

**Submission
No 417**

INQUIRY INTO COAL SEAM GAS

Name: Ms Jacqui Kirkby and Mr Peter Gibbs

Date received: 19/09/2011

16th September 2011

General Purpose Standing Committee No. 5
Parliament House
Macquarie Street
SYDNEY NSW 2000

Sent by Email: gpscno5@parliament.nsw.gov.au

Re: General Purpose Standing Committee No. 5 - Inquiry into coal seam gas

Dear Sirs:

My husband and I are the owners of the heritage-listed Varro Ville House situated in the Scenic Hills Environmental Protection (Scenic) zone in the Campbelltown Local Government Area (LGA) where AGL is proposing to put 72 coal seam gas (CSG) wells and associated industrial infrastructure as part of its Camden Gas Project (CGP), Stage 3 Northern Expansion (pending Part 3a application).

We are also part of the wider Macarthur community where the CGP has been operating for ten years, firstly under Sydney Gas Ltd., and now under AGL Energy Ltd. This is an area with rich layers of history, both aboriginal and colonial, and the birthplace of the NSW pastoral industry.

We have been involved in heritage for much of our lives and are members of the Furniture History Society, Australian Garden History Society, the Australiana Society, and the Royal Australian Historical Society.

We are also members of the Scenic Hills Association (SHA), an association of landholders and residents in and adjoining the Scenic Hills of Campbelltown, whose aim is to protect the Hills area as important landscape heritage not only for Campbelltown and the South West, but for

the State of NSW. As our issues are largely covered by the SHA submission, this submission seeks merely to supplement it with a further perspective on CSG mining's impact on heritage in the Macarthur region generally, and the CGP's potential impact on Varro Ville House...with implications for other heritage in the area. This submission therefore largely addresses the social and economic impacts in the Terms of Reference for this inquiry, with recommendations for government policy and legislation.

The Camden Gas Project Stages 1 & 2

Having moved to the Macarthur area five years ago from the Lower Hunter, we have been dismayed to see the loss of so many of the important colonial estates to development in the South West. This is despite the commissioning of a study that was supposed to lay the foundation for the preservation of these colonial estates and their landscape settings: *Colonial Landscapes of the Cumberland Plain and Camden, NSW: A Survey of selected pre-1860 Cultural Landscapes from Wollondilly to Hawkesbury LGA*, commissioned by NSW Heritage Council in 2000 from the National Trust and prepared by landscape heritage consultants Colleen Morris and Geoffrey Britton.

What was preserved from urban development we now learn may ultimately fall victim to the devastating effects of CSG mining that has been operating in the Macarthur area with inadequate checks on its impacts on groundwater, soil and surface water, and with long term and cumulative impacts unknown¹. Since these old estates depend on the viability of their rural activity for survival, it is particularly concerning to learn that briefs to heritage consultants from CSG mining companies did not alert them to the potential dangers from *subsurface* impacts –

¹ Australian Government: National Water Commission, *Position Statement- Coal Seam Gas and Water*, December 2010.

particularly from hydraulic fracturing - with heritage assessments being made mainly on the visibility of surface activity. Yet, from our research it seems that the Position Statement of the National Water Commission released on December 3rd last year summarises much of what has apparently been known by experts for the last decade².

It is particularly disturbing, given the prominent place in Australia's and NSW's history held by pioneers John and Elizabeth Macarthur (who also gave the district its name), that the NSW government has allowed AGL to sink fourteen CSG wells on the Elizabeth Macarthur Agricultural Institute (EMAI), part of the original Macarthur property now owned by the Department of Primary Industries, that adjoins Camden Park. The irony of subjecting this property to CSG extraction, given the current concerns about CSG mining, is that the EMAI is the Department's Centre for Animal and Plant Health. 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.

