

**Submission
No 648**

INQUIRY INTO COAL SEAM GAS

Organisation: Scenic Hills Association (SHA)

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Submission to the General Purpose Standing Committee No. 5

Inquiry into Coal Seam Gas

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16th September 2011

This submission is made on behalf of the Scenic Hills Association (SHA), an association of landholders and residents living in and adjoining the Scenic Hills on the South West outskirts of Sydney, who are also members of the wider Macarthur Community where the Camden Gas Project (CGP) has been operating for more than ten years - originally under the management of Sydney Gas Ltd and now owned by AGL Energy Ltd and operated by its Upstream Gas Division. The submission specifically addresses issues pertaining to AGL's conduct of this project to date and its proposed expansion of the CGP into the Scenic Hills Protection Area in the Sydney Metropolitan Area (CGP Stage 3, Northern Expansion). Recommendations are made for the CSG mining industry generally and specifically with regard to the CGP in all stages. The information provided in this submission is to the best of our knowledge.

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EXECUTIVE SUMMARY

This submission is made on behalf of the Scenic Hills Association (SHA), an association of landholders and residents living in and adjoining the Scenic Hills on the South West outskirts of Sydney, who are also members of the wider Macarthur Community where the Camden Gas Project (CGP) has been operating for more than ten years (Stages 1 and 2) - originally under the management of Sydney Gas Ltd and now owned by AGL Energy Ltd, and operated by its Upstream Gas Division (AGL). This submission specifically addresses issues pertaining to AGL's conduct of this coal seam gas (CSG) project to date and the implications this has for its proposed expansion of the CGP into the Scenic Hills Environmental Protection Area in the **Sydney Metropolitan Area** (CGP Stage 3, Northern Expansion). The project application is awaiting determination by the NSW Department of Planning under the transitional arrangements for the staged repeal of Part 3A of the *Environment Planning and Assessment Act 1979* (the EP&A Act).

Our research in preparation of our submission on the CGP Stage 3, together with our representation on AGL's Community Consultative Committee for the CGP since November of 2010 has led us to conclude that AGL has not proved to us that it can operate safely, that it has been in breach of key conditions of approval and of its Petroleum Production Leases (PPLs), has not been transparent with the public about its operations, may have under-reported accidents and may have done long term cumulative damage to rural and environmental heritage in the historically important Macarthur area by assuming that its operational risks were confined to the surface area and a narrow geographic band around its CSG wells and associated industrial infrastructure.

We have also concluded that AGL has significant land use conflicts with rural properties that could otherwise provide an important source of **urban agriculture** for Sydney, and increasingly with **urban**

residential areas and associated **urban amenity (roads, recreational, educational, religious institutions, etc.)** on the urban fringe of Sydney. As such we do not find that AGL has the community acceptance of its project that it claims.

We find a lack of appropriate legislative and regulatory oversight of CSG mining operations in general and including AGL, which has not only put the community at risk, but has allowed CSG mining companies to operate in ways that conceal the true operating costs of the industry and its economic impacts. When applied to the Camden Gas Project where AGL has apparently used the controversial hydraulic fracturing technique to a much greater extent than has occurred generally in Queensland, we question whether the quality of the CSG deposits in the Macarthur area justifies the damage that may be occurring as a result.

We have seen no proof that the CSG mining industry can ‘make good’ damage caused to aquifers, linked surface water, soil, heritage, alternative land use, communities, health and threatened and endangered species of flora and fauna.

We also find that there is no credible scientific support for the industry’s (and AGL’s) claim that CSG is the clean energy alternative to coal, as the required studies have not yet been done. However we note that indicative studies into shale seam gas mining from the USA suggest that CSG’s benefits relative to coal either do not exist or are too marginal to consider it a ‘transitional fuel’ in the short term.

With the evidence to date we believe that the NSW government would be recklessly endangering communities, health and the environment and compromising the lives and livelihoods of future generations to allow the industry to continue to expand **anywhere** without more research.

We therefore call for a moratorium on **further expansion** of CSG mining in NSW. This would apply not only to the issuing of further petroleum exploration licences, but to the expansion of existing projects under existing petroleum production leases. The moratorium would remain in place until the true impacts of the CSG mining industry (and its controversial use of hydraulic fracturing) on health (human and animal), the environment – particularly water resources, other land use, heritage, communities, land ownership and land values, along with its greenhouse credentials and economic viability can be fully and comprehensively established.

In the interim, and applying the precautionary principle, the government should move to limit any further damage that this industry may be causing, by imposing a **blanket ban on hydraulic fracturing**, and establishing an independent monitoring body with sufficient staffing and powers of investigation, and ability to apply non-discretionary penalties for breaches of operating conditions. Its first task should be to investigate the operation of all existing PELs and PPLs, and where there are numerous, significant and on-going breaches of the operating conditions that have caused/are causing significant damage, as above, that these be cancelled or suspended until this Inquiry is completed (at the very least), and that remediation and compensation be levied from perpetrators.

Finally, as strategic regional land use planning must be based on the science (which is not yet there for the CSG mining industry), the role of this planning should be to determine those areas where the government can prohibit it now based on significant land use conflicts and/or the application of the precautionary principle, thereby providing some certainty in planning for those areas. Planning should include all major land use and geographically affected areas and include representation in the Reference Group for non-aboriginal heritage, urban agriculture, and inclusion of other key regions in NSW subject to the rapid expansion of CSG mining, such as the Macarthur area.

Applying the above principles, AGL's application to expand the Camden Gas Project into the **Sydney Metropolitan Area** (CGP Stage 3, Northern Expansion): including putting 72 wells and associated industrial infrastructure into new residential suburbs and into the environmentally sensitive Scenic Hills of Sydney's South West, drawing gas from under about 26 suburbs, using residential roads and streets for its rigs and trucks, and with its main gas gathering pipeline running through the Australian Botanic Garden at Mount Annan and alongside Sydney's Upper Canal that carries Sydney's back-up water supply - **this project should be denied.**

Queensland has banned CSG mining two kilometres from major urban areas. It is inconceivable that the NSW government would allow CSG mining to move further into the urban area. In addition to the social, health, environmental and economic risks of this proposal, we question the precedents it will set for the rest of the Sydney Metropolitan Area and the potential divisiveness that selecting winners and losers for CSG mining's activities is bound to cause. In particular we ask the NSW Government to respect the high regard the people of Campbelltown and the South West have for the Scenic Hills as a heritage landscape and urban greenspace, and accord the same status to the South West's cultural and natural assets as it does to those in inner Sydney, such as Centennial Park and the Royal Botanic Gardens.

We would welcome the opportunity to appear before the Committee to present our case further at a hearing.

1. INTRODUCTION

The Scenic Hills is the local name given to the area covered by the *Campbelltown Local Environment Plan (LEP) – District 8 (Central Hills Lands)* on the South West outskirts of Sydney and adjoining land in the Camden Local Government Area (LGA). It falls within the Sydney Metropolitan Area and generally within the Macarthur region. The Hills, zoned Environmental Protection (Scenic) since 1974, have been fiercely protected by the local community and Campbelltown City Council (Council). The Scenic Hills Association (SHA) was formed on March 17th 2010 by local land and home owners in, and adjacent to the Hills with the aim of preserving and protecting the Hills from numerous threats to both its Environmental Protection zoning under that plan, and to the core aim of that zoning, which was to preserve the rural landscape with its scenic qualities, its remnant bushland (including the Critically Endangered Cumberland Plain Woodland), its aboriginal and colonial heritage and its special sense of place for the community.

In 2009 AGL brashly applied to expand the CGP northwards into the Scenic Hills Protection Area within the Sydney Metropolitan Area, drawing gas from seams running under approximately 26 suburbs, using residential streets and roads for access, and running its main gas gathering spine along Sydney's water canal (the heritage listed Upper Canal) and through the Australian Botanic Garden at Mount Annan. The Environmental Assessment (EA) for this project went on Public Exhibition in late the 26th October 2010. The expansion is strongly opposed by Campbelltown City Council, many landholders and the local community. Government agencies have also raised serious concerns about impacts on water, Sydney's Upper Canal (critical public infrastructure), heritage, threatened and endangered ecological communities and land use conflicts in the South West Growth Centre. The project application is currently being considered by the NSW Department of Planning

(DoP). Meanwhile, ignoring our protest, AGL is confidently progressing Stage 3 before the project has even been determined, by setting up a base line water study that would see the Scenic Hills and residential areas of South West Sydney used as a ‘guinea pig’ for future coal seam gas developments - undermining any confidence that the community might have left in the process of government.

In November of 2010 AGL invited SHA to send a member (Jacqui Kirkby) to its CGP Community Consultative Committee as a guest. Our experience on this committee and our investigations into the conduct of the CGP over the previous ten years (as a guide to what we might expect) have broadened our understanding of AGL’s coal seam gas operations in the Macarthur area covering the LGAs of Camden, Campbelltown and Wollondilly. This submission will therefore cover not only AGL’s plans to expand into the Scenic Hills and the Sydney Metropolitan Area, but also its prior and current conduct of the Camden Gas Project in the wider Macarthur area.

Our submission will respond to the first four terms of reference, but in doing so will address impacts that we feel have been neglected in the coal seam gas debate to date, with some virtually ignored by the NSW Government’s Strategic Regional Land Use Policy: our heritage, ‘sensitive’ and cultural land use, agriculture on the urban fringe, urban development and urban amenity.¹ This is particular to the urban-rural interface of a major city, under pressure from urban development and complicated by the historic nature of the area that was the birthplace of the Pastoral Industry in NSW and a highly significant meeting place for aboriginal tribes along the East Coast of Australia prior to colonisation.

¹ Of these only *urban development* has been separately listed on the Department of Planning website, but the area where coal seam gas and urban development meet on the outskirts of Sydney, i.e. the Camden Gas Project, has not been listed for priority consideration within the next 12 months. Notably, no heritage group is listed as part of the Reference Group, continuing an unfortunate tradition under the last government that has seen important heritage compromised or lost.

2. SOCIAL AND ECONOMIC IMPACTS OF AGL'S CAMDEN GAS PROJECT

2.1. Local and State Planning's role

While the NSW Government's Strategic Regional Land Use policy is a welcomed step in land use planning, its focus is clearly on prime agricultural land as if it were the only valuable land use threatened by coal seam gas extraction. Further it listed for priority those areas that it says are currently the focus of this activity ignoring other incompatible land use activities in the long running, ever expanding Camden Gas Project on the outskirts of Sydney.

AGL's Camden Gas Project (CGP) has been operating in the Macarthur area, originally under the management of Sydney Gas Ltd, for more than ten years (Stages 1 & 2). AGL's claim that *"it's a project that has been well accepted by the local community"*² is not correct. We believe that the Office of Environment and Heritage can attest to cultural problems that began with Sydney Gas Ltd's management of the project but that continue under AGL's management. In the early stages of the project these problems were experienced mostly by rural landowners. However in recent years, as AGL and the Sydney Metropolitan Area have been moving closer together and gradually overlapping, problems of incompatible land use have become magnified.

There are three main principles affecting land use planning on the urban fringe as it relates to CSG mining:

- Combining CSG mining (heavy industrial) and residential land use is completely at odds with the purpose of land zoning, making the industry an anomaly within the planning system without justification, and with significant adverse consequences for residents;

² Mr. Mike Moraza, Group General Manager, AGL Upstream Gas on Channel 7 News on 2nd September 2011.

- Unlike other parts of the world, Australia has been slow to recognise the important contribution that **urban agriculture** can make to **food security**. In NSW the need to retain agricultural land within the Sydney Basin is only just now starting to be considered. Yet small rural allotments are more fragile than larger ones when it comes to the disruptive activity of CSG mining and the possibility of even one accident that would damage soil, and surface and/or groundwater;
- The saying “man does not live by bread alone” remains in common usage with good reason. **Cultural, educational and recreational** land uses are an essential part of a civilised society and need to be considered in any strategic land use planning.

These principles have been applied below.

2.1.1. Impact of the CGP (Stage 1 & 2) on the outskirts of the Sydney Metropolitan Area

2.1.1.1. Residential

Despite AGL apparently being in breach of its conditions of approval and its obligations under its Petroleum Production Leases (PPLs) - as outlined in later sections of this submission - it has been allowed to continue to expand the CGP into areas designated for residential development, including land being developed at Spring Farm by Landcom where according to the NSW Government’s current development guidelines³ housing may be placed a mere 5-10 metres from operating wells in their early more active production phase (and depending on well type). Sensitive use (specifically schools, hospitals and aged care) may be placed 10-20 metres from operating wells in in this early active phase. This is despite the fact that an

³ *Locational Guidelines: Development in the Vicinity of Coal Seam Methane Wells*, NSW Department of Infrastructure, Planning and Natural Resources, May 2004.

accident at Dalby, Queensland in May 2011 required a safety exclusion zone of 100 metres on a rural property while the well blew salty water and methane 90 metres into the air for more than a day before being capped.

Residents interviewed by Channel 10 News (aired 29th August 2011) claimed not to have been told about the gas field when they purchased properties in the area. Since for most people their home is their primary asset, this situation will cause financial hardship to purchasers should they need to sell or borrow against the property. Parents interviewed by Channel 10 News expressed concern about health aspects for children playing in streets accessed by industrial rigs and trucks, and from chemical contamination. The worry and anxiety that this will cause residents can only now be compounded by the probability that they will not be able to sell their property at all, should they wish to move. The sheer incompetence of the planning is only matched by the apparent greed of both the NSW Government and AGL for the returns that they will get from the land at the expense of the residents whom they have jointly deceived.

2.1.1.2. Rural

For many people, living on the urban fringe is a lifestyle choice so that they and their children can experience the positive social and health benefits offered by a rural or semi-rural setting. CSG mining effectively rezones this land for **heavy industry** destroying this lifestyle choice, and inflicting the same financial and social effects described above for residential housing.

