

INQUIRY INTO COAL SEAM GAS

Organisation: Wilvil Pastoral Co

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Partially Confidential

Wilvil Pastoral Company

"Bronwyn Park"
1938 Baerami Creek Rd
BAERAMI CREEK
NSW 2333
Ph : (02) 6547149
Email :
wilvilpc@bordnet.com.au
ABN 31 692 116 938

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The Director

General Purpose Standing Committee No. 5

Parliament House

Macquarie St

Sydney NSW 2000

Submission to NSW General Purpose Standing Committee No 5 of the Legislative Council - regarding the environmental, health, economics and social impacts of coal seam gas (CSG) activities and its role in meeting future energy needs of NSW.

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Summary

We have such serious concerns regarding CSG exploration and production that we completely reject the proposal on environment, social and financial grounds.

The risk of contamination and depleting our underground aquifers is far too great. The problem of disposal of waste water is immense.

The disruption to our farming business is totally unacceptable.

The noise, pollution, unsightliness of drilling rigs is also beyond contemplation.

Fire risks associated with exploration and production of CSG cannot be understated in these long narrow valleys with only one way in or out.

Background

This submission is on behalf of Wilvil Pastoral Co, which is a partnership between Dr Phillip Westley-Smith and my self - Rowan Smith (Phil's brother).

- This partnership utilises land predominately owned by Dr Phillip Westley-Smith in the Baerami Creek area.
- We commenced farming in Baerami Creek in August 1976 with the purchase of three properties – 'Wilvil', 'Pacific' and 'Bronwyn Park' in the upper reaches of Baerami Creek.
- Since the late 80's, the properties 'Frank Easter', 'Wilpen Arm', 'St Elmo', 'Loumeah' and 'Neverfail' have been added.
- Farming enterprises have expanded from the original beef cattle and lucerne hay production to include beef dairy, thoroughbred horse breeding and racing, as well as stud cattle.
- Our farming business now includes over 1800ha.
- We utilise a 690 megalitre water license, spread over 5 of these properties to grow lucerne and winter forage crops.
- During our 35 years on the land in Baerami Creek we have been exposed to droughts, floods, fires, locusts, rabbit and mouse plagues and wild dog attacks, but none of this compares to the potential devastating threat from coal seam gas exploration and production.

History in the United States, Queensland and Pillaga region of NSW clearly warns 'ignore this threat at our peril'. The environmental degradation of our land, the economic impact on our production ability and the destruction of the very social fabric of our rural community are all under very real threat.

Social Divide

The social divide of those who may have signed 'access agreements' with coal seam gas companies and those who haven't and those who won't is very apparent.

(a local rural supply company), was approached by Leichhardt Resources for an 'Access Agreement'.. states that he has not signed anything. Anyway, people have abused him, closed accounts or simply stopped trading with

PEL's

Currently our properties in Baerami Creek fall under 3 PEL Licences –

- PEL 460 (Dart Energy) southern end of valley
- PEL 468 (Leichhardt Resources) upper mid end of valley – Leichhardt Resources hold PEL, Planet Gas has a farm-in arrangement. MBA Petroleum is the project manager.
- PEL 004 (AGL) northern end of valley

Our first direct exposure to CSG mining was when Phil was contacted via phone by [redacted] of MBA Petroleum in June 2011. Phil was told MBA Petroleum were looking for coal – no mention of coal seam gas.

A meeting was arranged for 19th June 2011 with a representative of MBA Petroleum.

with co-worker [redacted] representing MBA Petroleum and Phillip Westley-Smith, myself (Rowan Smith) and my wife Liz were at the meeting.

[redacted] was a very reluctant participant. He comes from an environmental background and works for a business which consults to MBA Petroleum. [redacted] stated he was uneasy due to the manner in which CSG mining companies gain access to people's properties and the subsequent damage caused by mining. When asked by Phil if he would have CSG mining on his property, [redacted] replied NO. Phil told him that was his reply to Leichhardt Resources's request for access – NO.