This is indicative of the previous NSW Government's disregard for national and state listed heritage, making us wonder what the point of heritage listing is. The NSW Government has taken over a number of key heritage properties in the past to ensure their greater protection, such as Belgenny Farm (EMAI) and Rouse Hill. We now question whether the government is acting in good faith in protecting such state and national assets on behalf of the people of NSW

² See 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, C. M. Aitkinson, *Environmental Hazards of Oil and Gas Exploration*, Prepared for National Parks of NSW Inc. Sydney, August 2002 and 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.

and Australia. We also question the ethics of allowing publicly listed companies to use public assets to make profits for their private shareholders.

Finally as members of the heritage community in general, and the Macarthur region in particular, we are deeply concerned that European Heritage is not represented in the Reference Group for the development of the NSW Strategic Regional Land Use policy with regard to coal mining and CSG mining. At the very least we believe that the National Trust of NSW should have been included. Further while we do not believe that there is a scientifically valid basis for land use planning for CSG mining at the moment, we nevertheless are dismayed that the Macarthur area is not listed as a priority region for land use planning over the next 12 months considering the historic nature of the area and the consequent impact of the Camden Gas Project on so many matters of national and state listed heritage, including not only European landscape and built heritage, but European industrial heritage (e.g. the Upper Canal), natural heritage³ and aboriginal heritage (the Yandel'ora)⁴.

The proposed Camden Gas Project Stage 3, Northern Expansion: impact on Varro Ville House and the landscape heritage of the Scenic Hills

Despite evidence now emerging of known non-compliance with a number of key conditions of approval in prior stages of the CGP, the NSW Department of Planning (DoP) accepted an application last year from AGL to extend its operations into the Sydney Metropolitan Area.

³ SHA has written to the Hon. Tony Burke, Minister for Sustainability, Environment, Water, Population and Communities, (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**).

⁴ http://www.rbgsyd.nsw.gov.au/annan/the_garden/indigenous

If the DoP approves this project, AGL will put up to 72 gas extraction wells with associated industrial infrastructure the length of the Scenic Hills Environmental Protection zone stretching from Denham Court in the north to Mount Annan in the south. The project features horizontal wells that will run for 2.5 km underground from the well heads, drawing gas from seams in a **subsurface** area encompassing about 26 suburbs of Campbelltown and Camden LGAs. AGL plans to run its main gas gathering spine line along Sydney's water canal (the 1880's heritage-listed Upper Canal, carrying Sydney's back-up water supply) and through the Australian Botanic Garden at Mount Annan – the native plant garden of the Royal Botanic Gardens and Domain Trust of Sydney. 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 and its hydraulic fracturing operations. The proposal is locally regarded as an outrage.

The Environmental Assessment (EA) for Stage 3 of the CGP includes Varro Ville House in its "Historic Cultural Heritage Assessment (Appendix J)"⁵ providing only a 'potted history' (with mistakes) that underestimates its importance and arrives at the conclusion that it will not be impacted by the development. We do not agree. While, according to its EA, AGL is not proposing to put gas wells and industrial infrastructure on the former Varro Ville Estate **at this stage** (understanding that Stage 3 is not fully specified in the EA with regard to the location of central water storage points, storage yards and infield compression units), it is not possible to isolate Varro Ville House and other heritage from its context.

⁵ It was apparently excluded from the draft EA and is only included here at the insistence of Campbelltown City Council ("Council").

Varro Ville House and the Northern Expansion

The EA, with its focus on the *Surface Project Area* (rather than subsurface) and its *development envelopes* methodology (which limits environmental assessment to a narrow area around the well locations) is, in our opinion, methodologically flawed (though no doubt financially attractive to AGL). While the EA notes the importance of the house in terms of its heritage listings (National, State, Local and the National Trust⁶), it fails to understand the importance of *context* for historic properties and the complex interrelationship of such properties with their environment. We contend that drilling and gas extraction in the *subsurface* as well as the *surface* area, and both inside and beyond the *development envelopes*, risks the long term survival of the house via its potentially adverse impact on the agricultural and estate features of the surrounding Varro Ville estate, which in turn relies on the viability of the protected rural heritage landscape of the Scenic Hills Environmental Protection area. We further contend that the property (house and estate) is far more significant than indicated in the EA.

