

Submission
No 259

INQUIRY INTO COAL SEAM GAS

Name: Mr Stewart Ewen
Organisation: Hunter Valley Wine Industry Association
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1. BRIEF SUMMARY

This Submission is made by the Hunter Valley Wine Industry Association (“HVWIA”) to address the Terms of Reference published by the General Purpose Standing Committee no. 5 to inquire into the environmental, economic and social impacts of coal seam gas (CSG) activities allowable under the NSW Petroleum (Onshore) Act, 1991.

This submission addresses each of the five headings mentioned in the Terms of Reference (TOR), however deals with them in globo rather than as individual headings.

The requirements of each of the Terms of Reference are dealt with, in the main, with particular reference to the wine growing areas of the Hunter Valley and provides, inter alia:

1. An outline of the unique characteristics and features of the Hunter Valley Wine Country, including viticulture and related tourism;
2. The problems associated with groundwater and fresh water aquifers, particularly addressing those viticultural areas which are close to long wall coal mining activities;
3. The position of the HVWIA on proposed coal seam methane gas exploration and mining in the Hunter Valley; and
4. Recommendations as to how to resolve the land use conflict between the Hunter Valley wine industry and coal seam methane gas mining.

The HVWIA recognises the need to use mineral resources and to provide of energy in our society, however it will not tolerate the incursion of this type of industrial land use into the prescribed and internationally recognized viticultural regions of the Hunter Valley. Aside from the adverse land use impacts on the wine industry, the very significant tourism industry that attracts more than 2.8 million tourists per year is at risk with both the perception and reality of industrial development in the Hunter Valley Wine Country. Furthermore, the HVWIA believes that high quality viticultural produce will have its quality compromised by fugitive methane emissions and deteriorating ground and surface water quality and quantity.

The Western Australian Government has recognized the need to protect the Margaret River vineyards from mining and is legislating to protect the Margaret River vineyards as it has already legislated to protect the Swan Valley vineyard areas.

The South Australian Government has recently announced its intention to protect the winegrowing areas of the Barossa Valley and McLaren Vale.

The South Australian Government has gone one step further in funding an examination as to the merits and de-merits of having the Barossa Valley and McLaren Vale vineyards areas declared to be of World Heritage status.

Accordingly the HVWIA recommends that, in accordance with the pre-election commitments of the coalition, and in accordance with the actions of the South Australian and Western Australian Governments in respect of their vineyard areas -

- 1. The Government protect vineyard and tourism areas located in the Hunter Valley Wine Country from current and any future CSG exploration licenses or production leases. The areas requiring protection are all viticultural GI regions within the Hunter Valley.**

A mechanism to implement this recommendation is outlined below:

Every six years, or such other period specified in any individual Petroleum Exploration Licence (PEL) the holder of a PEL must apply for renewal of the PEL.

Section 30 of the (NSW) Petroleum (Onshore) Act, 1991 provides that the area of the PEL to be renewed must not exceed 75% of the area currently being explored (subject to some Ministerial discretion).

PEL 267, which includes much of the Hunter Valley Wine Country, expires on 19th January 2012, providing an excellent opportunity for the Government to require the Licence holder to cancel (pursuant to S. 22 of the Act) the winegrowing, prime agriculture and tourism areas within that 25%. The area to be excised represents only 1% of AGL Energy's total exploration area, hence it has ample tracts of exploration area remaining away from winegrowing areas, and away from important fresh water aquifers.

It would be a simple exercise to place the PEL holder, in this case AGL Energy, on notice that it is proposed, upon renewal, to include in the 25% of the PEL area to be cancelled, that part of PEL 267 which falls within the viticultural and tourism areas of the Hunter Valley – see the designated GI sub-regions. This would save the Licence holder from expending any further exploration funds in that area and allow the Licence holder to pursue exploration in other, more appropriate, areas of this vast PEL.

Similarly, upon the renewal of PEL 4 on 10th November, 2009, AGL Energy was required to forfeit 17 blocks pursuant to Section 30(2) of the Act. Those blocks have not yet been identified, so far as the HVWIA is aware. Again it would be a simple exercise for the NSW Government to identify those areas located within the winegrowing and tourism area and require them to be cancelled in accordance with the renewal conditions of that PEL, rather than have the Licence holder advise the Government which blocks it wishes to forfeit.

In the alternative:

There is provision in the Petroleum (Onshore) Act, 1991 permitting the Minister to cancel PEL areas or parts thereof.