The opportunity for small rural allotments on the urban fringe to play a role in the emerging **urban agriculture** is also lost or compromised by the sterilising effect of coal seam gas mining

on the same land - in much the same way as occurs with the food producing capacity of prime agricultural land...with one distinction. Small rural allotments are more fragile than larger ones when it comes to the disruptive activity of CSG mining and the possibility of even one accident that would damage soil or surface water. The impact on **food security** options for a major city such as Sydney may be significant.

Likewise larger rural holdings, already under pressure from creeping urbanisation, have been put at risk by careless management and lack of independent monitoring of CSG mining. In breach of its obligations under its PPLs to ensure no pollution of the groundwater, AGL (and Sydney Gas before it) has conducted no scientifically valid groundwater monitoring in ten years of operating the Camden Gas Project, having taken no base line study at any point⁴. This has allowed complaints by landholders (Mount Gilead) of salty water in a previously freshwater creek (Menangle Creek) to be dismissed. AGL has claimed that without a baseline study taken at the outset there is no way to determine if groundwater has been contaminated by its CSG activities, yet we understand that both the methodology and technology exists to determine this (see section 3.2.2).

We wonder if AGL's claims are not only to avoid compensation claims relating to Stages 1 & 2 of the CGP, but also to enable it to progress Stage 3 by proposing to use the Scenic Hills Protection Area and its surrounding residential suburbs in South West Sydney as an experiment in groundwater testing - without consideration of other impacts in the area and without any evidence that it could 'make good' any damage.

⁴ Dr. Gavin M. Mudd, *Environmental and Groundwater Issues and AGL's Hunter Coal Seam Gas Project*, Final Report to the Hunter Valley Protection Alliance, February 2010.

2.1.1.3. Cultural, Educational, Recreational

The South West of Sydney was the birthplace of the Pastoral Industry in NSW. It is historically famous as the Cow Pastures area⁵ and the properties located here were romanticised by early 20th century architect Hardy Wilson in his now rare book “The Cow Pasture Road”, 1920⁶. This book became the inspiration for a series of tours of the same properties by NSW Historic Houses Trust (HHT) over the last four years.

In 2000, foreseeing the adverse impact that urbanisation (in particular the South West Growth Centre) could have on this historic area, the NSW Heritage Office commissioned the National Trust to conduct a study. In the ground-breaking report that emerged from this, *Colonial Landscapes of the Cumberland Plain and Camden, NSW*, authors Colleen Morris and Geoffrey Britton⁷ wrote:

“An overriding consideration for this entire study is that there remain within the Cumberland Plain and nearby areas, rural landscapes and landscape features of cultural value on account of their ability to demonstrate important aspects of early European occupation – gardens, vineyards, orchards, paddocks, fences, cemeteries, grant areas, windbreaks and accessways.

*“These early colonial landscapes are, collectively of **exceptional significance** [our emphasis] for their ability to demonstrate the interaction of the early European settlers with the Australian landscape...*

⁵ The Cow Pastures takes its name from an incident occurring within the first years of the colony. In 1788, Captain Arthur Phillip had brought with him on the HMS Sirius, a herd of cattle (two bulls and seven cows). Disastrously, these cattle strayed within five months and despite an extensive search were not found until seven years later, grazing contentedly on open pasture near the Nepean River and now numbering sixty one. As it was presumed that the cattle had understood how to choose the best pasture for themselves, they were left to graze there and were protected by future governors. Not surprisingly, early colonists followed their example and set up their early pastoral holdings in the area. (Note: The specific detail of the above incident varies according to the source.)

⁶ Hardy Wilson, *The Cow Pasture Road*, Art in Australia, Sydney, 1920.

⁷ Colleen Morris and Geoffrey Britton, *Colonial Landscapes of the Cumberland Plain and Camden, NSW: A Survey of selected pre-1860 Cultural Landscapes from Wollondilly to Hawkesbury LGA*, National Trust, 2000, p. 4.

“Planning for the conservation of these landscapes requires an integrated approach in order to manage entire areas within which there may be items of individual significance under separate ownership that, collectively, are of exceptional importance to the understanding of colonial settlement.”

One of the key recommendations of the report was to adopt *“a special category of zoning within the environmental planning framework – such as Environmental Protection Zone 7 – especially for the conservation of important cultural landscapes as a whole and large landscape curtilages...”*

The implementation of this report has been less than satisfactory with many of the heritage landscapes lost to inappropriate development under the previous government in NSW. What remains is a precious and increasingly rare reminder of our past.

Coal seam gas threatens what remains. The survival of these landscapes depends on the ongoing economic viability of these properties as rural concerns. Some property owners have had to go to considerable time and/or expense to defend their (and the state’s) heritage. Brownlow Hill secured a state heritage listing when threatened, and Mount Gilead took Sydney Gas to the Land and Environment Court to prevent adverse impact from the Rosalind Park gas treatment plant.

The Elizabeth Macarthur Agricultural Institute (EMAI), on part of the early property of pioneers John and Elizabeth Macarthur, has not been so lucky because it is now owned by the NSW Government (Department of Primary Industries). Despite the concerns of Macarthur descendants (and, we understand, the Institute itself) AGL has sunk fourteen

wells on this property. The irony of subjecting this property to CSG extraction, given the current concerns about CSG's environmental and health impacts, is that the EMAI is the Department's Centre for Animal and Plant Health, incorporating: the Centre of Excellence for Animal and Plant Health and the NSW Centre for Animal & Plant Biosecurity. Should the soil, surface and/or groundwater be compromised this would put the use of this property, and its viability as a cultural, educational and recreational centre at risk. The Georgian buildings on the property are claimed to be the oldest buildings in Australia of both national and state significance.

Finally, while acknowledging the **world class** nature of the Harness Racing facilities at the Tabcorp Menangle Park Paceway, AGL has nevertheless placed gas wells on this property. If this had been done when harness racing was located at Harold Park in the inner city of Sydney, there would have been an outcry. It's relocation to the South West put it in the path of the Camden Gas Project and apparently lowered its value as a cultural institution in the eyes of our government planners.

2.1.2. Impact of the proposed CGP Stage 3, Northern Expansion - Scenic Hills and surrounding suburbs in the Sydney Metropolitan area

AGL's proposal to expand the CGP into the Sydney Metropolitan Area and into the Scenic Hills Environmental Protection Area is an outrageous and audacious move.

The Scenic Hills is 'iconic' landscape heritage for South West Sydney, providing a green space buffer zone and backdrop to the city of Campbelltown. Parts have been lost over the years such that what remains is now critical. The area in question is bounded by Denham Court in

the north adjoining some of the most valuable real estate in the South West, and in the South by the Australian Botanic Garden at Mount Annan, the largest botanic garden in Australia and the native plant garden of the Royal Botanic Gardens Trust of Sydney.

Since 1974 when the Hills were zoned Environmental Protection (Scenic), the area has attracted a lot of ‘sensitive land use’. Churches, schools and religious communities are now dotted throughout the hills, along with small rural allotments, and rich layers of aboriginal and colonial heritage, sensitive bushland containing *critically endangered* Cumberland Plain Woodland and threatened and endangered animal species. Many residents bought houses in the surrounding suburbs to have views of the Hills, and use the Hills for recreational horse riding, walking and bike riding. The Hills are environmentally and culturally important to Campbelltown, and are an essential part the fabric of urban life and amenity within the outer limits of the Sydney Metropolitan Area.

In 2007 Campbelltown City Council reaffirmed the community’s position on the Hills when land developer, the Cornish Group, proposed rezoning approximately 800 acres of the area for commercial purposes. In rejecting the proposal Council stated⁸:

“(2)...Council confirms in the strongest possible terms its support for the high value that the Community of Campbelltown and South Western Sydney places on the Scenic Hills as an iconic landscape with distinctive scenic, heritage and environmental qualities.

(3)...Council unequivocally commits to continue to maintain and preserve the Scenic Hills for future generations to enjoy.

⁸ Minutes of Campbelltown City Council Meeting November 13th, 2007.

(4)...Council declares it has no intention to amend current overall planning controls that would allow land uses and development with the Scenic Hills, not currently permitted by LEP District 8 (Central Hills Land)."

The far sighted decision by local Councillors in the 1970s to preserve the Scenic Hills has been equated to the 19th century preservation of **Centennial Park** for inner city residents.⁹ It is inconceivable now that the NSW Government would allow CSG mining in Centennial Park with its main gas gathering pipeline running through Sydney's Royal Botanic Gardens. Yet this is exactly what AGL is proposing for the South West.

Under the CGP Stage 3 (Northern Expansion) AGL plans to install up to 72 gas extraction wells with connecting infrastructure - gas pipelines, access roads, central water storage points, storage yards - across the length of the Scenic Hills Protection area, effectively industrialising the area, with the main gas gathering spine line running through the Australian Botanic Garden at Mount Annan and along Sydney's water canal. The heritage-listed Upper Canal, as Sydney's back up water supply channel, is classified as critical public infrastructure.

The project features horizontal wells that will run for 2.5 km underground from the well heads (possibly under residential housing), drawing gas from seams in a *subsurface area* encompassing about 26 suburbs: Blair Athol, Blairmount, Bow Bowing, Bradbury, Camden, Campbelltown, Catherine Field, Claymore, Currans Hill, Denham Court, Eagle Vale, Elderslie, Eschol Park, Glen Alpine, Harrington Park, Ingleburn, Kearns, Kirkham, Macquarie Links, Mount Annan, Narellan Vale, Raby, Rosemeadow, St Andrews, Varroville, Woodbine.

⁹ Geoffrey Britton, landscape heritage architect and co-author of *Colonial Landscapes of the Cumberland Plain and Camden, NSW: A Survey of selected pre-1860 Cultural Landscapes from Wollondilly to Hawkesbury LGA*, National Trust.

AGL initially applied to put a *gas treatment plant* into the Hills as part of Stage 3, near schools and monasteries. The then NSW Minister for Planning (2010) vetoed the gas plant after local protest. A petition of just over 1000 names was raised at the time by the Scenic Hills Association (SHA) and a local newspaper. However AGL was allowed to proceed with the rest of its application even though it originally claimed it could not proceed **without** the gas plant and has not revealed how it will get its gas back under pressure to the Rosalind Park Gas Plant from up to 60% of its wells. This suggests that AGL, with the complicity of the NSW Government, is following a ‘foot in the door’ strategy into the Sydney Metropolitan Area.

AGL plans to use existing suburban streets and roads to access a number of its sites which includes the transportation of industrial machinery (rigs), chemicals and contaminated waste water associated with drilling, hydraulic fracturing (fracking)¹⁰ and maintenance operations.

AGL’s proposal is industrialising the Hills and surrounding suburbs, in the process destroying an important cultural and environmental asset and creating an imbalance in the amount of land within the LGA zoned for industrial use. **This goes to the heart of urban planning for South West Sydney.**

2.1.2.1. Residential impacts of Stage 3

The CGP Stage 3 is roughly divided between Camden and Campbelltown LGAs. Much of the Camden part is being rezoned for residential housing. AGL proposes putting two of its well sites (of up to six wells each) onto land that is either designated for residential development, or is in the process of being developed. People buying in these suburbs appear to be

¹⁰ ‘Fracking’ is a process used in unconventional gas extraction to release methane gas from the coal or shale seam. The seam is fractured by pumping water, sand and chemicals into the seam under pressure. It is implicated in chemical contamination and depletion of ground and surface water, raising concerns for farming, environmental safety and health.

unaware of AGL's proposal. This will have the same social and economic effects outlined above for Stages 1 & 2 (section 2.1.1.1).

Likewise AGL will be accessing other parts of the CGP in Campbelltown and Camden using residential streets and roads in suburbs dominated by young families - creating noise, visual disturbance, a potential for accidents and a consequent lowering of land values. AGL's trucks and rigs will have to navigate school children, parents' collection vehicles, church visitors, attendees of the Mount Carmel Retreat Centre and the Carmelite Monastery, recreational joggers and bush walkers and other residents when it uses St Andrews Road to access the wells it threatens to put on Serbian Diocese Orthodox land at Varroville against the will of the Diocese. Likewise it will be using what is now a quiet cul-de-sac and other residential streets to access two well sites of up to 12 twelve wells at Eschol Park.

Many people bought houses to take advantage of views and amenity offered by the Hills, and their property values reflect this – Eschol Park, Kearns, Raby, St Andrews, Bow Bowling, and most recently the new Landcom site "One Minto" where houses were being actively sold on the basis of these views¹¹. The destruction of the Hills (see next section 2.1.2.2) will have a corresponding effect on their property values.

Once again, since for most people their home is their primary asset, this situation will cause financial hardship to property owners should they need to sell or borrow against the property. The down-market drag on property values will have a similar flow-on social and economic effect on the area as a whole, including on local businesses. CSG is a non-renewable energy source and does not provide for sustainable economic effects on the local

¹¹ <http://oneminto.com.au/>

economy. It is doubtful that Stage 3 will even result in many new jobs as the new wells merely appear to be replacing depleted or depleting wells elsewhere in the CGP. However the potentially devastating and irreversible effects on the environment and the consequent impact on property values, together with the ‘bubble’ economy that accompanies unsustainable industrial activity will mean that the costs to the community will be high and long lasting.

Needless to say, AGL, in its Environmental Assessment for the CGP Stage 3 has not provided a cost-benefit analysis of its impact at either the local level, nor at the State level where it seeks its approval as a ‘state significant’ project. This situation would not be accepted in reputable corporate organisations acting on behalf of their shareholders, and should not be accepted by the NSW Government acting on behalf of its constituents.