[redacted] tried to explain Leichhardt Resources's request to obtain access to Phil's properties in PEL 468 and the procedures which would be undertaken using a brochure relating to PEL 470. [redacted] also confirmed no REF's (Review of Environmental Factors) had been done for Baerami Creek. Before [redacted] left he handed me a 'Request for Access' letter from Leichhardt Resources (*document attached*). This letter is dated 10th June 2011 and addressed to 'The Landholder'. It concludes with the threat of arbitration which can be invoked under Section 69E of the Petroleum (Onshore) Act 1991.

Section 69E also states this request must contain -

- 2(a) a plan and description of the area of land over which access is sought
- (b) a description of the prospecting methods to be used

Neither of these requirements were fulfilled.

The whole 'request for access' process initiated by Planet Gas was very unprofessional, inadequate and really very sloppy.

These shortcomings of Planet Gas in managerial procedures are not restricted to our contact with them.

A NSW Farmer's newsletter dated 14th July 2011 draws attention to more shortcomings in PEL 470.

Outdated advisory material and factually incorrect references to time frames were issued to landholders.

If these are an example of 'best management practice' of Planet Gas, no wonder landholders hold very grave fears when it comes to them drilling into and through our precious underground aquifers.

Tight management starts at the top and flows down through the chain of command in any business.

Planet Gas, in its prospectus (page 65) which was lodged with ASIC on 9th June 2004 identifies certain operating hazards –

- well blowouts
- explosions
- uncontrolled flows of natural gas or well fluids
- fires
- formations with abnormal pressures
- pipeline ruptures or spills
- pollution
- releases of toxic gas and
- other environmental hazards and risks

This reads like a script from a Hollywood action/horror movie.

To undertake any procedure which could involve any of the above lacks any real concern for the environment or safety of people affected.

It is not as if all of these procedures are being undertaken in the open or aboveground where they could be adequately managed. Many will be carried out several hundred metres underground.

Mining companies claim they will have in place a comprehensive monitoring system.

Once monitoring systems confirm that aquifers have been contaminated or depleted, how do they go about 'fixing' them? *This is virtually impossible!*

Monitoring systems would only confirm what we already fear. Monitoring systems can't prevent disasters.

Senator Bill Heffernan, the Liberal Chair of the Murray-Darling Basin Inquiry said of coal seam gas mining “it was an ongoing experiment and an adventure with unknown consequences”.

The farming future of NSW is being gambled. **THIS IS SIMPLY NOT GOOD ENOUGH.**

The flow on effect from a disaster on one property to neighbouring ones can't be overstated.

The pollution of waterways would have a devastating effect on those downstream.

In our instance, Baerami Creek flows into the Goulburn River, which flows into the Hunter River.

The potential to adversely impact food production right down the Hunter Valley can't be ignored.

Community Meetings

I was so alarmed at the manner in which Leichhardt Resources had threatened Phil with arbitration that I decided to call a community meeting on 16th July 2011 at the Baerami Hall. This meeting was called a 'Coal Seam Gas Information Afternoon'.

Local media were used to promote the meeting.

The community response was overwhelming. Such was the level of concern that nearly 200 people attended.

I. _____ opened the meeting. He stated Council's total rejection of any coal seam gas development in the Muswellbrook Shire.

He also stated how local government had little, if any say, about mining development.

II. Planet Gas was the next to address our meeting. His reception developed into quite a hostile session which I had to bring to order on more than one occasion. stated Planet Gas would not 'fracc' during the exploration stage. Unfortunately refused to comment or even talk of anything past the exploration stage because "that is

where we are up to". even stated that Planet Gas had no plans in the future for coal seam gas production in our local area. *What are they doing here?*

I asked if Planet Gas was interested in shale gas in the Baerami Creek area. said he was unaware of shale in the area. *In the Second World War era there was a shale oil industry in the upper reaches of Baerami Creek. Mine relics, infrastructures and mine entrances are still evident today – mainly in the National Park.*

is a geologist of international experience. Given that Planet Gas intend mining in Baerami Creek, reply left me dumbfounded!

The lack of transparency in the supposed consultative stage leaves a lot to be desired.

One thing was quite clear however, on several occasions said if access was denied then he would seek arbitration.

from Baerami was one who addressed the meeting when was on the floor. summary was very pertinent.

