

GENERAL PURPOSE STANDING COMMITTEE NO. 5

INQUIRY INTO COAL SEAM GAS

CORRECTED PROOF

At Narrabri on Wednesday 16 November 2011

The Committee met at 8.30 a.m.

PRESENT

The Hon. R. L. Brown (Chair)

The Hon. J. Buckingham
The Hon. R. H. Colless
The Hon. G. J. Donnelly
The Hon. S. MacDonald
The Hon. Dr P. R. Phelps
The Hon. P. T. Primrose

CHAIR: Welcome to the third public hearing of the inquiry into coal seam gas, which is examining the environment, economic and social impacts of coal seam gas activities in New South Wales. Before I commence, I acknowledge the Gomeroi people who are the traditional custodians of this land. I also pay respect to the elders past and present of the Gomeroi nation and extend that respect to other Aboriginals present.

Today's hearing will begin with evidence from several local councils. Other witnesses include Cotton Australia, the District Council of the New South Wales Farmers Association, Namoi Water and the Namoi Catchment Management Authority. We also will take evidence from environment and community groups, traditional landowners and local farmers. In addition to today's hearing the committee will hold three public hearings at Parliament House in Sydney and one public hearing at Bowral. The details of those hearings are on the Committee's website. At today's hearing we will have three local high schools in attendance—Narrabri, Wee Waa and Walgett. We warmly welcome the students from those schools who come here to see democracy at work.

I want to make some brief comments about the procedures of today's hearing. Copies of the Committee's broadcasting guidelines are available from the Committee staff. Under those guidelines media may film or record Committee members and witnesses. People in the public gallery should not be the primary focus of any filming or photographs. I remind media representatives that they must take responsibility for what they publish about the Committee's proceedings. It is important to remember that parliamentary privilege does not apply to what witnesses say outside their evidence at the hearing. I urge witnesses to be careful about any comments they make to the media or to others after they complete their evidence. Those comments are not protected by parliamentary privilege if another person decides to take action for defamation.

Committee hearings are not intended to provide a forum for people to make adverse reflections about others. The protection afforded to Committee witnesses under parliamentary privilege should not be abused during these hearings. I therefore request that witnesses focus on the issues raised by the terms of reference of the inquiry and avoid naming individuals. The Committee is aware that people hold strong views about coal seam gas development. There is a great deal of interest in the issues being examined by the Committee, as shown by the 1,000-plus submissions to the inquiry. The primary purpose of this hearing is to give individual witnesses an opportunity to give their evidence before the Committee.

Although this is a public hearing it is not an open forum for comment from the floor. Only questions from the Committee and the evidence of witnesses are recorded in the transcript. Audience interruptions are not recorded and may make it more difficult for witnesses to fully express their views. Witnesses are advised that any documents they wish to table should be provided to members through the Committee staff. A full transcript of what is said during today's hearing will be prepared by Hansard reporters. The transcript will be available on the Committee's website in the next few days. I ask everyone to turn off their mobile phones, as they may interfere with Hansard's recording of the proceedings.

KATRINA HUMPHRIES, Mayor, Moree Plains Shire Council,

COLIN JOHN MURRAY, Chairperson, Namoi Councils, and Mayor, Tamworth Regional Council,

ROBYN FABER, Mayor, Narrabri Shire Council, and

ADAM MARSHALL, Mayor, Gunnedah Shire Council, sworn and examined:

CHAIR: I will lead with Councillor Faber. Councillor Faber, would you like to make an opening statement?

Ms FABER: Thank you, Chair and members of the Committee. Welcome to Narrabri. Namoi Councils' chair will speak on environmental and cumulative impact concerns which all members of our organisation share. Narrabri Shire's submission addressed all the terms of references of this inquiry based on 20 years of local coal seam gas [CSG] exploration, which was initially seeded by a State government. The key points we wish to highlight are, firstly, local government needs the petroleum Act and the Local Government Act to be amended to enable a local government resource extraction rate to be struck so that this industry contributes its fair share to the provision of basic services and infrastructure, like all shire residents. The Local Government Act does not provide for resources other than coal and metaliferous extraction to be rated.

Secondly, Narrabri Shire calls on the State Government to appoint an independent officer, similar to an ombudsman, reporting directly to the Premier and the people to manage and enforce compliance with conditions of consent for all State-significant projects, including coal seam gas and mining; to monitor and report on environmental monitoring systems established for aquifer, noise, air quality and riverine flows related to coal seam gas and mining developments; and to manage coal seam gas exploration access processes and agreements with landholders, including local government. Such an office might delegate physical monitoring, enforcement and reporting to local government, as we have compliance capabilities, but give our residents some reassurance that these standards are being met.

Thirdly, any regional plan must encompass more than the land use and not be restricted to cumulative impacts from mining and coal seam gas alone. Our region is facing increasing demand from grain consolidation and the transport sector. Everything must be considered. Finally, coal seam gas extraction when properly managed will bring economic, employment and social benefits to our region. It already employs 60 locally and sources its basic needs locally. Our State is facing a looming power shortage. Gas can provide that power in a short time frame and is more efficient and clean in producing electricity. Gas also will attract new industries to our region and contribute to our sustainability. Narrabri Shire urges the Committee to consider the benefits of well-managed CSG production, along with the need to provide environmental surety. Thank you for your consideration.

CHAIR: Thank you, Councillor Faber. Councillor Murray, would you like to make an opening statement?

Mr MURRAY: Thank you, Mr Chair. Mr Chairman and members of the New South Wales Parliament Legislative Council General Purpose Standing Committee of Inquiry into Coal Seam Gas, thank you for the invitation and opportunity to give evidence to the inquiry into the social, economic and environmental implications of coal seam gas extraction. I address you and give evidence to this inquiry as Chairperson of Namoi Councils, a regional organisation of councils representing a membership of five local government authorities—Liverpool Plains, Gunnedah, Narrabri, Walcha and Tamworth regional councils—and the Namoi Catchment Management Authority. I table a copy of the Namoi Councils' updated submission to the inquiry and highlight, in summary, four important points within the Namoi Councils' submission relating to coal seam gas resource development within the Namoi Catchment and Gunnedah Basin.

Document tabled.

The first point is the precautionary principle. Namoi Councils expect nothing less than complete adherence to the precautionary principle in the cumulative impact assessment of coal seam gas extraction development proposals by State and local government under the rewrite of part 3A of the Environmental Planning and Assessment Act 1979. The precautionary principle must be a fundamental feature of the strategic land use planning framework developed to manage the land use conflicts which will naturally arise between

minerals and energy resource development, prime and strategic agricultural lands, agricultural production and water resources. Coal seam development proposal decisions must be guided by: one, careful evaluation to avoid serious or irreversible damage to the environment and human health; and, two, a cumulative impact assessment of the risk-weighted consequences of various options. Namoi Councils' member councils and the communities they represent expect a strategic and precautionary approach to be taken by the New South Wales Government to the assessment of proposals to develop the extensive coal seam gas resources of the Namoi Catchment and Gunnedah Basin.

The second point is the cumulative impact assessment of coal seam gas development proposals. Namoi Councils strongly advocate cumulative impact assessment of coal seam gas extraction development proposals on the basis that although individual actions may have a negligible or insignificant impact, their aggregated or collective impact may be significant and harmful to the environment. The potential cumulative impacts of multiple mines on the natural resource assets of the Namoi Catchment and Gunnedah Basin are generally and widely acknowledged by the regional community and particularly by environmental and farming interest groups. Namoi Councils recognise and fully support the work undertaken by the Namoi Catchment Management Authority in commissioning a study to establish a framework for quantifying the unmitigated risk of cumulative impacts across nine natural resource assets in the Namoi Catchment: soils, land use, surface water, groundwater, vegetation extent, vegetation type, vegetation condition, landscape connectivity and threatened species.

Critically importantly in Namoi Councils' view is that a key output of the proposed framework is a risk statement for any mining scenario that identifies the single impact of each mine extractive operation and the cumulative impact of all mines extractive operations and the associated levels of risk on each of the natural resource assets mentioned above. Namoi Councils strongly advocate the use of a cumulative impact assessment tool to enable the coal seam gas industry and local and State government as regulators and consent authorities to identify, assess and report the likely cumulative impact assessment of coal seam gas mining scenarios on the natural, human and built environment.

The third point relates to the New England North West Regional Strategic Land Use Plan. Namoi Councils is on record as congratulating the New South Wales Government for the introduction of a range of new initiatives, including the roll-out of a regional strategic land use plan, designed to address land use conflicts in the Namoi Catchment and Gunnedah Basin in relation to the coal seam gas industry's interaction with prime agricultural lands, agricultural production and water resources. In Namoi Councils' view, a regional strategic land use plan is a key planning instrument which will provide the underpinning regulatory framework for the cumulative impact assessment of coal seam gas extraction development. This plan must have regard to a raft of current natural resource management studies and strategies, including the nearing completion of the Namoi Catchment Water Study. When completed, the water study will provide for an integrated suite of models for assessment of the nature and extent of potential effects from coal and gas developments on water resources within the Namoi Catchment.

Namoi Councils support a whole-of-government approach to regional strategic land use planning, which would include the following initiatives to protect prime agricultural lands, agricultural production and water resources: one, consultation with communities, stakeholders and, importantly, local government; two, triple bottom line considerations of environmental, social and economic cumulative impact assessment of new coalmining and coal seam gas extraction projects; three, public consultation before exploration licences are issued on all new applications for coal, coal seam gas and petroleum exploration licenses; four, a submission of an agricultural impact assessment on all new project applications for coal, coal seam gas and petroleum extraction pending the completion of the Regional Strategic Land Use Plan; and, five, adoption of an aquifer interference policy to protect and better regulate resource development activities that impact on and are critically vital to Gunnedah Basin aquifers.

An effective and relevant Regional Strategic Land Use Plan is key to creating certainty for the community, the environment and the economy; building sustainable and resilient communities; involving the community in local and regional decision-making; giving primary producers and the mining and energy industry increased control of their respective futures; and balancing the need for growth, change and development with the need to protect the existing character, quality and operation of the places where we live. The Namoi catchment is a food-producing region of significance to the State and national economies.

It follows that the protection of prime agricultural land, ground and surface water as natural resources is of critical importance to the future of the catchment. Namoi councils hold serious concerns in relation to the cumulative impact of coal seam gas extraction proposals on the key natural resources and defining values of the

Namoi catchment of biodiversity, communities, groundwater, surface water and prime agricultural land. Namoi councils submit that the burden of proving the acceptability of coal seam gas development proposals rests firmly and unequivocally with the proponent, not the person, persons, groups or organisations arguing that it is environmentally unacceptable.

Protection of the biodiversity and natural resources of the Namoi catchment is not negotiable. Namoi councils, and the regional community they represent, expect a strategic and precautionary approach determined by cumulative impact assessment to be taken by the New South Wales Government to proposals to develop the extensive coal seam gas resources of the Namoi catchment and Gunnedah Basin. If this assessment establishes an unacceptable impact or there are threats of serious or irreversible environmental damage, coal seam gas development proposals must be refused. Achieving a balance between coal seam gas development with the protection of prime agricultural land and water resources is of critical importance to the future of Namoi catchment energy resources and primary industry. However, this balance must not be at any level of harm to the natural environment and the human health of the Namoi catchment and Gunnedah Basin.

In closing, I recognise the hugely valuable work and environmental leadership undertaken by the Namoi Catchment Management Authority in the management and protection of the region's natural resources. The raft of natural resource management plans and strategies developed by the Namoi Catchment Management Authority, together with the Namoi Catchment Water Study and the Cumulative Environmental Impact Assessment tool when completed will provide for an integrated suite of models for environmental impact assessment of the nature and extent of potential cumulative impacts from coal and gas developments on the natural resources of the Namoi catchment. Thank you once again for the opportunity to give evidence to this inquiry.

CHAIR: Councillor Humphries, would you care to make an opening statement?

Ms HUMPHRIES: A hardy and big welcome to everybody for coming to the north-west. It is lovely to see you all here. I am not particularly good at protocol. I am not particularly fond of bows and scrapes and things like that. I think we are all equal and I really welcome you to the plains. I am delighted to be able to add a personal touch to our submission. The Moree Plains is all about agricultural sustainability because that is what we do best. We have amazing innovative farmers, great graziers, a raft of product that comes out of the plains and we like to consider ourselves an integral part of the food bowl. We have sorghum and canola, we grow mung and fava beans, we have jolly woolly sheep and big, fat happy cows.

We grow some of the best pecan nuts in the world; we have the biggest pecan nut farm in the southern hemisphere. We also are very good with our olives. Our olives are very much a growing agricultural industry, but it is also adding a big string in the bow to our tourism industry, about which we are extremely passionate. More so, we grow the wheat that puts the bread on the shelves of all the supermarkets. We grow the durum that makes the pasta and we actually have people in our shire who grow durum and export their pasta to Italy, which is a pretty big feather. More importantly, we grow a lot of barley. You all know what barley is used for: it makes the beer. You cannot take the beer out of Australia; it just is not going to happen.

As far as energies, sustainability and things like that are going on, Moree is about to host BP Solar in partnership with Federal and State governments, Fotowatio and Pacific Hydro to build, if it were built today, the biggest solar energy farm in the world. However, with great sadness I believe that we are going to be pipped by Spain, possibly, before it is built. So we will have to be happy with having the second biggest, but that is good because we are happy with that. Our tourism industry is huge. Everybody says, "Oh Moree, yes, you have the beautiful waters." Yes we do. We are in the process of a \$7 million upgrade of our pools, which is a big task. But I would like to remind everybody that everybody gets excited about the jobs that come with coal seam gas. That is nothing compared to the jobs that come with tourism. Tourism is our baby. Without our water, we have nothing. Our water is absolutely paramount not just for our crops and stock, but also because it is on what our whole tourism is built.

More importantly, we drink the stuff. It is our drinking water. We cannot risk contamination in any shape, form or type. I would like to table the Leichhardt Resources Access Agreements because I think they are disgusting and you should all look at them. I have a problem: I am vain enough to see myself as the guardian of mental health, social wellbeing and happiness in my shire. Those access agreements that are being forced down people's throats are making people very unhappy and we do not like it. You need to read those access agreements because they contain a few things that I am sure will alarm you. The confidentiality clauses are the ones I really dislike because in the bush we rely on our neighbours. We all have extremely good relationships

with our neighbours. This is pitting neighbour against neighbour, and that is wrong. There also are issues in those access agreements about liability and indemnity, but you are all learned people and I am sure you will get a handle on it very quickly. I thank you for your time and look forward to the prospect of the Moree Plains being declared an agricultural area because you cannot drink coal seam gas and you cannot eat it either. What we do best is provide food for the world. Thank you very much.

CHAIR: Councillor Marshall, would you like to add to the debate?

Mr MARSHALL: Mr Chairman and Committee members, again, thank you for the opportunity to be here today to make a few remarks and answer any questions to clarify Gunnedah Shire Council's submission, number 594 and the supplementary submission 594A. At the outset I concur with all of my colleagues, who have spoken already. They each have touched on some separate but equally important issues surrounding coal seam gas. I have been watching very closely the travelling show that is this Committee, where it has travelled and the evidence it has heard. No doubt, you have heard an enormous amount of evidence on a wide variety of issues from a number of parts of the State and the submissions bear that out as well. I guess I must say good luck as well from me and everyone else here. It certainly is a big issue, and it is a big issue for our region.

In this region alone it is estimated that we are sitting on around 50 trillion cubic feet of extractable resource of coal seam gas. If you believe people in the electricity generation sector, the experts, if that resource were extracted and used to generate electricity, it could provide the energy needs for this State for possibly the next 200 to 300 years. Just on that basis you can see why there is so much pressure on government and on the Crown to exploit that resource and, given the world's thirst for energy, the desire of various companies that can see some economic value in trying to extract that resource. It is a huge issue for the region. You have our submission and you have heard the comments made already by my colleagues. I will not seek to regurgitate those, but just highlight briefly a few other concerns that possibly have not been mentioned or explored fully at this stage.

Essentially, from our council's point of view the top of our issues list definitely is water. You have heard a lot about that already in evidence across the State and you will hear a lot more about it today. Water is essential for our region, not only as an important resource for our agricultural sector but also for our communities. Almost all communities in this region, whether they be towns or villages, rely on groundwater to supply potable water supplies for our communities to live. It is an important tool also for other industry to use. Water is critical for our future not only by having a high quality but also having a high quantity to supply our communities into the future.

We are very mindful of the need for government to actually have appropriate regulations in place to ensure that if these activities are to exist in our region they do not threaten those underground water supplies and, I guess, also that there is a comprehensive regulatory regime for water extracted during the process of getting that gas out of the ground. What do we do with that water certainly has been a concern expressed throughout the region. A number of companies have come forward stating that there are various ways of treating that water and perhaps reinjecting it either underground or in other places. But there needs to be some strong regulation in that area. It causes the community certainly a lot of concern. Another important issue for our council is consultation with local government. Often councils are the last to find out when companies are awarded exploration licences or PELs are released across the region. Not only is that highly embarrassing; it also is very detrimental to developing a good working relationship between local councils and the State Government and also between councils and companies.

There was one good example in the Gunnedah shire when a particular company, Arrow Energy, had been given approval to drill a pilot well within 100 metres of one of our water bores for the Gunnedah township. Luckily, we had a very savvy resident who actually was looking on the Australian Stock Exchange website and found that news via public announcement through the stock exchange. Council certainly had no knowledge of that. We certainly were not even aware that the company was proposing to do any exploration. So immediately we had to engage the company and convince it in a very polite way that it was in their interests to possibly move the pilot well a long way away from our town water supply bores. That was possible. But, again, it highlights the need for communication and notification with local councils before exploration takes place.

We believe strongly also that there needs to be very strong involvement for local councils and a need for companies to be required to compile an assessment of potential impacts on local infrastructure, such as roads, and any proposed offset measures. These should be required not only at the start of exploration, but also at the project application phase. At the moment, while local government is the custodians of many of those

public assets used by companies and by the people who come into our region, there seems to be no consultation with local government in an exploration phase and also at a project application phase as there is with the mining sector to ensure that the issues we have about the assets of which we are custodians are adequately addressed by the companies and by government.

The other issue which has been raised has been the concern expressed by a lot of members of our community to us about the lack of a standard compensation arrangement for land holders—I know you have heard a lot of this already—on whose land infrastructure is proposed to be built, when signing access agreements that are thrust in front of them. When negotiating a compensation agreement they feel at a disadvantage. Individual landholders who have in the main little legal experience are trying to deal with a big well resourced company with a team of lawyers in their back pocket. It can be intimidating and stressful. They are not negotiating on an even playing field. There must be a way that we can establish a standard arrangement so people feel assured they are not being duded and it removes the ability for neighbour to be pitted against neighbour. That has a corrosive impact on a tight-knit community.

There needs to be a stronger presence in the region of the various Government departments responsible for regulating the activities of coal seam gas companies. One of the big concerns in this region is the lack of trust. The community has a real issue with trusting companies, and with all due respect Government as well. That is well founded from experiences in the past in this particular region. I am not saying that the silver bullet is having a strong presence of Government departments in the region but there needs to be a strong presence from the level of Government in the region that is the consenting and regulatory authority for these companies. If people have questions or want advice there should be people in the region that they can go to and ask the questions before exploration occurs: What is the process for project applications and consents being granted? There is no one in the region who can answer the questions.

People ring local council looking for that advice and we have all had to do coal seam gas and mining 101 courses to provide our communities with that information. We are not funded nor resourced to provide that service. That rightly should lie at the feet of State Government. They make the money out of the projects, they give consent and they are responsible for regulating the industry. We need a strong presence of people from those departments to help educate the community and build some trust back into the processes and what some of the companies are doing. I might leave it there, Mr Chairman. I have tried to cover some of the issues that have been raised. The Committee has access to our submissions. Thank you for the opportunity to address you and we look forward to working with you and with the Government to try and get some regulation around this industry so the community can have confidence their interests are protected.

CHAIR: I will ask a couple of questions myself. First to Councillor Humphries; your tourism, the one that helps my arthritis, does that water come from deep sources and do you know how deep?

Ms HUMPHRIES: About 2,000 feet.

CHAIR: That is about 700 metres.

Ms HUMPHRIES: That is the artesian water. We have sub-artesian as well. All our pools in town are artesian but the motels use sub-artesian water. Moree Shire uses both of those.

CHAIR: I pose my question to all witnesses, but Councillor Faber principally, the question of equity to communities from money earned by the resources within those communities; you suggest a legislative solution by changing the ability for councils to rate—what do you think of the concept that the West Australian Government have instilled? It hypothecates 25 per cent of all mining royalties and then allocates those funds through Local Government generally?