2.1.2.2. Rural impacts of Stage 3

In the *Campbelltown, Camden and Appin Structure Plan 1973*, the reserving of the Hills as a protected greenspace was based on principles of regional city design and conservation, supported by the unsuitability of the land for urban development. The plan stated “*The instability of substantial parts of the Razorback Range and the Central Hills Lands [Scenic Hills] strengthens the case for conserving these areas. The land should remain in its present basically agricultural use and private ownership to ensure a skyline free from urban development. The public will enjoy the area as a visual setting to the city but will not have access rights except at particular vantage points which will be publicly acquired.*”¹²

¹² *The New Cities of Campbelltown, Camden, Appin Structure Plan*, State Planning Authority of New South Wales 1973, p. 48.

The retention of the Hills is therefore not just about **individual landholder rights** but about **community rights** and local planning for communities.

The Hills remains largely in private ownership and its survival as a greenspace and urban amenity depends on the survival of land use that promotes its retention as such. The rural and semi-rural nature of the Hills means that it is made up of relatively small rural allotments. The minimum subdivision is 100 hectares with the largest holdings being no more than twice that. The land is used for a variety of purposes: many religious communities have moved there to practice their vocations in the peace and tranquillity of the Hills, run schools, churches and religious retreats. The land has been traditionally used for equestrian purposes (horse breeding, riding schools), veterinary research, grazing and dairying. Under the last government's culture of perverting the course of planning for local communities, a number of minor land developers bought land with a view to having the area rezoned and/or getting 'state significant' developments approved (despite the unsuitability of the land for this purpose). This coincided with the closing down of previous valued-added recreational and economic activity for the community, notably the Scenic Hills Riding Ranch and the Merck Sharp and Dohme Animal Science Research facility. However since Council has committed to keeping the protection zoning of the Hills, rural usage of the land continues, and now offers enormous opportunity as a focus for **urban agriculture**.

The social and economic impact on rural usage from AGL's proposal to expand CSG extraction into the Hills is mainly twofold: (1) impact on property values, and (2) destruction of existing land use leading to a domino effect on the rest of the community.

2.1.2.2.1. Impact on property values

A large part of the value of a property is in the zoning, details of which are contained in the 149 certificates of the sales contract which can be assessed prior to purchase. *Extractive industries* and *mines* are specifically prohibited by the Environmental Protection zoning. Landholders buying into the area for the tranquillity and viability of a rural lifestyle, including the many religious communities, had every reason to believe this would be protected. The restrictions of the Environmental Protection zoning, while potentially costly, are also protective of their investments and the vocational use to which they put the land. Yet in contravention of their 149 certificates, AGL seeks to avoid the specific prohibition in the zoning by disingenuously classifying its project as either a *public utility undertaking* or *public utility installation in petroleum production*¹³ effectively rezoning the area for heavy industry for itself, with the attendant social and economic impact on landholders.

This one rule for CSG extraction companies and another for the community is both inequitable and unworkable, and comes at a significant cost to landholders. Evidence presented by Agforce Queensland to the recent Senate Inquiry into CSG (as part of the Murray Darling Basin Plan Inquiry) claimed that one gas well can reduce the capital value of the land it's on by 20%...but that the reduction was academic because no one's been able to sell a farm with a gas well.¹⁴

¹³ SHA has received legal advice that AGL's interpretation of the legislation is not correct and may be subject to challenge which, if found in our favour, will impact on previous approvals where AGL also claimed this exemption.

¹⁴ *Courier Mail* 25th July 2011.

2.1.2.2.2. Destruction of existing land use

Mounting evidence from other parts of NSW and Queensland suggests that AGL's proposed project is also incompatible with at least three of the objectives of the Environmental Protection zoning (Zone 7(d1), 1 (b-c, e) in the Campbelltown LEP – District 8, concerning rural activities, including farming and agricultural research.

This evidence is finding support in government departments, government agencies and universities. Last year departmental advice to the Federal Minister for Sustainability, Environment, Water, Population and Communities, warned that coal and CSG mining companies had underestimated the impacts of their activities on native springs, groundwater recovery and land subsidence¹⁵. On December 3rd 2010 the National Water Commission released a Position Statement on CSG and Water, noting problems associated not only with 'fracking', land subsidence, waste water management, and water extraction but also "*significant social impacts*" caused by the disruptive nature of infrastructure construction and access. Soil scientist, Peter Dart of the University of Queensland's School of Land, Crop and Food Sciences warned of CSG mining's potential to damage top agricultural soil¹⁶. The potentially adverse impact of CSG mining on rural activity is supported by other academics¹⁷, the NSW Farmers Association and evidence from the Senate Inquiry into CSG, as part of the Murray Darling Basin Plan Inquiry.

¹⁵ *Australian Financial Review*, November 22nd 2010.

¹⁶ *Courier Mail* November 20th 2010.

¹⁷ For example: Professor Alan Randall from the Faculty of Agriculture, Food and Natural Resources at the University of Sydney, at a Sydney Law School Conference 16th June 2011, and water scientists from the Universities of Queensland, Southern Queensland, and Flinders University ABC 30th August 2011.

Any damage to water or soil in the Scenic Hills, from accidental spills or groundwater contamination, would be devastating in its overall impact due to the combined effect of the **small size** of the rural holdings, the advanced age and dispersal of the remnant Cumberland Plain Woodland and the potential for severe droughts in the area since early colonial times¹⁸ making water essential to the area's survival. Destroying the viability of rural activity and bushland would have a domino effect on its heritage, its flora and fauna and the communities living there (see following section 2.1.2.3).

AGL's Environmental Assessment (EA) for the CGP Stage 3¹⁹ has not considered its impact on rural activity in the area and has been widely criticised for its significant lack of information regarding groundwater impacts and its use of hydraulic fracturing.²⁰ (This will be considered further under the Section 3 on Environment and Health). AGL provided no site specific hydrology or hydro-geology study as part of its EA, relying instead on its general knowledge of the Sydney Basin, and the permission given to it by the Planning Assessment Commission (PAC) in determining AGL's Gloucester Gas Project application on 22nd February this year that allows AGL to pursue an "*adaptive management*" strategy. The PAC determination is currently being challenged in the Land and Environment Court (LEC). Yet in spite of our protests and the pending LEC hearing on Gloucester, AGL is conducting a baseline measurement of water in the Scenic Hills in preparation for proceeding with the CGP Stage 3 that would essentially see the Hills used as a 'guinea pig' for further CSG extraction in the

¹⁸ Local historian Verlie Fowler (former Campbelltown Councillor and former President of the Campbelltown and Airs Historical Society) wondered whether the history of severe droughts in the area was due to a localised 'rainshadow'. We provide indicative analysis from the monitoring of rainfall at Varro Ville House over the last five years as Attachment A.

¹⁹ *Camden Gas Project Northern Expansion Environmental Assessment*, prepared by AECOM for AGL Energy Limited, October 2010.

²⁰ Refer public and agencies submissions available on the DoP website under Major Projects: Camden Gas Project Stage 3 – in particular submission from Campbelltown City Council and *Camden Gas Project Stage 3 Peer Review of Groundwater Component of EA*, Worley Parsons for Campbelltown City Council, November 19, 2010.

Sydney Metropolitan Area, with no guarantee of AGL's being able to make good any damage it causes in the process.

AGL's casual disregard for the impact of this project on the rural nature of the Scenic Hills may derive from flawed assumptions about the future of the zoning. In its EA, AGL has dismissed the need to protect the viability of the Hills' rural activity, claiming "*Much of this land has been rezoned or is proposed to be rezoned under a Draft LEP... resulting in the loss of existing rural and agricultural land.*"²¹ While this is true for part of the land located in the Camden LGA (though its compatibility with alternative land use cannot be assumed), it does not apply to the Campbelltown objectives for the Scenic Hills and as such is grossly misleading to decision makers in the DoP. Further, it is not possible to isolate impacts on the adjoining land in Camden from that in the Campbelltown LGA.

It may also be based on the flawed assumption, frequently put forward by land developers, that the land in the Scenic Hills is *degraded agricultural land*. Firstly this ignores the different role of this land in the planning for the South West. Secondly, no evidence has been put forward to support this claim. In 1810, Governor Macquarie commented in his diaries that the farms of Townson (Varroville) and Thomson (St. Andrews, opposite Varroville) - comprising approximately 1200 acres currently in the Scenic Hills - were "by far the best pasturage I have yet seen in the colony"²². While land owned by hopeful developers is being allowed to visually deteriorate, there is no reason to believe that the land is not capable of being regenerated into productive **urban agricultural** usage based on the underlying quality

²¹ *Camden Gas Project Northern Expansion Environmental Assessment, Volume 1, Main Report*, Prepared for AGL Energy Limited by AECOM, October 2010, p.8-8.

²² Lachlan Macquarie: *Journals of his Tours in New South Wales and Van Dieman's Land 1810-1822*, Sydney 1979.

of the soil. The history of the area suggests that the key to its future usage lies in the preservation of water, which AGL's proposal is putting at risk.

2.1.2.3. Cultural, Educational and Recreational impacts of Stage 3

In its EA for Stage 3, AGL similarly failed to acknowledge the rare and unique properties, i.e. the natural and cultural assets, of the Hills that make it a place of significance at national, state and local levels of government and that explain why the area was set aside as an Environmental Protection area since the 1970s. It also omitted any reference to the 'sensitive' land uses in the Hills (monasteries, churches and schools), which sit in surreal juxtaposition to the industrial nature of the proposed activities. Whether these omissions were made for AGL's convenience, or whether it demonstrates AGL's cultural insensitivity to any land use other than its own, is unknown. Irrespective it cannot be trusted to exercise a duty of care to resources it places no value on.

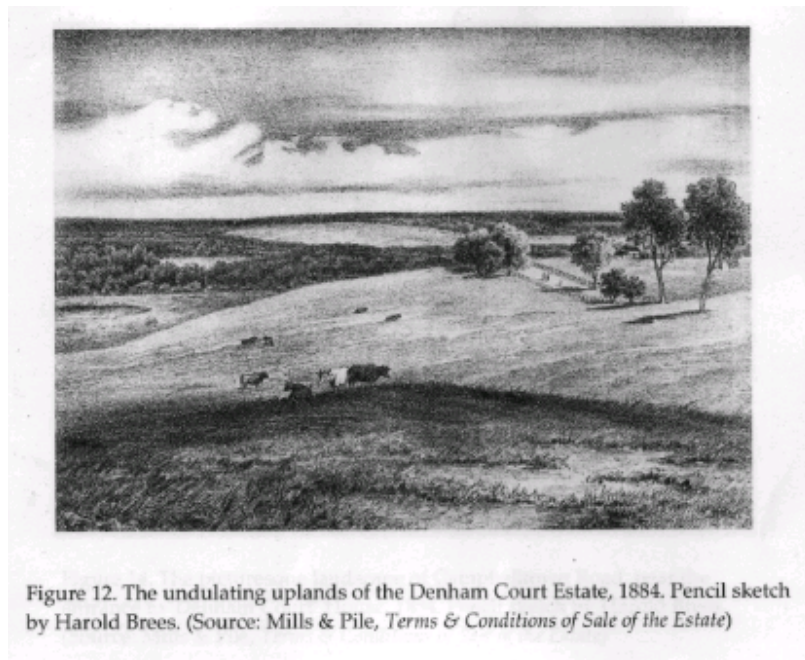
2.1.2.4. European Rural Heritage: landscape

The aims & objectives for the Environmental Protection area, contained in the *Campbelltown Local Environment Plan – District 8 (Central Hills Lands)* are clear about what is being preserved:

"This plan aims to ensure that the Central Hills Lands District of the City of Campbelltown retains the rural character that was envisaged for it during the planning that preceded the urbanisation of that City." (Part 1:2)

This view was far-sighted. Rural landscape preservation is only just being considered in places like Britain where heritage listings similar to the graded listings for heritage buildings are now being mooted for landscapes.²³

The rural heritage landscape contained within the Hills is of increasing rarity in the Cow Pastures area, bookended by the elevations of Mount Annan and Denham Court. Travelling from Denham Court to Campbelltown along Campbelltown Road, the landscape to the west gives an appreciation of what it was like to travel the road in the 19th century.



Half way along the road the landscape is dominated by Bunbury Curran Hill, and vice versa, views from there extend across the Cumberland Plain to Sydney's CBD. They were noted by Governor Lachlan Macquarie during his tour of the area in 1810, and documented in his diary:

²³ "Landscape in Danger: SIMON JENKINS makes the case for protecting the British countryside against the seemingly inexorable, unregulated march of development", *Country Life*, 25th January 2007, pp.57-59.

“[Finding] Mrs M had gone after returning home to see Dr Townson’s farm and Bunbury Curran Hill...we all followed her thither, and met her returning home again after having ascended the Hill, accompanied by her guide Mr Meehan [Surveyor and owner of Macquarie Field]...The accounts given to me by Mrs M. of the beautiful prospect she had from the top of Bunbury Curran Hill induced me to ascend it, which I did on horseback, and was highly gratified with the noble extensive view I had from the top of it of the surrounding country”²⁴.

2.1.2.5. European Rural Heritage: Varro Ville

Since so many of the estates in the Cow Pastures area are losing their context and meaningful interpretation, it is fortuitous that nearly all of the original 1810 land grant of Dr Robert Townson, “Varro Ville”, has been contained within, and preserved by the Environmental Protection zoning of the Scenic Hills, along with views to and from the homestead complex, including to Bunbury Curran Hill and to the original St Andrews estate now owned and occupied by the Carmelite Friars within the Scenic Hills.