"Baerami Creek's houses stretch for 25km's. The valley in most places is half km or less wide. The catchment is 35km's x 18km's – some 40,000 ha – bordered by sandstone escarpments, very seldom does the creek flow. Run-off is contained in the underground aquifers. The valley floor comprises some 2,500 ha, surrounded on three sides by World Heritage Listed Wilderness of Wollemi National Park. Damage to the water or to the land is unthinkable."

Addressing finished with *"we don't need your coal seam gas in Baerami Creek"* – very solid applause from the crowd.

quoted the thousands of truck journey's that is required to service CSG production. was somewhat flustered by the numbers but he conceded with *"that it would be a lot"*.

asked if he believed in 'a Social Licence'. replied that he did.

called on Planet Gas to withdraw its mining operations from the area because it did not have a Social Licence.

said he would consult with the board of directors at Planet Gas and reply within a fortnight. NO REPLY HAS BEEN RECEIVED TO DATE.

In Baerami Creek there is unanimous rejection of CSG exploration and production.

III. [redacted] from Newcastle University was an uninvited but welcome guest, who spoke about aquifer interference. His expertise lies in this field.

The Professor emphasised that every underground location was potentially geographically different. The result of studies in one locality might be quite different from a locality a few hundred metres away.

Eventually a fault line connecting different aquifers would come into play and the feared cross contamination of our waterways would occur.

IV. Jeremy Buckingham MLC closed the meeting which by this stage had become restless.

Jeremy even conceded that a month before this CSG issue, that his personal safety at such a venue would be in doubt – no such trouble here. His address commanded attention. His call for a 12 month moratorium on coal seam gas exploration was met with thunderous applause.

The mood of the meeting was intensifying.

Jeremy was even asked to articulate George Souris's position on CSG since they hadn't been able to ask George himself, either here at our meeting or previously at other meetings – that he was invited to attend but didn't. Pretty damning stuff! Jeremy Buckingham has the ears of the nearly 200 people at the meeting. We were all listening closely. This is National Party heartland – it is BLEEDING – the political shift is gaining momentum.

- Reports of our meeting were the front page headline and on page 8 of 'The Land' newspaper – 21st July 2011. *(copies attached)*

- 'Muswellbrook Chronicle' on July 22nd – page 5.
- Newcastle's 'ABC 1233' radio interviewed Martin Rush about our meeting. Martin clearly stated that **"Planet Gas did not have a social license to operate"**.
- 'The Newcastle Herald' published an article on Jeremy Buckingham's call for a 12 month moratorium on coal seam gas.
- Our concerns were receiving wide media coverage.

What is apparent is that our situation is not unique. Many other areas in NSW and QLD have gone through or are going through the onslaught from the mining companies

Never before have the legal rights of landholders been so threatened!

Environmental Defenders Office (NSW) Educational Workshop – 20th August 2011

EDO were unable to attend our first community meeting due to prior commitments across NSW.

Such was the uncertainty of where landholders stood and what possible procedures lay ahead that I arranged a second community meeting with the EDO as the sole participant.

and her assistant

spoke at length detailing the 'EDO's

Educational Workshop'.

Congratulations on the manner in which they approached the task.

The Attendance Sheet recorded 74 community participants, plus over 10 people sent in apologies.

The EDO was not prepared for such a large number. Handouts had to be shared and follow up copies arranged.

The workshop was a success, in the sense of people were now better informed, but still the long shadow of uncertainty hangs over the very future of our farming community.

The numerous threats by regarding arbitration was still ringing our ears.

Fire Risks

Methane gas is an odourless, colourless asphyxiant gas that is extremely flammable.

Planet Gas in its REF's for 2011 Meads Crossing-1 and Stony Pinch-1 exploration core holes states 'Based on this assessment the initiation and propagation of fire is recognised as the most significant risk to the environment at a regional scale'.

However, CSG mining companies are exempt from Fire Regulations. *How can this possibly be?*

During total fire bans the companies can carry on 'business as usual'.

In Baerami Creek with the major fuel source of the Wollemi National Park less than ½ km away from any future CSG activity, this exclusion from fire regulations must be questioned.

Once into production 'flaring off' doesn't even need to cease during a Total Fire Ban.

I am the local Fire Captain of the Baerami Rural Fire Service. The potential implications of the outlined situation is of grave concern.