Ms FABER: Chair, I think the royalties for regions generally covers a wide range of things and there is a perception on my part that everyone in West Australia expects to benefit overall from those royalties. I am more concerned about the ability of people who are directly using our resources in our shire to pay their way; whether it is grain being carted from Coonamble across our shire to get to Narrabri to a train and wrecking our roads or coal seam gas trucks driving and causing us to repair roads. The Act allows us to rate other forms of resource extraction but I guess because we never had it, it is not in the Act. We must have that ability to rate.

CHAIR: That would be a fairly elegant solution. The mechanism is there, all you need to do is extend the mechanism to other industries by legislation?

Ms FABER: It is a matter of equity. Why should these companies come into our area and be the only ones that do not have to contribute other than a land rate which may be as big as this desk I am sitting at. We seriously need to address this issue.

The Hon. GREG DONNELLY: Thank you for coming along today to provide us with an opportunity to ask you some questions related to your submissions. The chair just asked the question I was going to ask which was to do with the way in which a formula or framework is constructed to ensure that councils do receive their fair share of the benefit of coal seam gas development—if it was to proceed. I note with respect to Councillor Marshall's submissions on the Gunnedah Shire the notion of a community contribution program. Can you explore that a bit further and flesh it out?

Mr MARSHALL: Thank you for the question. Essentially we are all trying to achieve the same thing. We want to ensure that if these companies are in our region developing industry the community gets some longer term benefit, whether that is directly financially through development of community projects or long term community infrastructure projects. What we have put in our submission is only one of those options; that is a community contributions program. If the Government is giving approval to a project for a 21-year life, for example, that there is a contributions program that covers the 21-year life of that project, whether it is based on a cent per production ratio or based on an annualised fee that is agreed up-front and that money is then channelled into identified community projects.

The other option is to hypothecate some of the royalties. We support royalties for regions in this State. The Government is going to proceed, hopefully very soon. We have been patient as a region but we are starting to run out of patience in terms of the resources for the region policy. There is an enormous amount of wealth that is generated by those companies in this region for everyone in the State. Because they are in the region they are using the community's resources and they put a huge strain on communities. There needs to be contribution made voluntarily or we suggest there needs to be legislation imposing a standard right across the State and regions. Some companies will do it better than others. Some companies will play council against council, individual against individual and there will be winners and losers. If the companies are going to exist here the whole region should be winning—in inverted commas—from their presence.

There is the other option—dare I say—to do what Queensland does and remove rate pegging. That would allow councils to rate these companies appropriately so you forego the need to have a contributions program or a royalties program. The councils can identify mining land as separate for coal seam gas land and rate it accordingly because it is not limited by a rate peg. If the company is having an X-dollar impact on the community the community can recoup that via a rating system. The current rating system is archaic. It is based on an unimproved capital value of the business—which is ridiculous—on an ad valorem basis. No other place in the world would you be rating on that basis. That is another issue. Going back to your question; there are a number of options and those are a few of them. I think either of them would be good.

The Hon. GREG DONNELLY: Does anyone else want to follow up? I am talking about benefits beyond roads that might get broken up from trucks; I am talking about the enhancement and improvement of infrastructure that benefits the whole community.

Ms HUMPHRIES: I like the West Australian model where the State Government administers 25 per cent back to the communities. I am not into blood money and there has been a lot thrown about. It does not cut it with the \$900 million per year productivity cheque that comes into our Shire council—that is the average, bearing in mind that we just had nine years of drought. We have a parcel to protect there, I am not sure we are going to get that money every year from anyone. We are concerned about our water being quarantined and saved because that is a huge amount to protect. I do not know that any Government or resource company or anything else is going to recoup our shire to the tune of \$900 million a year. If they do, we will listen. Until someone comes up with an offer like that it is elementary; why would you give up something you have already got that is going very well.

The Hon. JEREMY BUCKINGHAM: From the submissions you have prepared, and your submissions today, it is obvious that water resources are intrinsic and fundamental to the viability of your communities. There has been a lot of concern raised about the lack of science and the lack of assessment of those ground-water resources before this industry has begun. What I would like to hear from all of you is your position on a moratorium on the industry until such time as that comprehensive assessment of the ground-water resources for this region has been done?

Ms HUMPHRIES: Moree plains was the first shire in Australia to put a moratorium on seismic surveying and everything that goes with it. We will continue with that moratorium until such time as we are 101 per cent satisfied that our water is not in any danger. As far as the science goes, I am not fussed on science as it is often manipulated. Scientists actually said 30 years ago that Thalidomide was fine. It is so manipulated I am not keen on the science. If somebody can come up with a new science that proves that our water is not going to be contaminated—and do not forget also there is a huge pressure issue with our bores—our farmers have piped and capped their bores at a cost of \$250,000 per 5,000-acre property to save bore water so we maintain the pressure.

If you let these guys come in and they do not have water licences and they can pump willy-nilly as much water as they like, all the water our farmers have tried to save will be lost, the pressure on the bores will drop and new bores will have to be sunk. That is a huge cost to the whole economy and a cost that a lot of people cannot bear. There are a lot of issues that need to be addressed with the water quality, supply and pressure. This has been going on for a while. This is the second Government committee I have attended, so the time, effort and expense that is going into this indicates there are many questions and there is a real problem that needs to be addressed. We are happy to continue with our moratorium until such time as we are 101 per cent satisfied.

Mr MURRAY: Thank you for the opportunity. I do not think I could support a moratorium. I honestly do not believe that the solution is that difficult. I think one of the confusing aspects of the current broader debate is the word "science". The word "science" is far too broad a term. I have a personal view that the word "science" is a cop-out because we are evading the actual issue. I believe if we analysed this on a risk-based methodology, there are some risks that are readily and easily able to be mitigated. We must accept that the State, Commonwealth and local government and the communities need access to the wealth and revenues that the gas industry can deliver and for all the other reasons that my colleagues have mentioned and the debate has had on the table forever. There are a lot of benefits in having coal seam gas extraction.

If we have a simple methodology like a risk assessment tool, there are a lot of risks that can be mitigated, like biodiversity risk by relocating fauna and flora. It must be acceptable, albeit at some cost. But it must be an acceptable outcome to mitigate the risks. If we can quickly move towards a process where we can analyse the risk, we will quickly work towards where we can understand the trigger where the risk becomes unacceptable. If the risk is unacceptable there should not be any extraction. That unacceptable risk should not be taken by governments, communities, companies or anyone involved. If we can adopt that methodology, I think we can quickly work towards a solution that enables us to progress. There are a lot of areas in this State where I certainly would not have too much difficulty in supporting coal seam gas extraction. Once we identified the risks, they can be very easily managed in a lot of cases. But, as supported by our submission, the two no-go zones are the prime agricultural land risk and the surface and underground aquifer risk.

CHAIR: Would either Councillor Marshall or Councillor Faber like to make a comment?

Ms FABER: I do not support a moratorium because if you do not do anything you will not find anything out. The problem we have is that we have people doing all these lovely models of water aquifers with inadequate information. Even the Namoi water study is relying on information being fed into it from exploration wells and monitoring of those wells in terms of aquifers. But the models are flawed because they do not really know practically what is happening. In Narrabri Shire we live on a floodplain. We have had half a dozen flood studies since 2000 which underpin our local environmental plan. If someone comes in and wants to develop on land that is flood affected they have to go and get another flood study. I can tell you that not one flood study agrees with another, even though they are based on the same principles and the same starting point in the year 2000. So I am very dubious about modelling that purports to tell us what will happen with aquifers without some real testing to prove that is what will happen. We should be using the exploration phase of coal seam gas with requirements that data must be monitored and fed back into studies to ensure that we can get accurate assessment. What Councillor Murray says is true: we can then make a proper risk assessment moving forward.

Mr MARSHALL: The Namoi water study that is being conducted at the moment is absolutely critical. As I understand it, at the conclusion of it the Namoi area will be the most intensely studied area in Australia in terms of analysing, getting the 3-D models for water supplies, the interconnectivity and possible risks to it. But water is extremely complicated and the more we know it is often the case the more we do not know. I agree to some extent with what councillors Murray and Faber are saying. If we are trying to get the best information to inform decision-makers and planners to make the best decisions to protect our interests we need data. Critical to

getting that data is to test what is under the ground. You can achieve that to some extent with seismic testing, and that is undertaken, and you can do that from the air. But there will need to be ultimately some drilling.

Government has been doing this for years. In our region there are hundreds and hundreds and hundreds of bore holes that governments of various persuasions over the years have drilled in various locations. Indeed, a lot of the information being fed into the water study is coming out of pilot wells and exploration holes that have been dug by some of these companies. It is ironic that government drilling versus company drilling, they are often using the same contractors. The same people are drilling holes under the same guidelines but we tend to have this impression that if a company drills it is bad and if government drills it is okay. What is critical is it does not matter who drills, it is important that we have the right regulations in place and that they are policed. I have some concerns that sometimes they are not adequately policed. We need to ensure that occurs; we need to ensure that the regulations are there and we need to get the best possible data. It is an extremely complicated area. It is far beyond my expertise but I know enough to know that we need the best possible data and that will have to involve some form of drilling.

The Hon. RICK COLLESS: Thank you all for coming today. I congratulate you, Councillor Faber, on your submission. It contains a number of good recommendations. I refer to the issue of rate versus royalty. If it is a rate only that is levied rather than a combination of rate and royalty, do you say it should be on a per well head basis rather than the traditional per hectare basis that we work under at present?

Ms FABER: I believe it would be related to productivity. Therefore, it has to relate to the well heads. If you look at the land, there is hardly any land there to speak. That is the issue we have at the moment. We can only rate basically on land. When you come to the Local Government Act and our rating, you can strike a mine rate which does not preclude us from also having voluntary planning agreements with mining companies and also asking the Government for a return of royalties. We just do not have any power to rate gas but they are making the same impacts on our infrastructure. Their staff are using the same facilities—the swimming pools, the halls, whatever—as the miners are. Why should they be excluded? It would have to be on some production.

The Hon. RICK COLLESS: If you start talking about a production rate, that in fact is royalty, is it not—per litre of gas that comes out?

Ms FABER: You need some mechanism to determine it. If you preclude land how else do you arrive at it?

The Hon. RICK COLLESS: That is what I am suggesting: so many thousands of dollars per well head per annum.

Ms FABER: I do not have an issue with that. If you want to make sure it does not look like a royalty in disguise, I have no problem as long as we have the ability to strike a rate and, by the way, as Councillor Marshall said, not capped so we do not lose out on the other side. This needs to be additional money coming in to help us offset the costs.

The Hon. RICK COLLESS: I ask this question of Councillor Murray in his role as chair of the Namoi Councils. Obviously there has been a lot of very vocal opposition to coal seam gas across the State. What is your view of the overall level of underlying support otherwise for the industry in the community, despite the fact there is quite vocal opposition?

Mr MURRAY: I believe that there is a very strong minority which we hear all day every day about the risks and the downsides and the negativities involved with gas extraction. I would have to say that I think there is also a fairly mature and well-supported view that providing the State is able to have the right management and controls and the essential assets are protected, in my view and the message I take from our broader community is general support to have the benefits of gas extraction. God help us, in Australia we suffer all these natural phenomena with droughts and floods. We should be able to take advantage of some natural assets too. I do not want to be the third umpire on judging what any previous governments may or may not have done in the past but I think there has been just too much emphasis on what may come from the State and the State has a secret answer to all problems. This is a community problem. If the State genuinely involves the community, you might be surprised how amiable a solution we might find ourselves. We need really good leadership to drive the debate in the direction that the community is seeking. I do not think it is all that difficult.

The Hon. RICK COLLESS: Councillor Humphries, Moree is the heart of the artesian bores in north-western New South Wales. Do you have any idea how many artesian bores are in the Moree shire?

Ms HUMPHRIES: I could take that on notice and find out for you. I could not hazard a guess.

The Hon. RICK COLLESS: Yes, thank you. The other issue in relation to that is what strata do those bores go through on their way down to the artesian basin? Do they also penetrate surface aquifers? The artesian bores are as deep as or deeper than most of these coal seam gas bores.

Ms HUMPHRIES: That is right, but they are there with a purpose. They are many and varied. They go through all the different layers. There are so many different formations, rock formations and all the different layers. They go through the whole lot.

The Hon. RICK COLLESS: If there is a risk of cross-contamination of aquifers from coal seam gas bores, that risk would apply equally to the artesian bores, would it?

Ms HUMPHRIES: Yes, it applies to the whole lot from 2,000 feet down right up through the whole lot. As I said before, we use all different strata and levels of water for different things. We have got nothing without it, absolutely nothing.

The Hon. SCOT MacDONALD: I address this question to any of you because you have all raised the issue of prime land in one way, shape or form. Is it your expectation that the State Government would identify what is prime agricultural land, whether it is for food or fibre? Is it your expectation that the State Government would dictate how that land could be used, whether it is able to be used for coal seam gas or not? In other words, I am asking you about the property right issue.

Ms HUMPHRIES: The property right issue is huge. I really do think we need guidance from the State Government. They have got the facts, the figures, the data for what is produced and where. They know what the value of the agricultural land is. There are probably places in the Moree Plains shire that could have gas wells without too much interruption but there are plenty of places where it will cause grave interference.

The Hon. SCOT MacDONALD: Do you think it is the role of the State Government to say to a property owner that they can or cannot have a particular activity on their property, whether it is coal seam gas or whatever?

Ms HUMPHRIES: Yes, I do.

Mr MARSHALL: In short, yes. We do that now with our SEPPs, State environmental planning policies and LEPs, local environmental plans. We do that at all levels of the planning system. I think the community is looking for that certainty. Certainly it is very clear that everyone agrees—I hate using the term "prime" agricultural land—that highly productive agricultural land should simply be off the table in terms of coal seam gas and also mining operations. We will have some huge issues feeding ourselves and the world in the future. The land we have got that is highly productive is very precious and it needs to be protected. So yes is the short answer.

Ms FABER: This comes back to the Government being very strategic and prioritising where it allows the developments to occur. The Crown owns the gas under the ground. They do not have to make it a free for all and say, "Here is a grid of the State. You can go over there and there and, by the way, do whatever you like." That is why everyone is so upset. There are no more exploration licences to go. They are all out there. What we need is a proper strategy on the part of the Government to say, "We have considered everything. This is the area where we will allow development. There is potential there for the next 100 years. By the way, our next plan will be to move into this area and that area." We will all have certainty, there is no free for all and there is no trying to get a quick quid out of this. We need a proper prioritised approach.

Mr MURRAY: I believe this risk-based approach is the answer. I do not think the Government can come out and draw lines on maps and follow contours and watercourses and underground aquifers or anything. We need to establish the valuable and unacceptable risk areas to go into. That may be quantified by the type and productivity and the sorts of land we see in some of the high-value grain-producing areas et cetera. Then we need to understand the associated risks. There may be a lot of risks that we can take and which will be acceptable to the community, but it is not about drawing lines on maps. If the Government goes down that path,

we will be sitting around these sorts of tables for the next hundred years still arguing with each other. We have to identify what it is we want to save. There is a lot of work being done on that now if the Government is receptive to that as a philosophy.

CHAIR: This session has come to a close. I thank the councillors for attending, some of whom attended from a distance. Your input is most valuable. If it is not an issue already for the Local Government and Shires Association, perhaps the question of rating might be put on the agenda.

Mr MURRAY: It is well and truly on the agenda and has been for some time but, unfortunately, we have nobody to listen to us.

(The witnesses withdrew)

CRAIG ANDREW TRINDALL, Traditional Land Owner, Gomeroi Nation and

MICHAEL JOHN ANDERSON, Traditional land Owner, Gomeroi Nation, affirmed and examined:

CHAIR: As a number of people have come into the public gallery since we started proceedings this morning I will repeat a few matters. A number of camera crews are present and under the broadcasting guidelines they understand that the media is not to concentrate on the audience. They can film the Committee and the witnesses. For the benefit of witnesses, you are covered by parliamentary privilege but that does not mean you can make derogatory comments about any individual. Any adverse comments must be confined to companies, entities or the Government, and not individuals. The Committee is aware that the subject of this inquiry is contentious, but the process behind these inquiries is to allow witnesses to be heard so that their evidence can be taken into account. Audience comment, cheering, jeering or interjecting is disorderly. A full transcript of all hearings will be on the website as quickly as humanly possible. Before we proceed to questions from the Committee, would either or both of you like to make an opening statement?

Mr TRINDALL: Yes, I would. Yaamagara ngindaay, gulbiaay Gomeroi Narrabri. Nhama Craig Trindall, Gomeroi mari—I wish to acknowledge my elders past and present and my countrymen here today. Aboriginal cultural values are intrinsically linked to the health and wellbeing of the land. We have a sacred relationship with the land and as custodians we are responsible for looking after country, just as our ancestors have for over 1,000 generations. Due to contemporary practices adopted within this country, we as a people have been disconnected from our traditional lands. Over the last 200-plus years the health of our traditional lands has deteriorated and so too has our personal health. We as a people lived in harmony with our environment. It was and remains vital to our identity and our belonging. We as Aboriginal people have never ceded our sovereignty, nor have we signed any treaty ceding any traditional custodianship over our traditional lands.

While I feel privileged to have the opportunity to say my piece here today, I must point out that this type of forum is not appropriate for Aboriginal people because it excludes and makes many of our elders feel uncomfortable. They certainly have a lot to contribute but, unfortunately, they are not willing to participate in this forum. I recommend that such inquiries be flexible in the future to meet on the terms of traditional custodians, much like other State and Federal government agencies have attempted to do, that is, to meet on country and in a venue where our mob feel comfortable. In relation to the Committee's first term of reference, the Gomeroi people have concerns in particular about the effect of coal seam gas activities on ground and surface water systems, the effects related to hydraulic fracturing and the effects that may result in impeding our access to what is termed as Crown lands, including travelling stock routes and State forests .

We believe there could be potential for contamination of our groundwater and subartesian water supply. We believe there is very little understanding of the long-term effects that this industry will have on this resource and this also relates through the process of hydraulic fracturing. Our recommendation is that the State should have a dedicated research fund to provide the knowledge to assess and manage the environmental impacts of this industry. In respect to land access, not only do private landholders have concerns but so do we given that we have limited access rights as it is. Coal seam gas licences will further limit our people's ability to access even what is deemed as Crown land, which we do at times to perform cultural continuance. Our recommendation is that the consultation process involves Aboriginal people to ensure that access is maintained.

In relation to the Committee's second term of reference, the Gomeroi people have concerns in particular about regional development, investment and employment, and State competitiveness; the issue of royalties payable to the State; and local government, including the provision of local-regional infrastructure and local planning control mechanisms. We ask: Where is the economic commitment to traditional owners? Our resources are being exploited and the wealth is being distributed outside of our communities. We are not a party to the economic benefits and we want that to change. Corporate responsibility needs to be extended and shared with traditional owners. I find it incredibly ironic that organisations such as local councils are advocating for royalties, yet there is no mention of economical benefits for the area's First Nations peoples.

Recommendation 1 is that we believe that a legislative framework needs to be developed that includes provisions for proponents to commit to sharing economic benefits with First Nations peoples from where our natural resources are being exploited. Recommendation 2 is that Aboriginal people be included in the development of local planning control mechanisms so that provisions are included to protect and preserve our cultural heritage. In relation to the Committee's fourth term of reference, the Gomeroi people have concerns

about the potential for legislation to be developed that does not acknowledge our cultural rights to access and use land for cultural purposes. That extends to examples such as hunting, fishing, collecting food and medicines, and performing ceremony or other cultural practices. Our recommendation is that future government policy regulating coal seam gas activity in New South Wales incorporate the views and recommendations of the now formed working party of the Office of Environment and Heritage that, hopefully, has Aboriginal representation. We are putting recommendations to that group that it identify spots for Aboriginal people. At the moment it just states that members should come from those 10 identified organisations.

Recommendation 2 is that the Office of Environment and Heritage's working party adopt a policy that requires the formation of local or regional cultural heritage management boards which align with Aboriginal nations within New South Wales and that each cultural heritage management board must include no less than a 50 per cent representation of traditional owner descendants. In closing, we the Gomeroi people representatives believe that it is integral that the State Government and industry commit to engaging with traditional owners in any development of policy, implementation of programs and commercial practices affecting traditional owner lands. We recommend that we sit down to with government and industry to develop an effective engagement strategy so that we do business right from the outset, not after policies have been drafted without our input. We are the people who should be able to make decisions about what will work and what will benefit our community. We must all remember that we are living on Aboriginal land, always were and always will be. Today we are meeting on Gomeroi Narrabri country. Thank you.

