there will be timid, ill-informed or indifferent landholders ready to enter into access agreements with the CSG licence holder. Even if there are no such landholders the licence holder can presently force an access arrangement on to a landholder through the arbitration and the appeal process.

Once an access arrangement has been finalised for CSG exploration or production on land, and drilling activity commences, neighbours are potentially detrimentally affected in a number of ways. There are environmental risks and effects which typically are identified in the applicant's Review of Environmental Factors ("REF") documents lodged with the PEL or lease application. These environmental risks/effects include fire propagation (including gas flares), invasion and/or contamination of aquifers causing ground water depletion/contamination, leaching of gas into nearby aquifers, leaching or runoff of "produced" water which will be saline and/or contaminated with chemicals,

heavy vehicle traffic to and from the site, unsightly metal structures and/or pipelines appearing in the landscape, introduction of weeds, noise, fumes, smoke and dust, and disruption to the neighbourhood. In addition CSG activity in an area results in reduced land values (*2).

An example of the identified environmental effects from exploration (not production) can be seen in the Leichhardt Resources own REF lodged on 14 June 2011 (*3) p.66 under "Conclusions":- *"Planet Gas' risk management study has identified areas of concern at both the localized and more regional level and a risk management strategy has been tabulated to preferably remove the risk or, if elimination is not possible, minimize the risk. Based on this assessment the initiation and propagation of fire is recognized as the most significant risk to the environment at a regional ('macroscopic') scale. Invasion and contamination of aquifers is a significant 'mesoscopic' risk, however low invasion drilling fluids with chemically and environmentally benign additives and best industry practice operating procedures will minimise that risk. Vehicles and rotating equipment are key risks to rig crew personnel and third parties operating at the local ('mesoscopic') level."* See also p.63-65 & Table 5.3:- "*There is potential for minor short-term environmental degradation due to noise and vibration impacts*" and "*Minor short-term impacts such as noise and vibration will likely be experienced in residences in proximity to the drill sites*" and "*The proposal may result in short term potential risks to the safety of the environment due to potential accidents and spills*" and "*There would be localised and non-permanent visual impact on the immediate vicinity of the activities for the duration of the program*" and "*The drilling fluids may comprise of environmentally-friendly and non-hazardous weighting agents, viscosifiers, fluid loss control additives and biocides. The drilling fluid will be weighted to maintain slight overbalance to control formation pressure and prevent fluid crossover between potential aquifers*" and "*If hydrocarbons or water are produced, the core hole will be circulated to a weighted drilling fluid, preventing further fluid flow, followed by the core holes being plugged and abandoned with cement. Any small volume of produced gas would be directed to the pre-constructed flare pit and flared in an industry standard controlled procedure*." The potential in the field for human error or sloppy performance, particularly by employees of third party contractors, causing leaks or spills or fires, is obvious. Once the second stage of exploration is reached (testing gas production potential), and when the production stage is reached, fracking is carried out. Ground water and/or atmospheric contamination by fracking chemicals and hazardous waste, either from spills or evaporation ponds, poses serious health risks to humans and wildlife (*4). Gas flares and flare pits also result in toxic air and soil pollution endangering health and birds. Leakage of gas into ground water or the atmosphere is another hazardous factor. Flooding (common in the valley) presents a particular danger when hazardous materials are on-site.

Conflicts with and within the community arise partly as a consequence of neighbours having had no consultation or financial stake in the CSG activity. Neighbours presently are not consulted or informed of CSG drilling, have no right to object to exploration and

limited right to make “public submissions” to the minister under the EP&A Act prior to the granting of a production lease. (This contrasts with the process available to neighbours in respect of any other development which is not classified as “state significant development” – advertisement, objections, submissions and hearings.)

Planning law should be changed to mandate early notification of all landowners in the neighbourhood potentially affected by any proposed CSG exploration or production activity. There should be a right for effected landholders to raise objections/submissions to an independent decision-maker (determining authority) prior to development approval, who must take into account such objections/submissions when assessing applications. Both applicants and objectors should have appeal rights to the Land and Environment Court. There is a need for legislation to provide for such mechanisms to allow local input into decision-making in order to restore public confidence in the CSG licensing and planning systems.