I sought guidance from Fire Control at Singleton: clearly stated that as such the Rural Fire Service had no CSG fire policy. He indicated that 'Joint Service Committee' with 'Special Hazards Committee' was concurrently reviewing this situation.

He indicated we should treat any CSG incident as a "Flammable Gas Incident". was very helpful.

He forwarded some material which he had drawn up for the Putty area. I indicated that I intended to contact the Rural Fire Service Commissioner – Shane Fitzsimmons. said by all means.

I have contacted Rural Fire Service Head Office and through the Commissioners assistant – it had been arranged for the Commissioner to ring me on Friday 2nd September 2011. Unfortunately this didn't eventuate and has been rescheduled for Wednesday 7th September 2011. Somewhat late for the writing of this submission.

National Parks

- Wollemi National Park is part of the World Heritage Listed Greater Blue Mountains National Park.
- The discovery of the world famous Wollemi Pine and its home is in this park.
- Wollemi National Park surrounds the valley of Baerami Creek.
- The economies of scale in developing a gas field within the narrow confines of Baerami Creek needs close scrutiny.
- Wherever CSG development was to take place in Baerami Creek, the National Park would be an immediate neighbour, if not the closet neighbour.

One must wonder if the miners intend extracting gas from the National Parks in order to justify the development of their Exploration Licences.

- Wollemi National Park had no depth restriction placed on it when it was gazetted. In other words it is regarded as 'to the centre of the earth' – no mining whatsoever.

If a mining company was to 'fracc', how would they 'pull up' the fracing on the Park boundary?

If toxic fracing chemicals were used then the Park would be exposed to these.

Even if fracing were not used the coal seam still needs to be de-watered to let the gas flow.

The nature of Baerami Creek being a very narrow valley would surely mean that de-watering was occurring in the National Park. The resultant decrease in underground hydraulic pressures could change the balance of the underground aquifers. Where interconnectivity between aquifers is in place the flow-on effect may not become apparent for quite some time.

Once the well head was developed, Methane gas could then become available from the National Park.

How do you stop the miners damaging forever the geological balances in the Park and extracting the CSG?

In a narrow valley like Baerami Creek, I don't think the miners could stop the process even if they wanted to, once they have started.

Use of Chemicals – in hydraulic fracturing

My understanding is that

- 1) The use of toxic chemicals such as Benzene, Toluene Ethylbenzene and Xylene (BTEX) are currently banned in the fracking process.
- 2) The fracking process has a moratorium on it till December 31st 2011

I refer you to a paper prepared for National Toxic Network (NTN) by Dr Marion Lloyd-Smith and Dr Rye Senjen – June 2011. The paper is titled “Hydraulic Fracturing in Coal Seam Gas Mining, The Risks to our Health, Communities, Environment and Climate” – www.ntn.org.au

Until a thorough Australian scientific review of fracking and total disclosure of fracking fluids used in Australia is complete, then the ban on fracking chemicals, including ‘BTEX’ and the moratorium on fracking should remain in place.

Why did France ban fracking?

Buffer Zones

- The Environmental Defenders Office (EDO) in it's submission on the NSW Coal and Gas Strategy 15th April 2011, called for “mandatory buffer zones to exclude any mining activities within 1km adjacent to rivers, wetlands and water courses”.
- There have also been suggestions from conservation groups that a similar buffer zone should exist around National Parks.
- A Strategic Land Use Policy is forecast to identify prime agricultural land which should be excluded from mining activity.

- If any one of these three proposals was adopted, then NO CSG MINING would be permitted in our local area.

A buffer zone around any water course is surely mere common sense.

- When Baerami Creek floods, many parts of the area are totally inaccessible for many days. It doesn't matter what vehicle you drive.
- To make safe any mining operations would be extremely difficult if not impossible.
- There is only one road in and out – no alternative route. The sandy dry bed of Baerami Creek can turn into treacherous quicksand with no apparent bottom during flood time.
- Any surface contamination for whatever reason could possibly be catered for before it directly entered a water course if an adequate buffer zone was in place.
- Humans being humans, mistakes will be made.

The precautionary approach is definitely needed.

Dewatering of Coal Seam Beds to allow flow is of huge concern.