It is recommended that the Government invite AGL Energy to apply to cancel those blocks within the Hunter Valley vineyard areas and, in the event AGL Energy does not make such an application, the Government cancel those blocks and legislate to have the vineyard areas permanently excluded from any further exploration or extraction of coal seam methane gas.

GENERALLY IN RELATION TO COAL SEAM METHANE GAS, IT IS FURTHER RECOMMENDED THAT:

1. *The Government legislate, as soon as possible, to overcome all the negative issues associated with coal seam methane gas exploration and extraction.*
2. *Coal Seam Methane Gas exploration and extraction be made subject to all relevant State and Federal environmental legislation including the native vegetation and water management laws.*
3. *The Government legislates to give the community full legal rights to challenge and enforce environmental laws under which coal seam methane gas companies are operating.*
4. *Landowners be provided with the right to refuse consent for coal seam methane gas exploration or extraction on their land with compulsory acquisition by the coal seam methane gas companies in the event of any type of affection of private land, including loss of land value.*
5. *There be a prohibition on coal seam methane gas exploration and extraction in important bushland, in National Parks and State Forests, on community owned land, on land used for agricultural or horticultural purposes, in zoned residential land, through fresh water aquifers, or adjacent to streams, rivers or any other water way.*
6. *That no chemical, which could in any way contaminate fresh water aquifers or groundwater, be used in the "fracking" process*

2. INTRODUCTION

This Submission is made by the Hunter Valley Wine Industry Association (“HVWIA”) to address the Terms of Reference published by the General Purpose Standing Committee no. 5 to inquire into the environmental, economic and social impacts of coal seam gas (CSG) activities allowable under the NSW Petroleum (Onshore) Act, 1991.

The requirements of each of the Terms of Reference are dealt with, in the main, with particular reference to the wine growing areas of the Hunter Valley and provides, inter alia:

1. An overview of the HVWIA.
2. The unique characteristics and features of the Hunter Valley Wine Country, including viticulture and related tourism;
3. The problems associated with groundwater and fresh water aquifers, particularly addressing those viticultural areas which are close to long wall coal mining activities;
4. The position of the HVWIA on proposed coal seam methane gas exploration and mining in the Hunter Valley; and
5. Recommendations as to how to resolve the land use conflict between the Hunter Valley wine industry and coal seam methane gas mining.

3. THE HUNTER VALLEY WINE INDUSTRY ASSOCIATION

The HVWIA commenced in 1970 and was incorporated in 1989 as a member based not-for-profit association representing over 175 grape growing, wines and associated industry members.

It is the peak body for the Hunter Valley wine industry and exists to assist its members in their participation in the Hunter Valley wine industry in all its facets from viticulture through to winemaking, sales and wine tourism.

The HVWIA is most concerned at the threat posed by Coal Seam Methane Gas Mining (CSGM) proposed for the region and believes that such industrial activity will seriously compromise, if not destroy, the iconic, flourishing wine and tourism industries long established in this valley and cause an unacceptable diminution to the character and amenity of the area. The HVWIA also remains alert to any increased coal mining in areas that have traditionally hosted vineyards, reflecting its view that the Broke Fordwich and Upper Hunter areas have been overdeveloped from a coal mining viewpoint, and that a better balance between existing agricultural and mining activities needs to be struck.

The HVWIA is also most concerned about CSGM and its impacts on the groundwater environment. A preliminary hydro-geological study in the Broke area has highlighted that the hydrogeology is complex, when taking into account both natural geology and the geology altered by long-wall, underground and open cut coal mining. The water study referred to was overseen by Professor Gary Willgoose of Newcastle University and independently critiqued by a groundwater expert, Dr. Gavin Mudd of Monash University. The study alerted the risk of the loss of groundwater caused by the possible interconnectivity of the upper freshwater aquifers with the long wall coal mining which is adjacent to the proposed gas exploration and extraction area. Dr. Mudd states "In summary, there remains significant uncertainty about the extent of possible future impacts on groundwater resources and the environment around Broke". A copy of reports from both Dr. Mudd and Professor Willgoose are attached to this submission.

Significantly, the National Water Commission has recently released a Position Statement on Coal Seam Gas and Water dated December, 2010. Its position is that "The consequences of not managing the water risks and uncertainties associated with the economic benefits of CSG are substantial. Therefore, the Commission strongly argues for the careful, transparent and integrated consideration of water related impacts in all approval processes." Furthermore, there are clearly insufficient processes in place for dealing with the coal seam water brought to the surface and the NWC is recommending a "precautionary and adaptive approach to managing and planning for CSG activities" as being "essential to enable improved management in response to evolving understanding of current uncertainties."