CHAIR: Mr Anderson, do you have anything to add to that?

Mr ANDERSON: Yes. I just acknowledge the traditional owners and the old people of the past who come from this area and who still reside within these territories. I simply add to what has been stated already, that there has been a written submission done by the New South Wales Native Title Corporation. In that it describes a range of our concerns. But on a more personal level, I am particularly concerned that within this area of the Gomeroi nation there is still a lot of knowledge, a lot of language and a lot of association to country. It is unfortunate that even today we still have to sneak on to people's properties and walk up rivers and in gullies to get access to some of our cultural sites. They are religious to us. They are very important places. It is horrible that we still do that in this day and age and that we do not have that free access to country whereas mining companies have free access to anything and do whatever they want. That seems to be a bit of a flaw in your white fella's government institutions to protect the rights of your citizens from these capitalists who run around pretending they are going to put a lot into our communities. That is not necessarily the case.

A case in point is to see all these big mining companies fly in their experts from all overseas and pay exorbitant rates of money at the expense of local people and professions within Australia. It is just not happening. You guys have the records in your offices and in Parliament to prove that. You have various reports floating around in your offices that also substantiate that. It is absolutely imperative that Aboriginal people start to become included in the decision-making processes. Right now we are constantly at loggerheads and all that we hear in these communities are people saying that they are all drunks and slobs and live on welfare, but that system was created for us, unfortunately. We are not to blame for that situation. Sure, we all have an opportunity to get out of that.

We want to develop our land. We want to be part of the process of decision making that allows us to have an impact on the process of planning within the communities and country. No matter how much land is cleared, no matter how much work is done to erase the memory and cultural contact to our country, we will never forget it. You can clear as much land as you want and dig as many holes as you want but you will never take away the memory of where those things are. I find it extraordinary that we are not included in the process and considerations. We understand that right now what is happening with Aboriginal people is that there is a conflict between the culture of Aboriginal people and our beliefs versus economic development and a sustainable economic future for Australia. I think that what we need to do is to sit down and look at that. We cannot do that at the expense of the people who live on the land and need that land. The Aboriginal people need to have some comfort in knowing that it is going to be protected.

I want to add that a lot of people talk about our culture, that you can go out and you do a survey so you can find a scarred tree or some old stone etchings or broken stone which was a tool manufacturing site that Aboriginal people occupied and used. That is not all of Aboriginal culture, there is much more than that. We have air space stories and we have ground stories. We have stories that connect us to the stars. We have a lot of stories that connect us to the stars. We have a greater—besides Mayans and the Aztecs—reliance upon the star

stories than anywhere in the world. The other thing that we have is a great deal of stories that deal with underground water and what is underground.

We talk about how things were formed in our stories and we have what is called in the Northern Territory the rainbow serpent. In Gomeri we call him *correo*, which is the crocodile, but basically the same spirit that goes through. I heard someone ask a question: How do you know where the under-water goes and which way the aquifers flow and how many there are? If you want we can do an aerial picture of where that crocodile went and you will find water everywhere he went underground. We will show you the channels; which way and where the water holes in different areas are where he came up to have a look as he travelled under the ground. This will give you the line of the water that goes through the aquifers besides the Great Artesian Basin, and that is above the Great Artesian Basin.

The poisoning of water holes: We talk about those connections because they go all the way through and fracking and having that water contaminated or in some way compromised by some sort of chemical then that will affect the whole system in the long term. It is our knowledge and we hope that one day someone will wake up, maybe too late, and say: We should talk to the Aborigines about that, maybe they did know something. We do know a lot about the country we occupied for thousands of years and we still have those connections. It is important that we begin to look at that. On an economic side of this coal seam gas: I have been privileged enough now to sit in on some of the meetings in southern Queensland because I am a border fellow for the Gomeri people. The Gomeri people are split by two boundaries, Queensland and New South Wales, and have two different sets of laws. We have been talking to the gas fellows in Queensland and they have a hell of a spin on how they do that fracking.

Not everyone tells you the same story and the type of chemicals and sandblasting that they do to frack the coal. Nonetheless, I think we need to get some regulatory system in place and do one or the other and not have a whole range of coal seam gas operators using different chemicals that are pollutants. We challenged them on the video that came out of America showing them turning their taps on and they can light a match over the top of it and it will fire up in their house out of the taps. That is one incident we are informed that they put on there to exacerbate this problem and develop and conjure up the emotions and get the emotions flying against coal seam gas. These people are pretty hard to believe because it is about the dollar and the bottom line in the long term rather than the welfare of society. That is a thing that Aboriginal people are concerned about; the wealth versus the well-being of the public and people. Our concern is also the well-being of the stories and well-being of the country. We are part of the country. We know the country very well. I will leave it at that.

In closing I do want to say that there is something that is about to complicate things that is going to happen within the next 12 months in Australia and England. We do have now a document signed by Queen Victoria and is also an Act of the British Parliament, and it gives unconditional sovereignty to Aboriginal people in this country. The question now is how the Parliaments of Australia are going to deal with it. Section 10 says it had to be proclaimed in every State in this colony. There is a delegation going to England to start talking about it. In terms of ownership of minerals there are some problems that the Australian Government are going to have to deal with one way or the other whether you like it or not. I put you on notice. You are the Parliament. You are elected by the people of New South Wales and there are some things that will emerge.

The mining companies will be notified of it pretty soon and there is going to be another battle in terms of the adverse possession that Europeans hold over the country. I think we need to talk about that in the scheme of things. We are interested in this country, we are interested in protecting this country and I am more interested in not having mining companies take 1,000 per cent of resources in this country and spend it somewhere else rather than the communities, because our communities out here are dying and we cannot have that.

CHAIR: Mr Trindall, your opening statement contained a great number of detailed suggestions, would you be prepared to table it for us so we can get a true record of it?

Mr TRINDALL Yes, not a problem.

CHAIR: I will proceed, if I may, to questions.

The Hon. SCOT MacDONALD: Can I come at it from the youth unemployment perspective? I think I had a similar conversation in Alstonville, Lismore, when we spoke to some Aboriginal people up there. Do you see any opportunity for employment for particularly Aboriginal youth I am thinking about, whether they take up a skill or trade, that sort of thing, through coal seam gas, through the industry I am talking about?

Mr TRINDALL: There are probably two responses. The first is: What have you seen to date? I believe it is a bit like now where the focus is on the benefits that can be provided in the future. Why were not these discussions held in the first place? Corporate responsibility; where was it in the first instance? You can blame legislation and say that people were only doing consultation in alignment with whatever policies that were a former DEC: That is the first response to that.

My other response to employment is that it should be shared. Employment should be shared but not just Aboriginal people in a community such as Narrabri. I think there needs to be investment in the training beforehand. How long have these people had the licences in Narrabri and around this area? Why was not there training set up in advance to train and skill up not only Aboriginal people but all of the community so they can use those people once things kick off in a commercial capacity? I do not think there was enough effort made in the first instance. In the future maybe: No one knows what the future is going to hold. With the moratorium on what is happening out there for Aboriginal people and non-Aboriginal people? There are only a select few benefiting from this.

The Hon. Dr PETER PHELPS: There are 60 locals in Narrabri who have benefited.

Mr TRINDALL: You name how many Aboriginal people.

The Hon. Dr PETER PHELPS: I do not know.

CHAIR: Have any of the coal seam gas companies talked to you yet?

Mr TRINDALL: We get a notice when they want a cultural heritage clearance for a well because that is what you have to do through the Office for Environment and Heritage, the former Department of Environment, Climate Change and Water. What they need to do before they do any disturbance, they need to get a cultural heritage clearance. Aside from that contact is very limited. If there are proposed routes a cultural heritage survey is limited to the activity line. It does not look at the whole big picture. For example, if there is going to be 800 wells in the Pilliga alone no one is looking at the cumulative impact, they are only looking at the little lines and tracks over a series of time. Let us say if it takes them five years to put down 40 wells we are only looking at little parcels at a time, 25-metre squares. It is not happening on a range basis and it is not then, as Michael alluded to, talking about this disruption, not only environmental repercussions but how that impedes the dreaming, the stories associated with these sites and landscapes.

CHAIR: The answer is; they have not come to you to talk about policy issues?

Mr TRINDALL: You know why? The Act says if you have a registered native title claim then you are allowed to, through section 29 notices, you are allowed to write to respond and talk. Prior to that there has been very limited contact. I note there was a great uncle of mine at the grand opening some six or seven years ago but a very limited response.

Mr ANDERSON: I am not sure whether they discuss things with the land council under the State land rights Act, but they do not represent traditional owners, they represent people who have been removed to different locations. There is room for people from traditional owners and as well as other people that have translocated in other policies where you picked people up and put them on missions. We have to deal with that now. Can I come back to the point on Aboriginal employment? If it is anything like the rich man in West Australia who owns Fortescue Metal, if they set up programs where they put Aboriginal trainees on and lock them away in a prison camp like the immigration settlements and train them in those centres where they charge them almost the same rate as they are paying them as trainees so they walk away with \$10 at the end of the week to spend on lollies and ice-cream: That will not be good for us, we want something more real than what Fortescue Metal offered.

The Hon. Dr PETER PHELPS: You must have some idea of what you would like in terms of training.

Mr ANDERSON: Not only in terms of working with communities, they need to train people in the local areas. The employment vocational training programs produce welders, boilermakers, plumbers and other type of tradesmen who are needed for this industry. I believe they can work in concert, all of us can work in

concert with local government and others to formulate strategies to train people within the local communities to be able to take on these jobs. We do not need to bring in other people from outside.

The Hon. Dr PETER PHELPS: Do you not already have TAFE arrangements that do that?

Mr ANDERSON: TAFE gives you certificates I, II, III, IV. I know at home in a little country town called Goodooga we have got Aboriginal people out there with certificates coming out of their ears, certificates I, II, III. They have been trained stupid but they cannot get a job.

The Hon. Dr PETER PHELPS: Why not?

Mr ANDERSON: Because no-one is offering jobs.

The Hon. Dr PETER PHELPS: There is no employment in Goodooga?

Mr ANDERSON: There is no employment in any of the areas. These blokes are too busy bringing plumbers from the cities to do their work. They are not getting people in the local communities. There are a lot of people with certificate-trained courses through TAFE who have qualified sufficiently enough to be able to move on into apprenticeship programs. These essentially are pre-apprenticeship training programs and they are qualified to a certain level. But, unfortunately, they are not offering the jobs.

Mr TRINDALL: Can I respond in regards to "what jobs, what training". Industry is like this, they have HR managers and HR departments. I believe that you might be best served to ask them for an audit of what jobs they have and ask them for an audit of what training specifics are required for those jobs and then do a cross-audit against what courses are currently being delivered within this community to address those requirements, then do a marry up of that and see whether there has been that opportunity for organisations such as TAFE to deliver that training. My bet would be that there has not.

CHAIR: If you were to put forward a recommendation to the Committee specifically about training, do you have the organisational structure in this area to be able to represent your people to one of the companies to talk about a training program?

Mr TRINDALL: It is as simple as sitting down. Like I said, be involved in discussions. We would be able to lead and be involved with developing something where we can get joint outcomes and economic benefits. We do hear there are skill shortages and the like. As I expressed before, not just with Aboriginal people, we are talking about our community.

CHAIR: When we were looking at coal issues in Gunnedah exactly the same problems were talked about, not necessarily in relation to Aboriginal people but the lack of trained places to be able to fulfil them and they get FIFO—fly in fly out. That is not necessarily good for the local communities.

The Hon. GREG DONNELLY: Thank you coming today to give your evidence. Are there any models in other States and Territories that we should look at as a guide for resource development projects that have effectively involved Indigenous communities? In other words, are you aware of projects elsewhere in Australia, even in New South Wales, where there has been cooperation and involvement with Indigenous communities?

Mr TRINDALL: I will make one quick response and Michael might have his own response. Can I take that question on notice? That way we can give you a best practice response.

The Hon. GREG DONNELLY: Yes, thank you.

Mr TRINDALL: What works for other communities may not necessarily work here. But there are elements of those that we can break down.

Mr ANDERSON: My only response is that there are very few anywhere in Australia that we can use as a model that is working. I can say though that my own experience is the knowledge of how they work at the Argyle diamond mines, for example. They have a very good operation and they have always had a good relationship with the people there. In terms of employment outcomes there are a lot of Aboriginal people working in that industry and they are traditional owners. The only other one where they started off on a good

track and in a good manner was the uranium mine and those areas. But, unfortunately, that fell by the wayside because there was a lot opposition because the proper people were not encouraged and were not part of the overall planning. There were Aboriginal people who were foreign to the country and it just blew up in everybody's faces. They were signing off with Aboriginal people who traditionally did not belong there and they were talking for other countries. There is not that many, sorry.

CHAIR: Thank you for coming and talking to us today. Your evidence will be very valuable, I can assure you. If you have taken any questions on notice, we ask that you give us an answer within 21 days.

(The witnesses withdrew)

MICHAEL BERNARD MURRAY, National Water Policy Manager, Cotton Australia, sworn and examined:

CHAIR: Mr Murray, would you like to make an opening statement?

Mr M. MURRAY: Cotton Australia obviously represents the cotton growers and ginners of the Australian cotton industry, which earns something in excess of \$2.5 billion a year for the Australian economy. Like any industry we expect the right to be able to operate and we believe that the mining industry and the coal seam gas industry should also have that general right to operate. We are not opposed to it and in many places it does coexist. We try not to be NIMBY-like in our outlook—not in my backyard—but the truth of the matter is in many cases where coal seam gas companies and other mining companies wish to operate, it also happens to represent some of the very best of Australia's agricultural soil and water resources. Therefore, we do have a conflict of interest in what we would like to see happen and, no doubt, what coal seam gas companies would like to see happen.

Our absolute priority in looking at the coal seam gas industry is to ensure the protection of the quality, quantity and reliability of Australia's water resources, particularly as they are available for use for agriculture. Our second priority is to protect high-quality agricultural land. When those two issues can be dealt with properly, we then see it is absolutely important that there are fair and adequate access and compensation arrangements for landholders who are impacted by coal seam gas developments. I stress that this is not about paying out people to allow activities to happen. That is very much a secondary consideration when we have ensured that we have protected both the water and land resources.

In terms of water, New South Wales is pretty much heading in the right direction, as we understand what the aquifer interference policy will contain. The concept of having to have any extractions metered and licensed is a good one. What we are most interested in doing is ensuring that the overall water balance is maintained. Irrigators had to do that and other water users have to do it. You would all be familiar with the water-sharing plan process that we went through. In this particular area, here and to the north and the south, most groundwater irrigators lost something in the order of 50 per cent of their entitlements. They have gone through a lot of pain and they expect that the mining industry at the very least must go through the same sort of rigorous licensing processes as our irrigators have to go through.

Looking after the quantity can be done through licensing. As to quality, that needs to be done through good water testing and understanding what people need to be looking for, what would be the appropriate time frame for that testing and also having a clear strategy. If we start getting indications that water quality is being impacted, how do we prevent that or prevent it from getting worse and then remediate it? That is something I do not have the answers for at the moment. It is no good just saying that we will have a testing regime without having at least a good understanding of what you are going to do if you start finding negative tests.

I am not overly familiar with the Namoi water study that is going on. As I understand, it is all about trying to work out the potential impacts that mining and coal seam gas extraction could have on the overall resource. To that extent it is to be applauded. When that is worked out and that study is in, the next phase is to have an overall water use plan for each valley. Just as we have surface water sharing plans, groundwater sharing plans and the like, with water that will basically be a by-product of coal seam gas there needs to be a good plan on how that gets used and integrated with the current water uses, where appropriate. At this point in time we would probably argue that the best way of dealing with the re-used water is to reinject it into the aquifers and maintain the water balance that way. That may or may not be technically feasible. That may or may not be technically feasible in some spots and not other spots.

A second use we would support, unless there is further evidence to suggest that it would not work, is actual substitution. Basically the coal seam gas industry may extract water as part of their process. They would need to clean it up to a high standard. It could then be possibly used by irrigators who currently have sub-artesian aquifer licences. So it might be, "I was going to pump 1,000 megalitres out of that sub-artesian aquifer. I will leave that there and I will utilise coal seam gas water." It would not be a simple one-on-one equation. There would have to be some sort of factor put in. I have had people argue anywhere between 1.5 to 2 because with the coal seam gas industry you would be receiving water every day and that is not necessarily when you would want it as a farmer. So you would have to have allowance for evaporation losses, the inconvenience of having to provide the storage and the like. But it is something that could be worked out.

If the aquifer reinjection is not appropriate and substitution is not appropriate, then you could be looking at new water use. So you might end up expanding some irrigation activity. In Queensland at the moment a couple of schemes are being looked at, almost ready to go as I understand. One of the drawbacks is that people are saying, "It will only be a 10-, 15- or 20-year water supply in that particular area. Should I develop irrigation based on that short period of time?" People need to go into that with their eyes open. If at the end of the day it looks like an economic proposition knowing that it is going to have a short period of life, maybe that is a way to go ahead. When it comes to the protection of the high-quality agricultural land, I drove down from Moree today. I have been living in Moree for eight years. Through drought or good seasons I have never seen a bad crop on that country between here and Moree around Bellata on the black soil plains there. It is just magnificent agricultural land.

Why we would want to develop another industry on that sort of resource is just beyond me. Surely there is enough gas and coal and other resources around to operate on secondary land before you go on to what is literally the best of the best. To that extent, again if we look north, what are they doing in Queensland? They have going through Parliament at the moment their strategic cropping land legislation. It is a good start but it is very narrowly focused. It basically says, "We will determine strategic cropping land on eight very scientific soil-based criteria." To be quite honest, without double checking, I am absolutely certain that the country around Bellata would qualify as strategic cropping land under those criteria. However, what makes soil great productivity is not just the dirt. It is the water resources under it. The strategic cropping land legislation does not take that into account. You have to get a 100 per cent tick on all eight of those criteria to get through. If you have seven of the eight you are not going to qualify and it does not account for any production diversity.

When the New South Wales Government develops its regional land use policy, it actually has to think about diversity even just for the sake of diversity. Just like we heritage list eighteenth, nineteenth and twentieth century houses to make sure we have some diversity, we should then from an agricultural point of view want to ensure that we have at least the best examples of everything to protect it. I did a tour down the Hunter Valley a couple of weeks ago and the absolutely beautiful thoroughbred studs there are under threat from coal seam gas and mining development. I suspect that if you applied the Queensland strategic cropping land criteria, there is a fair chance that that land would not qualify simply because it slopes and is undulating land. Yet it is difficult to see why you would not want to protect at least the best of the best of that.

The Western Australian Government in respect to a shale gas development rather than a coal seam gas development said, "We are not going to allow that extraction to occur underneath Margaret River" the wine-growing area. Again, I am sure that country would not qualify under the strategic cropping land legislation, but it certainly has value to be protected. We need to look at that. When it comes to land access and compensation arrangements, it absolutely is as important as actual compensation when working with the companies and the landholders to make sure the impact is as minimal as possible. Certainly in Queensland the experience of landholders up there has been varied. Some companies in some areas are quite good to deal with and in other areas they seem less good to deal with.

I am thinking of one example when a company said, "We want to put three coal seam gas wells down on your place, here, here and here." The landholder said, "Well, okay, that one I can live with, it's next to storage; that one I can live with, it's right on the edge of my field; that one is right next to my driveway. I'm going to be driving by that every day and seeing it. If you want to put it there, that's \$50,000 a year" compared I think to \$10,000 for his other wells. If we get to the stage where development is occurring on land, the real test will be if the land owner can hop in his ute, drive around and see those wells and see them as an asset and not as an inconvenience. We have to aim to get to that. I will leave that as my statement.

The Hon. GREG DONNELLY: Thank you for your submission and for attending today. I refer to the appendix to your submission, which is the draft policy. Could you give the Committee a bit of background to its development? As it is version number one, does that mean this policy still is in development form or is this pretty much the final policy?

Mr M. MURRAY: It is still in development form. That was August, but since then, basically all our cotton growers have been busy planting crops so we have not really had a chance to go back and run through it. I do not think it is going to change very much. We may see a little bit of a switch between whether we see as a priority groundwater reinjection compared to substitution. That may basically be almost area by area as to which is the most appropriate. Otherwise I think it is going to be largely as it is finalised.