Dr Townson (1762? – 1827) was the colony’s first Doctor of Letters and the most educated man in the colony when he arrived in 1807. The remnant terracing of his vineyard, regarded as “second only that of Gregory Blaxland [at Brush Farm]”²⁵ is still evident in the landscape. Other important owners of the property were explorer Captain Charles Sturt - who in the 1830s altered watercourses and put ‘waterholes’ in every paddock as a water conservation measure, James Raymond - the first Postmaster General of NSW who introduced prepaid

²⁴ Lachlan Macquarie, *ibid*.

²⁵ Australian Dictionary of Biography: <http://adb.anu.edu.au/biography/townson-robert-2743>

postage as a world first, and Judge Alfred Cheeke who bred and trained there the winner of the first AJC Derby recorded in the Turf Register in 1865.

In the report commissioned in 2000 by the NSW Heritage Council and the National Trust²⁶, the authors noted about Varro Ville: “[It]...is one of the few estates remaining in the Campbelltown area where the form of the original grant and the former agricultural use of the estate is still appreciable to any great extent.”²⁷

While AGL does not intend **at this stage** to put wells or infrastructure across the Varro Ville estate (as far as we know), its survival depends on the survival of the Scenic Hills Protection Area. The possibility of damage to landform (subsidence), soil and water that threatens rural activity in the Hills also threatens the Hill’s European heritage either directly or indirectly: the rural heritage landscape, the agricultural and estate features contained within the landscape (colonial dams²⁸), and the built heritage such as the national and state-listed Varro Ville House that depends on the landscape for its setting and context, including the stands of 19th century Cumberland Plain Woodland that forms part of its former landscape park.²⁹

2.1.2.6. European Industrial Heritage: the Upper Canal

AGL’s proposal to run its main gas gathering spine line down Sydney’s Upper Canal not only risks Sydney’s back-up water supply but also its industrial heritage. The Upper Canal was built 1880-1888 as Sydney’s fourth water supply system. It is lined mostly with dry rubble masonry, elsewhere with concrete or rubble cement. It is State Heritage listed for its historic

²⁶ Colleen Morris and Geoffrey Britton, *ibid.*

²⁷ Colleen Morris and Geoffrey Britton, *ibid.*, p. 97.

²⁸ AGL’s hydrogeologist was unable to confirm whether any of the dams in the surface area are ‘spring-fed’ and therefore potentially at risk from the planned CSG mining. Meeting between SHA and AGL Management on 10th December 2010.

²⁹ See *Camden Gas Project Stage 3 (Northern Expansion) – submission from Owners of Varro Ville House*, January 12th 2010.

and architectural significance. AGL will run pipelines backwards and forwards across it to link up with the main spine line. The Sydney Catchment Authority, in its submission to the DoP raised concerns about damage to the canal and, as far as we know, has not yet given permission to put either wells or the spine line near it. It is extraordinary that a publicly listed company could use, and put at risk, state assets (and critical public infrastructure) such as the Upper Canal and the botanic garden (see 2.1.2.6.1) to generate profits for its private shareholders.

2.1.2.7. Botanic Garden

The newly re-named Australian Botanic Garden at Mount Annan is located at the southern end of the Scenic Hills. Dismissed in the Main Report of the EA as a “local tourist attraction”³⁰, it is in fact the Australian native plant garden of the Royal Botanic Gardens Sydney, with a collection of over 4000 species, and is the largest botanic garden in Australia. It is home to 160 species of birds and other wildlife (including wallaroos, swamp wallabies and protected reptiles). It hosts the NSW Seedbank and the only publicly accessible collection of clonal replicas (first generation) of the endangered Wollemi Pine. AGL plans to locate portions of its gas gathering system in the botanic garden.

2.1.2.7.1. Aboriginal Heritage

The Scenic Hills are central to an area of high **geographic** significance in Australian history generally and Aboriginal history in particular. Known as the Yandel’ora “land of peace between peoples”, this was a special meeting place between Aboriginal groups to settle

³⁰ *Camden Gas Project Northern Expansion Environmental Assessment*, prepared by AECOM for AGL Energy Limited, October 2010, pp.2-4.

disputes in a peaceable manner, determine law and arrange marriages at least once in a generation, with tribes coming from as far north as Maroochydore and as far south as Melbourne³¹. Its significance extends beyond the artefacts and landmarks identified by AGL in its EA, applying instead to the whole land area and its sense of place. There is no mention of the Yandel'ora in the EA's assessment of Aboriginal heritage and the associated archaeology (though these facts are freely available on the DECCW website). The EA simply states, "*There are currently no known Aboriginal 'Places' within the Surface Project Area.*"³²

2.1.2.7.2. Natural Heritage

Birds have been an on-going feature of the Scenic Hills from early colonial times when bird-artist John Gould visited Charles Sturt at Varro Ville in 1838 and was so impressed with Sturt's bird drawings that he tried to buy them from him (later stolen by a workman who overheard the conversation)³³. The Environmental Protection Area is home to a large number of bird species - 77 of which have been identified by local ornithologist Michael Paul.

The Hills is also home to the *critically endangered* Cumberland Plain Woodland (CPW) that has been, and continues to be decimated by development in adjoining areas in the South West, along with the associated threatened and endangered species of flora and fauna. Stands of CWP have been identified as 19th century and part of a landscape park for Varro Ville House³⁴. As such they not only contribute to the significance of Varro Ville House and its setting, but are a source of local variant regeneration. The age of the CWP and its listing as

³¹ Royal Botanic Gardens website: www.rbgsyd.nsw.gov/annan/the_garden/indigenous

³² *Camden Gas Project Northern Expansion Environmental Assessment*, prepared by AECOM for AGL Energy Limited, October 2010, Appendix I, Aboriginal Archaeological Assessment, p.45.

³³ Mrs Napier Sturt, *Life of Charles Sturt*, Elder & Co., London, 1899.

³⁴ Landscape Analysis by Geoffrey Britton for Draft Curtilage Study 2007 commissioned by the current owners of Varro Ville.

critically endangered makes it very vulnerable to environmental impacts to soil, water or subsidence. AGL's assurances of protection of the natural heritage in its EA are inadequate. In particular the *envelope* methodology that AGL proposes to implement **after** project approval, limits its environmental assessment of impacts to a small geographic area around the **surface area** of the well sites and connecting infrastructure, ignoring the complex interactive nature of the environment (including *subsurface* connections) – even though this is at the forefront of current academic study across a number of disciplines.

On legal advice, SHA wrote to the Hon. Tony Burke, Minister for Sustainability, Environment, Water, Population and Communities, on the 1st March 2011 asking him to call in the CGP Stage 3 for assessment under s70 of the *Environmental Protection and Biodiversity Conservation Act 1999* (Cth) (**EPBC Act**). At the time of writing, other than a brief acknowledgement, we have received no further advice. Local Federal Member Laurie Ferguson (Werriwa) has subsequently written to Minister Burke endorsing our concerns about AGL's proposed CGP Stage 3. In his letter he wrote: *"The 2009 proposal has been assailed by Campbelltown Council, is widely condemned by residents, and could affect many planned and existing suburbs. Groundwater impacts are of particular concern and heritage sites could be detrimentally impacted on. I urge very serious consideration of the need for EPBC coverage."*³⁵

Concerns have also been raised by the former NSW Department of Environment, Climate Change and Water (DECCW).³⁶

³⁵ Laurie Ferguson, MP (Werriwa), letter to the Hon. Tony Burke, 19th July 2011.

³⁶ Refer submissions from DECCW available on the DoP website under Major Projects: Camden Gas Project Stage 3.

2.1.2.7.3. Religious and educational institutions ('sensitive' land use)

The religious communities in particular, with their dedication to a life of contemplative prayer, depend on the tranquil semi-rural environment, with its relative silence and scenic beauty.³⁷

AGL has regarded their landholdings as further opportunity to expand its industrial activity without regard for their special use of it. This is reinforced by complaints regarding AGL's opportunistic and/or hard sell 'sales' approach to securing access for its wells, with little or no real information about the actual and potential impact that CSG mining might have on their land and usage of it, and without correctly informing landowners of their rights.

We understand that the Marist Brothers (St Gregory's Agricultural College) originally agreed to AGL's proposal but have since changed their minds in light of recent media coverage of accidents, groundwater and other problems. Likewise, though the Carmelite Friars declined to have wells on their land, they too have expressed concern at the "less than frank" information provided by AGL in its 'sales' approach to them.³⁸

The Serbian Orthodox Diocese has raised similar concerns, having understood from AGL that it had no power to stop its employees from accessing its land at Varroville for assessment. AGL proposes putting a cluster of up to 6 wells and associated infrastructure on the Serbian Orthodox Diocese land. The Diocese has written to the Department of Planning indicating that they only became aware of AGL's plans after the official closure of the Public Exhibition

³⁷ Submissions to the DoP Major Projects, Camden Gas Project Stage 3, from both the Carmelite Friars (December 7th 2010) and Carmelite Nuns of Varroville (December 15th 2010).

³⁸ Carmelite Friars, *ibid*.

period. This is despite numerous claims made by AGL in its EA that it consulted fully and kept affected landholders informed throughout the process (see section (4.3.2)).

The Diocese has said it will not be able to go ahead with its plans for a primary school, and aged care facility should AGL proceed.³⁹ The land adjoins that of the Carmelite Nuns, who were also not consulted in the preparation of the EA but who believe that their way of life is seriously threatened by the project.

As previously indicated, AGL's trucks and rigs will have to navigate school children (from Mount Carmel High School as well as St Sava College), parents' vehicles, church visitors, retreatants and other visitors to the Mount Carmel Retreat Centre and the Carmelite Monastery, recreational joggers and bush walkers and other residents when it uses St Andrews Road, Varroville, to access the wells it threatens to put on Serbian Diocese Orthodox land. In addition to the possibility of accidents, we expect that the noise and vehicle movement to be excessively disturbing given the proximity of the Retreat Centre and Monastery to the road, and to Varro Ville House.

2.1.2.7.4. Local Planning for the Scenic Hills

The Scenic Hills have long been regarded by Council as the backdrop to the City of Campbelltown⁴⁰, separating it from Liverpool and Camden. Council has reaffirmed the Hills' role in its current planning for the LGA, citing a draft Visual Study for the new consolidated LEP, *"the landscapes of the Scenic Hills provide the setting for the City of Campbelltown and are what make it a truly unique example of a satellite city."* We note that Council has also

³⁹ Submission to the DoP Major Projects, Camden Gas Project Stage 3, from Board of St Sava College, the Serbian Orthodox Diocese Education and Aged Care Fund and Serbian Orthodox Diocese of Australia and New Zealand, 12th February 2011.

⁴⁰ *Campbelltown, Camden and Appin Structure Plan*, State Planning Authority of New South Wales, 1973.

suggested that this project has *“the potential to adversely impact on the implementation of strategic planning documents that apply to the district.”*⁴¹

2.2. Loss of Productivity due to Land Use and Environmental Conflicts with CSG Mining

SHA did not set up as an anti-coal seam gas mining group. We have been drawn into this by AGL’s proposal to move into the Scenic Hills. We examined AGL’s EA, sought additional information and had numerous meetings with AGL management and staff, made submissions (as a group and individually), and continue to lobby politicians, keep the community informed, respond to actions of AGL , attend meetings and so on – at an enormous cost to our social and economic lives.

This is multiplied all over the State of NSW. In the process of examining CSG mining in our area, we have been drawn into the wider movement across NSW and Queensland that has major concerns with CSG mining and its impacts. The vast majority of the people associated with these groups are people like us – not professional activists, nor experts in the field – people who have other lives to live and jobs to do of a productive nature. Instead we find ourselves drawn into this exhausting and very unproductive ‘fight’ against the very powerful and wealthy CSG mining industry with extremely adverse social and economic impacts on ourselves and families. We are impressed that the anti-CSG movement is dominated at its core by people who are intelligent, educated, creative, driven, and morally and ethically upstanding, who do not believe that the industry has demonstrated that it can operate safely anywhere at this point in time. To the extent that the industry continues to expand without the evidence to verify that it can operate safely and economically at the same time, so too will the anti-CSG movement at an enormous

⁴¹ Submission on the Environmental Assessment for Stage 3 of the Camden Gas Project, Campbelltown City Council, p. 23.

economic and social cost to the State of NSW. These costs need to be included in any assessment of the CSG industry's viability as an energy source for the future.

2.3. Need for a new Economic Model incorporating full Cost-Benefits

AGL's justification for proceeding to expand into the Sydney Metropolitan Area is underwhelming.

When considering:

- the value of the community assets at risk, - the probability of damage multiplied by the costs of either writing the assets off or restoring them, and the domino effect of their total loss,
- the sterilisation of the land for other uses (perhaps in perpetuity once the science is fully known),
- the social, environmental and health consequences,
- the loss of property values and its domino social and economic effect,
- possible 'bubble' effect on the local economy longer term,
- the costs of applying professional risk management for the first time - including advance planning (site-specific government-commissioned hydrology & hydrogeology studies) and truly independent (government) monitoring - which must be undertaken given the risks in an urban area, and
- the contribution of CSG extraction and processing to the greenhouse effect,

we question whether the quantity and quality of the CSG deposits here (in terms of ease of extraction, given the proposal to use an unspecified amount of 'fracking') justifies the damage that

such a process may cause to this unique area. There is nothing in the EA that addresses the economics of exploiting this resource relative to other CSG options or with reference to the cost to the community (i.e. a cost-benefit analysis). Renewable energy sources are not included in the discussion of alternatives, and there is no evidence or quantitative data accompanying the “do nothing” option – only ‘motherhood’ statements. This is an unacceptable basis for making any risky business decision, and in particular, a project determination that is deemed to be of “state significance”, particularly as this must surely set precedents for further CSG mining in the Sydney Metropolitan Area.