Hunter Valley Wine Country landowners are also extremely concerned about the diminution in the value of their property holding caused by the very prospect of CSGM. The evidence in Queensland is that the

Valuer-General in that State has reduced the UCV on properties affected by CSGM wells by 12-15%. In most cases this understates the adverse land market situation, as in reality landowners cannot attract buyers at all in such circumstances. To add insult to injury, there is no compensation available to the landowner for the loss of market value of their land.

In addition to the specific planning recommendation outlined above for the Hunter Valley Wine Country, the HVWIA strongly supports the adoption of the following broad planning and regulatory initiatives:

- a) tougher planning assessments of CSG extraction proposals until such time as all strategic land use plans are prepared and planning reforms implemented. As promised by the Coalition we wish to see:
 - greater caution and more transparency in granting exploration licences;
 - explicit agricultural impact assessments as part of the EA process for all new applications;
 - no new mining and petroleum approvals granted where there is a detrimental effect on agricultural productivity and associated water resources; and
 - All DAs to adhere to the Aquifer Interference Regulation (regulation due by 28/6/11).
- b) reforming the mining and CSG legislation to protect strategic agricultural land and associated water resources;
- c) reforming the planning assessment process to require full cumulative impact assessment, compliance and independent monitoring, taking into account all local activities including agriculture, coal mining, other coal seam methane mining and exploration, Singleton Army Base intrusions and the like;
- d) reforming the planning process to require full socio-economic profiles;
- e) preparation of strategic land use plans that adopt a triple bottom line approach. However, the HVWIA is concerned at what the detail of TBL strategic land use planning might look like. For instance:
 - what aspects of social, environmental and economic phenomena will be selected as key criteria for assessment?
 - How will the weightings of each criteria be determined?
 - How will environmental goods such as clean air, clean water and a visually attractive rural landscape be weighted?
 - How will short term economic gain (eg CSGM) be weighted compared to long term economic gain from viticultural production & tourism?

The HVWIA urges adoption of the precautionary principle in the framing of the TBL template and a strong and effective community engagement process adopted to establish this planning process.

- f) Banning the use of BTEX and all other dangerous chemicals in CSG hydraulic fracturing fluids operations;

- g) CSG proponents required to obtain an Aquifer Interference Approval under the Water Management Act;
- h) reviewing CSG well construction and hydraulic fracturing standards to prevent inter-aquifer leakage;
- i) reviewing the Water Management Act, The Water Act and the Petroleum (Onshore) Act to ensure aquifers are protected and to provide more robust and appropriate regulation and control for the emerging CSGM industry;
- j) an audit of all CSG exploration licences to review their status and ensure licence holders are adhering to the conditions and making the results publicly available;
- k) the appointment of a Coal and Gas Ombudsman to investigate complaints;
- l) banning the use of either permanent or temporary evaporative ponds particularly in flood prone areas or areas of absorbent soils, the use of any saline water being mixed with fresh water, the use of product water as a dust suppressant or use on rural lands;
- m) the Department of Primary Industries reporting on the potential cumulative impact at each major stage of a CSG mining DA;
- n) landowners having at least equal rights to their land in negotiations with any coal mining/CSGM developer;
- o) landholders and local communities being fully informed and fairly compensated for impacts on their land, water & capital improvements;
- p) CSG mining proponents not making hefty payments, other than by way of bond, to Government until after a project has been assessed and if and when it obtains a Mining Licence;
- q) improved assessment of the provision of public services (health, education, transport, recreation, etc) and facilities in regional centres and benchmark against comparable settlements in non-mining areas;
- r) State and Local Government to receive increased financial contributions from mining companies to help deliver improved services and infrastructure; and
- s) the NSW Government and proponents to engage openly and transparently with the local community prior to the tender for a coal or CSG exploration licence.

4. THE UNIQUE, ICONIC VALUE OF THE HUNTER VALLEY WINE & TOURISM REGION

4.1 Viticulture

The Hunter Valley is Australia's oldest wine region, with the earliest vines planted in 1825. Today there are over 230 wine related businesses and vineyards spread over an area of 4,500 ha. The region, known as Wine Country, primarily includes areas in Broke Fordwich, Lovedale, Pokolbin, Mount View, Millfield, Wollombi and Singleton, Denman and parts of the Upper Hunter.