The Hon. GREG DONNELLY: On some agricultural lands there is coexistence of farming and coal seam gas exploration. Indeed, farmers have told us that it works quite satisfactorily for them. Can the cotton industry envisage the possibility of having coal seam gas mining operating on cotton farms or is that beyond your comprehension? Your position essentially is that land should be dedicated for cotton farming and that there really is no provision for coal seam gas mining?

Mr M. MURRAY: We can be a bit schizophrenic about that, to be quite honest. If our growers had their choice they would say, "Look, just stay off this land. It is not worth you guys developing in terms of the risk to the resources." Having said that, both in Queensland and in New South Wales the law is very heavily weighted to the extractive industries in that at the end of the day they can actually enter your lands and go ahead and do it. In this process where we are trying to protect our land and water resources, we are also working with a number of mining companies and saying, "Look, if at the end of the day you do have to come on to it, these are the minimum things we want." One of our particular hot spot areas is around the region of Cecil Plains, which overlies the Condamine alluvium in the Surat Basin of Queensland. It is very similar country to the irrigation country around here and Narrabri—beautiful black soil overlaying aquifers.

We would really say that you should not be on this country. However, it looks as if the mining companies and the coal seam gas companies are holding the aces in their hands at the moment. So we are saying, "Look, instead of 500 metre spacings on your wells, can you go to 1,500 metres?" They are saying, "Yes, we probably can. We can do directional drilling in some cases." On the Cecil Plains area they actually feel that the coal seams are probably a little too narrow for them to do too much of that, but it may be feasible. We are pointing out, "Well, there's no point putting a well right in the middle of the field. Can you space it out on to a side?" Yes, we are looking at it; yes, it is in the realms of possibility. Is it something that we would like? No. In some of our more dry land developments where they are reasonably well advanced in Queensland, again I have some dry land farmers saying, "We would like to work with you to the extent that you can operate on our land and you will not even have to pay us compensation because you're not going to make an impact." That is where they would like to end up. I do not think they are going to get to that level.

The Hon. RICK COLLESS: What you have called high-quality agricultural land, which previously has been called prime agricultural land, is a real issue. I agree that the land you were talking about between here and Moree would fall into any category of high-quality or prime agricultural land, or whatever you want to call it. The problem is that as you go out of that area into land of lesser agricultural quality, where do you put the line? There has to be a line somewhere on a map that says on this side you cannot do gas mining and on this side you can. Is that not always going to be the issue?

Mr M. MURRAY: It is going to be an issue and I guess it is an issue that government, be it local, State or Federal, will have to grapple with all the time, and it is going to be a judgement call. I think science can help inform. I would suggest that you might want to start with something like the criteria that Queensland is using with its strategic cropping land and then start thinking about some of the diversity issues that I mentioned earlier. I am not sure whether you will hear from Martin Rush, the Mayor of Muswellbrook Shire Council, but that council has been doing some really good mapping work and saying, "Look, these are the requirements we need for our various industries." I think that is well worth looking at. At the end of the day you guys are going to have to make a judgement call. Talking about that area reminded me of something I wanted to say when I was talking about protecting water quality. Government has a role to be the honest umpire in asking is there a water quality issue, can these particular processes beat fracking, work without any risk, or whatever. For government to be that, it has to be well-resourced. One of the issues is that all the good hydrologists and the like have been snapped up with big salaries by the various extractive companies. You guys will have to match that and maybe build that into your fees and royalties to help pay for it.

The Hon. Dr PETER PHELPS: With respect, there always will be an argument from people who are opposed to it totally that we as a Government have an interest in it through royalties and so we skew the results, in the same way that when mining companies produce pressure and water-quality results they say that they are skewing the results. There will always be a certain level of people that you are never going to be able to convince?

Mr M. MURRAY: No doubt, as with any issue. However, at the very least there needs to be a separation of departments. Water quality and that should sit very clearly within the Office of Water so there is at least some degree of independence. In Queensland that role has been provided to the Queensland Water Commission, a semi-independent authority. That may be something that is worth setting up to make judgements. I am not overly familiar with, say, the Mine Subsidence Board but, again, something that is seen to be

reasonably independent may be a good way of getting away from that perception that the royalties are going to override everything.

The Hon. RICK COLLESS: Are you aware that we have commenced a strategic agricultural land assessment process in New South Wales?

Mr M. MURRAY: I am aware it has commenced. I have not seen any of drafts of it.

The Hon. JEREMY BUCKINGHAM: The appendix to the Cotton Australia draft coal seam gas policy states:

The preferred method for maintaining the water balance is reinjection.

How did Cotton Australia arrive at that position as the preferred methodology? What working examples have you seen of that?

Mr M. MURRAY: Firstly, as I said in response to Mr Donnelly's earlier question, that is one area that is likely to change in our policy because it is still a matter of ongoing debate as to what is the best. Have we seen it working yet? No. From our research we gather that it could be appropriate in some situations. Ideally, I would say you would want to reinject into the same aquifer from which it was extracted. The problem with that is that from the coal seam gas extraction point of view, they obviously want to get rid of the water to get the gas out. So it may be a case of when they are finished in this section you start bringing the water that was originally extracted from there and put it into that section as they move on. The technical feasibilities need to be investigated further. A lot of this work came out of dealing with a group called the Basin Sustainability Alliance, which is based around Dalby. It has been looking at these issues for approximately three years and it is probably the most advanced. It is basically a group of landholders and community members who, obviously, are most interested in protecting their land and water resource, but they are also pragmatic enough to say that this industry is here, it is existing, how do we actually work with them.

The Hon. JEREMY BUCKINGHAM: Your submission states further:

There needs to be independent comprehensive quantity and water quality monitoring—

that makes a lot of sense—

to identify any early impacts on either quantity or quality of water resource contained within sub-artesian aquifers.

How will we ensure that those impacts can be picked up early enough? Obviously, it is a very complex system below the ground between all the aquifers. The water movement may not be quick and, potentially, we could see significant impacts that we do not pick up early. Is that a key risk in this process?

Mr M. MURRAY: I am not a hydrologist, so I may be on the wrong track here but, yes, it is a risk. How key a risk it is, I am not so sure, given the general time frames with underground water. It is not like surface water. You have room and a bit of time, but it comes back to my earlier statement saying that the Government has to be properly resourced to be able to collect this data. The data may be supplied by the mining companies or it may be collected by the Government, but at the end of the day the Government has to be well enough resourced to be able to look at that data, put it into its models and pick up the trends early. To a large degree, that is what the Queensland Water Commission is charged with. Its response to protecting people is that it is doing a cumulative impact study and if it suggests that an individual water resource will be impacted by the activities of coal seam gas extraction, the company has to have an alternative water plan put in place for you before it extracts that water.

If that impact does occur there is an alternative plan to ensure that your water is supplied. In my mind that is fine and that protects the water resource of the individual. Where I think the Queensland model fails is that there is nothing there saying how we protect the overall long term health of the aquifer. I run out of water, I get my water restored and I am fine, but the overall basin supply, has that been impacted in the long term and if it does show to be long term impacted what are we going to do about it? Queensland does not have the answers. In New South Wales we have to say that trend has been picked up, what are we going to do? Maybe we are going to stop extraction and see if that reverses the trend; or we are going to do something with reinjection: I do

not have those answers, all I know is that it has to be resourced enough so people are in place so they can provide those answers.

The Hon. SCOT MacDONALD: Can I take you to that Bellata property, eight out of eight, beautiful wheat crop every year, grow babies scenario; what happens if that guy is getting \$200 a tonne, \$100 less per tonne than he needs to break even. How are we going to address that and say we are going to quarantine that from wheat or barley but you can not engage in coal seam gas. Do you see that as an appropriate role for the Government?

Mr M. MURRAY: It is a role that Government, local and State, do every day. Land use and planning rules are out there. I have just sold my house on the edge of Moree. I would have loved to subdivide it into three different blocks and made more money, but I am not allowed to do it. What we want in that area is certainty: Certainty is never certain and not forever. I want a reasonable time frame. I know I cannot do anything else on the property in the next 15 years and that gets built into the value. It is not going to make everyone happy. It is a judgement call: that is why you guys are elected.

The Hon. Dr PETER PHELPS: There is no compensation; we have seen this with the Native Vegetation Act: There is an arbitrary decision by Government, often with political motives, which then has a net effect upon the property which then has a net effect upon the livelihood of the farmers concerned. Would it not be better to say, provided there is no aquifer cross-contamination, if you want to put coal seam gas on your property go for it?

Mr M. MURRAY: It is still something that needs to be proven one way or the other, but if you believe the coal seam gas on that property is going to do unrepairable long term damage to that resource then as a nation you may feel that land needs to be protected for the long term. Generally speaking I believe people should be compensated when they have had their property rights impacted. That is the ideal. It certainly works in some areas. In other areas it does not work. Go back to my own example; I was not compensated for the fact I could not subdivide my property.

The Hon. Dr PETER PHELPS: The difference is you bought that property knowing it could not be subdivided. If you believed that it could be subdivided and subsequently you were told you cannot subdivide it; that would be a different situation.

Mr M. MURRAY: I am not a local government law expert but I know they do change their plans every 10 or 15 years and I have not seen a compensation cheque yet. I think your point is valid and it is a legitimate debate as to whether they should be compensated. That will depend on how much we, as a nation or State, value that particular resource that we have got.

CHAIR: I call the session to an end. Thank you for agreeing to appear before the Committee. Your evidence has been very valuable.

(The witness withdrew)

(Short adjournment)

CHAIR: Before we commence I would like to welcome students from three local high schools; Narrabri, Wee Waa and Walgett. welcome to the Committee and I hope it is of some value to you today.

JANET HELEN JUDD, Friends of the Pilliga, and

MILTON FREDERICK CHARLES JUDD, Friends of the Pilliga, affirmed and examined:

CHAIR: Mr Judd, are you representing an organisation or appearing as an individual?

Mr JUDD: I am appearing for Friends of the Pilliga and in an unofficial capacity representing volunteers of the Rural Fire Service.

CHAIR: Before we commence questioning would either or both of you like to make an opening statement?

Ms JUDD: Certainly. We are here representing Friends of the Pilliga. We are a community organisation from Coonabarabran and we stand to gain nothing whether or not the coal seam gas goes ahead. We are not going to get anything either way. Our particular interest is in the Pilliga and the Pilliga project which is a large area of temperate woodland, the only remaining large area, and that is important. It is not rubbish land as many people describe it. It is not marginal land. It is important for a number of different ecosystems. Other people are focused on farm land and water; we are not doing that. It is important for us to preserve high conservation value land. There is quite a lot of private land that is high conservation value land that is covered by voluntary conservation agreements with the National Parks and Wildlife Service and agreements that have been entered into with catchment management authorities. There is also public land and the public land of the Pilliga is under State Forests or listed as State conservation area and these are the areas we have particular concern for.

Our particular concern is biodiversity and the potential, even though this appears to be a large area, for the fragmentation and breaking up of a large area so that it leads to a number of impacts on the endangered species which live there. They have done a recent survey and have found 21 endangered species in an area where the previous proposal indicated that there were not very many and there would not be very much impact: Fragmentation leads to extinction. It has been said: We can move them somewhere else. There is nowhere else to go. It is a highly fragmented landscape around the Pilliga, it is cleared, it is no longer bushland and things that depend on bushland cannot be moved there.

We would like to point out that coal seam gas under full life-cycle analysis is not all it is cracked up to be. It has huge potential for producing a lot of greenhouse gases—more than they claim will be produced. I think the Aboriginal issues are important. It is all very well to make a token acknowledgment of Aboriginal people by calling in a small group of people to examine a small area for artefacts, but the Aboriginal people do not work in that way. The Pilliga is rich in Aboriginal heritage and Aboriginal people have a landscape view of the land out there, and should not be asked merely to look over this particular area and see if there are any artefacts in it.

The fire risk is a huge potential and my colleague will talk about the fire risk in the Pilliga. Our general opinion is that it is best to stop it, basically, and if we cannot stop it we need a moratorium until we know a great deal more about it. That moratorium should not be on just exploration licences, it should be on the pilot wells and it should be on the development, which is going ahead at this moment in the Pilliga—it is happening already. We need to look at alternatives such as solar and thermal. We should stop thinking about using it as an export gas. We should be thinking about using it as an internal domestic gas. Queensland produces enough domestically that we do not need to go any further in New South Wales than we have already. Our opinion in general is that high conservation value places are not the place where we should be putting an intensive industry such as coal seam gas extraction.

Mr JUDD: First of all I would like to give you a bit of my background. I am a retired farmer with 35 years experience fighting fires in the Pilliga. I was an engineer, special projects officer in the ship building division of Commonwealth department of shipping.

CHAIR: I will ask you to turn your mike off and speak loudly.

Mr JUDD: Before I became a farmer I was a marine engineer and I was a special project officer in the production section of the ship building division of the Department of Shipping and Transport. Now there is no ship building industry in Australia. I had to study specifications and technology for \$55 million semi-submersible off-shore oil rigs. I know a bit about it. What I am worried about are the firefighting problems. I am also worried about the integrity of the wells. I will go on first with the firefighting. The Pilliga scrub—sorry, forest—get a number of fires. On an average of every seven years we get a section 44, which is a State emergency. That is a huge fire. To give you some idea of what these fires are like, in 1997 in the middle of the night the fire crossed the Newell Highway. The ambient temperature was over 20 degrees, the wind gust was 60 kilometres an hour and the humidity was down to only about 5 per cent. Everything becomes like tinder. There is nothing you can do about it. In the last big one in 2006, where 40 per cent of my own property got burnt, the fire covered seven kilometres in 21 minutes. Visiting firefighters from the coast could not fathom how it could go so fast.

Now, the gas problem: most of these fires, the really big ones, are started by lightning strikes. The Rural Fire Service has an apparatus to measure this. In a fire season where you have the right conditions it is not unusual to get over a thousand lightning strikes in a 24-hour period. Luckily, not all of these produce a fire. However, the potential of a lightning strike on a gas well is rather bad. The reason for this, as a human being you do not stand out in the open in a lightning storm because you are 70 per cent liquid and you will attract it. I could think of nothing better than a two kilometre deep well—and that is how deep they are in the Biblewindi area—made of steel, submerged in a wet environment, to attract lightning.

The problem with this is the well head itself is tested to 2,000 pounds per square inch. However, the gas is then fed into a small plastic pipe—undoubtedly a pressure pipe, plastic polyurethane—which runs a generator some distance away from the well. As well as that, the feeding pipe going from the well head down into the ground connects with the plastic pipe 116 millimetres in diameter. A lightning strike travels at a tremendous speed, anywhere between 120 and 140 kilometres per hour. It has five million joules of energy and 30,000 degrees centigrade temperature. It will blow a pine tree to bits by boiling the sap. If that hit one of these well heads—and if there are over 1,100 well heads in the Pilliga—we are going to have a really bad fire as far as I am concerned. Sitting down as an engineer using Charles law, you get something like a 34,000 pound increase, but it would not be that because it is deeper. But you are going to get a tremendous surge of pressure and also you are going to get a lot of heat. I reckon the plastic pipe will not put up with it and we will have a big fire.

The other thing that is a problem is the random emissions, and they do have them. You do not get a lot but you do get them and they are bad greenhouse gases, of course. But you can get ember attacks in the Pilliga that go anywhere between 10 and 20 kilometres. If that suddenly got to a well that had an emission problem, we would have another well fire. We are not prepared for that sort of thing. We are trained to put out barbecue gas fires and things like that. The other thing about it, of course, is that a lot of these bad fires come from the south-westerly direction and we would be fleeing through the gas field if we were trying to get away. It is a personal protection problem. In relation to the well integrity, it is common in oil drilling and other high-pressure situations to cement all the way down the bore. You bore the hole, in this case put a steel pipe down and cement down the outside of it.

I talked to the engineer from Eastern Star Gas, Rohan Robinson, sometime ago. It is parliamentary privilege but as far as I am concerned they are a cowboy outfit, or they were because tomorrow they are being taken over. They only intended to cement through the aquifers. His reason for this was that the Pilliga sandstone was impermeable. They would go down through the first lot, they would hit the shallow aquifer which is used by all the cockies round here, and then they would cement through that. They would keep on drilling through the next couple of layers of geologically, in his words, stable stuff until they got to the artesian basin, cement through that and keep on going down to the coal seam gas. He said, "We don't want the water running into the seam", which they do not. I brought this up on Monday with the Santos people. They said, "We wouldn't do that. We would cement all the way down", which is the common thing.

The other thing I am worried about is the integrity of the cement. I have samples. I did not bring them here. The cement they are using to plug the wells is very poor. Even though it might be cemented all the way down, what I am worried about is the long-term integrity of it, particularly if they start fracking. Even so, we do get earth movements around here from time to time. A thing that was brought up on Monday by Mr David Wolfenden, the water manager for Moree shire, was electrolysis and other things. So I am really worried about the fire issue. I want to give a brief word on employment. Our son works in Bass Strait. They fly him every fortnight from Perth to Bass Strait. He gets \$25,000 a month and they fly him back. They do not employ local

people. You have to be specialised. He has had to do a whole lot of stuff to become a professional rigger. That is probably enough from me if you want to ask questions.

The Hon. Dr PETER PHELPS: Do you have any examples in Australia of a lightning strike on a coal seam gas well?

Mr JUDD: No, I do not. In 2007 there was a lightning strike on one of those big coal trucks down in an open cut mine in the Hunter. It was just sitting out in the open and it went bang.

The Hon. Dr PETER PHELPS: But there are no examples of a well strike?

Mr JUDD: Not yet. The wells out here have not been here all that long. They did say they had one to some National Parks people, a while ago but there was no evidence of it. There is evidence on the web of lightning strikes on gas storage tanks in the United States.

The Hon. Dr PETER PHELPS: But they are different from the wells themselves.

Mr JUDD: They are steel. The wells are a better ground than a tank—two kilometres of steel pipe going into the ground.

The Hon. Dr PETER PHELPS: Given that the footprint of the roads and the wells is small and they are not going to be fenced off, why would that necessarily be a problem in an area of such a vast size as the Pilliga? Why would it be a problem for biodiversity, given the very small size of these pads and the relatively small impact of tracks?

Ms JUDD: The requirements of particular animals for particular lifestyles are very specific. When you have a road they cannot cross it.

The Hon. Dr PETER PHELPS: How does a 10-by-10 metre pad affect it?

Ms JUDD: It has the roads through it and it has the pipelines through it. These are much wider than that.

The Hon. Dr PETER PHELPS: The pipelines are underground.

Ms JUDD: But they have cleared the areas. They are cleared.

Mr JUDD: Fifteen metres wide.

The Hon. Dr PETER PHELPS: Which then grow back.

Ms JUDD: But they do not allow trees to grow back on them. They will allow the scrub to grow back but they will not allow the trees to grow back on them.

The Hon. Dr PETER PHELPS: But there are 500,000 other hectares.

Ms JUDD: But you end up with a group of animals over here which are living in an area cut off from an area over there.

The Hon. Dr PETER PHELPS: But animals do not live 15 metres across—

CHAIR: Order! It is not for the Committee to debate an issue.

The Hon. Dr PETER PHELPS: Assertions have been made that animals will not go across 15 metres of scrub.

Ms JUDD: And they will not.

CHAIR: The Hon. Dr Peter Phelps will allow the witness to make her statements and those statements can be tested for veracity by other means. Please continue, Ms Judd.

Ms JUDD: And they will not cross those sorts of distances. Many animals will not cross any open area and by the time you have got the lines going in every direction you have areas of isolation.

The Hon. Dr PETER PHELPS: How did these animals travel across the Pilliga scrub when it was far more open than it is today?

Ms JUDD: It was not.

Mr JUDD: That is a furphy, sir. It really is.

The Hon. Dr PETER PHELPS: Is it?

Mr JUDD: Yes. Read John Oxley.

Ms JUDD: It was as mixed then as it is now.

The Hon. SCOT MacDONALD: You made a statement about cheap exports. My understanding is that we are looking at \$3 a petajoule now but if the industry develops they are expecting it go between \$6 and \$8 a petajoule—sorry if I have the name wrong. Where did the belief come from that it is going to go to cheap exports?

Ms JUDD: I may have said "cheap" in the submission. I did not say "cheap" when I was saying it then. I am sure if you check the transcript that will be so. I did not say "cheap" exports. I said "going to export". It seems to me it needs to stay in Australia. If we have 500 years of it, let's use it in Australia and benefit from it.

The Hon. SCOT MacDONALD: That is puzzling for someone like me who thinks Australia is where it is today from exports. We are an export-trading nation. But that is a statement.