Varro Ville's treatment in the EA seems to be indicative of how heritage is generally treated by CSG mining companies.

The Importance of Varro Ville and its setting in the Scenic Hills

Varro Ville House sits at the centre of a largely intact 1810 colonial estate originally of 1000 acres (approximately 800 remaining) that is wholly contained within the Environmental Protection zone of the Scenic Hills. Though now unfortunately separated by subdivision, the

⁶ The National Trust has a special relationship with the house. As a former owner, it incorporated covenants into the Sales Contract based on its own heritage reports, obliging future owners to restore and maintain the house to a specified standard. This is additional information to that included in the EA.

estate and the Hills provide the context and landscape setting for Varro Ville house, without which it cannot be meaningfully interpreted.

The estate was owned by a succession of people important to the establishment of Australia (not just NSW), including the original grantee Dr Robert Townson (Doctor of Civil Laws and the colony's most educated man when he arrived in 1807), Captain Charles Sturt, the famous Australian explorer who made Varro Ville a model of water conservation (which he referenced in his public speeches), Judge Alfred Cheeke (Supreme Court) who, at Varro Ville, trained and bred the horse "Clove" that won the first recorded AJC Derby in 1865 at Randwick, and James Raymond, the first Postmaster General of the Colony of NSW who established a "world first" when he introduced pre-paid postage in 1838. Contrary to what is reported in the EA (one of a number of mistakes) the current house is the third house on the property built under the ownership of Judge Cheeke in 1859. Other agricultural and estate features relate to previous owners and are critical to the preservation and interpretation of its historical development. Little would be left of their ownership were they to be destroyed or compromised.

Varro Ville House and its surrounding agricultural and estate features have been the subject of/featured in numerous reports and writings, including:

1. Orwell & Peter Phillips Architects, *"Conservation Policy Report: Varroville, St. Andrews Road, Minto"* May 1992 (commission by the National Trust of Australia [NSW]), and
2. 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 (commissioned by the NSW Heritage Council and prepared by the National Trust of Australia, NSW, in 2000);

3. *Landscape Analysis* by Geoffrey Britton for Draft Curtilage Study 2007 commissioned by us as the current owners of Varro Ville. This report that has not yet been finalised.

All these reports agree that the cultural significance of the property is bound up with the agricultural and estate features associated with the house, now separated from the house lot.

The importance of preserving the surrounding land also relates to the increasing rarity of the rural heritage landscape in the Cowpastures area, which reminded early settlers of the rolling downs of Wiltshire in England and fed the myths that gave the area its name⁷.

In the groundbreaking report commissioned in 2000 by the NSW Heritage Council and the National Trust, the authors stated *"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** for their ability to demonstrate the interaction of the early European settlers with the Australian landscape..."*⁸

⁷ The Cow Pasture Road 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 – of which Varroville is one. (Note: The specific detail of the above incident varies according to the source but is correct in its overall direction.)

⁸ 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.

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.”⁹

Many of the historic estates in the area that were included in this report are being subsumed and lost forever to development in the South West Growth Centre, including many that featured in Hardy Wilson’s, *The Cow Pasture Road* (Art in Australia, Sydney, 1920)¹⁰.

Fortunately, and until now, the Varro Ville estate and its Scenic Hills landscape setting have been protected by the Environmental Protection zoning of the *Campbelltown Environment Plan (LEP) – District 8 (Central Hills Lands)* which has limited development, preserved the rural heritage landscape and banned inappropriate land use, including a specific prohibition on *extractive industries and mines*. When there have been other attempts to change the zoning around Varro Ville House (e.g. in 2004 and 2007) the NSW Heritage Office (then part of the DoP) has written to Campbelltown City Council urging it to retain the zoning to protect Varro Ville and its landscape setting, noting the ‘superior protective capacity’ of the Environmental Protection zoning¹¹. Council has continually reaffirmed its commitment to retaining the zoning¹² including on December 14th 2010, when Council also rejected AGL’s CGP Stage 3 EA and Application, noting, amongst other concerns, damage to the cultural and natural values of the Scenic Hills.