Truly outstanding, iconic Australian wine zones, regions and sub-regions can be granted official recognition by virtue of a 'Geographical Indication,' or GI. A GI is an indication that identifies the wine as originating in a homogeneous and discrete region or locality where a given quality, reputation or other characteristics of the wine is essentially attributable to that geographical origin. The purpose of a GI is to protect the use of the regional name under international law, limiting its use to describe wines produced from wine grape fruit grown within that GI.

GIs are determined by the Geographical Indications Committee, a statutory authority of Wine Australia, and listed on the Register of Protected Geographical Indication and Other Terms. The use of Geographical Indications was commenced to enable Australia to fulfil its Agreements with the European Community on Trade in Wine and the Agreement on Trade-Related Aspects of Intellectual Property Rights. This designation evolved in response to Australia's increasing wine exports to EC countries during the late 1980s and early 1990s.

The Australian Geographical Indication "Hunter Valley" was entered in the Register of Protected Names in May 1996 in response to a direction received by the Registrar from the Presiding Member of the Geographical Indications Committee acting under Section 40Z of the Australian Wine & Brandy Corporation Act 1980. The Australian Wine and Brandy Corporation (AWBC) is an Australian Government authority that promotes and regulates the Australian wine and brandy industry. The AWBC also regulates wine exports, ensuring the quality and integrity of each shipment of wine exported

Within the Hunter 'region' there are two 'sub-regions', namely "Broke Fordwich" and "Pokolbin". The discrete wine growing sub-region of Broke Fordwich was entered into the Register of Protected Names in September 1997, the first sub-region to be declared in New South Wales and only the second sub-region to be so declared in Australia. The Pokolbin sub-region was placed on the Register in July 2010. The official maps and textual description of each of the two Hunter Valley sub-regions are shown in Attachment 1. Other discrete wine growing sub-regions in the Hunter Valley such as Allandale, Lovedale and Rothbury have not yet been given formal GI status as there are some trademark issues associated with the place names and commercial interests. These matters are in the process of being resolved.

The Wine Country vineyards produce more than 39 million litres of wine per annum, valued at more than \$270 Million with flow on effects of over \$230M. The Hunter crushes about twice the tonnage of grapes it grows because it has become the processing hub for vineyard expansion that has occurred throughout the region and on the NSW western slopes because of the area's proximity to suppliers, winemaking expertise, marketing experience, export ports and the Sydney market, and the Hunter brand itself. The local wine industry has thus invested heavily in its winemaking capacity, with major wineries committing to multi-million dollar projects to increase crushing, bottling, fermenting and production capacity.

Cellar door sales are estimated to be worth \$100 Million per annum. An ever growing percentage of product is now exported overseas to Europe, USA and Asia.

It is estimated that the industry directly employs over 7,000 people with an additional 10,000 indirectly employed.

The total value of investment expenditure directly associated with the grape and wine production is approximately \$450 Million.

The quality of the Hunter Valley wines is highly regarded around the world. The main reason that the Hunter Valley makes such unique, high quality wines is because of the special soil and climatic conditions. These areas have been specifically mapped and registered around the world as significant sites of viticultural production. It is not possible to move these vineyards, and new areas of production cannot be found or the style of wine that is currently being produced will change. You can move sheep, cows and even communities, but you cannot move these unique vineyards and they must be preserved.

The photograph below is typical of the iconic and beautiful Hunter Valley Wine Country landscape with the backdrop of the Brokenback Ranges.



The next photograph shows an aerial shot of the Chinchilla area of Queensland depicting the ravaging of the landscape resulting from coal seam methane gas extraction



Evidence of destruction of vegetation is shown in the Pilliga, photographs of which are attached.