The Hon. RICK COLLESS: In your submission you refer to the fugitive emissions. You say that fugitive emissions are inevitable and you go on to say that 3 per cent of methane leakage rate cancels any greenhouse gas emissions advantage claimed for CSG over coal. Does that include the fugitive emissions that come from coal itself? Because in an open cut coalmine surely all the gas that is contained in the coal is emitted into the atmosphere.

Ms JUDD: I am quoting an article which I received.

The Hon. RICK COLLESS: From where?

Ms JUDD: I would be happy to provide it for you.

The Hon. RICK COLLESS: Thank you.

The Hon. JEREMY BUCKINGHAM: Thank you very much for your submission. I am interested in your views on what you think State forests should be used for. Your submission states:

Under the Brigalow Act the forests of the Pilliga are classified as a CCA zone 4 and this means that they can be used for a number of purposes.

Do you think coal seam gas can coexist with those other uses such as forestry, conservation, apiary and so on?

Ms JUDD: The decision was made at the time for political reasons.

The Hon. JEREMY BUCKINGHAM: Sorry?

Ms JUDD: The Brigalow decision was made in 2005 to retain some areas as a State conservation area [SCA] and some areas as State forests. That is the different CCA zones. State forests and SCAs were allowed to have a certain amount of mining but the implication was that mining would have a much smaller footprint than the footprint of the coal seam gas industry. Forestry should continue in forestry, if possible, if there is something to go ahead there. Conservation should happen in both forestry and in State conservation areas. Forest is set

aside for conservation values. But the coal seam gas industry has a much larger footprint than was predicted with that political decision.

Mr JUDD: There is a coalmine on the north-eastern edge of the forest and it will be coming in underneath it. The Newhaven company, I think that is the name, has got it. I was part of the stakeholders on the Brigalow Belt. There will be an underground coalmine going in underneath. I think it might be interesting if they meet the coal seam gas coming the other way. But it has a smaller footprint.

Ms JUDD: Underneath has a smaller footprint. Down through the top is a big footprint.

Mr JUDD: It is 1.3 hectares every 500 metres, and some of them are 200 metres. There will be 550 of these 1.3 hectare cleared areas plus the interconnecting roads and pipelines. I have ridden a mountain bike along some of them. That is the other thing about firefighting, we have no idea where are all these new tracks are. They keep telling us that they own the tracks that they have put in themselves, not State Forests. The other thing that worries me is the flare. They do not have any blow-out protectors on these wells, from what I can see, because it is low pressure, 23 to 40 pounds per square inch. It is not like off shore. If they cannot get rid of the gas they can either vent it to air, which is bad as a greenhouse gas, or they can flare it.

On the individual wells where they have to flare, they put it well away from the well because they are worried about it and they flare it. But when they get back to the main compression area in the middle of the forest they have got a really big flare. They have cleared the ground around it but the grass is growing back round it. What happens on a fire ban day? Somebody from the Nationals Parks asked the question the other day what happens on a fire ban day. You cannot even light a barbecue in the open. They did not have an answer for it.

Ms JUDD: So it is either the flare or venting. If you are venting you are putting a highly flammable gas into the atmosphere.

Mr JUDD: Bill Heffernan went crook about them venting when he was here. Normally that would be okay. But if you have a flare not too far from the forest and you have a high wind you could get debris going through, particularly with the main one where they have not kept it cleared down the bottom of it. You only need a couple of twigs to catch alight on a 5 per cent humidity day and away you go.

The Hon. JEREMY BUCKINGHAM: In Casino one of the risks they identified was insects flying through the flare and landing in the grass.

Mr JUDD: Yes.

The Hon. PETER PRIMROSE: In relation to fire, and I certainly am not an expert, is there an official attitude of the local Rural Fire Service?

Mr JUDD: No. I have to say, unfortunately, there is not. However, they are looking at it. I am not talking on behalf of the Rural Fire Service. I am talking on behalf of local volunteers who have to fight fires. There is a movement within the Rural Fire Service upper areas where something has to be done about this because this is not just the Pilliga; it is all over the State more or less.

The Hon. PETER PRIMROSE: Would it be worthwhile for the Committee to approach the Rural Fire Service to seek its view?

Mr JUDD: That would be a very good idea. They are beginning to listen to me now, but we need you.

The Hon. GREG DONNELLY: Thank you for attending today and providing us with an opportunity to ask you some questions.

Mr JUDD: Thank you for coming here.

The Hon. GREG DONNELLY: On the last page of your submission, just above point number five you state:

Production from wells has commenced illegally while they are still only under exploration or pilot plant licence.

Could you elaborate on that and give the Committee some additional detail?

Ms JUDD: The gas is being produced and sold to a small power station called Wilga Park. In the details from its quarterly reports it is listing how much money it is making from the selling of this particular gas to the Wilga Park plant.

The Hon. GREG DONNELLY: Quarterly reports from which company?

Ms JUDD: Quarterly reports from Eastern Star Gas.

Mr JUDD: I think the last quarterly report I saw they made \$16,000.

Ms JUDD: No, it was \$600,000.

CHAIR: I will draw this session to a close. Thank you very much for giving us the benefit of your experience.

Mr JUDD: Thank you. I really would like it if you did approach the Rural Fire Service.

(The witnesses withdrew)

ROSEMARY MARGARET NANKIVELL, Chairman, Coal Seam Gas Committee, Caroon Coal Action Group, and

JAMES FREDERICK EDWARD HAMILTON BISHOP, Spokesperson, Mullaley Gas Pipeline Accord, sworn and examined:

DAVID MICHAEL QUINCE, Chairman, Mullaley Gas Pipeline Accord, affirmed and examined:

CHAIR: Would any of you like to make an opening statement?

Ms NANKIVELL: Could we make two opening statements because we are from two different organisations?

CHAIR: Of course.

Ms NANKIVELL: Good Morning. As Chairman of the Coal Seam Gas Committee of the Caroon Coal Action Group, I thank you for the opportunity to express our concerns about the potential development of the coal seam gas industry on the Liverpool Plains. From what I have heard throughout this hearing, I am concerned that it is a fait accompli but, in fact, there should be an inquiry into an industry that has the potential to destroy existing profitable industries for a short-term gain. I make the following points. There has been no independent analysis of the development of the coal seam gas industry. The proponents of the coal seam gas industry in New South Wales include the companies and the State Government at ministerial level supported by the advocates in the industry, investment and planning departments. To the farmers of the Liverpool Plains and many others, the Government and the coal seam gas industry are in close alliance. This raises the question of whether the Government is acting in the public interest. The development planning processes used at State level rely on companies to provide the necessary compliance material. However, what is missing is independent economic, financial, social and environmental analysis of the impacts of industries such as coal seam gas.

An economic and financial assessment of the potential coal seam gas industry in New South Wales needs to be done independently of the industry and investment department, and the Department of Planning and Infrastructure, which not only lack the skills but are tied to the resource companies. This is a matter of urgency. The economic analysis needs to cover, first, the loss of farm and grazing land, related production and livelihoods to accommodate access to resource in rural New South Wales. This needs to fully quantify the economic losses across different farming and grazing systems from the forced coexistence proposed by the Government and its departments; second, loss of agro industry and associated employment and community effects; third, the costing of damage to underground water resources; fourth, the impact on viability of downgraded value of rural farm land assets once coal seam gas companies gain access; fifth, related social impacts and costing; and sixth, net employment impacts from coal seam gas expansion at the expense of agribusiness and farm production.

A financial analysis needs to define net royalties accruing to the Government and the scale of increased outlays from the potential damaging impacts of the coal seam gas industry in New South Wales across the State. These need to be completed to complement the proposed regional bio-resource assessments by governments that are proposed under a Federal role in resource planning and development licensing. The rationale is that the development planning approach that relies on company estimates and assessment with State Government compliance review is fundamentally flawed and independent assessments are required in circumstances where contentious industries are proposed. Until this analysis is completed, I believe that the coal seam gas industry has no place in productive agricultural lands, lands of high conservation value and valuable water resources. Until that is proven, the coal seam gas industry is an illegitimate industry.

The survival of all rural communities depends entirely on our ability to access groundwater. In 2000 the Water Management Act was introduced for New South Wales to secure a sustainable basis for water management. New South Wales was at the limit of its available water resources and new licences for commercial purposes could no longer be issued. A limit was placed on the total volume of water to be extracted under the Murray-Darling Basin Cap. Twelve years later the proposed coal seam gas industry contradicts this Act and threatens the viability of existing agricultural industries. Figures from Queensland sites vary, but drawdowns of 55 metres in potable water supplies are quoted. Recovery of these aquifers was estimated to take a nominal 150 years. It is further estimated that 100 gegalitres of coal seam gas water will be extracted per year

for the Queensland gas industry. This water will contain up to 7.5 million tonnes of salt. These are extraordinary figures.

For the average farmer a drawdown of 55 metres would result in the loss of their stock and domestic supplies. The extraction of vast amounts of salt and water would result in subsidence and eventual destruction of aquifers. The impacts on our groundwater may take many years to be realised. The United States of America EPA is now investigating over 1,000 complaints of aquifer contamination. In a country as reliant as we are on groundwater, we cannot afford to let this happen. Another emerging issue is the maintenance of wells. Steel rusts, cement deteriorates and the integrity of these wells is compromised by the natural movements of the earth. Long after the gas companies have gone, New South Wales will be left with the maintenance of these wells at considerable ongoing expense

The Liverpool Plains is home to many innovative farmers using advanced farming techniques. Farmers have been here for many generations and have learnt to work with the fertile, self-mulching black soils. Many of us have been bought up with the simple belief, look after the land and the land will look after you. This completely contradicts everything about coal seam gas companies. Infrastructure has to be placed carefully on these moving soils. Pipelines, sump ponds, well heads, compressor stations, all-weather roads, waste water facilities and overhead power lines will not only interfere with farming practises but also lead to erosion and interference with surface water flows. Wells on a 500-metre grid spacing will severely impact upon the value of properties and neighbouring properties, while reducing farmers' incomes. Livestock can also be affected with a study in Canada showing fertility rates dropping by 30 per cent in breeding cows. A farmer's relationship with financial institutions will be altered as their asset base is devalued and income is reduced.

Over the past four years Santos has been working in our district. Its failure to consult meaningfully with the farmers and its reluctance to part with information—excused by "commercial-in-confidence" clauses—means that farmers no longer are sure of their future. Santos, which surely must have forward projections, refuses to tell farmers yet is happy to tell its shareholders. Much of our knowledge comes from Australian Stock Exchange releases and Santos investor seminars. This uncertainty led to the establishment of the Spring Ridge blockade. I have no doubt that unless Santos can prove scientifically that its activities will not impact on our water supplies and that the agricultural productivity of the Liverpool Plains will not be compromised, these blockades will become the norm. These come at considerable financial and emotional costs to the families involved. The Liverpool Plains represents many billions of dollars of long-term agricultural investment. This is money that stays in rural communities. The gas companies represent short-term investment where the money is quickly absorbed by partly or wholly owned overseas companies, and leaves a legacy of environmental issues. I ask you to facilitate an independent analysis of this industry as a matter of urgency.

Statement tabled.

CHAIR: Mr Bishop, would you like to make an opening statement?

Mr BISHOP: Yes. Thank you for the opportunity to attend this morning. I am here representing the Mullaley Gas Pipeline Accord. That is an area of farms that run from the little town of Willala south of Boggabri to just north of Kahlua. We have approximately 100 farmers receiving emails with 60 definitely affected farmers on a proposed pipeline. We believe that our area is unsafe and not a suitable location for the proposed Eastern Star Gas pipeline from Narrabri to Wellington. Given the fact that it is running through some of Australia's most productive agricultural land, we believe the pipeline should be relocated. There is an alternate route down the Newell Highway which has established itself as a quasi corridor for pipelines. We cannot see why that choice cannot be adhered to given the high level of production from the Liverpool Plains. We are concerned that if this pipeline is not relocated the reason it has been put there will prove to be to extract gas from the Liverpool Plains.

CHAIR: Did you have something you wish to table?

Mr QUINCE: Yes.

CHAIR: Anything you have you can table.

Ms NANKIVELL: I hope you read them.

CHAIR: Mr Quince, do you have anything you wish to add?

Mr QUINCE: Just to reiterate what Jamie said, we believe this is not a safe or suitable place for a pipeline. The central ranges pipeline, a considerably smaller pipeline, has been placed through a corner of the area, not across a floodplain like they are trying to in Santos's case. It has caused numerous breaches, it has cost a lot of money, it has interrupted farmers going about their daily business and we feel there is a better situation for this pipeline down the Newell, in that lighter country, off privately owned land and where a highway already facilitates this sort of infrastructure. Reiterating what Jamie said; if this comes down through our area it will facilitate the start of coal seam gas mining in our area. It is good agricultural land and that would be ridiculous.

The Hon. PETER PRIMROSE: To any of the witnesses, but probably Ms Nankivell because you touched on the point: We have heard evidence that the coal seam gas industry would bring training and much needed jobs to rural communities. We have heard evidence that even exploration wells bring guaranteed income to farmers on their land. Can you please comment on that?

Ms NANKIVELL: I would like to comment on that. We are not in the business of compensation, but from a farmer's point of view if an exploration well is put on somebody's property it not only effects that property it is also the neighbour's property. There is instantly a devaluation of the value of the person's property. In the United States of America they talk about a 22.5 per cent diminution of these properties and quite recently there was a property that was put on the market close to a pilot production and it failed to raise a bid. As a would-be purchaser of a property and having studied the coal seam gas industry intensively for the last four years, to the point of being an obsession, which is unfortunate, I would not go near a property in a coal seam gas region.

The Hon. PETER PRIMROSE: Can I ask in relation to the second part of my question about being a guaranteed source of income: In terms of the agreement with the coal seam gas company would you agree that people, the farming community, and the farmer, have a guaranteed source of income?

Ms NANKIVELL: You have to look in the long term. If you are receiving \$5,000 a well per year and you are sitting on a property that is worth a couple of million dollars and you have the value of that property sliced by a fifth, that sort of compensation is not nearly adequate. Communities like the Liverpool Plains survive because we are close-knit communities. If we do something on our property it affects properties all around us. I do not believe that any sort of guaranteed income from a gas company, when you look at the potential damage to the underground water, the complete destruction of the underground water, would in any way make up for the value. You must remember that many of our properties have been in families for generations. It is a very short term gain for a lot of pain.

Mr BISHOP: Minister, can I add to that? Farmers that have engaged in contracts with gas companies are now themselves saying that the money they receive does not compensate them for the time involved in dealing with the gas companies thereafter. We have to remember it has been suggested that a gas well will produce somewhere in the vicinity of \$800,000 to \$1 million per well. A farmer is receiving, if he is lucky, \$2,500-\$2,600 per year. The inequity is there to start with. The other side is we have a living example in our own region in relation to this pipeline. We have a neighbour two or three properties down who has endeavoured to sell three farms. The average land value was \$1,600-\$1,700. Because of his need to sell the only price he could receive was \$800 per acre. You can see the consequences are dire. If you ask most farmers this angle of compensation has been worked over and over by the gas companies. Most farmers are not interested in the money. They want to get on to continue producing food and they are not going to have lifestyle, land or water affected.

The Hon. GREG DONNELLY: Could I direct my question to Ms Nankivell in terms of your conclusion to your submission where you said words to the effect that you believe we should facilitate an independent review of the coal seam gas industry.

Ms NANKIVELL: Absolutely, there are too many unanswered questions.

The Hon. GREG DONNELLY: Could you elaborate on how that would be conducted and who would be involved in this review of the industry?

Ms NANKIVELL: For example my husband is an economist and after a long time chatting about it he came out with these points: That we should look at what Australia or New South Wales is going to gain from the coal seam gas industry and what it is going to lose from the coal seam gas industry. If you look at the overseas

American model and the Queensland model, it is the farmers that are the big losers, the landholders. You are aware of the New South Wales royalty system where they do not pay royalties for five years. They have a five year royalty holiday and then it becomes 6 per cent up to 10 per cent of the well head. They get significant tax breaks—up to \$500,000 per well. What is New South Wales going to get out of it?

The Hon. GREG DONNELLY: Under any circumstances are you prepared to contemplate the creation of a coal seam gas industry in New South Wales?

Ms NANKIVELL: Yes. If the coal seam gas industry can prove that it is not going to have detrimental effects to the landscape it is in there would be no reason to object. There are a lot of factors that have to be taken into account. Do you want a farm with a huge amount of infrastructure on your property? You have those considerations to think about. The long and short of it is: Australia is the driest inhabited continent on earth. We do not have the water resources to play around with. I would like to see my children and grandchildren having the same access to fresh water and good environmental conditions to farm, or whatever they would like to do. I do not want to see what has happened in America and what is beginning to happen in Queensland happen here.

The Hon. GREG DONNELLY: We do not either. For those people who are opposing the idea of the development of the industry we are trying to contemplate what would be the circumstances which would satisfy them that there is a possibility to have a viable industry in the State.

Mr BISHOP: Can I butt in? At the end of the day what a lot of farmers find totally unacceptable is we see a productive industry, being agriculture, which has existed for many years and contributed enormously to the GDP of this country now being put under threat by the coal seam gas industry. I will go further than that: I think there is a lot of rural people would call for a Royal Commission as to how this is being handled at the moment. As a farmer I stand back and I watch. I am a conservative voter. I am happy to mention that. I have seen how these issues have been addressed on a State and national level and the bias is totally in favour of the coal seam gas industry.

We are tired of it. That is why Lock the Gate is having the presence it does to date. You only have to drive down most country roads today and you will see sign after sign. As a conservative voter I feel I have been abandoned. Only in the last week we saw the National Party Federal member, Warren Truss, put up a five claw principle to support agriculture: How the coal seam gas would be dealt with. The issue was put before the House and I believe that five senators did not show for the vote. What message does that send the Australian people? I am a conservative voter: I think that answers it in one.

The Hon. JEREMY BUCKINGHAM: There are a lot of questions I want to ask. The first is about your sense of your country—I would like to hear from all of you because you are from different parts of the Liverpool Plains—whether or not your sense is you can coexist with pipelines, with an industry that is on a growth footing? The industry relies on growth, it relies on new wells, and pipelines. The question is: Do you think you can coexist with that industry? That is the suggestion put to us. The other part of it is what impact is this having on you? Ms Nankivell you said you feel your life has been interrupted and dealing with coal seam gas is an obsession. Mr Bishop, I get the sense that you are angered by the way that this is being managed or not. The two parts are: Do you think you can coexist and what impact is dealing with this industry having upon you?

Mr QUINCE: I actually had this conversation with Sam Crafter from Santos and he told me that coal seam gas and farming could coexist. I have had experience with broad acre farming on black soil and I can tell you now that sort of infrastructure will not and cannot exist with agricultural. I said to him: Who have you got for expertise on this? What is his name? What has he done? Silence. Are you going to employ anybody? Silence. You cannot make these claims? Silence. Mr MacDonald would have seen the damage that that pipeline has done there at Kahlua. It was exposed. It is impossible to cope with that as a regular event.

This sort of infrastructure cannot go there. This is some of the best farming country in the world and you want to gas mine it. It is unbelievable. I am staggered. When you look at the laws that have been made here it is like opening the gate and it is a free-for-all. I am reading the submissions from Santos and Eastern Star and they are talking about a one-stop shop—less regulation—they have not got any regulations now. It is diabolical. I think you need a Royal Commission. I think that is the only way you are going to get to the bottom of this. As far as I am concerned Santos is running this State.

Mr BISHOP: We hear it time and time again that mining and coal seam gas can coexist with agricultural. Mining rips the land apart, coal seam gas drags out the gas and the water, and everything else. They do not suggest that agriculture can coexist with mining and coal seam gas. I am saying can agriculture survive? As Mr Quince has mentioned: in our particular area, no. You only have to look at what has happened south of Chinchilla. Have you seen a full blown coal seam gas well will do. Put that on the Liverpool Plains.

CHAIR: We saw it at a thousand feet.

Mr BISHOP: You would understand. You have a network of cobweb collection pipes and you have transmission pipes. We are talking about soils that are unique. The Liverpool Plains are made up of heavy black vertosol soils. They crack open when it gets dry and when it gets wet they shrink and compact. They are in constant movement. Anybody that has to build a house you have to get an engineering design. They will tell you it comes down to what the slab should be. Our particular soils can swell up to 60 to 70 per cent. The moon can make the soils move by dragging moisture from underneath. You have this magnificently productive agricultural land. You only have to look at what comes off the Liverpool Plains. Just look at the production that comes off this plain alone. It is been suggested to me that if you do the numbers economically going forward to 2050 you will find more money produced from agricultural than from mining. As Mrs Nankivell has said, no-one has taken the time to go through the cost analysis. In answer to you, I believe in our particular case no.