Were the DoP to override Council’s commitment to the zoning and allow AGL to extend its CGP into the Scenic Hills Protection zone, it would represent a significant contradiction of the

⁹ Colleen Morris and Geoffrey Britton, *ibid.*, p. 97.

¹⁰ Varro Ville was featured in this book with reference to the James Raymond era of ownership.

¹¹ Letter from the Executive Director of the Heritage Office (DoP) to Campbelltown Council, April 28th 2007.

¹² Minutes of Campbelltown City Council Meeting November 13th, 2007.

importance it has previously placed on the preservation of the zoning, ignore the advice it has previously provided to Council, and signal a significant deterioration in its regard for important NSW heritage.

Additionally, were damage to occur to Varro House as a consequence of this project being approved, a problematic situation would arise with regard to Varro Ville House's heritage listing at the State level and by the National Trust. Both of these oblige us as owners of the property to conserve and maintain the property at our own expense – with access to government funding not guaranteed and, in any case, inadequate to cover the actual expense involved. Should the context for the house so degrade its liveability and monetary value, such that our obligations become unreasonable, or harsh and unconscionable, this could have major implications for public policy and the preservation of heritage in private ownership generally, without which much heritage would disappear. This position is particularly problematic if the government (i.e. the NSW State Government) that places these obligations on us is the same government that is responsible for degrading the context. It's hard to see how any private owners would ever again want to put themselves in such a situation.

How the CGP Stage 3 risks damaging the agricultural and estate features of the Varro Ville estate, and threatens the survival of the Scenic Hills

A key feature of the Varro Ville estate is the water conservation system established by the explorer Charles Sturt during his ownership of the property over three years 1837 to 1839. Sturt later, in his official capacity as Assistant Commissioner of Lands in South Australia, championed the cause of water conservation referencing Varro Ville as a model of this practice.

“On my farm at Varroville, until labour and skill were exerted, one only of many channels held water, and that was brackish. When I passed that farm, every paddock had its proper water-hole. In a severe drought I not only fed 180 head of stock on 1,000 acres (or which 350 were under cultivation), but I permitted nineteen families to supply themselves from my tanks. We must resort to the same means here...”¹³.

Landscape analysis¹⁴ has established that dams across the Varro Ville estate (and those within view of the house) were likely established by Sturt - some still in their original form, others since widened. Those visible from the house are likely to have been originally established by Sturt (given the natural catchment feeding them) but have since (along with the stands of remnant 19thC Cumberland Plain Woodland) become part of a landscape park around the house that is more likely the work of William Weaver, the colonial architect who designed and built the current Varro Ville House in 1859¹⁵. The house was designed as a ‘house in landscape’ with over-proportioned windows to take in the views. The latter dams are in important view lines from Varro Ville House and are important to birdlife on the property and the Scenic Hills generally. Sturt noted the need for these dams given the ‘brackishness’ of the natural waterways (probably Bunbury Curran Creek), suggesting that his dams were salt free.

We are deeply concerned that CGP Stage 3 will damage these dams. Concerns about water depletion and contamination are being raised in relation to CSG mining in other areas but are yet to be fully investigated. The lack of environmental monitoring (and no baseline data being collected at the outset) has allowed mining companies (including AGL) to attribute saltiness

¹³ Quoted in Mrs Napier Sturt, *Life of Charles Sturt*, Elder & Co., London, 1899, p.193.

¹⁴ *Landscape Analysis* by Geoffrey Britton for Draft Curtilage Study 2007 commissioned by us as the current owners of Varro Ville.