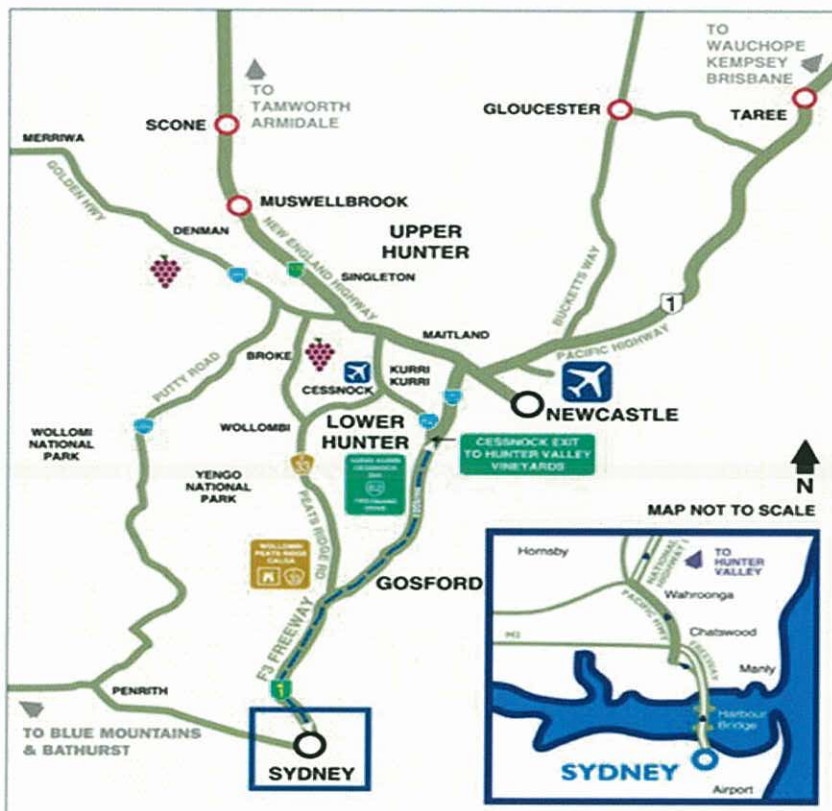
Further detail of the destruction in the Pilliga is outlined, together with other coal seam methane gas hazards in the report of CM Atkinson "Coal Bed Methane Hazards in New South Wales". A copy of that report is also attached.

Photographs of the destruction in the Pilliga are also attached.

4.2 Tourism

The Hunter Valley is one of Australia's most popular places for tourism. In calendar year 2010 there were more than 2.8 million visitors to the Hunter region – the highest of any NSW region.

This vibrant and growing tourist market, located only two hours from Sydney, is catered for by 160 vineyard cellar doors, 55 restaurants, three major golf courses, a multi-level complex of resort hotels through to small bed and breakfast accommodation businesses providing 5,000 beds per night, and substantial infrastructure that allows for a complete tourism experience for the visitor.



There is a very close and interdependent relationship between the wine and tourism industries and if one is damaged or compromised the other, interrelated industry is also severely affected. It is important to appreciate therefore, that because of this unique symbiotic relationship between the two industries, the inherent risks and potential long term damage of CSGM is magnified many times.

It is estimated that the vineyard and tourism industries together in the Hunter Valley inject \$1.8 billion annually into the economy. The tourism sector alone provides approximately 30,000 direct and indirect jobs (Tourism Hunter, 2011).

Hunter Valley Wine Country Tourism, Tourism Hunter, Tourism New South Wales and Tourism Australia spend millions of tourism dollars each year enticing visitors to the Hunter Valley. What attracts these visitors are the inviting images of the destination showing the beauty of the region from hot-air ballooning over the vineyards to couples relaxing by a fire with a wine in hand to horse-riding through the vineyards and wine tasting. These images build our brand that delivers a quality experience to our visitors so that they continue to visit us time and time again. CSGM has the ability to damage our brand purely through perception and destination awareness that it is occurring in our region.

4.3 Other Agricultural Activities

In addition to the vineyard operations, there are other agricultural pursuits occurring in Hunter Valley Wine Country. These include the production of olives, nuts and alpacas.

4.4 Social & Cultural Fabric

Cessnock and Singleton Councils are both most concerned at the prospect of CSG mining in their local government areas and have passed resolutions calling for productive farmland, including vineyards, to be protected from the emerging industry.

In November 2010 Singleton Council resolved that its new Local Environmental Plan would prohibit coal seam gas exploration and development. The Council also resolved to make CSG exploration a land use requiring council consent, robust environmental assessment and transparent and effective community engagement.

Similarly, on the 6th October 2010 Cessnock Council amended its LEP to exclude mining and extractive activities from the zone containing vineyards.

It is significant to note that the earliest custodians of this land, namely the Wanaruah tribe, support the view that CSGM in the Broke/Bulga region should be excluded due to "high significance of cultural heritage values of the Aboriginal people and the traditional landscape of the area". (See attached letter from the Wanaruah Aboriginal Land Council letter).

It is also significant to note that in Western Australia, the Environmental Protection Authority has recently recommended against the Vasse Coal Management's proposed underground coal mine being established near the prime wine-growing region of Margaret River. The WA EPA has announced that there is "adequate information to demonstrate that Vasse Coal Management's proposal is environmentally unacceptable".

Residents were particularly concerned about the threat the mine posed to water supplies and underground aquifers. The local Augusta Margaret River Shire Council said it was concerned that local water supplies would be adversely affected by the mine. The Chairman of the EPA, Dr Paul Vogel, said the mining proposal is environmentally unacceptable and could have irreversible consequences for the Margaret River region.