But as Mr Quinn said, I think nobody is against energy, not in any form or fashion, but there has to be balance and in our case in the right place. If we look at Australia as a lump sum piece of land, we should be looking at where we get our energy from, where are we going to feed our people from. There is no forward vision coming out of any of this. It is all short term. We talk about renewable energies, nothing is being done. Brazil, the fifth largest economy in the world, has restructured where they get their energy from—ethanol. Everyone freaks when we talk about ethanol because it is using biofuel, using food. That is ridiculous. I have just come back from California and I have seen technology there where they are producing fuel on waste material, sugar water. But nothing is being done here. Our focus is purely and solely on endeavouring to get this industry up and running at every level of government and bureaucracy possible. In our particular case, the Liverpool Plains, and any other high productive agricultural land the answer is no.

Ms NANKIVELL: Quite clearly, my life has been turned completely upside down. I was a nice person, a conservative person with my children. I expected the National Party to look after me. We find a past Deputy Prime Minister at the head of a gas company. It is not just the National Party. All these parties, all their lobbyists come from ex-politicians. What has essentially happened is I have lost faith in the Government to act and govern wisely and responsibly for us. Our fight for the Liverpool Plains has gone on now for nearly eight years, I think it is. If we had not intervened and taken the sort of direct action that completely flies in the face of the average farmer, because we are a conservative lot as you are probably aware, we would have been gassed out of existence and mined out of existence and Australia would be far worse off because they would not have the valuable food-producing area of the Liverpool Plains.

We have just come off a 20-day blockade. The strain on our community was huge. We had 80 to 85 year old men who had lost brothers, cousins in the various wars fighting for this country, and had made huge contributions to the community throughout their lives, sitting alongside the road in 38 degree heat. What sort of a happy, healthy community is that? And all levels of government have neglected us. It was only a last grasp attempt by The Nationals that something came out of it. But that has not brought about the sort of thing that I am saying will lead to the responsible development of a coal seam gas industry or the preservation of an agricultural industry and our water resources.

CHAIR: I am sure you are still a very nice person.

Ms NANKIVELL: I am a very nice person, sir.

CHAIR: Mr Quince, do you have something to add?

Mr QUINCE: Could I just add that I went through a lot of these submissions that you have published. As you know, it is very hard to find one for coal seam gas. They are all against coal seam gas. What really brought home the light to me was reading Santos and the other metgas companies. They all talk about the royalties or infer royalties. With Santos, they take it one step further and say that their royalties will be \$150 million per annum out of the Gunnedah Basin. As you can see, beef is worth \$110 million, let alone the

grain part of it. As we know, there are no royalties in this. It is absurd. These people are lying about something as simple as that. What else are they not telling the truth about?

CHAIR: They will have their opportunity to answer some of those questions.

Mr BISHOP: One thing that is important because I think the Warrumbungle Shire Council would probably like this said, this is a piece of pipeline that we took Mr MacDonald to see. Unfortunately, by the time we got there they had filled it in with rocks. This is one of the breaches that took place last year in December when we had massive rain. This is a Central Ranges pipeline that carries natural gas from South Australia all the way up through Coolah and up to Tamworth. In December last year we had extreme rain and that pipe was exposed. We are not suggesting for one minute that the pipe totally caused the erosion but it certainly exacerbated it by removing a lot more water around the pipe.

CHAIR: It was a gully erosion?

Mr BISHOP: It was a gully erosion. The issue here is that when it came to remediate to resolve the problem, the only way that those sandbags could be put there was by helicopter. The council had to fly those in. They then had council workers around that pipe in the mud trying to pack those in. They were not trained. They had not in any way had any formal education in how to deal with this particular issue. They did not know whether there were any cracks along the pipeline or in any way it could have leaked. They were exposed at all times to the elements. As the mayor said effectively, why in a million years are we putting this type of infrastructure into this land? Mr Quince is holding up a photograph of it now. That is what our area looks like when it starts to get wet. Last year for the best part of 10 weeks we could not get near any of our plain country, it was just too wet. The ability to access this country when it gets wet is impossible. These are issues that we are dealing with.

Lastly, you asked about health. The stress that this pipeline has placed on people in our community has been quite dire. In fact, there has been one elderly gentleman who has been unwell for some time. I have been told that this has now brought on a full degree of Parkinson disease on that particular gentleman because of the stress that he has been placed under by continual land access agents knocking on his door wishing him to sign because they were desperate to get people of some degree to start saying that they would accept the pipeline going through from Narrabri.

The Hon. RICK COLLESS: Mr Bishop, it is my understanding that the proposal to put the pipeline down the Newell Highway is being viewed sympathetically.

Mr BISHOP: Thank you for raising that. That is a good point. I hope it is; that is great. I am pleased to hear it but I have heard that before. I have heard that from Tony Windsor, the Federal member.

The Hon. RICK COLLESS: It is not his decision to make, with all due respect. It will be the decision of the State Government in negotiation with the gas company. That is what is occurring now.

Mr BISHOP: I appreciate that. I am very pleased. Can I ask: Is the New South Wales Government now making this decision?

The Hon. RICK COLLESS: The roads Minister is negotiating at the moment. That is all I am prepared to say. But certainly the prospect of putting it down the Newell Highway is very real.

Mr BISHOP: I am pleased to hear that. If I may say, in our endeavours and with what we have had to deal with in the last 18 months with the Eastern Star Gas pipeline, we have at all times tried to represent the community and we have tried to inform local council and politicians. In that process, obviously, we have taken multiple politicians to see that site because it was easy to get to. It was not one that we tried to target; it was easy access of the ones where it happened. In that process the company that runs it is called Jemena. They became very concerned because this was now an issue for them having pipelines and black soil and how were they going to deal with it. They then commissioned the Soil Conservation Services to write a report. The report was written. We were told ultimately it was for remedial works as to how they would repair it. That was being used even by local councils, Gunnedah Council being one.

It said effectively that our committee had misinformed people about the fact that the pipe caused the erosion and effectively there was nothing wrong with putting pipes in black soil. Effectively, we were then

forced to defend this position. We engaged an eminent soil scientist to go out and do the necessary groundwork to review the job. He has done so and he has come to the opinion that the pipe has definitely exacerbated erosion and caused it. He has also come to the opinion that the pipeline should not be put into black soil because of the science that lies behind it.

The Hon. RICK COLLESS: Do you have a copy of that report?

Mr BISHOP: It has not been completed yet, sir. What I am coming to is the basis that once we engaged him for a fee of \$6,500 to \$7,000, we have been told that Santos had an ecologist ring this gentleman and offer him \$130,000 to do a similar report along the pipeline. You would not be spending that sort of money, sir, unless you were serious about putting a pipeline through this part of the world. I hope you are right but we have heard numerous mentions of it from Mr Windsor. Santos had a meeting with him and they alluded to that as well. The vice president, James Balderstone, has informed me that the pipe will not be going through here but at the end of the day nothing has been done.

What we are very concerned about is that when we ask people about any of these issues all we are told is that the New South Wales Government has a strategic regional land use policy they are looking to develop that will protect our part of the world. I can assure this Committee that they held one of those meetings in Gunnedah. It was called a strategic regional land use planning day and it was a farce. You should be aware of it. It was invitation only. I certainly was not invited. They would not invite me because I am too outspoken. They only wanted people who would come along and abide for the day. A very eminent farmer who ran a very large operation on the southern part of the plain rang and asked could he bring with him a soil scientist.

They said, "No, you cannot. We do not want that. We want this to be a very simple day." The process of the day was to have maps and texta colours to rule in what will be in and what will be out of the strategic regional land use plan—in other words, we want to know where mining can go and where agriculture will go. The farmers, graziers, irrigators who were present were broken into three or four groups. They then were asked to proceed on that process. The people present refused. They did not feel comfortable and felt that that was not the way to approach it. We do not want lines on a map where we rule someone in or someone out.

The Department of Agriculture people were invited to the day. Again, a very well-known district agronomist was asked to participate. He could see what was happening and he was not happy with it and he declined. Another person was asked to be part of the process, another agronomist, and he declined. The staff from the Tamworth Department of Agriculture office refused to come to the meeting because they saw what was going on. This is the strategic regional land use planning day that you are trying to put forward. When the farmers refused to be a part of the day they were given basically a rebuke by the two Department of Primary Industries people present.

If that is the strategic regional land use plan that we have got coming, heaven help us. When I spoke to that eminent scientist that we have used, he was at Orange and they had basically a presentation given to them in relation to the strategic regional land use plan. At the end of it they broke into laughter. The person said, "Why are you laughing?" He said, "That is simple. It's a joke. There will be nothing in the plan." That is what is being put forward to us at the moment. I ask the Committee that you should be going out and finding out just what is going on. Thank you, when you say that the pipe will be moved. I hope you are right but I am becoming very sceptical.

CHAIR: Mr Quince, do you have something you wish to add?

Mr QUINCE: If I could reiterate, the soil conservation fellow who did the report for Jemena, Bruce Hundy, I spoke to him on the phone regarding the report he made. It was a 25-page report and there was only one third of a page that related to what he thought might have caused the erosion. He thought it was a head cut from silting downstream. I do not totally agree with that and I have had conversations with other soil conservation fellows at the site who said that they thought the pipe had definitely exacerbated or multiplied the situation. I told him what we are up against, the pipeline going down through this area here. If you ask Telstra, they cannot even put a telephone cable down through the stuff. So how are you going to put in a 30-inch gas pipeline without coming to the surface or changing the flow of things? He said to me on the telephone that it would be a no-brainer—this is Bruce Hundy—it would have to go down the Newell Highway.

CHAIR: Would you be prepared to table those documents, if they are not included in your original submission?

Mr BISHOP: By all means, the photographs and documents. I am very happy to do that.

The Hon. RICK COLLESS: When are you expecting that final report?

Mr BISHOP: I have to talk to the scientist about that. At this stage it still has to go before our committee to be ratified.

The Hon. RICK COLLESS: Would you be prepared to make a copy of that report available to this Committee?

Mr BISHOP: Anything we can do to assist but, as you would appreciate, that is something I have to refer to the committee.

The Hon. RICK COLLESS: My other question relates to your comments about Mr Truss's announcement and the fact that five National Party senators voted against it.

Mr BISHOP: They did not vote. They did not show.

The Hon. RICK COLLESS: Are you aware that the motion that the five National Party senators voted against was moved by The Greens in the Senate?

Mr BISHOP: With all due respect, this should cut across all political boundaries. We are sitting here as Australians.

The Hon. RICK COLLESS: I agree with that comment but some others do not.

Mr BISHOP: With all due respect, then they are not Australian. I have come to this conclusion. I am proud of my country. I am sitting here today because I believe in the country and I believe in country people. I will fight while there is breath in my body to defend and look after them and I am sure all you people feel the same way. What I am concerned about is why is this a battle? Why do we feel that each day we get up we have to take on this industry? Alan Jones has a document that thick of all the people who have been approached and are now lobbying on behalf of the coal seam gas industries. Why is that? We should be working for the benefit of this country. I support Mr O'Farrell. He came in with a very difficult challenge and he has a tough job in front of him. But at the end of the day it should not be at the demise of good agricultural land, it should not be at the demise of the people and it should not be at the demise of our water.

The Hon. RICK COLLESS: Everyone on this Committee would agree with you.

Mr BISHOP: I am thrilled to hear that, sir, but when we step away from here there are a lot of people in the gas companies who are all about the word but when it comes to the action they are very, very loose.

Mr QUINCE: If I could add, I was advised by a senior commercial manager in Eastern Star Gas that the problem our community has is that this pipeline would be exempt from strategic land use. This was back in July. It is not even released. How would he be privy to that sort of information to start with? I think the same question was asked of Eastern Star Gas by the Federal senate committee and they could not answer it.

Mr BISHOP: What worries us is that we had a committee attend a New South Wales farmers meeting in Tamworth a little over a month ago. At that meeting the chairman of Eastern Star Gas, the Hon. John Anderson, spoke, and there were other people. It was a young New South Wales Farmers day. Following the meeting—Mr Quince was present and there were other people present—they were talking with the chairman of Eastern Star Gas. He made an astounding statement. The statement was simple. He said, "You get your science, we'll get our science and it won't make any difference." What is that all about? Are we not going to rely on science? Are we not looking to basically get the best results? To me that is outstanding. Here was someone who represented our community making a statement virtually saying, "Well, it doesn't matter what you do, this is going to go ahead." I cannot believe that.

CHAIR: I will call this session to a conclusion.

Ms NANKIVELL: Could I just make one quick statement. The group of mayors today made an assertion that it was a small vocal minority that did not approve of coal seam gas on agricultural land. To back that up, in the *Northern Daily Leader* on 14 November a poll was published that said 87 point something per cent of readers of the *Northern Daily Leader*, which is the big regional newspaper in this area, did not believe that agricultural and coal seam gas can coexist. I thought I would add that because that is a clear indication of where we are coming from.

CHAIR: Thank you. If you could also table those photographs, the Committee would be grateful.

Mr BISHOP: Mr Chairman, could I ask one question? It is not directed at you because I do not know how the proceedings take place. I find it frustrating that we are all here today giving our side of the story. Where are the gas companies?

CHAIR: They will be appearing tomorrow.

Mr BISHOP: Here?

CHAIR: In Sydney.

Mr BISHOP: Why are they not up here in front of us?

CHAIR: Because they chose—

Mr BISHOP: Why? Once again, they are calling the shots.

The Hon. Dr PETER PHELPS: This is not a public meeting. This is a parliamentary committee.

Mr BISHOP: It might be sir.

CHAIR: Order! A question has been asked and I will answer it. The Committee decides, in consultation with witnesses, where witnesses will or will not appear. Those witnesses will be sworn and give evidence under oath exactly the same as you have done. It does not matter to me or to any other Committee member where they are, their evidence will be on the record the same as yours. You have my personal assurance, Mr Bishop, that they will be questioned and perhaps asked questions based on evidence given by previous witnesses. In fact, that probably advantages the Committee because we are able to develop a bit of an agenda, if you like, of questions that have not been able to be answered. They will be answering those questions under oath.

The Hon. JEREMY BUCKINGHAM: Point of order.

CHAIR: There is no point of order.

The Hon. JEREMY BUCKINGHAM: I have not raised it.

CHAIR: I am not allowing a point of order.

The Hon. JEREMY BUCKINGHAM: You have to.

CHAIR: No I do not. Ladies and gentlemen, there has been some suggestion, in fact, I believe by the Hon. Jeremy Buckingham, that this was a construct. I know you would like to have them here so you could get stuck into them, but this is not that type of hearing. It is not a public forum.

Mr BISHOP: It is not that, sir. We just would like to hear what they have to say because at the end of the day, they seem to be able to gloss this over as if this is not happening, there is no problem here and everything is perfect. All I would say is, if it is so perfect, why do we have tens of thousands of people in this State and across this country up in arms?

CHAIR: You have all been allowed to have your say and you have done so under oath. I have tried to control any debate from the Committee. The same level of opportunity will be given to the coal seam gas companies' representatives and their answers will be recorded in the *Hansard*. As a Committee, at the end of all

that evidence, we will take it all into account and we will make some conclusions and recommendations. We then will give those recommendations to the Government by the middle of February when we are required to report. It is then up to the Government to determine whether it will accept those recommendations. That is how these inquiries operate. I assure you that it is not a little game being played here. It is just that we want to give everybody the best opportunity to give their evidence. The audience today has been fantastic. I understand the technical difficulties we have experienced, but witnesses have been allowed to have their say. In all cases, so far we have conducted the inquiry under those rules and we would like to continue to do so.

Mr BISHOP: Thank you. I have one last point, if I may. Is it possible that you may visit our area? How many have actually been to the Liverpool Plains? Everybody has a clear understanding. The bottom line is that we had a food security forum and in the process a *Reuters* journalist came from Perth. We took them out to show them the plain. They were so fascinated with what they saw that they spent most of the day touring talking to farmers and did not come into the forum.

Mr QUINCE: If they are going to coal seam gas the Liverpool Plains, it is appropriate for them to put a coal seam gas well up on Bondi and Palm beaches. Then they could stick the life saver on top. That is what it has come to.

CHAIR: This session is concluded.

(The witnesses withdrew)

ALISTAIR NORMAN DONALDSON, Representative, NSW Farmers, affirmed and examined, and

TIMOTHY PAUL DUFFY, Member, NSW Farmers Association,

JUDI MELINDA SHEEDY, Representative, NSW Farmers Association, and

TIMOTHY DUDDY, Representative, NSW Farmers Mining Reference Group, sworn and examined:

CHAIR: I remind the members of the audience that audience comment is disorderly at all times. Please allow the witnesses to give their evidence without interruption. For the benefit of the witnesses I repeat that these Committee hearings are not intended to provide a forum to make adverse reflections about other persons. You can name and shame any company, but do not name people. The protection afforded to witnesses under parliamentary privilege should not be abused during these hearings. Therefore, I request that witnesses focus on the issues raised by the inquiry's terms of reference and avoid naming individuals. Whilst you are afforded parliamentary privilege giving evidence, if you speak to the media or make comments outside, that parliamentary privilege ceases. Before we proceed to questions, would one or more of you like to make a brief opening statement?

Ms SHEEDY: Thank you for the initiative that has enabled this inquiry to proceed. Thank you for the opportunity for us to be able to present to you and our local community. We are representing NSW Farmers local district councils in Gunnedah, Pottinger, Spring Ridge and the Boggabri areas. In our submission and in our presentation today we are supporting the NSW Farmers State submission, which I believe you are hearing in Sydney tomorrow. We want to support that with live, local examples and reasons for our members' concerns for the expansion and development of the coal seam gas industry in north-west New South Wales. For me, three years ago, my journey into coal seam gas began when Eastern Star Gas first knocked on our door wanting to put down an exploration hole as our neighbours had refused access.

My husband and I live 30 kilometres west of Gunnedah, next to Santos' first coal seam gas test pilot well in New South Wales. The last three years have been a blur of research, late nights, early mornings, meetings, conferences, workshops, roundtables, travelling to Sydney, meetings Ministers and politicians, and having very lengthy and heated discussions about mining, coal seam gas and agriculture, and whether in fact we can coexist—all while trying to manage a mixed farming and contracting business and bringing up three children under five. This is a familiar story for the others seated beside me and for many others who have sent in submissions to you. The community concern about coal seam gas is overwhelming. We need to adopt the precautionary principle with the coal seam gas industry because in its current state with the current level or lack of research and the coal seam gas industry's practice, and with the current legislation, we do not believe that the coal seam gas industry can coexist with agriculture in this area.

From visits to Queensland that our local members have undertaken and with much research and personal experience, we have come to these conclusions. I would just like to detail a couple, given the time poorness we have today. The overwhelming concern is about water. We are talking about not only groundwater, but surface water, and we are talking about quality and quantity. The risk of interconnectivity and contamination of all water sources is significantly too high to allow this industry to proceed without appropriate scientific and objective research. Even APPEA admits that there will be interconnectivity. Its spokesperson, Ross Dunn, has publicly stated:

Drilling will, to varying degrees, impact on adjoining aquifers. The extent of impact and whether the impact can be managed is the question.

I ask: how can we manage contaminated aquifers? The National Water Commission has already publicised its concern about the lack of science and research into the potential impacts of the coal seam gas industry. If the National Water Commission is concerned about the impact on water, should not our Government and should not the coal seam gas industries also be? We need, in fact, we demand, objective scientific research to be conducted into these concerns and we need to adopt the precautionary principle. The proposed coal seam gas infrastructure on water flows and farming practices—I am pleased to hear that you have gone to Queensland and had a look—from the pipelines, the pads, the core holes to the compressor station all will change the direction, depth, velocity and volume of the surface water on our farming areas.

The high-flow pipeline that the previous group talked about that is proposed to run from Narrabri to Wellington is looking at dissecting the Coxs Creek flood plain. It actually is overriding the flood management

plan, which took over two years of government and landholder collaboration to establish. If approved in this route, it is yet another example of mining practices overriding agricultural regulations. In addition, erosion will take away the topsoil of floodplain country, which is lessening its productivity. Hydraulic fracturing, or fracking, is banned in Canada and France. Why would New South Wales and Australia welcome it when two other countries where this technique has been discovered to have significant environmental impacts do not want to use it? There is significant concern also about the types and cumulative amounts of chemicals being used. Farmers are under strict regulations about what chemicals can and cannot be used. Surely the same strict conditions should be applied to the energy industry.