¹⁵ There is evidence that the estate (outbuildings, drive etc.) had a major make-over during this time to work in with the house.

(among other pollutants) and water depletion to other factors. We deplore this state of events. We especially note the Position Statement published by the National Water Commission on December 10th 2010 warning of the potential for irreparable damage to surface and ground water systems from CSG mining. We also note that Campbelltown Council sought specialist advice in regard to the adequacy of the level of detail and extent of assessment of groundwater related impacts associated with the project application. Council, wrote in its submission to the¹⁶ DoP, *“The conclusion by AGL in its response [to concerns raised by Council in response to AGL’s draft EA] that ‘increases in surface salinity are not expected as impact to shallow aquifers is not anticipated’ is not supported based on the...deficiencies in the EA and its generic nature.”*

We can support Council’s view from our own discussions with AGL. As a member of SHA, I was recently asked to sit on AGL’s Community Consultative Committee and have also attended two private meetings between representatives of AGL and SHA. During one of these meetings (10th December 2010), I requested information relating to potential impacts on the Sturt dams and water storage systems in the Scenic Hills generally. Specifically I noted to Mr John Ross, AGL’s recently appointed hydrogeologist, that it was apparently the practice of early settlers to use aboriginal knowledge of natural springs in establishing their ‘water holes’ (dams). Mr Ross was unable to comment on this and confirmed that AGL was relying on general knowledge of the Sydney Basin and had not carried out site-specific assessments as part of the EA for Stage 3. He was unaware of the presence or importance of the Sturt dams but, based on the geology of the Sydney Basin, was doubtful that these be would ‘spring-fed’ since this would depend on the occurrence of basalt soil rather than the shale soils that appear to be endemic to the area. I

¹⁶ Submission on the Environmental Assessment for Stage 3 of the Camden Gas Project, Campbelltown City Council, December 14th 2010.

indicated that across our 8 acres alone, there appears to be basalt soil (with a ph of 5.5) and that Governor Macquarie, on his visit to Varro Ville and the adjoining property of St Andrews (now occupied by the Carmelite religious community) on November 8th 1810 later wrote in his diaries *“This [St Andrews] and Dr Townson’s farm are by far the finest soil and best pasturage I have yet seen in the Colony...”*.

Mr Ross agreed that without a specific study he could not rule out the presence of basalt soil and natural springs feeding the dams. He also wondered if certain soil and geological formations could retain water after rain that seeps out slowly over time giving the appearance of natural springs.

AGL also admitted in our December 10th meeting that it had no lessons to bring to Stage 3 from previous stages of the CGP as it had not carried out valid groundwater monitoring over the previous ten years of the CGP, having taken no baseline measurement at any point. AGL then informed us it intended to take a baseline study of the Scenic Hills in order to do groundwater monitoring (for the first time) during Stage 3. In other words AGL expected to be able to assess ground and surface water impacts as part of its ongoing CSG operations in the Scenic Hills, without having proved the safety of its operations in prior stages of the CGP and without any indication that it could ‘make good’ any damage done to the environment in the process.

This is unacceptable. AGL, in this EA and meetings we have had with them, has not exhibited an understanding of (or perhaps enough regard for) scientific method. Further AGL’s past performance and its non-inclusion of this information in the EA suggests a prior careless disregard for the environment and heritage until community pressure is applied. Consequently we have no confidence in AGL’s ability to take its own baseline assessment and provide

monitoring of its own activities - particularly when it has a vested interest in the outcome. Such an approach merely makes the Scenic Hills Environmental Protection area 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 is demonstrated by a history of severe droughts since colonial times¹⁷ combined with the small size of current landholdings limiting their viability. Damage from connecting infrastructure and noise from truck movements along St Andrews Road would also degrade the environment for all who live here including Varro Ville House. 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. It would also irreparably damage the heritage of the area both directly and as a consequence of the dependence of that that heritage on the viability of the Hills' rural activity together with the associated biodiversity of remnant, *critically endangered* Cumberland Plain Woodland, some of which is part of the landscape park associated with Varro Ville House. Any suggestion by AGL that it could make good any damage done is patent nonsense.