In general, it seems to us that this is an industry that has been **facilitated** rather than **regulated** without an adequate **cost-benefit analysis**. Our investigations suggest that the industry has been allowed to ‘cut corners’ in order to keep its costs down (e.g. the ‘adaptive management’ strategy, inadequate penalties for breaches, poor compensation arrangements to the community and landholders), and to keep the government’s short term costs down (e.g. allowing the industry to self-monitor and self-report). As such we do not believe that our governments or this industry have proven it can operate **safely and economically at the same time**. A new model for assessing the value of CSG versus other energy options must be developed that incorporates the best that science can provide. We would regard it as irresponsible, and contrary to the precautionary principle and to good economic management, for the NSW government to allow the CSG industry to expand, either by exploration or production, until this is in place.

3. ENVIRONMENTAL AND HEALTH IMPACTS OF AGL'S CAMDEN GAS PROJECT

3.1. Expert Warnings

A growing number of environmental and health expert warnings are being issued in relation to CSG mining, both in Australia and overseas. In every case what is being flagged is the potential harm from CSG mining and the urgent need for more scientific research before it is allowed to expand. Key points from a relevant selection are summarised below:

On December 3rd 2010 the National Water Commission released a Position Statement on CSG and Water, warning that *“the potential impacts of Coal Seam Gas developments, particularly the cumulative effects of multiple projects are not well understood,”* noting problems associated with hydraulic fracturing (‘fracking’), land subsidence, waste water management, water extraction and “significant social impacts” caused by the disruptive nature of infrastructure construction and access. This followed reports in November of departmental advice to the Federal Minister for Sustainability, Environment, Water, Population and Communities, warning that coal and CSG mining companies had underestimated the impacts of their activities on native springs, groundwater recovery and land subsidence⁴².

In June 2011, the National Toxics Network (NTN)⁴³ called for a moratorium on drilling and ‘fracking’ chemicals used in coal seam gas and shale gas extraction, claiming the vast majority had not yet been fully assessed by the Australian industrial chemicals regulator, the National Industrial Chemical Notification and Assessment Scheme (NICNAS).

⁴² *Australian Financial Review*, November 22nd 2010.

⁴³ *Hydraulic Fracturing in Coal Seam Gas Mining: The Risks to our Health, Communities, Environment and Climate*, prepared by Dr Mariann Lloyd-Smith and Dr Rye Senjen, National Toxics Network, June 2011.

Doctors for the Environment, Australia (DEA) has claimed that the potential ill health caused by all facets of the industry's operations have not been assessed and has called for Health Impact Assessments to be included in Environmental Assessments for CSG mining. In its submission to the Senate Inquiry into CSG (Murray Darling Basin Plan Inquiry)⁴⁴, it documented mental illness brought on by stress and family discord, and physical health problems caused directly by chemical contamination of drinking water and air and indirectly from contamination of food through water and soil – not only from fracking and drilling fluids but from chemicals naturally occurring in the coal seam that are brought to the surface: volatile organic compounds, high concentrations of ions and also radioactive substances. Potential long-term hazards are cancer and deformities.

Because of its environmental and health risks, 'fracking' has been banned in France, is currently suspended in areas of the UK, is suspended pending review in Quebec, Canada and has strict conditions in the State of New York in the USA including a ban within primary aquifers and within the drinking water catchments⁴⁵. There is currently a moratorium on 'fracking' in NSW until the end of 2011 for new exploration licences. This is an odd decision of the NSW Government: if it is suspected of being unsafe, why would there not be a blanket ban across NSW for CSG extraction generally including for existing production leases?

CSG's greenhouse credentials are also under a cloud. The CSG industry disingenuously describes its product using the umbrella term *natural gas* when there are potentially significant differences between unconventional and conventional natural gas. Likewise the industry misleads the public

⁴⁴ ***Submission to the Rural Affairs and Transport References Committee Inquiry into management of the Murray Darling Basin – impact of mining coal seam gas***, Doctors for the Environment, 27th June 2011.

⁴⁵ *CSG Inquiry: Key facts and references for submissions*, posted by Justin Field on website for Jeremy Buckingham MLC (NSW Greens).

by comparing its product with coal only at the **end use phase**, claiming it *burns cleaner than coal*.

Various studies investigating the life-time impact of **unconventional** natural gas production (shale and coal seam gas) on greenhouse gas emissions have raised the spectre that, unlike conventional gas, it may not have the advantage over coal due to the fugitive methane emissions during the production phase. Two recent studies from overseas: from Cornell University (CU)⁴⁶ and from Carnegie Mellon University (CMU)⁴⁷ arrived at different findings comparing shale seam gas and coal using different assumptions and time frames (20 and 100 years respectively). The CU research concluded that gas was at least as dirty as coal when methane leaks from drilling and pipelines were properly counted, while the CMU study found it was cleaner. However both studies agree that methane from natural gas production is a potent greenhouse gas that needs to be controlled and therefore fugitive emissions are critical to the estimates. It is also not clear how relevant the 100 year time frame is if unconventional natural gas is to be regarded as a 'transitional fuel' making the Cornell University findings more relevant. Both studies agree that other environmental impacts from unconventional gas extraction need to be taken into account when considering future energy needs.

As American studies into shale seam gas mining, these studies are indicative for CSG mining in Australia, and signal the need to re-examine the claimed role of coal and shale seam gas in the transition to renewable sources of energy.

The lack of such research in Australia was revealed on 19th August when the Brisbane Times quoted an internal briefing document acquired through a Right to Information request. It

⁴⁶ Robert W. Howarth et al, "Methane and the greenhouse gas footprint of natural gas from shale formations", *Climate Change* (2011), 106:679-690.

⁴⁷ Mohan Jiang et al, "Life cycle greenhouse gas emissions of Marcellus shale gas", *Environmental Letters* 6 (July-September 2011).

revealed that in February, energy advisors in the Queensland Department of Employment, Economic Development and Innovation (DEEDI) admitted there was no comprehensive analysis of coal seam gas emissions available. The briefing was sent to the department's director-general Ian Fletcher, from his deputy Dan Hunt: *"A full life cycle emissions analysis for Australian coal seam gas to electricity generation (including production, pipeline transport, liquefaction, shipping, regasification, transportation and generation) has yet to be completed,"* it read. The briefing also suggested the government was relying on industry-funded research to back claims that gas from coal seams was significantly less damaging to the climate than coal.⁴⁸

Any industry-funded research cannot be regarded as independent. This was the experience with the Tobacco Industry in the USA. The recently announced joint venture, the Gas Industry Social and Environmental Research Alliance (GISERA) founded by CSIRO and Australia Pacific LNG (a CSG to LNG joint venture between Origin and ConocoPhillips) is in this category. The CSIRO media release indicated that it would undertake research in five key social and environmental areas: groundwater and surface water, biodiversity, land management, the marine environment and socio-economic impacts. However it also stressed that its objective was to *"support the sustainable development of the coal seam gas (CSG) industry."*⁴⁹ This presupposes a key outcome of the research, i.e. that the CSG industry **can** develop in a sustainable way, making the research scientifically compromised from the outset.

⁴⁸ Graham Readfearn, *Brisbane Times*, 19th August 2011: <http://www.brisbanetimes.com.au/environment/cloud-over-csg-emissions-20110818-1izx1.html>

⁴⁹ CSIRO Media Release 11/75, 13th July 2011: <http://www.csiro.au/news/Coal-seam-gas-research-alliance.html>

3.2. AGL's Environmental Performance in the Camden Gas Project to date and its implications for its proposed Expansion into the Scenic Hills of the Sydney Metropolitan Area

3.2.1. 'Fracking'

In their submission to the Senate Inquiry, DEA indicated that 10%-40% of wells in Queensland had been 'fracked'.⁵⁰ Of the 138 wells in the Camden Gas Project to date, 117 or 85% have been 'fracked' suggesting that the CGP is a less accessible source of CSG with a potentially greater adverse environmental impact for the Macarthur area and South West Sydney.⁵¹

Further in numerous public meetings, AGL has been inconsistent in its assertions about its 'fracking' activities, and both secretive and probably disingenuous about its use of chemicals. This gives us no confidence in AGL's claims that its activities are not harmful to the environment and to health, as follows:

Campbelltown City Council (Council) specifically requested that AGL make a presentation on 'fracking' to its Community Consultative Committee (CCC) meeting of 25th November 2010. AGL's Operations Manager [redacted] detailed a list of 'additives' being water, sand, gelling agents (viscosifiers), crosslinkers, surfactants, buffers, breakers, microbiocides and nitrogen. On questioning by Council representatives about use of hydrochloric acid, [redacted] admitted that AGL used acid 20% of the time. Council then queried whether, in light of this, AGL was in breach of its Condition of Approval for the CGP Stage 2, Section 75J which specifies the use of only 'sand and water' slurry in fracture stimulation. Mr Roy indicated that he was not aware

⁵⁰ *Submission to the Rural Affairs and Transport References Committee Inquiry into management of the Murray Darling Basin – impact of mining coal seam gas*, Doctors for the Environment, 27th June 2011, p.8.

⁵¹ Note that the data provided by AGL on its website is not entirely clear on how many wells have been drilled in total and the current status of those wells.

of this and that AGL would not be able to fracture stimulate if it was made to use only sand and water. indicated that 99.51% of fracturing fluids are water and sand, with 0.49% additives.⁵²

At the same meeting the SHA representative requested that AGL put details of their ‘fracking’ and the chemicals used in writing for the benefit of the community. AGL declined saying it would be too ‘technical’– offering a “Q & A” instead. Even though we indicated that we or Council could engage consultants to review the data, AGL still declined and has maintained this line ever since.

At the next CCC of 10th March 2011, Council representatives again pressed AGL on compliance with Section 75J of the Stage 2 Conditions of Approval. AGL Environmental Manager said (as quoted in the Minutes of the Meeting), *“water and sand...makes up a fair portion of the slurry used. It is not until we drill a well that we can build a frac programme, tender to the frac companies, review the geology and get a programme together which include details of any chemicals to be used. Our conditions are such that we aren’t required to give DII [Department of Industry and Investment] further information on chemicals used.”*⁵³ He likewise confirmed that in briefing landowners about the intention to ‘frack’, *“...we don’t discuss finer details of the fracture stimulation activities such as what chemicals are being used. We haven’t been required to provide that level of information to date.”*

⁵² Minutes of the Community Consultative Committee, AGL – Camden Gas Project, Meeting No. 27, 25th November 2010.

⁵³ Minutes of the Community Consultative Committee, AGL – Camden Gas Project, Meeting No. 28, 10th March 2011.

However at a Public Forum held in Campbelltown on the 25th June 2011, AGL's Group General Manager, Mike Moraza, emphasised to the community gathering that in the vast majority of the wells fracture-stimulated by AGL, that it had used **only sand and water** (contradicting the statement made previously by AGL's Operations Manager).

At the CCC of 16th June 2011 the SHA representative queried AGL's new line that it only used sand and water (Public Forum and in this meeting) in light of previous claim (documented in the Minutes of that CCC) that AGL could not fracture stimulate without additives (chemicals). AGL Management denied that would have said that and re-affirmed that sand and water alone can be used. A conversation then ensued about the definition of a 'chemical' versus an 'additive', to which the AGL Manager claimed that she did not know what the definition of a chemical was. This last comment did not appear in the Minutes.⁵⁴

AGL continues to suggest its 'additives' are similar to those used in household products. This claim has been discredited by the NTN.⁵⁵ Additionally, though Operations Manager :

in response to a question in the November CCC, agreed that BTEX can occur naturally as a by-product of the extraction process, this does not appear in AGL's 'Fact Sheet' on 'fracking' on its website. It merely claims that it does not use BTEX in its 'fracking' fluids but misleadingly does not mention that BTEX can be released to the environment by the extraction process, nor does it reveal that BTEX could be introduced in the drilling process.⁵⁶

⁵⁴ *Minutes of the Community Consultative Committee, AGL - Camden Gas Project, Meeting No. 29, 16th June 2011.*

⁵⁵ Dr Mariann Lloyd-Smith and Dr Rye Serjen, *ibid.*, p. 8.

⁵⁶ Notably, AGL's in response to a question about BTEX in the CCC meeting in November 2010 agreed that BTEX occurs naturally in the coal seam: *Minutes of the Community Consultative Committee, AGL - Camden Gas Project, Meeting No. 27, 25th November 2010.*

3.2.1.1. CGP Stage 3 Northern Expansion

AGL has indicated that it **will** use 'fracking' in the Northern Expansion. However it either does not yet know, or does not want to put in writing exactly how many or which wells it will 'frack'. It has said that it will 'frack' the vertical wells which is likely to be one in six. However on further questioning AGL Environmental Manager [redacted] said in the CCC of March 2010 (as quoted in the Minutes), *"If drilling of SIS [horizontal] wells alone is not enough to recover the gas, then fracking is an option to recover the gas."*⁵⁷

Since the horizontal wells will run for 2.5 kilometres from the well head it is not only the fragile Environmental Protection Area that will be affected, but potentially nearby residential housing as well.

3.2.2. Groundwater

Apparently in breach of its obligations under its PPLs to ensure no pollution of the groundwater, AGL (and Sydney Gas before it) has conducted no scientifically valid groundwater monitoring in ten years of operating the Camden Gas Project, having taken no base line study at any point⁵⁸. Further AGL has claimed to SHA that, in the absence of such a baseline study it cannot assess any impact it may have had on groundwater in previous stages (Stages 1 & 2) of the CGP.⁵⁹ However we now understand that both the methodology

⁵⁷ Minutes of the Community Consultative Committee, AGL – Camden Gas Project, Meeting No. 28, 10th March 2011.

⁵⁸ Dr. Gavin M. Mudd, *Environmental and Groundwater Issues and AGL's Hunter Coal Seam Gas Project*, Final Report to the Hunter Valley Protection Alliance, February 2010.