Further, the South Australian Government has announced plans to protect “the unique heritage, culture and integrity” of the winegrowing regions of McLaren Vale and the Barossa Valley by:

- Maintaining and preserving the rural amenity of the regions for future generations to enjoy;
- Maintaining the rural character and scenic vistas that attract so many tourists to the Barossa Valley and McLaren Vale;
- Making sure that future development supports and does not detract from the dominant land use, such as wine, food, agriculture and tourism;

And that in order to do this the South Australian legislation will need to:

- Clearly identify the unique values of each region;
- Specify measures to retain, maintain, protect and restore these values;
- Specify what land uses and types of development are prohibited from the protected areas;
- Identify activities and development proposals that complement local values, and then create a process for the accelerated assessment of these proposals;
- Ensure that environmental sustainability is an important part of any assessment of development;
- Ensure the assessment process enables development in these areas that is sympathetic to their unique environment.

Further, the Premier of Western Australia has declared the Western Australian Government should not place at risk the standing of the Margaret River. “This is because Margaret River has a world reputation. It is probably the central feature, along with the Kimberley region of the future tourism industry of WA. It is a huge asset and we will take great pains not to compromise that.”

The vineyards of the Hunter Valley have an even greater history and world reputation than the Margaret River and a similar stance, it is submitted, should be taken by the NSW Government for the protection of the Hunter Valley Vineyards.

Experience to date from the coal mining industry in the Hunter Valley shows that there are significant negative social and cultural impacts from major resource developments, resulting in:

- Increased pressure on housing, resulting in rapid growth in house prices and rents;
- Increased pressure on education and health services;
- Reduced road safety due to the increased movement of heavy vehicles; and
- Gender imbalances due to an influx of male workers.

The NSW Government is urged to reflect on the growing community concerns about never ending industrial development. The community, including the HVWIA, is saying loud and clear that rural and

regional Australia wants to see more decisions like the Margaret River one. The price paid by the local and regional communities is deemed too high for more of the same old approach.

In particular, the Broke and Bulga areas of the Singleton Local Government area have been subjected to extreme industrial development accompanied by dust, noise, bright lights, truck movements and visual pollution.

This has been brought about by:

- open cut coal mines;
- activities resulting from underground mining;
- exploration for coal seam methane gas;
- activities of the army and air force in and around the Singleton Army Base with small arms fire, machine gun fire, low flying jet aircraft and significant bomb explosions.

In addition there are proposals for drilling in Bulga for hot rocks to support a power station which would be erected at Bulga in the event that the hot rock drilling is successful. It is anticipated that such drilling would be to a depth of about 4 kilometres. Problems related to this method of power generation have been encountered in the Cooper Basin with failing steel in the drill shafts and underground explosions from “fracking”.

The Broke and Bulga areas cannot take any further industrial intrusion without a significant effect on the agricultural productivity of the area, let alone the effect on the health of the inhabitants and the environment as a whole. Enough is enough in this area.

5. THE VIEW OF THE HVWIA REGARDING COAL SEAM METHANE GAS

The HVWIA recognises the need for mineral resources and their extraction; however it will not tolerate the incursion of this type of industrial land use into the described viticultural regions of the Hunter Valley. Environmental considerations aside, the extremely significant tourism industry that attracts more than 2.8 million tourists per year to the vineyards is at risk with both the reality of industrial development and just as importantly, the perception that there will be future industrialisation of the Vineyard Area. The media release accompanying the new coalition “Strategic Regional Land Use Policy” notes that the policy will take into account all existing exploration licences – such as AGL’s exploration for coal seam gas in Pokolbin and the Broke/Fordwich areas – which have not yet applied for a Production Lease.

In short, the HVWIA advocates a new NSW Gas Strategy that embraces:

- a balance in land use considerations, where existing viticulture, agriculture, horse breeding and tourism retain the ability to operate effectively without adverse environmental impact;
- a better pre-exploration assessment of areas where CSGM and coal mining should be allowed, particularly relating to the effects on groundwater and fresh water aquifers, before the mining companies expend substantial investment;
- an onus on coal seam methane gas explorers to prove, prior to the commencement of exploration, that there will be no chance of contamination or diminution of ground water or fresh water aquifers;
- a better deal for landowners faced with CSGM wells on their land;
- a new court or ombudsman related to community appeals against miners, where the conflicted Minister is no longer responsible for hearing appeals to his decisions;
- a change and rewrite to the various Acts governing CSGM so they are strengthened to reflect the detail of the new policies;
- tougher environmental conditions and strengthened post-approval audit capabilities deployed to each region; and
- an effective community consultation approach, where the Community Consultation Committee has traction in requiring the mining company to engage and resolve community issues.
- Compulsory acquisition of affected properties, as is required in the coal mining industry, and/or compensation for loss of value of properties by virtue of the existence of coal seam methane gas mining or damage occasioned to property as result of such mining.