- *Where to store this saline and sometimes toxic water is an immense problem.*
- *Evaporation ponds on our floodplain flats would be unthinkable.*
- *Environmental damage from leaking or breached dams could be catastrophic.*
- *Storing this water in tanks would be impracticable.*
- *To contemplate trucking the immense volume of water out seems ridiculous.*
- *There still remains the problem of how to dispose of this vast quantity of saline or toxic water.*

Property Values

Adverse Impact on rural lands

- i. Wilvil Pastoral Co is the largest holder of land in Baerami Creek.
- ii. Of our 1800ha only 300ha are farmable paddocks
- iii. These paddocks range in size from 20ha to 1 ha
- iv. Average size for 58 farmable paddocks is 5.2ha

Any interference from CSG explorations or production would have a serious impact on us.

Access roads to multiple well heads would virtually make the farm unworkable – irrigation programmes would be highly disrupted, stock movement and watering would all be affected.

Baerami Creek is an aesthetically very pleasing valley. It is one of the main attractions of this area.

This is one of the main reasons why people choose to live, raise families and work here.

Noise, dust, potential gas leaks and unsightliness of drilling rigs would be totally unacceptable.

One of the dynamics of our valley is that noise can travel kilometres, and in the stillness of the night drilling would be unbearable. Wind can rush by overhead but not be felt in the valley.

Compensation to landholders subjected to exploration and production is totally inadequate when considering the revenue generated.

The bargaining imbalance between large mining operations and individual property owners is totally in favour of the miners.

Economic Impact

The economic impact on any one individual landowner who was singled out for exploration or production on their land would be substantial. The small acreage of paddocks which make up our holdings would make the impact of any intrusion on our land a substantial one.

Normal farming routines would be thrown into chaos.

On the larger scale the CSG industries impact should be viewed as not the sum of the individual projects but rather the cumulative effect of the whole.

Mining in general is having a huge effect on the Australian Economy, The flow-on effect it is having as our ever strengthening dollar is of real concern. Add to this the emerging CSG industry under its current laws in NSW and the problems will only be exaggerated.

Other industries will struggle to compete both locally and overseas.

Jill Emberson from ABC Radio Newcastle recommended a book to me, a very relevant book by Paul Cleary, titled 'Too Much Luck'. It makes for very interesting reading and the chapter 'Raiding the Food Bowl' is very relevant for the situation we find ourselves in.

It certainly raises issues which I broadly support and I put to you for your close consideration.

I highly recommend this book to you if you haven't already read it.

Food Security and Agricultural Activity

Farming enterprises in Baerami Creek include horse studs, cattle dairy, pecans, olives, beef cattle and extensive lucerne hay production.

Every farming enterprise is dependent on clean, reliable, high quality water for irrigation, stock and domestic requirements.

Our prime agricultural land together with abundant underground water, underpin every farming enterprise in our area.

Policies need to be in place to encourage agricultural production rather than to destroy, inhibit or curtail it.

Farmers are literally being dispossessed of their own land.

The very right of land ownership is being challenged.

I refer you to an article in the Sydney Morning Herald's Good Weekend – Saturday 13th August 2011 by David Lesser. This gives a graphic account of the experiences with CSG mining for one unfortunate family. It is truly frightening. The detrimental effect on health, farming and the environment highlight how we can all be affected.

Future Energy Needs of NSW

A recent newspaper article claimed that such has been the uptake of solar derived power that the need for a new baseload power station in NSW has been put back a decade.

This breathing space should be used to further develop sustainable energy sources – wind, solar and particularly geothermal. Geothermal has that baseload capability that is lacking right now in other renewable energy sources.

CSG may have a role to play in this transitional stage.

But it must be stressed that CSG is not renewable and is not sustainable.

Most of the frantic CSG development we are seeing in NSW is destined for export.

NSW will not benefit totally from this 'cleaner' fuel source at the consumption stage.

- We will however be left with a huge 'carbon footprint' from the mining procedure.
- Leaking well heads and pipelines
- Thousands of truck movements needed to develop and sustain CSG projects.
- Land clearing for mining and pipelines.
- Loss of productive farmland and its ability to store carbon.
- The substantial number of ship movements needed to transport the gas.
- The carbon footprint of supporting industries
- The huge carbon footprint from the baseload power stations that will be needed to support the CSG industry.