Other heritage and their links to Varro Ville House

AGL's treatment of Varro Ville House gives us concerns about how other heritage in the area is treated. We note, for example, that while AGL (or their consultant) acknowledges the importance of views from Varro Ville House¹⁸ to Macquarie Fields House and Denham Court House, the latter's views are discounted because they are "outside the study area" (not because they won't be affected). Further, while AGL acknowledges that the Denham court well

¹⁷ The history of severe droughts in the area suggests the presence a localised 'rainshadow'. I have provided some indicative analysis based on our own monitoring of rain at Varro Ville House over the last five years as Attachment A.

¹⁸ This is based on recommendations contained in the report of Colleen Morris and Geoffrey Britton, *ibid*.

sites may be visible from Varro Ville House and may obstruct these important viewlines, this is discounted because there are already buildings “dotted around the landscape that are of a greater scale and visual presence than the proposed infrastructure”. This is utter nonsense. No sitings have been taken from Varro Ville House; else the consultant would have observed that there are no buildings currently visible in those viewlines from Varro Ville House. Secondly the presence of other buildings in the area is not necessarily adverse to the context of Varro Ville House if those buildings are consistent with the rural heritage character of the area (noting that AGL’s structures do not comply). Thirdly, even if there were buildings already in existence that were incompatible with the zoning, this is not a reason to further compromise the area. That argument sets a precedent for every inappropriate development that comes along subsequently until there is nothing left of the environmental protection zone.

Project not sufficiently specified

In our meetings with AGL, AGL staff acknowledged that AGL would need in-field compression for its northern well sites (RA03 and RA09, VV07 and VV11). AGL also acknowledged that it might need infield compression for another three of the midrange well sites (CU20, 22 and 02). In fact the requirement for infield compression cannot be specified for any well site until the performance of the well is ascertained. This means that a third of the well sites are not fully specified, and at least 60% are in doubt. As such AGL is asking for approval to proceed with a project, elements of which are known to be required but whose form and location do not form part of this report. It is further disturbing that comments by AGL and the DoP suggest some complicity in allowing this. This is indicative of the quality of the application as a whole.

Conclusions

AGL's assessment of the impacts on heritage and its environment in its EA for the CGP Stage 3 (Northern Expansion) suggests that it is 'going through the motions' rather than attempting to gain any real understanding of the potential impacts of its CSG mining activities.

The quality of the Historic Cultural Heritage Assessment (Appendix J) as it pertains to Varro Ville House, and its use in the Main Report of the EA, is consistent with other reports provided as appendices to the main report, which also affect Varro Ville House and its landscape setting. The generality of the data used (rather than site-specific data) is disturbing, there are many errors, they are vague and there are too many unknowns. AGL's own language alleviates it of commitment - it may 'consider' doing things but makes few undertakings - and there are a number of sub reports still outstanding. Additionally we find the methodology underpinning applicable parts of the environmental assessment flawed as it fails to comprehend the complex interactive nature of the environment. As a consequence we are left with the impression that this application is a request to the DoP for something of a *carte blanche* to 'explore', to make it up as it goes along and self-monitor. Given the concerns that are being raised about CSG mining, this EA and AGL's application is, in our view, not of an acceptable standard.

Further, were the DoP to approve this project, it would not only represent a contradiction of the stance it has previously taken on the retention of the zoning to protect Varro Ville House and its landscape setting, it would also set a dangerous precedent as the CGP Stage 3 is wholly within the Sydney Metropolitan Area. If CSG mining is to be permitted in the iconic Scenic Hills of South West Sydney with gas gathering lines running through its botanic garden, what is to stop CSG mining in Sydney's Centennial Park, the Domain and the Royal Botanic Garden in

Sydney's CBD? Surely there isn't going to be one rule for the South West and another for the rest of Sydney? How much more social and economic division is the CSG mining industry going to be allowed to create?