More particularly the HVWIA has examined much of the background information on coal seam methane gas mining, the current and emerging issues and some possible management actions into the future and we make the following comments:

- coal seam methane gas is a very potent global warming gas. When released into the atmosphere as a raw gas it is 20 times more potent as a global warming blanket than Carbon Dioxide;
- When methane gas is burnt it produces about 60-70% of the Carbon Dioxide generated from burning the same amount of coal;
- Close examination needs to be made of the carbon cost of exploring for and extracting methane gas from coal seams. Some scientific papers (Prof Robert Howarth. Cornell University, USA) indicate that the real carbon emission equals or exceeds that of coal in that there is much energy expended in the exploration and extraction process, including production, processing, transportation and waste treatment. Added to that is the inevitable leakage of raw methane;
- New South Wales needs to prioritise the production of energy from clean, low carbon technologies such as sustainable and renewable sources, not yet more fossil fuels;
- Tougher planning assessments need to be prepared;
- Reforms need to be made to the Petroleum (Onshore) Act, 1991 and associated State and Commonwealth legislation to protect strategic agricultural land and associated water resources;
- Penalties for breaches by CSMG miners need to be strengthened to ensure that there is sufficient deterrent to miners who seek to take short cuts in disposal of contaminated water. A deliberate dumping of hundreds of thousands of litres of highly saline water at Bulga by AGL in PEL 267 resulted in the killing of vegetation. A remediation order was issued by the appropriate Department, however there appears to be no available punishment. It seems that it was cheaper for AGL to dump the contaminated water, and then plough up the ground, rather than truck the water away for proper treatment.

Further, a blow out in a coal seam methane gas well near Campbelltown operated by AGL energy attracted merely a formal warning, notwithstanding that investigations revealed that a “de-gasser unit” wasn’t being used properly.

Again, there is no deterrent to coal seam methane miners from them breaching their licence conditions.

Directors should be made accountable for actions of the company where there is blatant disregard for compliance with licence conditions.

- Planning assessment should be open to public and inter-Departmental scrutiny, rather than Reviews of Environmental Factors being dealt with in-house, and must address all cumulative impacts. Assessment and monitoring compliance should be addressed.
- No new petroleum approvals should be granted where there is a detrimental effect on agricultural productivity and associated water resources.
- It is important that the Government recognizes the need to not put “all the eggs in one industry’s basket”. Not only is mining non-renewable, it would be a mistake not to have a balanced industry development framework in place that positions agriculture, viticulture, tourism and other appropriate industries that last generations alongside the currently dominant mining industry.
- Coal seam methane miners must prove that well construction and hydraulic fracturing standards are such that there is no possibility of contamination or diminution of fresh water aquifers or ground water.
- Enhanced buffer zones around any CSMG wells should be legislated.

- Where there is any affection to private land values, there should be compulsory acquisition provisions, as is common in the coal mining industry.
- Evaporative ponds should be banned.

Groundwater Impacts

Matters of major concern to the HVWIA about CSGM are the impacts on the groundwater environment. A preliminary hydrogeological study in the Broke area has highlighted that the hydrogeology is complex, when taking into account both natural geology and the geology altered by long-wall, underground and open cut coal mining.

The water study referred to was overseen by Professor Gary Willgoose of Newcastle University and independently critiqued by a groundwater expert, Dr. Gavin Mudd of Monash University.

The study alerted the risk of the loss of groundwater caused by the possible interconnectivity of the upper freshwater aquifers with the long wall coal mining which is adjacent to the proposed gas extraction area.

Dr. Mudd says that “it is unclear if large scale CSG extraction has ever been attempted so close to active (or even historic) long-wall coal mining operations.” He goes on to say that “Subsidence from long-wall mining can lead to impacts on groundwater levels through opening up new cracks, fractures and pathways which previously did not exist. This could lead to significant risks when combined with the substantive groundwater extractions and changes due to any future CSGM project.”