In QLD this massive load is being sprouted as one reason why QLD needs a baseload power station sooner rather than later.

If NSW was only to produce what it needed to consume, then the whole CSG debate would take on a totally new perspective.

- There would be no need to infringe on highly productive farmland.
- There would be no need to mine up against National Parks.

- There would be no need to inflict irreversible damage on our underground aquifers.

CSG development could be relegated to areas with low conflict land and water use issues.

A far more acceptable outcome.

Water Sharing Plan

I am also Chairman of the Baerami Creek Water Users Association.

Together with Office of Water we have formulated a 'Water Sharing Plan'. This calls for the sustainable and responsible use of this precious resource.

To have CSG operations taking place with the potential to contaminate, deplete (or both) our natural water resource is totally unacceptable.

- To develop a CSG project, the miners would need access to vast amounts of water.
- They would need to secure a Water Licence.
- Where would they get one in Baerami Creek? Not one of the holders of a Water Licence in Baerami Creek is prepared to trade with the miners!
- Landholders within Baerami Creek have been trying to secure licences to irrigate. The Office of Water says all water is already allocated. **We are told there is none to spare!**

Drillers Experience

Recently I had a conversation with an experienced drilling operator by the name of

currently lives in Denman and has over 25 years drilling experience in all areas of Australia, except Victoria and Northern Territory. During this time, has been involved in drilling holes to a depth of up to 1700 metres.

claimed you just don't know what will happen in any given drill hole. He stated that things could be going "sweetly" for weeks, then all of a sudden, in a new hole everything that could go possibly wrong, would.

also claimed that all materials he has drilled through are porous. The amount of water lost whilst drilling was staggering. Little cracks, fissures and voids are everywhere.

recounted many episodes of his drilling experiences.

One of which highlights his claim of porosity involved drilling in a dry lake bed. The surface layer consisted of 4 to 5 metres of compacted clay; this was followed by 140 metres of ordinary clay. Air being blasted at 350psi was used to facilitate drilling. Once drilling had ceased an area well over 100 metres surrounding the drill hole bubbled air for several days after. This was through clay, which is considered to be non porous.

Another episode, used to highlight the unexpected was when he was drilling and using a mixture of Ammonium Nitrate and diesel to facilitate the procedure. This mixture reacted with rock they were drilling through and flowed back out of the ground, they had no control of it!

has not had any experience with fracking. This he claimed was carried out by another team of "experts". Procedures or chemical additives for fracking, was not his domain. Coal, he did say, was soft as butter and you could do what you wanted with it.

One thing stood out about his story was the uncertainty of what might be encountered on any given drill hole.

This is not the story CSG mining company management tells you about in the results of their 'industry best practice' drilling procedures.

On the subject of drilling, Ross Dun a CSG industry spokesperson has been quoted in the Sydney Morning Herald – 3rd August 2011 as saying “Drilling will, to varying degrees, impact on adjoining aquifers. The extent of impact and whether the impact can be managed is the question”.

This truly suggests that there will be situations the miners will not be able to ‘handle’.

Submission

1. A full moratorium on all forms of CSG drilling until the environmental, social and health impacts have been rigorously and independently assessed under Australian conditions.
2. CSG exploration and mining to be made subject to all relevant environmental legislation, including the native vegetation, water management and fire regulation laws.
3. The provision of standing to ensure that the community has full legal rights to challenge and enforce environmental laws under which CSG companies are operating.
4. The provision of a right in the Petroleum (Onshore) Act to allow landholders to refuse consent for CSG exploration or production on their land.
5. A prohibition on CSG exploration and mining in important bushland, valuable farmland, groundwater aquifers, residential areas and public lands. The establishment of adequate buffer zones around such areas.
6. A requirement that all chemicals used in CSG drilling or fracking will be publicly disclosed and must be assessed by the chemical regulator for use for that purpose before being approved for use.
7. Development of CSG in an orderly manner so as not to impact on other Australian industries.
8. Need to consult and seek approval for CSG exploration and production from Local Council's.
9. To Conform to Local Government LEP's.