⁵⁹ Meeting between SHA and AGL: [redacted] and [redacted] 10th December 2010.

and/or technology exists that would allow assessment of the CGPs impact on groundwater in prior stages⁶⁰.

This is confirmed by Dr Gavin Mudd (Environmental Engineer) from the Department of Engineering at Monash University in his report for the Hunter Valley Protection Alliance. He reviewed the environmental performance of the CGP in Stages 1 & 2 with reference to AGL's Annual Environmental Performance Reports (AEPRs) for 2006/07 and 2007/08 raising many concerns. With regard to groundwater he noted the following claim by AGL:

"A previous technical assessment of the groundwater regime found that as the entire casing of each well is cemented from top to bottom, connection between the Illawarra coal measures and overlying aquifers is not possible. The potential for cross contamination between aquifers during the production life of a well is therefore extremely unlikely." (AGL pp. 4-14 and 37 of AGL's AEPRs, 2007 and 2008, respectively).

Dr Mudd commented on this: *"Ignoring the issue of the 'technical assessment' not being cited at all (making it impossible to check this study), the fact that there is (apparently) no actual monitoring data to validate this claim is **very concerning**. If the assessment is correct, then it should be easy to obtain ongoing groundwater monitoring data over time to continually prove that this claim is valid. Sound data is critical, as cements and bore casings can fail over time, especially since issues such as corrosion have long lag times."*⁶¹

⁶⁰ Rivers SOS and Submission to DoP on the CGP Stage 3 by Marylou Potts, *Concerning protection of groundwater in the Project areas constitution AGL Camden Gas Project Stages 1, 2 and its implications for the proposed expansion in Stage 3*, 18th May 2011.

⁶¹ Dr. Gavin M. Mudd, *Environmental and Groundwater Issues and AGL's Hunter Coal Seam Gas Project*, Final Report to the Hunter Valley Protection Alliance, February 2010, p. 6.

The potential for groundwater contamination due to well deterioration over time, well damage from the ‘fracking’ process and/or **unpredicted** geological faults, has been noted in other specialist reports, and appear to be common across geological environments, including: well casings being sheared off by fracking⁶², cement carbonation and deterioration⁶³, and *“unknown and unsuspected faults [in the geology]...acting as conduits allowing water to drain from the upper aquifers of the Artesian Basin into the previously separate lower Permian layers [affecting shallower groundwater resources]”*⁶⁴.

Since our meeting with AGL’s hydrogeologist, AGL has discovered a groundwater impact study commissioned by Sydney Gas for Stage 1 of the CGP (Cawdor near Camden) in 2001. We note in the limitations of the study that: *“This assessment is site specific”* and *“Where data collected by others have been used to support the conclusions of this report, those data have been subjected to reasonable scrutiny but have essentially, and necessarily, been used in good faith.”*⁶⁵

Since the geological data was collected by Sydney Gas in the course of its drilling and testing operations⁶⁶, like any industry-funded research, it cannot be regarded as independent. This limits the reliability of the data. However the study could provide a supplementary basis for assessing environmental impacts in this early stage of the CGP.

⁶² Tori Shenstone, formerly of Bow Energy, in an address to the Brisbane Ekka 2009.

⁶³ Damien Mavroudis, *Downhole Environmental Risks Associated with Drilling and Well Completion Practices in the Cooper/Eromanga Basins*, Department of Primary Industries and Resources, SA, March 2001.

⁶⁴ C. M. Aitkinson, *Environmental Hazards of Oil and Gas Exploration*, Prepared for National Parks of NSW Inc. Sydney, August 2002.

⁶⁵ CM Jewell & Associates Pty Ltd, *Assessment of Groundwater Impacts of Coal-Bed Methane Development, Cawdor, NSW*, 16th November 2001, p.2.

⁶⁶ CM Jewell & Associates Pty Ltd, *ibid.*, p.1.

AGL should be levied and the funds used by the NSW Government to commission a truly independent assessment of AGL's impact on ground and linked surface water in the CGP to date. Any adverse impacts should be rectified where possible and compensation paid to those damaged by the impacts. Should AGL be found to be adversely impacting ground and surface water with its current methods of operation then it should be denied further expansion of its CGP operations.

3.2.2.1. CGP Stage 3 Northern Expansion

The EA for this proposal assumes no below ground risks even though this is the area of most concern at present. No site-specific hydrogeology assessment of the area was conducted for the EA, with AGL relying instead on general knowledge of the Sydney Basin for its assessment of ground and surface water impacts. In our meeting with AGL on December 10th 2010, AGL's hydrogeologist admitted that without a specific study he could not say how dams (including the historic dams across the Varro Ville estate, which he was unaware of) were fed, and he could not rule out the possibility of natural springs in the area. It follows therefore that AGL cannot rule out ground and surface water contamination in this fragile environment.

In the same meeting on 10th December 2010, AGL indicated that it would be conducting a baseline assessment and groundwater monitoring in Stage 3 (though this was not included in the EA). We wrote in our Submission to the DoP on the CGP Stage 3 that we did not accept this as a condition of approval for three key reasons: (1) we have no confidence in AGL's ability to self-monitor based on its past performance, (2) we question whether a true base line could now be taken given that AGL has already explored for gas in the area, and (3) most

importantly, baseline monitoring of Stage 3 makes the Scenic Hills and the surrounding suburbs of South West Sydney the ‘guinea pig’ for future developments...but at what cost?

The preciousness of water in this area (demonstrated by its tendency to severe droughts - see section 3.2.3.1) when combined with the small size of current landholdings, risks their viability. Damage to essential streams, dams and catchment and/or any reduction in water supply in this fragile area would spell the end of the Hills as we know them, destroying the viability of its rural activity with a domino effect on its heritage and other land uses.

Ignoring our submission and a subsequent letter to AGL asking it to not progress this study prior to project determination, AGL has proceeded to set up the baseline water study in the Scenic Hills at the furthestmost point of the Northern Expansion in the Sydney Metropolitan Area, adjoining some of the most valuable real estate in the South West. In doing so it undermines the determination process, giving the impression that nothing has changed in the NSW Department of Planning since the change of government in March this year. As the Minister for Planning has announced that the CGP Stage 3 will be determined by the ‘Independent’ Planning Assessment Commission (PAC) – a structure that was set under the previous government and, we understand, with appointees by the previous government, AGL could be forgiven for believing that it is ‘business as usual’ since the PAC has never declined any CSG projects. This does not restore the community’s faith in government processes.

3.2.3. Accidents affecting surface water, soil and air

On 24th November 2010, Cate Faerhmann MLC asked the Minister for Transport, representing the Minister for Climate Change and Environment to supply details of complaints to DECCW

in relation to coal seam gas activities. Of the 35 complaints *“where CSG is the only activity at the site”*, approximately half (17) relate specifically to the CGP. Note that this does not include complaints to AGL or self-reports of incidences or accidents to the Environmental Protection Authority - now the Office of Environment and Heritage (OEH).

Our concern is that the current monitoring regime in Australia that effectively allows CSG companies to self-monitor and self-report means that the number of accidents or incidents may be under-reported. This concern has been reinforced by AGL’s recent Sugarloaf Well 3 incident along Menangle Road near Campbelltown.

The incident on May 17th 2011 was publicly observed as a coal seam gas well ‘blowout’ and was caught on camera by a Channel 10 News crew accompanying Greens MLC Jeremy Buckingham on a tour of the Camden Gas Project in Sydney’s South West. According to witnesses and AGL statements, a routine well maintenance procedure was in progress when a foamy liquid was propelled into the air from a degasser on a mud tank unit attached to the well and was carried by winds blowing in the direction of residential housing in the suburb of Glen Alpine and of Sydney’s water channel, the Upper Canal.

AGL eventually reported the incident to the OEH two days later on May 19th. AGL initially claimed in the media that it was an accident that should not have happened. However in the subsequent CCC meeting of 16th June 2011 AGL management admitted that AGL had not originally reported it to the OEH because it did not think it had done anything wrong and only reported later when it realised it had been filmed and that there would be community

concern.⁶⁷ This was supported by the TV footage which did not suggest that the staff on site were concerned.

At Mr Buckingham's request, the NSW Government conducted an inter-agency investigation, and, contrary to AGL's view, found that AGL had **not** met a condition of its Environment Protection Licence, specifically that the degasser was "*not being operated in a proper and efficient manner*", but since there was "*no significant harm to the surrounding environment*" only a formal warning was issued to AGL Upstream Investments Pty Limited.

This has raised many concerns for the community.

The first is that AGL was allowed to engage its own consultant and investigate itself, even though it had admitted in the CCC that it did not think it had done anything wrong, which goes to the integrity of the process.

Secondly it left many unanswered questions:

- If AGL was only using harmless biodegradable soap, as it claimed, why was the grass in the area 'discoloured'?
- Was contaminated waste water from the well, and methane vented to the air as well?
- Did AGL on-site operators allow these contents to vent to the air deliberately?
- To what extent was the investigation compromised by the delay in reporting and the lack of independent resources to investigate?

Thirdly we do not believe that a 'warning' provides sufficient disincentive to stop coal seam gas companies from engaging in 'sloppy' practices, including in this case:

⁶⁷ Note that this admission was not recorded in the Minutes of the meeting giving ongoing concern about the nature of the minute-taking for the CCCs. This has been raised with the Independent Chair of the CCC in writing by SHA.

- a. Failure to report the incident until two days after the event.
- b. Breach of its conditions of operation, and in the vicinity of ‘critical public infrastructure’ (i.e. Sydney’s Upper Canal).

Finally and most importantly, AGL’s admission that it did not initially report the incident because it did not believe it had done anything wrong raises the possibility that there have been an unknown number of other incidences that were **not** reported because they were not caught on camera, but with a potentially cumulative adverse impact on the environment.

This concern was reinforced in the CCC of 16th June 2011 when AGL reported another incident where contaminated water had poured into a paddock because it claimed its facilities had been “*vandalised*” (a hose had been removed). AGL said that it wondered if it had been ‘set up’ by an environmental group and immediately reported the incident to both the police and the OEH. The spill had been exacerbated by the presence of “*shallow aquifer*”. Note again (and worryingly) that these comments were not recorded in the Minutes of the CCC, which goes to the integrity of the CCC as a community forum.

Our other concerns are:

- If AGL had **not** suspected it had been ‘set up’, would it have reported the incident?
- If AGL is unable to provide security for its facilities, then should it be operating in densely populated areas close to, or in, urban areas?
- AGL has claimed that shallow aquifers are unlikely given the geology of the area, yet this demonstrates not only the possibility of these, but the problems that can occur as a result.

These incidences indicate to us, and contrary to its public statements, that AGL probably only takes its environmental obligations seriously when it believes it may have been ‘caught out’. We would be interested to know how many other incidents have been ‘self-reported’ when there was no public or official third party observance.

3.2.3.1. CGP Stage 3 Northern Expansion

Concerns relating to the possibility of accidents and other risks to air, soil, surface and groundwater in the Scenic Hills and surrounding suburbs of the *surface* and *subsurface* area of the CGP Stage 3 are documented in public submissions to the DoP on AGL’s EA for this project – notably, submissions from SHA, Campbelltown City Council, the Carmelite Nuns, Serbian Orthodox Diocese, NSW Office of Water, DECCW, and the Sydney Catchment Authority (SCA). The SCA has documented its concerns for Sydney’s water canal (the Upper Canal) along which AGL plans to run its main gas gathering spine line, and adjoining which it plans to put clusters of wells. As critical public infrastructure, and Sydney’s back-up water supply it is inconceivable that any coal seam gas company would be allowed to locate such dangerous and unproven industrial activity in its vicinity.

We also note the project’s potential to impact upon matters of National Environmental Significance, including three threatened ecological communities and 41 Commonwealth listed threatened species, four endangered ecological communities and one critically endangered (Cumberland Plain Woodland) and a total of 52 threatened and migratory fauna species amongst others. AGL’s Preliminary EA recommended the project be referred to the

Commonwealth for assessment under s70 of the *Environmental Protection and Biodiversity ACT 1999* (Cth), but this was omitted from the EA that went on Public Exhibition.⁶⁸

The area has a long history of severe droughts since colonial times, and indicative research on rainfall patterns (Attachment A) supports the local view that it may be in a localised rainshadow. When considering the small size of the rural holdings in the Hills and the dispersal of endangered or threatened species (flora and fauna) this means that any damage to its soil or surface water could have a catastrophic effect on the viability of the Environmental Protection area.

Finally at both a practical and symbolic level, the Hills are regarded locally as the ‘lungs’ of Campbelltown in an area that, due to its geography, geology and (some would reasonably contend) past planning mistakes, already suffers unacceptably high levels of air pollution and lung related disease. Cumulative pollution impacts, along with any damage to the viability of rural activity and the associated biodiversity of remnant, *critically endangered* Cumberland Plain Woodland in this fragile environment, would result in the destruction of the Hills as a greenspace buffer zone so vital to the community.

In summary, we question whether this area could tolerate even **one accident** such as occurred in Dalby (and elsewhere) within the fragile Environmental Protection zone, near sensitive land use, state and nationally-listed heritage, urban amenity, critical public infrastructure, and adjoining or in residential suburbs.

⁶⁸ We wrote to the Federal Minister for the Environment, the Hon. Tony Burke, on 1st March 2011 asking him to call in the project under the relevant legislation.

Since it also seems that AGL is unable to secure its facilities, the probability of accidents seems to be unacceptably high.

3.2.4. Environmental Compliance

Compliance is clearly a problem and the process and penalties (lack of) need to be reviewed.