Dr. Mudd expresses the view that the “potential for overlap between groundwater impacts from subsidence due to long-wall coal mining and possible CSGM activities” is a “serious risk” and that it “needs detailed investigation and assessment. It also highlights the need for a cumulative impact assessment of all present and possible future activities in the Broke region to ensure that the environment, groundwater and community remain protected, as well as all industry being approved to operate within appropriate conditions and total impact limits.”

Dr. Mudd goes on to say “In summary, there remains significant uncertainty about the extent of possible future impacts on groundwater resources and the environment around Broke”.

It is also apparent that it cannot be proven that any method of coal seam methane gas extraction will not contaminate or diminish the upper fresh water aquifers.

Significantly, the National Water Commission has recently released a Position Statement on Coal Seam Gas and Water dated December, 2010. The position of the NWC is that “The consequences of not managing the water risks and uncertainties associated with the economic benefits of CSG are substantial. Therefore, the Commission strongly argues for the careful, transparent and integrated consideration of water related impacts in all approval processes.”

Furthermore, there are clearly insufficient processes in place for dealing with the coal seam water brought to the surface and the NWC is recommending a “precautionary and adaptive approach to managing and planning for CSG activities” as being “essential to enable improved management in response to evolving understanding of current uncertainties.”

And finally, it was reported in the Sydney Morning Herald on 3rd August, 2011 that the Australian Petroleum Production and Exploration Association (APPEA) declared that “coal seam damage to water table is inevitable.” And further “good management could minimize the risks of water contamination, but never eliminate them.”

This view of the industry body seems to confirm the view of the scientific community. Any risk to water tables must be proven to be nil.

Land Values

Landowners are most concerned about the diminution in the value of their property holding caused by the very prospect of CSGM. The evidence in Queensland is that the Valuer-General in that State has reduced the UCV on properties affected by CSGM wells by 12-15%. In most cases this understates the adverse land market situation as in reality landowners cannot attract buyers at all in such circumstances. See correspondence attached from a registered valuer confirming the same situation in the Hunter Valley Wine Country (Attachment 2). To add insult to injury, there is no compensation forthcoming to the landowner for the loss of market value.

Here is a photo of the current production site in Chinchilla, Queensland. Imagine this overlaid over our wine country!



CURRENT LEGISLATION

The Petroleum (Onshore) Act does not address the issues of coal seam methane gas exploration and extraction. David Holmes of the Department in an AMPLA seminar some years ago said that it was proposed to review the Act in a number of areas. One of those was the review of compatible land uses.

He said that “fracking” is noise and a “big disturbance” and that 200 metres might be too close to a dwelling in some circumstances.

He said that amendments needed to be made to the Mining Act, the EP Act and the P(O) Act generally in relation to environmental protection, rehabilitation and security. This has not been done.

He further said that the legislation needs to clarify powers to impose conditions and to amend conditions, eg how to measure and contain water on site from the start to the close, and indeed how the operation is to be closed.

More Statutory requirements would be legislated, he said, in relation to leases, reporting and audits. He went on to say that directors and managers would be deemed liable for offences of Corporations.

The review of the Petroleum (Onshore) Act was to take place after public comment which was to be sought during 2007-2008. This has never happened.

The P(O) Act is very light on in relation to production and closure. He continued that the Act was originally drafted for remote exploration did not address production because the Department "thought that the industry would never go anywhere".

The further matters he listed requiring review was to examine the structure of titles, compensation, land access, safety, the environment, interaction with coal and other mineral mines, and whether or not to merge the Mining Act and the P(O) Act, and whether or not the Coal Seam Methane gas mining Company should own the land.

None of these matters are addressed in the current Act, and the review has never taken place.

6. CONCLUSION

The HVWIA welcomes the opportunity to lodge this submission to the Inquiry into Coal Seam Gas.

In this Submission the HVWIA has provided feedback on what it believes ought to be the fundamental directions of any coal seam gas strategy.

Furthermore, it has attempted to demonstrate the unique, iconic characteristics and features of the Hunter Valley Wine Country, which includes closely interrelated viticulture and tourism industries. This dynamic, highly productive rural landscape warrants safeguarding from incompatible, industrial development such as CSGM, as has been recognized by the Governments of South Australia and Western Australia.

The submission has outlined the problems associated with coal seam methane gas exploration and extraction and has directed attention to the protections now being given to the vineyards of South Australia and Western Australia.

The HVWIA would welcome the opportunity to present evidence before the Inquiry should it be so required.

Please don't hesitate to contact Mr Andrew Margan, President of the Hunter Valley Wine Industry Association (email

OR

Mr Stewart Ewen OAM (email) for further information.