3. **National Parks**

Drilling should be prohibited within 1 km of national parks or World Heritage sights. The increased fire risk, and the risk to alluvial ground water and the visual impacts are factors which by themselves should dictate that the precautionary principle should apply, and a buffer of 1 km would seem to be the minimum safe distance.

4. **Compliance:-**

Local community oversight of CSG operations is the most effective way of ensuring compliance with desired environmental outcomes. Once a CSG exploration licence or production lease is granted then the formation of a local community committee should be legislatively mandated, funded by the licensee (in part to pay for expert monitoring of groundwater, air quality, noise, fire hazardous activity etc as appropriate), informed of all operational decisions in relation to the CSG operator’s activities and empowered to monitor site activities and to ensure detection of any environmentally damaging episodes/practices and any breaches of compliance with conditions of consent. Breaches would be reported to appropriate compliance and enforcement authorities, which need to be resourced and equipped with the necessary powers to enforce remediation of breaches and impose punitive orders, including compensation to persons affected, and suspension of CSG approvals.

Conclusion

Unless changes are made to the law expeditiously it is likely that large numbers of rural landholders will be adversely effected by CSG activity, having regard to the number (48) and size of existing PELs covering most of the state. (One third of NSW is covered by CSG exploration licences). Community meetings, continuing press coverage, political agitation and demonstrations, increasing outrage at the invasion of private property, litigation and inevitably environmental catastrophes will likely result, as well as long term damage to the environment and public health.

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As said by Malcolm Turnbull (formerly Commonwealth Minister for the Environment) on ABC's Q&A, August 15, 2011:- "We have a lot more coal in Australia and a lot more gas than we have prime agricultural land. Our best agricultural land is very scarce in truth, not just in Australia but globally. The world food task - the task of feeding the world - is getting harder and harder because we are running out of water in many parts of the world, partly because of climate change and also because of the unsustainable extraction of groundwater, particularly in China. China's ability to feed its own population is diminishing. So, you know, we should regard our prime agricultural land as a very high priority. That's the first point. The second point I want to make is water. When we think about coal seam gas extraction or, indeed, mining - that affects groundwater systems. And remember the groundwater is what feeds the rivers. The groundwater is where most of our water in Australia is located, beneath our feet. That can affect water resources hundreds of miles from the location of the coal seam gas bore or, indeed, the mine. So it goes beyond… the interest of the farmer. Because a farmer may agree, he may say "Fine, I'll take the money and you knock yourself out. You know, drill, do whatever you like in terms of fracking and coal seam gas extraction on my land". But what if that affects the watertable and the groundwater for the neighbours, not just next door but hundreds of miles away? What if lowering the water pressure to get coal seam gas out results in … springs and bores and rivers, hundreds of miles away, losing their access to water?

We are talking about our most precious resource … our water. We are the driest continent on earth. Now, I can tell you this, if you damage your groundwater sources, if you contaminate aquifers, whether it's by chemicals or whether it's by allowing contaminated water from a coal seam to get into a fresh water aquifer, you cannot fix it. You can't rehabilitate it….. If you muck up the groundwater, you've got a long term problem and that is why the critical element that has been missing is the scientific work, the groundwater science, the hydrology. That is what needs to be done. We know very little about our groundwater in Australia and we need to know more." (*5).

References

Leichhardt Resources Letter.pdf

*1:

*2 http://www.northerndailyleader.com.au/news/local/news/general/gunnedah-properties-in-limbofears-devalue-land/2277524.aspx

*3: http://www.dpi.nsw.gov.au/__data/assets/pdf_file/0004/395572/20110614-REF-PEL-468-Meads-Crossing-1-and-Stony-Pinch-1-Core-Holes-.pdf

*4 http://ntn.org.au/wp-content/uploads/2011/02/NTN-Fracking-Briefing-Paper-2011.pdf

*5 http://www.abc.net.au/tv/qanda/txt/s3291166.htm