Our members have grave concerns that their legal rights regarding property access, ownership and land values are being diminished by continued pro-mining legislation. The only time within the whole coal seam gas exploration process, under the current legislation, they have any input into the manner and way in which the proponent will interact with them is at the time of negotiating land access agreements—and yet the majority of landholders are ill-equipped to enter into this type of negotiation. Our members are seeking a right to veto in legislation: To be able to say no to the entry of energy companies on to our land.

Already in our area we have seen a reduction in land values of 30 per cent and this is before any full blown production has occurred. Community consultation, or the lack thereof, I could talk about at length. There have been many public relations and information sessions within our community and within the last three years I have attended all of them. What we are being told is what is happening. We are not experiencing consultation. From this we have a lack of confidence because energy companies when they are approaching landholders are showing a complete lack of understanding of our practices, of our business and how the land flows. The initial run-out for the pipeline was through the wettest part of the floodplain to the point they could not get on to the land during the floods.

Local governments need to be included in the process as we have seen numerous examples where councils have been uninformed about coal seam gas activity. This was evidenced in Gunnedah last year where Arrow Energy wanted to put down an exploration hole in between the town's two main water bores. Coal seam gas would be a drain on local government resources. As yet there is no financial contribution to councils to offset this and the number of road transport movements when in the construction stage is significant. Yet again local landholders are forced to cover this as well.

The social impacts: It is hard to express without becoming emotional how difficult the uncertainty is we live under. The only way I can explain it is a few years ago when my mother was diagnosed with cancer and we had to wait two weeks to find out the extent of her illness. Thankfully it was treatable but that example illustrates how stressful is the uncertainty of not knowing how this is going to impact on us. We do not know what is going to happen in 10 or 20 years. In terms of business planning, family planning and succession planning our members and we personally do not know where we stand. It is a huge mental and financial cost.

In conclusion, we need to adopt the precautionary principle. There needs to be complete review of legislation and regulation and whilst I understand this is happening at present, whilst that is happening there needs to be a suspension of all exploration activities. It needs to be on potentially agricultural land not just prime agricultural land. We need objective scientific research. It is important to highlight that whilst it is relatively early days for the coal seam gas industry in New South Wales the impact of the industry is already being felt.

Landholders are anxious and apprehensive. They are already being asked to sign access agreements and we are already seeing communities pulled apart in different directions as seen in the Spring Ridge area. We are being asked to compromise on our family's future, our business future, industry future and disregard generations of investment. This is all with only a handful of wells in the ground. We need to use the precautionary principle. We cannot allow industry to impinge on the right of another. We need to stop the gas rush and we need to protect our food and fibre bowls now.

CHAIR: Would any of the other witnesses from Farmers like to make a statement?

Mr DUFFY: I thank the committee for giving us the opportunity to voice our concerns. I am the landholder who lives directly opposite the Kahlua pilot site at Mary's Mount. I have been there 25 years. I am married with four children. Seeing the elephant in the room, probably in the last couple of months, we decided we would use an exit strategy. We put our property up for auction trying to make life simpler and move towards town, and educate our children. The agent who took our prospective buyers around and valued our property—I will give you numbers, I am happy to do that—valued our property between \$1.3 and \$1.5 million for

1,500 acres. Each of the eight prospective buyers all expressed concern about what is happening with the gas. We actually went to auction about a month ago. We had two registered bidders. On advice of the agent he suggested that we put in an initial vendor's bid of \$900,000. The two registered bidders did not pursue that. So the auction failed.

I spoke to both of the registered bidders afterwards and they replied that their concern about the gas was such that they were not prepared to take the risk. On the strength of that I now do not have the option of doing as I was choosing to do; trying to make life simpler, trying to educate my children. The substantial asset I have built up over 25 years is probably one third the value. This is not just us. The Kahlua pilot site is going to be the central site of a bandeau field. I direct you to a Santos document: "Eastern Australia business unit. Capturing the future. The movement investor trip, 26/27 September 2011". Page 20 of that shows the plans for our area and the proposed pipeline. I am one of 100 landholders in our immediate area. If this Narrabri project is going to involve 550 wells, prospectively there will be 550 wells in our area, so it is reasonable to expect a one-third loss of value in the properties.

There were previous questions about compensation. Compensation at the moment is in the order of \$5,000 per well per year. To try and return 10 per cent on my \$1.5 million investment that would require me to have 30 wells on my farm. Along with those 30 wells, in order to generate that gas and pump it, it will need a compressing station, water treatment station and a pumping station. The compressing station requires a 3,000 horse power diesel engine running 24 hours a day. We are going to need access roads, 24 hour access for Santos technicians, and a complete loss of lifestyle where our farm will be totally industrialised.

I could live with that if I was going to be compensated appropriately, but I would take the same measures that my neighbour across the road has and that is become an absentee farmer, fracturing the community that I have been brought up in because there is no way I can live in that environment. The end result of this is enormous amounts of stress for me, my neighbours and for other members of the farming community. We statistically know stress levels are high, suicide rates are high and droughts and commodity prices cause mental health issues. I firmly believe that this issue we are confronting today may be one of those factors that will tip some of our members over the edge with catastrophic results.

CHAIR: Would you like to say a few words?

Mr DONALDSON: Thank you for this opportunity to have my say. I am part of a farming operation west of Boggabri. We are immediately south-west of the 550 well-sets planned for the Bibblewindi State Forest which is 1,100 wells. We are midway between that field and the Kahlua field. I am the recipient of a pipeline as discussed by the previous group; core sampling 2-kilometres to the north; core sampling 6-kilometres to the south of us; so the writing is on the wall so far as extraction is concerned. In the 130 years that we have been farming—I am fourth generation now—this is probably the biggest issue we have had to confront. On this farm we have eight small low yield aquifers that we believe are feeding out of the Bibblewindi State Forest area. They are extremely low yield but extremely important aquifers. They are integral to the way we do business.

With the best practice management grazing systems that we employ on our farm, we would be deemed to be lower value land, but we can conclusively prove on our soil types with the right management and water resources for the management of livestock that we can categorically produce between 10-15,000 kilos per dry hectare, which is comparative to black soil. We have substantial concerns there. One particular concern I have is the business environment in which we are finding ourselves. At the moment it pertains to the extraction of coal in our district. One day a couple of months ago I went to town to get some dents knocked out of my car. That particular business had lost all his staff. The next stop was to get my car serviced: That business had lost his staff. The resources industry is cherry-picking every job out of the local market and creating a business environment that is untenable. We have some grave fears for that.

CHAIR: Ms Sheedy, would you be able to table your opening statement for us?

Mr DUDDY: As you heard in some earlier presentations the Namoi valley is one of the most fertile areas in the State, possibly the nation and the world. This valley has 205,000 gegalitres of water that we use as a sustainable yield in some 1.2 million hectares of agricultural land. We produce beef, lamb, wool, cotton, wheat, sorghum, sunflower, canola, lucerne, linseed peas and beans, as well as every other crop imaginable other than tropical fruits. From where my property is, where my family has lived since 1934, the greater family has lived in the region for 175 years, we have 3,308 riverine kilometres to the mouth of the Murray at Goolwa because the rivers in this region head west. When exploration licences were first given in this region for coal and gas we

expressed enormous concern to the then State Government about the potential damage to the water resources of this region and the size of the environmental footprint from an inappropriate development.

Through community action we have facilitated the Namoi water study, which is a world first in intensive three-dimensional understanding and mapping of a region. The problem that we have with the CSG development and potential development in this area is that much of the damage that will occur, and I have no question that it will occur if the development is allowed, will not be seen for years to come. The coal seam gas companies would have left the area and towns will have their water supplies polluted, farmers will have their water supplies polluted and it will materially harm this region to a degree that no-one can understand. Because there is so much that goes on under the ground that we cannot see, it is impossible to source the genesis of this harm and what we will be left with is our businesses completely destroyed and the mining companies, exploration and gas companies all claiming, "It wasn't us. Prove it."

In the slow-moving ancient water resources that have taken millions of years to accumulate the quantity of water levels that are there, you cannot take a region out of the middle of a floodplain and expect it will not have an effect. You cannot say, "This is a rocky outcrop, we can do that here." The reason why we have built water resources the way we have in this valley is because of our topography, our soil types and the amount of water that falls here that comes from the Great Dividing Range. If that is put at risk by any of these developments, the agricultural productivity of this State will be materially harmed.

The only thing I ask of you today as you make your recommendations of this Committee is that we do apply the precautionary principle and that you take into account that damage to water resources takes a very, very long time to show up. The question would be: What is the hurry and why do we assume that coexistence is the model? What we have to suggest is: Is coexistence possible? If we do not have enough science to establish that coexistence is possible, then this industry cannot be allowed in agricultural valleys like this that are as productive as this or the nation will never forgive what we have done.

The Hon. RICK COLLESS: I preface my question by saying that we fully understand the importance of water on the Liverpool Plains and that if this industry is to go ahead there can be no impact on the groundwater reserves on the plains, or anywhere else for that matter. Ms Sheedy, in your submission you talk about concerns with connectivity and draining factors in the United States of America. Are you aware whether that was coal seam gas extraction or coal shale extraction?

Ms SHEEDY: My understanding is it is coal seam gas.

The Hon. RICK COLLESS: A lot of the concerns that have come forward with respect to aquifer fracturing relate to shale gas rather than coal seam gas.

Ms SHEEDY: I am happy to send through my references for that, if that helps.

The Hon. RICK COLLESS: Yes.

Ms SHEEDY: I would say too just to clarify, it is not just groundwater we are concerned about, it is also surface water and springs.

The Hon. RICK COLLESS: Mr Donaldson, you made mention of the eight aquifers on your property. Can you tell us what depths they are and what sort of yields you get out of the various depths?

Mr DONALDSON: They vary between 1,000 feet and three feet and as shallow as 40 feet. Some of these are only delivering a recharge of 200 litres an hour, but they are absolutely integral to that particular part of the property for the purpose of rotational grazing. These are not major aquifers. I am not sure that any water study could do that type of aquifer justice. They are small aquifers and managed by each aquifer. It is not one large aquifer underneath that we could put down test holes to test and get an idea where it is heading. They are quite small aquifers but we believe that they are at risk.

The Hon. RICK COLLESS: The bore you have that is 1,000 feet deep, does that go through any of the other aquifers on its way down?

Mr DONALDSON: I think they just kept drilling until they found some water and it was literally at 1,028 feet.

The Hon. RICK COLLESS: That is one of the issues the Committee needs to clarify, the fact there are already a lot of bores that have been sunk at various depths and gone through other aquifers on their way down, which predisposes that cross-connectivity.

Mr DONALDSON: I think if they found a reasonable aquifer anywhere along that profile they would have stopped at that. I would suggest that there is no particular aquifer on that particular bore.

Mr DUFFY: With respect, farmers do not inject chemicals into the bores.

The Hon. JEREMY BUCKINGHAM: I have too many questions to ask. I ask this question to anyone, in your submission one of the spokespeople for APPEA—Australian Petroleum Production and Exploration Association—Ross Dunn said:

Drilling will to varying degrees impact on adjoining aquifers. The extent of the impact on whether the impact can be managed is the question.

We have heard a lot about the precautionary principle and risk management. In your view, collectively, do you think we can manage that risk to the aquifers? Do you think that we should even begin down that journey of putting in thousands of those wells? Do you think it is ultimately something we will be able to manage in the short-and long-term?

Mr DONALDSON: Can I just briefly say that at a recent function five months ago, an Eastern Star Gas day, I was assured that there would be a full-scale benchmarking of all known water sources along the Bibblewindi State area and they would get back to me very shortly. But there has been no contact at all whatsoever. Benchmarking must happen anywhere near these major developments.

Mr DUDDY: I believe that it is possible to drill by using different practices and not harm the water resources. Irrigators in this district and farmers alike have been drilling holes for a very long period of time. The practices that I have seen exercised by both the coal seam gas and the coalminers, if we had drillers that had operated like that in our water resources looking for water we would have hunted them off the place and sued them. This is one of the issues: we do not have any control over those practices. We have to stand there while they have a fence in the middle of our land drilling through our water assets doing things that we would not allow.

We have instances in this valley where neighbours have harmed other neighbours' water resources over the years by doing more drilling practices. My family for one has been drilling in the area since the early 1960s. We were the pioneers of irrigation in this region. We had the largest bores in the southern hemisphere by 1965. We have had a great deal of experience. But there is not one of those drillers who is drilling for those resource companies that I would let near our water resources. The Government does nothing to override those practices, nor are there any resources on the ground that can be enforced that their processes are wrong because there are so few officers that understand. Anyone in the Office of Water that understood has left and gone to work in private practice somewhere.

The Hon. SCOT MacDONALD: I address my question to anyone; I am looking for clarification. You represent Gunnedah, Boggabri and Pottinger. You say you want a right to veto or lock the gate. It is my understanding the position of New South Wales Farmers is not to back a right to veto. Is that a policy in progress?

Ms SHEEDY: It is actually a new policy with the New South Wales Farmers to lobby for a change in legislation to have the right to veto. It is different to lock the gate because lock the gate is an illegal activity. What New South Wales Farmers is advocating is that the legislation is changed to give landholders the right to veto.

The Hon. Dr PETER PHELPS: In relation to benchmarking, pressure and water quality of groundwater aquifers, is there some necessity for production wells or at least low-scale production to be put into effect so that you can assess the effect on groundwater from the activity, as is happening at Kahlua?

Mr DUDDY: There was a great deal of public statement made about this last week. There is certainly exploration that does need to occur to understand our water resources. But it should be done with the level of mistrust that is in this community now towards the extractive companies. It should be done by some State-based

process that is very tightly regulated and there should be proper exploration that goes on for water. Because what happens, the companies go out and shore up the financial viability of those resources. They do not go to the Government and say, "My God, we have found the second-biggest aquifer in the southern hemisphere." They say, "We have found a gas resource that does this, this and this" and forget to mention the water resources that are there. So you have the entire weight of the financial viability of the resource without the environmental impact taken into account when those processes are put forward.

The Hon. Dr PETER PHELPS: The aquifers they are drawing from have saline levels so as not to be agriculturally productive.

Mr DUDDY: That may well be the case but there are situations where coal seams run into major aquifers. Many coal seams are actually aquifers.

The Hon. Dr PETER PHELPS: But they are not aquifers that are drawing water for agricultural production.

Mr DUDDY: No, let me finish. You have a major water resource that sits up here and the coal seam that runs to the surface. You can have a highly viable aquifer that hits the coal seam and runs down. So as they suck water out of the coal seam, it can be recharging from the higher good quality aquifer structure. So you have vertical integration and that is the thing that they do not actually understand.

The Hon. Dr PETER PHELPS: The argument against that is that any coal seam that hits the surface would already have been subject to mining activity.

Mr DUDDY: That is absolutely untrue.

Mr DUFFY: In answer to your question, Dr Phelps, being a neighbour of Kahlua I have one bore on my property which is at 500 feet that is in a coal seam. We draw on coal seam water. We reticulate the water over the entire property. My cattle are drinking off that as we speak. It is salty. If you put it on open ground it will kill the grass.

The Hon. RICK COLLESS: What sort of salt levels?

Mr DUFFY: I cannot give you the numbers but it is not suitable for human consumption. You cannot put it on the garden, you cannot water a lawn with it but cattle will drink it. They will walk past a dam to get to this water source. This is the water source that is for Santos a waste product. They want to take that away and jeopardise my entire raising enterprise. This is one of the things that we have found very difficult in dealing with Santos. Santos have been in there consulting, I would say advisedly. It has been more information sessions about coming onto our properties and telling us what they are going to do with our water, how they are going to drill on our properties, where they are going to put pads and where they are going to put roads, without discussing with us the implication of what would happen with my water.

We have been assured by Santos that they will give us full explanation of the next process that they are going to go on with, any further expansion. It is only in the last couple of weeks we have found this document which details the 2012-13 work program for the Kahlua pilot site where we have found the actual plans that Santos have been talking about. There has been no consulting with us whatsoever. As far as any social licence is concerned and any credibility that Santos might have had with us, that has gone out the window because we feel our trust has been misplaced.

The Hon. PETER PRIMROSE: How would you respond to the following statement: "The coal seam gas industry will bring much-needed jobs, money and training to the local community"?

Ms SHEEDY: What happens is that in the exploration phase it is actually contract workers who are brought into the region. It does help the local economy in terms of accommodation and food, but they fly in and fly out. In terms of Santos, until recently there was one employee who actually lived in Gunnedah. Everybody else flies in on Monday morning on Brindabella from Brisbane and they fly out either on Tuesday or Friday afternoon. In terms of bringing local jobs, we are yet to see that. I think there are a couple of admin girls now, but that is it. In terms of training, we have yet to see any evidence of that. Once you actually have production happening, it is a very low human resource industry.

I think you have someone who comes around and checks the fields and that is about it. In terms of training and what it can bring to a local area, we are yet to see any evidence of that. All we are seeing is a drain on housing. When you look at towns like Dalby and talk to the mayor, it is a real issue for them to try to find affordable housing. We are really seeing that squeeze in Gunnedah particularly. In terms of royalties, I am sure you are aware, it is a holiday in New South Wales until five years and then progressively goes up to 10 years at 10 per cent. But of that, 90 per cent of post-production costs can be deducted. So essentially you could be talking only about 1 per cent of production, which the State Government gets, but how much of that goes back to the local community is yet to be decided.

CHAIR: Mr Donaldson, did you wish to add something?

Mr DONALDSON: Yes. So far as employment issues are concerned, based on what we have seen from the effects of the coalmining industry, I presume that CSG will just contribute to those woes. If you did a straw poll on our local field day, the iconic agricultural companies that are particularly based in the Surat Basin, they are reeling from the fact that they train up people and lose them, train them and lose them. A major stock carting business in Tamworth sold recently. It put particular emphasis on training all its truck drivers. Of course, what happened is that it just trains them and loses them to the mining industry: train, lose, train, lose. They just sold the business and gave up. This is what is going to happen.

The Hon. GREG DONNELLY: Thank you for coming today to provide us with the opportunity to ask you some questions. On page 8 of your submission under paragraph 2.2 "Community Consultation" you express what could best be described as dissatisfaction with the process. However, towards the bottom of the first paragraph you talk about "meaningful, purposeful and engaging community consultation (excluding Arrow/Dart Energy when it was forced to)." Could you elaborate on that consultation and how that can be distinguished from the other communication exercises that have happened?

Ms SHEEDY: Gladly. What happened is that a member of the community contacted me, I think on a Friday. He had just been spending a bit of leisurely time looking at the stock exchange and some reports. He is interested in energy and came across a press release from Arrow—I think it now is called Dart—saying it was going to put down this exploration core hole between Gunnedah's two main water sources. Council did not know anything about it so there was a bit of a blow-up in the media about it. Prior to that there had been no community consultation from this company. Because of the media presence or interest there was a community meeting. That company did actually listen to the communities concerned and moved its core hole to another area. That was consultation: the company listened to what the community had to say and then acted on that. That is very different from what the energy companies are purporting to say is consultation, of which there are a few examples.

One is that they might have an information session where they will be available for four hours. They will bring their experts and it is in a hall and people walk round and ask questions on an individual basis. Our argument is that you do not know what you do not know. So it is difficult to know what questions to ask. So with public pressure occasionally they would have a public meeting. The benefit of that is that you get to learn from one another and ask questions. Not everyone is as outspoken as another. But even at those meetings Santos representatives would stand up and tell us what is happening. We might ask some questions and that is the end of it. There is no give or take, listening or hearing or actually making any changes to what the community actually wants. Another example of Santos' communication is small, guided conversations.

You had to register your name to go and there is a direct quote and wording on particular topics of the process of coal seam gas extraction and exploration. Again, you went along and were told what was happening and there was no consultation. Essentially, there is not a two-way communication, which is consultation. The only evidence I have seen of consultation with Santos would be in the last week where there was consultation with Glassidon and Georges Island clearly because the site was being blockaded by 80 or 100 cranky farmers that they had to listen and have some consultation. Failing that, I have yet to see any evidence of the energy companies actually consulting.

CHAIR: I apologise for not commencing this section on time. We have run a little over time, so I apologise for keeping you. Thank you for your submissions. We value your input. This session has concluded.