Recommendations

AGL's application to expand its CSG mining operations into the Sydney Metropolitan Area – the Camden Gas Project Stage 3 (Northern Expansion) - should be rejected on planning grounds alone, without the need for further science about its groundwater impacts or any other study. Applying the precautionary principle, Queensland has already imposed a prohibition on CSG mining within two kilometres of major urban limits. Yet NSW allows it to continue on the urban fringe (in Landcom residential developments) and has allowed AGL and the community in the South West to battle it out to stop its advance across our suburbs and protected greenspace at enormous social and economic cost to the community.

Further, as members of SHA and the broader community objecting to CSG mining's rampant and unchecked advance across NSW, we support the current call for a moratorium on new approvals of CSG mining to allow independent research to be carried out on the impact of the industry and its controversial use of hydraulic fracturing on health, the environment, other land use, heritage, communities, land ownership and land values and underground water systems in particular the Great Artesian Basin. Until this is done and appropriate legislation put in place to guide and regulate the industry we do not support *approvals* of any new projects – either to explore or develop. This includes the northern expansion of the CGP and further expansion within Stages 1 and 2 in the broader Macarthur Area.

In the interim, we urge the Government to appoint a suitable heritage representative to the Reference Group advising the government on its Strategic Regional Land Use policy, and to include the Macarthur Region in its list of priority areas for regional land use planning.

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

Yours sincerely

Jacqui Kirkby and Peter Gibbs

Attachment A: Comparison of Annual Rainfall (mm) across Different Locations in the Sydney Metropolitan Area

	2006 (August to Dec.)	% diff.	2007	% diff.	2008	% diff.	2009	% diff.	2010	% diff.	Av. diff. (’07-’10)	Total (’07-’10)	% diff.
Observatory Hill (Sydney CBD)	994.0 (414.0)		1499.2		1082.6		956.2		1153.8			4691.8	
Liverpool (11.5km from Varroville) c/f Sydney	521.3 (220.6)	-48% (-47%)	1044.2	-30%	995.6	-08%	697.7	-27%	865.8*	-25%	-23%	3603.3	-23%
Ingleburn (4.1km from Varroville) c/f Sydney	474.0 (226.4)	-53% (-45%)	1011.2	-32%	923.0	-15%	655.5	-31%	879.2*	-23%	-25%	3468.9	-26%
Varro Ville House (c/f Liverpool and Ingleburn)	N/A (176.0)	(-20%) (-22%)	938.3	-10% -07%	879.5	-12% -05%	612.5	-12% -07%	739.5	-15% -16%	-12% -08%	3169.8	-12% -09%

* Much of the monthly data collected were not quality controlled, and by comparison with other years may have been overestimated. The Varroville data is consistent with other years when compared with Sydney CBD.

Commentary

As expected Ingleburn and Liverpool (south west of Sydney CBD) get approximately 30% less annual rain than Sydney CBD on average (using the more reliable data), while Varroville gets approximately 7% less rain than its nearest suburb to the north east (similar to the difference between Liverpool and Ingleburn). Notably however, in the drought of 2006, the effects were more severe with the south western suburbs getting only half the annual rainfall of Sydney, and Varroville getting 20% less rain than its nearest suburbs (measured over the last five months of that year) or almost 60% less rain than Sydney. This exaggerated effect is not seen in other drought years of the last decade and appears to be related to specific weather effects in that year (just as in 2008 there was relatively more rain across Sydney). However it supports historical records of severe localised droughts.

Note: Rainfall at Ingleburn, Liverpool and Sydney were taken from Bureau of Meteorology weather stations, while the rainfall at Varroville was recorded at Varro Ville House. Only the last five months of rainfall were recorded at Varro Ville House in 2006.