Until SHA raised the issue this year, the twice yearly Independent Audits that AGL is obliged to conduct and publish on its website (2007-2008 and 2009-2010) were absent. The 2009 – 2010 report has still not been published. Additionally the minutes of the CCC's were not being published on AGL's website (as required) until SHA raised it. This reflects on both the OEH and the CCCs since both have obligations to review the environmental performance and compliance of the respective CSG mining companies (though the latter has no statutory obligations).

There is also a problem of lack of independence in the monitoring, reporting and auditing process. If a CSG mining company commissions a consultant to perform these tasks, then they are not independent and the process is compromised. This is particularly the case when the same consultant is used by a CSG mining company for a variety of purposes such that the CSG mining company becomes a valued client of the consultancy. Further, who is auditing the auditors?

On the 31st August 2011, Channel 7 News in Sydney ran a story outlining on-going breaches by AGL of the conditions of its Environmental Protection license at its Rosalind Park treatment plant. Channel 7 quoted documents sourced using a Freedom of Information request that showed AGL had exceeded the limits for hazardous waste stored on site at the

plant, and had emitted 30 per cent more acid-rain causing sulphur oxides than allowed, breaching its license conditions for three years running. Correspondence between the Environment Department and the Rosalind Park plant obtained by Seven News said: *"The long-running nature of these non-compliances is unacceptable and must be addressed."*

On the 2nd September the Group General Manager for AGL Upstream Gas Division, issued a statement claiming that the Channel 7 News coverage had been misleading, saying:

"AGL's Rosalind Park Gas Plant's emissions are required to comply with a level set by the Office of Environment and Heritage (OEH). The initial compliance level set in 2004 by the EPA was a maximum emission level of 1 milligram per cubic metre of sulphur trioxide (SO₃).

In 2010 AGL noted to the OEH that in NSW the PROTECTION OF THE ENVIRONMENT OPERATIONS (CLEAN AIR) REGULATION 2010 set a maximum emission level of 100 milligrams per cubic metre of sulphur trioxide for commercial and industrial activities which commenced operation after 1 January 1972. It became evident to both AGL and the environmental regulator that the sulphur trioxide levels for Rosalind Park had been set too low.

In consultation with OEH and other state departments, the licence conditions were modified and the levels were adjusted in accordance with current EPA requirements."

SHA checked with the OEH and was given a subtly but significantly different version of this. SHA was told that the OEH tries to achieve best practice operational targets when setting guidelines for industry (rather than just allowing them to operate at the maximum). AGL had originally agreed the benchmarks that it could achieve with its plant operations as part of the approval process. However it subsequently became clear that AGL could not meet the

original environmental benchmarks it had agreed to, so the benchmarks were changed to allow them to be met.

This is somewhat different to the statement issued by AGL and again causes concern about how AGL discloses its operations to the public. Further, while the OEH is apparently happy with the subsequent agreement, this incident raises issues about discrepancies between what AGL claims during the approval process and what may subsequently occur. **This goes to the heart of community confidence in the approval process and its subsequent monitoring and management.**

AGL made no comment in its statement about the other environmental breach featured in the news story, i.e. storage of waste on site.

3.2.4.1. CGP Stage 3 Northern Expansion

Since we contend that just one accident could have unacceptably disastrous consequence in this area, how it is reported after the fact is irrelevant.

The issue is that even with an efficient, independent monitoring regime (should this be achievable), accidents can still happen. Applying the precautionary principle, AGL's application to expand into this area and the Sydney Metropolitan Area generally, should be denied.

4. LEGISLATION AND REGULATIONS

As we are not legal experts our comments here are based on our observations and our experience as a community being threatened by this industry and the difficulties that this has caused us.

4.1. Facilitation vs. Regulation

Our first observation is that the legislation and regulations governing this industry seem to be more about **facilitating** this industry rather than **regulating** it. This has resulted in legislation that overrides other legislation in favour of the CSG mining companies, in a complex layered web that appears to be difficult for even lawyers to interpret and apply, let alone the community. It also creates a clash of legal rights that undermines the moral underpinning of our legal system and of specific legislation. People's outrage is based on the injustice of the current situation that provides different rules for different members of the community on the same issue.

4.1.1. Landholder property rights

Landholders in Australia understand that they do not own the minerals underground and that the government may give another company the rights to these. However the reverse of this assumption is that landholders have exclusive access to what lies on top. CSG companies cannot extract their gas without taking over part of, and in the process compromising, what landholders understand to be theirs at the surface. This is unworkable.

4.1.2. Community Rights through Local Planning

CSG mining is not just about landholder rights. No landholder can do what they like without regard for the Local Environment Plan (LEP) and Development Control Plan (DCP) of its local

Council. Otherwise planning madness would ensue. Yet CSG mining companies can by-pass local controls to turn any area into an industrial zone merely by securing (by legal force if necessary) access agreements with landholders, and development consent from the state government under “state significant” legislation, overriding local planning. Other landholders who have bought into an area accepting to abide by the rules and restrictions of the zoning can feel rightly outraged at the inequities.

4.1.2.1. AGL’s proposed CGP Stage 3 Northern Expansion

AGL has classified its project as a major project under Group 2 Clause 6 of the *State Environmental Planning Policy (Major Development) 2005* (SEPP 2005) and a project to which the Part 3A of the *Environmental Planning and Assessment Act 1979 (NSW)* applies. The application was made before the change of government in March and is subject to the transitional arrangements put in place by the new government.⁶⁹

Despite this, AGL has established its permissibility with reference to the LEPs of Camden and Campbelltown. *Extractive industries* and *mines* are specifically prohibited in the LEP for the Environmental Protection Area of the Scenic Hills which comprises the surface area for the CGP Stage 3. However AGL has referenced the Model Provisions in both LEPs to establish that its project is a *public utility undertaking* or *public utility installation*, and therefore does not require development consent for its activities.

⁶⁹ The NSW Minister for Planning is the determining authority, but has delegated his authority to decide those pending Part 3a applications that have been classified as ‘controversial’ to the ‘Independent’ Planning Assessment Commission (PAC). ‘Controversial’ is defined as having received more than 25 submissions or the local Council objects. Since in this case the local Council objects, the CGP Stage 3 will be sent to the PAC for determination.

Not only does this appear entirely disingenuous from the community's point of view, but SHA has received legal advice that AGL's interpretation of the applicable legislation is not correct and is subject to challenge. We note that should this be the case then it has implications for prior Stages of the CGP.

Finally we note that in 2005, a specialist consultant, having identified four key hazards of CSG mining in the Wyong area by Sydney Gas Ltd (now incorporated into AGL) concluded, *"Consideration should...be given to classifying coal bed methane sites as **industrial chemical sites** [our emphasis] controlled by the relevant regulations."*⁷⁰

This is a long way from being the benign *public utility undertaking* that AGL claims for this project and the consequent regulations it expects to operate under in the Scenic Hills Protection area.

4.1.3. Water Legislation

Rural and semi-rural property owners who have experienced restrictions on bore drilling and usage and who have been willing to work with government authorities to conserve water have been rightly outraged that CSG companies have been given free rein to draw water at will from the coal seams, where these affect other aquifers. It is hard to see how if the CSG industry had to operate under the same restrictions it would be able to continue. Concerns about recycling and reinjection suggest that these are not the answers - begging the question whether in such a dry continent, CSG as an energy alternative should not be questioned in the same way that water intensive agricultural crops such as rice are being questioned.

⁷⁰ C. M. Aitkinson, *Coal Bed Methane Hazards in New South Wales*, Prepared for Tony Davis & Associates, Australian Gas Alliance, New South Wales, January 2005, p.3.

4.1.3.1. AGL's conduct of the CGP to date

AGL has apparently been allowed to conduct the CGP up to now (and ongoing) without any water usage restrictions. The NSW Office of Water (NOW), in its submission on the CGP Stage 3, noted *“at present AGL have made licence applications **for their existing well field**, which are still undergoing assessment. These applications included application for the 30ML/year entitlement referred to in the EA. As such, the proponent does not currently hold the entitlement as claimed in the EA.”*⁷¹

4.1.4. **Environmental Controls**

As covered extensively in the section 3.2.4, the community can have no confidence in these controls when they are altered to allow CSG mining companies to comply after approval. The agreement of controls as part of the approval process that are later found to be too difficult for CSG mining companies to comply with (or because the technology cannot measure them) suggests that the CSG mining companies, along with our government agencies, are either incompetent or are disingenuous in encouraging the community to accept these projects on the basis of minimal environmental impact. The example in section 3.2.4 refers to AGL's operation of the Rosalind Park gas treatment plant as part of the CGP Stage 2. Rosalind Park is also proposed as the treatment plant for the CGP Stage 3 - assuming AGL can work out how to get its gas back under pressure to it (unspecified in the EA for the CGP Stage 3).

⁷¹ Covering letter, *Major Project Application, Camden Gas Project - Stage 3 (09_0048)*, NSW Office of Water, 6th January 2011.

4.2. Monitoring, Compliance and Penalties

As outlined in prior sections of this submission, AGL's breaches of its operating conditions and/or breaches of other regulations not contained in its operating conditions, that have apparently continued for years without being identified and/or corrected, signal the failure of the current monitoring and compliance regime that allows CSG mining companies to effectively self-monitor, self-manage, and self-report. It is hard to recall any other industry that is allowed to operate in this way and we wonder what might have happened during the recent Global Financial Crisis (and before) had Australian financial institutions been allowed to operate accordingly.

When this is combined with recent PAC planning approvals that allows CSG mining companies to follow an 'adaptive management' strategy⁷², such as AGL's Gloucester Gas Project on the 22nd February this year, then this is extraordinarily irresponsible on the part of government.

It is further exacerbated by the absence of appropriate penalties for breaches, or by the wide discretion, combined with a lack of will on the part of government to apply penalties.

No amount of legislative change and/or the imposition of comprehensive operating conditions will change the current situation without truly independent monitoring by an independent body with wide powers to investigate and a non-discretionary application of appropriate penalties, including cancellation of exploration licences and production leases and jail terms for executives and directors.

⁷² Defined in Wikipedia: "**Adaptive management** (AM), also known as **adaptive resource management** (ARM), is a structured, iterative process of optimal decision making in the face of uncertainty, with an aim to reducing uncertainty over time via system monitoring. In this way, decision making simultaneously maximizes one or more resource objectives and, either passively or actively, accrues information needed to improve future management. Adaptive management is a tool which should be used not only to change a system, but also to learn about the system (Holling 1978). Because adaptive management is based on a learning process, it improves long - run management outcomes. The challenge in using adaptive management approach lies in finding the correct balance between gaining knowledge to improve management in the future and achieving the best short - term outcome based on current knowledge (Stankey & Allan 2009)". http://en.wikipedia.org/wiki/Adaptive_management

The CSG mining companies cannot be allowed to give the appearance of ‘independence’ merely through outsourcing the monitoring and reporting activity to consultants it selects and pays fees to. This must also apply to the studies that are done as baselines for monitoring, such as hydro-geology studies. The CSG mining companies have an interest in the outcome and should not be allowed to conduct these themselves, with or without outsourcing to experts.

The CSG mining companies should be levied to pay for these studies and for the monitoring, to ensure that the economics of the industry are properly constructed and the industry does not effectively get a subsidy at taxpayers’ expense.

A single responsible monitoring body would also ensure greater government accountability for monitoring and management of breaches by CSG mining companies, and would facilitate better complaint reporting from the community. Currently complainants are worn down by the complexities in determining which government department is responsible for which area of CSG mining – apparently, at the moment, divided between four NSW Departments: Resources and Energy, Primary Industries, OEH and Planning. This division also means that no one is entirely responsible or accountable when there is a problem and complainants just get forwarded from one department to another.

4.3. Community Consultation, Transparency and Language of Disclosure

We are deeply concerned that there are insufficient legal constraints on the way in which the CSG mining industry discloses its activities to the public, and the consultation process it conducts with landholders (for access arrangements) and the community generally. This not only disadvantages landholders and others in the community but creates deep distrust.

4.3.1. Language

People can make innocent mistakes or be unclear in their communication without it being intentional, and many of us are guilty of ‘styling’ our case (SHA included).

However our concerns are with more serious issues relating to way CSG mining companies advise the public on matters that concern the public’s financial well-being, safety and health, where that communication misleads through:

- omission,
- the use of certain words,
- spin, and
- being **factually correct** while **contextually misleading**.

The following are some examples in our dealings with AGL. Others have been documented in previous sections of this submission.

AGL frequently uses the word “*independent*” when referring to consultants that are employed and paid by AGL to fulfil a specific task. In other words these consultants are ‘third party’. There is a difference between ‘outsourcing’ and independence.

Likewise AGL frequently uses, (in its EA for the CGP Stage 3 and in its CCCs) vague terms. In the CCC 25th November 2010, the SHA representative stated “Given the potential risks moving into Sydney, the community needs to have far more assurance than ‘in most’ or ‘potentially’. What are the circumstances, we need firmer language...”⁷³

⁷³ *Minutes of the Community Consultative Committee, AGL – Camden Gas Project, Meeting No. 27, 25th November 2010.*

In the Public Forum held at Campbelltown on the 25th June, 2011, AGL's Group General Manager, Upstream Gas refuted the claim in a video that gas companies can forcibly access landowners' land, saying that gas companies need access agreements. He omitted to say that landholders are legally obliged to negotiate access agreements and that ultimately the vast majority cannot stop gas companies coming onto their land (which was the message in the video). Omitting these facts was highly misleading and was corrected by SHA at the meeting.

In an AGL advertisement in the Macarthur Advertiser on the 7th September 2011, AGL claimed that recent media reports about the Camden Gas Project were misleading. In addition to statements about Rosalind Park (referred to in the previous section), AGL's Group General Manager, Upstream Gas wrote *"I completely reject media claims that AGL would drill gas wells within 20 metres of residential homes...all new wells must be constructed at a minimum of 200 metres from the nearest existing home."*⁷⁴ This is factually correct but contextually misleading as it would lead people to assume that they will not have wells closer than 200 metres. This is not correct, and was not what the media story was about. It referred to the distance that houses can be built from existing wells that have already been sunk.⁷⁵

4.3.2. Significant Errors of Fact in Environmental Assessments (EA)

There appears to be insufficient legal redress or disincentives regarding misleading information provided in EAs. AGL's EA for the CGP Stage 3 contained significant errors of fact that were potentially misleading to decision-makers. We reiterate some examples below:

⁷⁴ "It's time to set the record straight", Macarthur Advertiser, 7th September 2011, p.14.

⁷⁵ Refer *Locational Guidelines: Development in the Vicinity of Coal Seam Methane Wells*, NSW Department of Infrastructure, Planning and Natural Resources, May 2004.

- In the Main Report, on page 1-6, AGL claims, *“During the preparation of this EA, key stakeholders were identified. These stakeholders included local community groups as well as key government agencies. Throughout the preparation of the EA, these stakeholders have been kept informed of the progress of the Project and issues raised by these stakeholders have been addressed as part of the EA.”* The EA further states (Main Report page1-8), *“Well surface locations, gas gathering lines and access roads have been chosen in consultation with landowners... (Main Report, page 3-4) to accommodate the primary existing land use.”*

While AGL responded to SHA’s request for meetings **after** the EA went on public exhibition and invited SHA onto its Community Consultative Committee, SHA was **not** included in the preparation of the EA and we are not aware of any other community groups in the Stage 3 area that were consulted. Further, other landowners, in their submissions to the DoP have complained that they were not consulted about having wells on their land at all, or were not advised that AGL intended to put wells on their land and only found out from others after the Public Exhibition had closed (Serbian Orthodox Diocese).

- In the Main Report page 8-8, in referring to the ‘undeveloped’ and ‘agricultural’ land in the *surface project area*, AGL states, *“Much of this land has been rezoned or is proposed to be rezoned under a Draft LEP. It is therefore important to note in this regard that planned future growth in the area will result in large portions of currently undeveloped land being released and developed for a variety of land uses, thereby resulting in the loss of existing rural and agricultural land.”* This statement is not

correct and would reasonably lead decision makers to dismiss community concerns about impacts on rural activities or threats to the Environmental Protection area.

- The NSW Office of Water (see section 4.1.3.1) in its submission noted that AGL made an incorrect claim to hold a 30ML/year water entitlement when it had no such entitlement or water licence.
- AGL omitted to carry over to the EA that went on Public Exhibition, from its Preliminary EA, the consultant's recommendation that the CGP Stage 3 be referred to the Commonwealth under s70 of the *Environmental Protection and Biodiversity Act 1999* (Cth). The Preliminary EA specifically stated that the project had the potential to impact upon matters of National Environmental Significance in relation to threatened species and ecological communities.⁷⁶
- AGL has admitted to SHA⁷⁷ that it does not know how to get its gas back under pressure to its Rosalind Park gas treatment plant from up to 60% of its planned wells since the previous Minister for Planning (Tony Kelly) vetoed a new plant in the Scenic Hills. To do so it will need either infield compression or it will have to reapply for permission to build a gas plant. These facts were not included in the EA and their omission would reasonably lead the community to underestimate the ultimate impact of the development. The absence of comment, resulting from the community's inability to comment on a project that is not fully specified, is potentially misleading to those responsible for the project's determination.

⁷⁶ Preliminary Environmental Assessment for the Camden Gas Project Stage 3, Northern Expansion prepared by AECOM for AGL Gas Production (Camden) Pty Limited, 5th February 2010, p.27.

⁷⁷ Meeting between SHA representatives and AGL Management, 10th December 2010.

CSG mining companies should not be able to put on Public Exhibition documents with the potential to mislead, leaving it up to others to discover the errors and omissions, but with no repercussions for the mining companies. This could induce dangerous and irresponsible game-playing by the CSG mining industry. We understand that some legal penalties apply for deliberately providing misleading information in the EA but that the onus is on the complainant to prove that it was done deliberately.

Severe penalties should apply where incorrect information or omissions could reasonably be held to have a significant impact on the determination.

4.3.3. Community Consultation and Landholder Access Agreements

There is a need for legislation to ensure that CSG mining companies do not mislead communities and landholders in the process of establishing or expanding their operations, through landholder access agreements or through formal community consultation: the Community Consultation Committees.

4.3.3.1. Landholder Access Agreements

We have received a number of complaints, and there are further complaints in landholder submissions to the DoP about the way AGL went about securing landholder consent to putting CSG wells and infrastructure on their land. The process appears to be one of ‘selling’ rather than properly ‘informing’ landholders and communities about their rights, about AGL’s proposed activities and the likely impacts and possible risks.

To be valid, landholder access agreements should be accompanied by a signed statement from the landowner that they have received and read a document compiled by the

government outlining landholder rights and other important information. This would be similar to the arrangements in place between Real Estate Agents and their Vendors.

If possible, all existing landholder access agreements should be reviewed to ensure adequate compensation, remediation and insurance against damage to properties including water, with these being struck down where there are clear signs of deception or unfair negotiations.

We support the call for landholders to be given the right to say no to having CSG wells and other infrastructure on their land, but do not support the reverse, i.e. the right of landowners to say yes where this is contrary to the local zoning and local DCPs.

4.3.3.2. Community Consultative Committees (CCC)

These committees are currently set up and approved by the NSW Department of Planning under Department Guidelines.⁷⁸

Given the conflicts between this industry and other land use it is hard to imagine that these committees could be anything other than somewhat dysfunctional. However we note that they are intended to be set up once a mining project has been approved. Therefore our comments should apply only to committees where existing projects are in operation and need to be managed, and/or where there is future agreement about where CSG mining can co-exist in communities based on a full investigation into the science. Committees that were established to oversee exploration licences are a grey area and are bound to produce a great deal of conflict where the community has had no input into the approval process and there has been minimal legislative oversight.

⁷⁸ *Guidelines for Establishing and Operating Community Consultative Committees for Mining Projects*, NSW Department of Planning, June 2007.

Our experience on AGL's Camden Gas Project CCC is that it is not being run in accordance with key aspects of the Guidelines which may have implications for other CCCs as there appears to be no quality control in place to ensure the proper running of the CCCs. In the time that SHA has been sitting on the CCC, we have observed that AGL is **not** fully complying with its responsibilities under the Guidelines, with no one (other than SHA) requesting that compliance, including the provision of Independent Audits (not provided since 2006 as at the last CCC in June), and the posting of the CCC Minutes on AGL's website. In our time on the CCC, AGL has mostly not provided *"timely, accurate or comprehensive reports on their operations"* and AGL has not responded within 28 days to SHA requests in the CCC.

Additionally the CCC does not appear to be properly constituted in terms of the number of community representatives (given the three LGAs represented, the community is under-represented), the types of representatives, nor the recommended selection process. AGL appears to be nominating who it wants onto the CCC, thereby compromising the CCC's integrity as a community forum. There is no declaration of pecuniary interests in the meetings (to the extent that these exist), and SHA has raised deep concerns about the quality and accuracy of the Minutes, requesting that these be audio-recorded for accuracy if the current guideline that AGL records the minutes remains in place.

We recommend that the Guidelines and their implementation be reviewed, as our experience suggests that the current system, together with non-compliance with key aspects of the Guidelines, seems designed to facilitate the progress of this industry rather than provide a balanced and constructive dialogue between the community and the CSG companies.

5. CONCLUSIONS AND RECOMMENDATIONS

In addition to the specific conclusions and recommendations contained in other parts of this submission, particularly in Sections 3 (Environmental and Health Impacts) and 4 (Legislation and Regulations), we make the following summary comments:

5.1. Conclusions

In our investigations into the operation of the Camden Gas Project to date, along with the proposed CGP Stage 3 Northern Expansion into the Sydney Metropolitan Area, the CSG mining industry generally, and AGL Upstream Gas in particular, has not proved to us that it can operate **safely** and **economically** at the same time, or without significant harmful and irreversible impacts on other land use and the environment (natural and cultural).

The economic viability of the CSG mining industry has been propped up by significant ‘corner-cutting’ (absence of proper planning including absence of site specific hydrogeological data prior to drilling), absence of appropriate monitoring and penalties for breaches of operating conditions, non-compliance with conditions of approval and environmental obligations, poor landholder compensation, poor or no compensation for long term environmental damage or damage to community property values, augmented in NSW by a royalty holiday. Should the industry be obliged to carry out proper planning, be banned from using inappropriate techniques such as ‘fracking’, be levied for monitoring, have their landholder negotiations standardised, be obliged to pay proper compensation etc. we wonder if it would stand up economically as the viable ‘transition’ fuel that the CSG mining industry currently claims.

Even if it did, the monitoring regime that has allowed CSG mining companies to effectively self-monitor and self-report, means data collection to date is compromised and cannot be relied on. Experts from many areas, water, soil, agriculture and medicine seem to agree that the science is not yet there to support claims that this industry can operate safely anywhere, and we doubt that accidents can be avoided.

Further we have seen no proof that the CSG mining industry can ‘make good’ damage caused to aquifers, linked surface water, soil, heritage, alternative land use, communities, health and threatened and endangered species of flora and fauna.

It has significant land use conflicts suggesting that there will always be friction outside designated industrial zones. Even with proven safety it clearly cannot operate anywhere and everywhere as its proponents claim.

Finally its greenhouse credentials are now under a cloud, with admissions by government bureaucrats and scientists that there is no credible scientific support for the industry’s claim that CSG is the clean energy alternative to coal. The required studies have not yet been done. However indicative studies into shale seam gas mining from the USA suggest that CSG’s benefits relative to coal either do not exist or are too marginal to consider it a ‘transitional fuel’ in the short term.

With the evidence to date we believe that the NSW government would be recklessly endangering communities, health and the environment and compromising the lives and livelihoods of future generations to allow the industry to continue to expand **anywhere** without more research.

We also support the view that continuing to invest in such a dubious energy source that we know is not a sustainable solution for our energy needs, only draws investment from renewables that could provide that solution. The sooner we make the move to renewable energy sources that do not cause significant land use conflicts, the better it will be for everyone. If our generation has to undergo some pain for the benefit of future generations then it will be supporting a long and admirable tradition in Australia.

5.2. Recommendations

Given the lack of evidence supporting the continuation of this industry, we support the following:

There should be a moratorium on **further expansion** of CSG mining in NSW. This would apply not only to the issuing of further petroleum exploration licences (PELs), but to the expansion of existing projects under existing petroleum production leases (PPLs). The moratorium would remain in place until a fully independent enquiry can establish the true impacts of the CSG mining industry (and its controversial use of hydraulic fracturing) on health (human and animal), the environment – particularly water resources, other land use, heritage, communities, land ownership and land values, along with its greenhouse credentials and economic viability. Our policy has always been that this be a Royal Commission of Inquiry, but we are grateful for the present NSW Upper House Inquiry if it remains truly independent and comprehensive.

During this time, and for existing projects, an independent monitoring body should be established by government with sufficient staffing and powers of investigation, and ability to apply non-discretionary penalties for breaches of operating conditions. Its first task should be to

investigate the operation of all existing PELs and PPLs, and where there are numerous, significant and on-going breaches of the operating conditions that have caused/are causing significant damage, as above, that these be cancelled or suspended until the above Inquiry is completed, and that remediation and compensation be levied from perpetrators.

Since it is socially and economically beneficial to both the CSG mining industry as well as communities to provide certainty on planning matters as soon as possible, where the evidence exists now to ban CSG mining in certain areas based on significant land use conflicts and/or the application of the precautionary principle, then those decisions should be made immediately. These early decisions should in no way suggest that CSG mining can expand into other areas before the science has been established to prove that it can do so safely, economically and without causing damage to those communities, and before the appropriate legislation and monitoring is in place.

Under the precautionary principle, there should be a blanket ban on the use of hydraulic fracturing ('fracking'), including in existing projects.

Finally, as strategic regional land use planning must be based on the science (which is not yet there for the CSG mining industry), the role of this planning should be to determine those areas where the government can prohibit it now based on significant land use conflicts and/or the application of the precautionary principle. Planning should include all major land use and geographically affected areas and include representation in the Reference Group for non-aboriginal heritage, urban agriculture, and inclusion of other key regions in NSW subject to the rapid expansion of CSG mining.

5.2.1. The Camden Gas Project Stages 1 & 2, and proposed Stage 3 Northern Expansion

As our findings, conclusions and recommendations were derived from our experience of the Camden Gas Project, there can be no exception here. The CGP stages 1 & 2 should be subject to a moratorium and to investigations into AGL's compliance under the existing PEL and PPLs and into any damage that might have been caused, particularly to ground and surface water. Like all other CSG mining companies, AGL should be made to pay compensation and make good any damage it has caused.

The Macarthur area with its heritage, extensive urban development and potential role in urban agriculture should be included in the next 12 months strategic planning, along with suitable expert representation in the Reference Group.

Applying the precautionary principle and appropriate land use planning, the proposed CSG Stage 3 Northern Expansion application by AGL should be denied, given its location in a major urban area with pre-existing social and health problems, the proximity of the project to critical public infrastructure (the Upper Canal), the significant planning and land use conflicts (including rare heritage), and the need to preserve agricultural land within the Sydney Basin.

Most importantly we ask the NSW Government to respect the high regard the people of Campbelltown and the South West have for the Scenic Hills as a heritage landscape and urban greenspace, and accord the same status to the South West's cultural and natural assets as it does to those in inner Sydney, such as Centennial Park and the Royal Botanic Gardens.