(The witnesses withdrew)

DOUGLAS FRED CUSH, Property owner,

NATALIE HELEN TYDD, Property owner,

PENELOPE LOUISE BLATCHFORD, Property owner, and

ROBERT JOHN BLATCHFORD, Property owner, sworn and examined:

CHAIR: The afternoon session of this public inquiry will now commence. Most people present have heard my comments regarding the giving of evidence, especially to not make any adverse mention of any individual.

Mrs BLATCHFORD: I am an individual landholder but I also am chairperson of the Bellata Gurley Action Group Against Gas. I am also a member of the NSW Farmers Mining Reference Group.

Mr CUSH: I own a value-adding company in Tamworth called Bellata Gold Manufacturing and Bellata Gold Milling.

CHAIR: Before we proceed to questions, would any of you or all of you like to make an opening statement?

Mrs BLATCHFORD: Good afternoon and thank you for granting us this opportunity. Combined we own thousands of hectares of land located between Bellata and Gurley, east of the Newell Highway below the Nandewar Ranges. This farming area is renowned for being strategic highly productive agricultural land, characterised by its highly prized black earth soil types and undulating, sloping, ridge country terrain. It is renowned for cereal production, in particular durum wheat. Today we would like to present to you why this region is unsuitable for coal seam gas extraction. CSG infrastructure poses environmental impacts and cumulative damage on the lands within this region with respect to soil erosion, soil subsidence, soil movement, increased compaction, salinity and natural management of groundwater, and risk to biodiversity and threatened ecological communities is inevitable. In addition, I will also detail our concerns for the legitimacy and financial viability of the licence holder for PEL470—Leichardt Resources Pty Ltd.

With respect to the environmental impacts of soil erosion, soil subsidence, soil movement, increased compaction and salinity it is first necessary to appreciate the soil types unique to this region. The soils in this region are referred to as black earths—black to very dark brown in colour—and tend to have a high clay content of 50-80 per cent. They commonly contain higher amounts of strongly swelling smectite clay. I add that I am not a geologist. When dry these soils crack to the surface more frequently and commonly have a strongly self-mulching surface. Highly prized for cereal production, black earths are located mainly on the gently undulating plains or mid to lower slopes of rolling hills of basalt and their associated quaternary alluvial plains and have been identified north east of Narrabri below the Nandewar range outwash plains.

Others areas that are identified with similar soil types are the Darling Downs and the Liverpool Plains. A common problem to these soil types in this region of undulating terrain is soil erosion. To manage soil erosion broad based banks are used on farming country to intercept runoff that is flowing down through paddocks to prevent significant soil movements before soil erosion begins. Their low profile allows the entire bank to be farmed. Banks are slightly graded to carry the flow to a stable outlet. This is either a natural watercourse or a constructed grassed waterway.

Water flowing in a concentrated area may form gullies. Access tracks, in particular gravel roads, increase the risk of unmanaged water flows and create gullies and further erosion rendering productive areas unproductive if not rehabilitated immediately. Any continued, continual or new disturbance to the soils damages the topsoil structure, increases the risk of soil subsidence, increases compaction, increases water logging characterised by sodicity, salinity, poor surface drainage and ponding. The cumulative effect of all these on the farming landscape is poor crop growth, no production at all, the need for additional contour banks, graded banks and an increase in soil conservation works. Soil conservation works in this area are of high value. Over the past 10 years alone in total the four landholders here have spent over \$3 million dollars on the design and implementation of contour banks, graded banks and soil conservation works. With an annual budget of approximately \$100,000-\$200,000 on maintenance of banks and water and soil erosion controls.

All farms and fields are designed according to the natural vegetation, location of creeks and slope of the country. These works are high in both monetary and environmental value. This is a significant point for the Committee to consider when it clearly states under part 5, section 72 subsection 1(c) of the Petroleum (Onshore) Act 1991 that the holder of a petroleum title must not carry on any prospecting or mining operations or erect any works on the surface of any land: on which is situated any improvement, being a substantial building, dam, reservoir, contour bank, graded bank, levee, water disposal area, soil conservation work, or other valuable work or structure. Subsection 3 goes on to say: The Minister is to determine whether any improvement referred to in subsection (1) (c) is substantial or valuable. As mentioned earlier we hold concerns for the legitimacy and financial viability of the licence holder for PEL470, Leichardt Resources Pty Limited. Leichardt Resources is a privately owned company which commenced 7 June 2007. I will mention one name that has been on the internet.

CHAIR: No.

Mrs BLATCHFORD: There is one director and secretary of Leichardt Resources. The company's registered office and principal place of business is the director and secretary's workplace. His workplace is not Leichardt Resources. This information is freely available on Leichardt Resources company brochure. Leichardt Resources' issued capital is \$100. The PEL was advertised as approved to Leichardt Resources in the New South Wales Government Gazette No. 106 on 29 August 2008. Leichardt Resources ABN was registered after this on 17 November 2008. Leichardt Resources has shareholders in the company listed as trust accounts and another company called Lawlords Pty Limited these details have been provided to the Committee and it is readily available on the internet. Lawlords Pty Limited has issued capital of \$2. That totals \$102 of issued capital for this company. These details have been provided to the Committee.

Based on these initial company searches and title searches, the director and secretary of the private company Leichardt Resources appears to have no assets. Given the access agreement for exploration is solely between the landholder and the holder of the licence, in our case Leichardt Resources, I believe the third party counter-risk too high to enter into any financial arrangement with Leichardt Resources. If for any reason losses were to incur or lands damaged at the exploration stage or further into any other stage, pilot well or production, I am not convinced that Leichardt Resources would have the financial capacity to make good. Undertaking a basic due diligence on any company wishing to enter into a financial and contractual arrangement is common practice and one that I carry out regularly as part of our business procedures. It would be remiss of us not to. Our assets, landholdings and financial commitments are considerable. In no way would we enter into an access arrangement with an unknown company which may jeopardise our land and environment, our equity levels, our ability to carry out our farming practices and meet our financial commitments.

Leichardt Resources clearly states in its company brochure on the internet that the company is one of the few privately owned CSG companies operating in Australia. However, Leichardt Resources it would seem had no intention of operating as a true mining company or exploring for CSG given the tender of 2009 advertising expression of interest to acquire its CSG assets. A speculative statement given Leichardt Resources had not explored for CSG in PEL470. The tender closed June 2009, Leichardt Resources entered into a farming agreement with Planet Gas and CBM Pty Limited, who have subcontracted the works out to MBA Petroleum, who in turn subcontract out the drilling and exploration. Other subcontractors would also be used depending on the activity. The chain of responsibility is long and when it comes to the crunch the only signed agreement a landholder has is with Leichardt Resources with issued capital of \$100 and not any of its subcontractors. Additionally, the only company recognised by the New South Wales State Government is the licence holder.

The chain of responsibility is questionable and the New South Wales government, for whom they are supposedly undertaking the exploration, need to step up and take responsibility. The landholder should not be expected to enter into an agreement under the circumstances with which the Landholders of PEL470 are being expected to. I challenge the state government to itself negotiate and sign off on access agreements where land is found to be suitable for CSG with the landholders. With a guarantee by the State Government that any and all damage and equity losses caused through coal seam gas exploration and extraction on their lands be compensated in full. I do have some recommendations but I might leave it at that.

CHAIR: Are you able to table that?

Mrs BLATCHFORD: Yes.

CHAIR: The recommendations are the most important part.

Mrs BLATCHFORD: I can read them.

CHAIR: No.

Mr CUSH: Since writing my submission I have made further enquiries into the grid pattern, how the road network operates and the exclusion zones. This information is extremely difficult to come by but from the information I have collected I have made some alterations to my calculations which I outline below.

My name is Doug Cush. I am here today in my capacity as farmer, miller and manufacturer of pasta. Our family's businesses include 4,000 hectares of highly productive cultivation country east of Bellata. In addition to a value-added business Bellata Gold which operates a state of the art durum mill and pasta making facility located at Tamworth, situated in the golden durum triangle. Bellata is world-renowned for producing some of the world's best durum wheat. Since 2003 Bellata Gold has been producing award winning gourmet pasta that is 100 per cent traceable from our paddocks to the plate. I believe we are the only company in the world who can make that claim. Our products are sold right across Australia and exported around the world. We have invested millions of dollars in regional New South Wales developing these businesses and directly employ over 20 people, in addition to having a large number of suppliers who rely on our success for the ongoing viability of their own businesses.

The map on display was drawn up by the soil conservation planner out of the Inverell office in 1970. Minister Rick Colless can verify this as he was previously a soil scientist with this department. The chap who drew the map was Graham Short. We did not own that farm at the time, it was the Reece family. The authenticity of the map is still justifiable on today's basis. You will see that the map has lines drawn on it. The red lines are an overlay. Based on the information I received following two separate visits by two Planet Gas employees I have drawn up the overlay that represents how the property would be divided with wells located every 700 metres squared if coal seam gas extraction were to occur. The Planet Gas employees who visited me suggested their operations would represent only 1 per cent of land use. This land use representation is extremely inaccurate. The percentage required is much greater when you factor in that each well site is interconnected with pipelines.

They are all based on that map and each square is 700 metres and that will be a well site. They will be located two feet below ground level. I will talk about feet and metres, forgive me, I am the old school. One carrying gas the other water, with a 10-metre exclusion zone on either side of them in addition to the 10-metre wide all-weather access road to each well head the total width is 30 meters. My holding of around 4,000 hectares would end up with a road network spanning 267 kilometres in length by 30 meters wide. That is equal to 800 hectares of cultivation or 20 per cent of total land use loss. Based on this year's durum crop that is yielding over 5-tonne per hectare and a delivered Bellata price of \$300 per tonne I stand to lose \$1.2 million of income. Keep in mind this is accounting for the road network only. On top of this is the area for other infrastructure such as powerlines, pumping stations and central pipelines. There are areas I do not understand how the network happens. I am here as a farmer talking about the geography of this land.

The soil type is best described as soft, self-mulching black clay cracking soils. These black soils are 2-4 meters deep, followed by a 12-18 inch thick band of porous soil that is a type of moisture bearing soil, then there is heavy clay that water does not penetrate. The geography of this land has anything up to a 3 per cent slope resulting in soil erosion being a major issue. The erosion risk is managed with an extensive network of contour banks and waterways. We spend every year around \$230,000. We have a Soil Conservation Service methodology done at \$135 an hour and we have a man that is fully engaged, that is all he does, going round pushing rollover banks and repairing on a continuous basis. Looking at the map again, I draw your attention to the red lines that represent contour banks. I will go to the map and try to explain it to you. As you can see, there is a network of conservation banks. Over the years since 1997, since we have taken over the place, all this network of banks has been implemented. There was not much of it there when we came. That is why the whole operation in the last 11 years has been quite extensive.

What happens is that the slope from there down to Terry Hie Hie Road is about three or four kilometres. That is a huge fall. If you were to take this overlay, you would have to assume that you are going to have this sort of pipeline on it. Somewhere through here would be a major pipeline. I am not sure how it works. You would have feeders into that pipeline. Everywhere that pipeline crosses they are well sites. I am talking about something that is theoretical here because anything I have seen on display out of the Pilliga or up in

Queensland is higgledy piggledy. They are all over the place. I am working on theory here. Hills do not come into it; you do not have to go around anything like that. This is just purely theoretical. Here you are not going to go straight over this hill; they will go around it.

What happens here, when the water flows it will flow in each direction. It is directed in one way. The pipeline is an exclusion zone so you are not allowed to spray it, you are not allowed to farm over it and you cannot drive over it. That 20 metres is an exclusion zone. At our own expense we would have to spray that 20 metres otherwise we would end up with weed farms. Beside that is a 10 metre all-weather road so that they can have access to all those well vents. So that is 30 metres. Every well here is connected. The explanation I have been given is that there are water pressures and gas pressures. There is a network of these where you get pressure out of one. You might even have a well that does not even have gas in it. But you rely on the water pressure out of that well to feed the other wells. So there is a balancing act. It is not as if you get away from these wells. They say there are only two out of three that work but they all live in conjunction with each other. That is why they become a network of pipes.

You can imagine, these are all two feet under the ground on soft black alluvial soil, highly erodible. Where it crosses there, each time it crosses a bank the only possible way you could do it is some sort of pipe work. I do not know how you do it. But that water would run down the table drain off that road. It is full of water all the time. The only way you can get rid of water out of our country, as I have explained, is it sheds it. As soon as you have any more than 20 points it will just shed it because it is full of water. It will run into that bank and then along and hopefully there will be enough of the bank there to carry it through to the waterway. Unfortunately, if it does not, that water going from one bank to the other will just rise to the peak over that bank and then go down the slope, bang, bang, bang, bang, and you will have an environmental disaster.

I might not know about anything underneath the ground, and I am not here to argue about it. I am talking about 25 years of extraction and forever gone agricultural land in the Bellata district, or east of the Newell Highway anyway. To wind it up, there are two questions I have to ask the Committee. Please explain in your own words how CSG and broadacre farming on highly erodible black soils can coexist. The second question is: When you see that we cannot coexist, can you tell me who will be responsible for the compensation to me, especially under the circumstances facing PEL 470 landholders where the Government has given away exploration rights to our properties valued at over \$4,500 per hectare to Leichhardt Resources, a shelf company that has a paid-up capital value of just \$100?

CHAIR: Ms Tydd, would you like to add anything?

Ms TYDD: No.

CHAIR: Mr Cush, would you be able to table your opening statement?

Mr CUSH: Yes, I can.

The Hon. SCOT MacDONALD: Mr Tydd, you made a couple of statements in your submission about the loss of good agricultural land, particularly good farming land. Are you aware under the onshore petroleum Act you can prohibit a well going on cultivated land?

Ms TYDD: As Ms Penny Blatchford has pointed out, I am very well aware that that is in the Act. I have questioned a number of people, including the Department of Primary Industries and some of the members of Parliament present and their staff about that. I have been told that there are that many other pieces of legislation that override the petroleum Act it is useless to read it in its black-and-white print on the page. On that point, does it not then come back to the Minister being the person who makes the decision?

The Hon. SCOT MacDONALD: A piece of legislation is a piece of legislation. I do not think it is overridden by the planning Act or any other Act that I am aware of.

Ms TYDD: Yes, it is.

Mr BLATCHFORD: Have you read it all?

Ms TYDD: Also, the second part of that is that the Minister has the right to grant access or to make that decision. If the Minister does not even know where Bellata is what hope have I got?

Mrs BLATCHFORD: With respect to the sections and exemption of cultivation, if you read section 41 of that same Act we are discussing it relates to the rights of holders of the production lease, which we are not under yet. It says:

The holder of a production lease has the exclusive right to conduct petroleum mining operations in and on the land included in the lease together with the right to construct and maintain on the land such works, buildings, plant ... for the full enjoyment of the lease or to fulfil the lessee's obligations under it.

The Act also states that you can say no to cultivation but they can take you to arbitration in 28 days and you then have to go to the Land and Environment Court and the Minister can overrule you saying no to cultivation.

The Hon. SCOT MacDONALD: Are you aware of any examples where the Minister has overridden?

Mrs BLATCHFORD: It is a very new industry, with due respect. I do not know if the Minister has had an opportunity.

The Hon. SCOT MacDONALD: A feature of a few of the examples was the food security issue. We hear a lot about it. Australia's food production goes up by about 2 per cent every year, mainly because of productivity and things like that. If we lose a part of our land to mining or coal seam gas, do you accept that that food production will be quickly replaced? For example, you take some production out of cotton and go back into food production. I am curious where this food security point is going.

Mrs BLATCHFORD: I think there are two components to food security. One is perhaps we may run out of food. As a developed nation I do not believe Australians who are affluent have a food security issue. But I think people in developing nations are the ones who will have the food security issue. There is a second component to food security and that is our health. I do not think that people are being made aware that coal seam gas and the water will be flowing through our food chain. I would like the opportunity if I am going to buy meat to know that the cow was eating forage grown from coal seam gas water. Whether it is perception or real fear, I think the community has a right to know that. I think there are more components to food security than just rummaging through a bin looking for our food.

Ms TYDD: You suggested in your question that we are increasing our food production because of the economies that we are achieving. Those economies are achieved by broadscale farming equipment and the use of GPS navigation systems. You start putting this sort of infrastructure in our paddocks we will not have that equipment to use. So that 2 per cent increase, I would suggest we would probably start falling the other way.

Mrs BLATCHFORD: I would also like to add there is a lot of talk about the cotton industry and how we only produce cotton for fibre. I am a cotton grower as well as a cereal producer. The cotton industry and that cotton fibre produce cottonseed. That seed is a valuable food source for the oils industry. I think you will find that Cargill is a big purchaser of oil and the oil is right through our food chain. A lot of cafes use cotton seed oil. It is also a huge component of feedlotter and cattle producers. That cotton seed is in the food chain. It is unfair to say that cotton is only fibre producing. It contributes to food and also has the opportunity of being a renewable resource as the seed is an oil

The Hon. JEREMY BUCKINGHAM: My question is based on Mr and Mrs Blatchford's submission. It is clear that a lot of the recent productivity gains in agriculture are based on your knowledge and capacity to farm smart with biological fertilisers, no-till conservation farming and implementing innovation with machinery and practice. That is where productivity comes, but you were talking about losing from 1 per cent up to 20 per cent of the land through coal seam gas. If we settled on 10 per cent, what does that do to your return on assets and your viability? If you lost 10 per cent of your land to coal seam gas, are you actually going to be a viable operation with the flow-on effects?

Mr BLATCHFORD: What Jamie Bishop said earlier is very relevant. We have only about 50 per cent equity in our land and as soon as coal seam gas proceeds to enter our land, my land value will halve. So that leaves me with no equity. Straight away I will have to renegotiate my loan with my bank and that is going to cause a heap of pressure and I could be out of business. I would say there would probably be a 30 per cent loss because I will have to deal with all these roads, people, pipes and ignorance on my farm from day to day. They started off saying, "We'll just put it on your scrub land." That scrub land has been put there specially. With the CMA we are trying to repair lands where we leave areas out for animals, insects and beneficiaries and everything else away from our waterways and just to do the right thing for the country. Now I grow a cover crop

and all that does—I lose income by doing this—is protect the soil from the rain, wind, erosion and evaporation until the next crop comes along. We are getting out there with our farming techniques. I just cannot understand why we would need this to come in and intervene with what I am trying to do.

The Hon. JEREMY BUCKINGHAM: You say that just the perception of coal seam gas could devalue your property to the point whereby you may be forced to renegotiate with your bank?

Mr BLATCHFORD: Absolutely. I think it is probably already there. There has not been land going for sale lately in our PEL, but that question is going to be asked. If you are under a cloud of industry coming in like that, why go there? Why not go somewhere else where you have not got that concern. It is a big concern. It is the only thing Penny and I talk about.

Ms TYDD: So that we are not talking about a perceived risk of land values, I suggest it even is a higher risk that those properties become unsaleable. I will use myself as an example. My husband and I for the last five years have been actively in the property market attending auctions looking to buy a property to expand our own personal landholding. The minute those people arrived on our front gate I said to my husband, "It stops now." We have not attended one more auction. We do not read what is in the paper. I am absolutely not interested in owning land under the situation that the Government has got us in right now. If someone is looking to sell property in our area, I will not be looking to buy it.

Mr CUSH: Let us say it is only 10 per cent. The figures show that it is 20 per cent. You cannot get away from that fact. If they are going to claim those areas, they will. We are not going to be allowed to be able to go into that 30 metres, except we have a 120 feet bird space and we will have to keep those areas free from weeds otherwise we will end up with weed farms. It is not 10 per cent or maybe 20 per cent; it is actually 20 per cent according to the measurements that I have created. That is 20 per cent of your value gone. Who is going to buy that farm if you have an extensive ground network of piping underneath in erodible soils? Nobody in their right mind would. If it costs me \$230,000 a year across my five properties to maintain, that is \$230,000 just to maintain it. Then they will have to compensate me for another \$1.2 million. It just really is not worth it. Then at the end of the exercise the \$2 company will just walk. If we want to sign any agreement, it has to be with the Government. If it can give it away for \$2, I am sure it can take the responsibility for accepting the destruction of land that will be there in another thousand years' time.

There is a block of land on that wheat wall that was original farming country on Gurley Station. We harvested it two days ago. We took 475 tonne from 150 acres, and that was not fertilised. It was badly abused for the first 50 years of its history. You can bring it back and make something of it provided you still have the topsoil, but not if you are just going to allow it all to wash down a network of gullies. It would be sacrilege if any government allowed this to happen. I am not talking about in the west where you have flat country and you do not have these issues. Basically, you can draw a line east of the Newell Highway: it is all ridge country. They talk about the plains, but there are hills all through it: North Star, Cropper Creek, they are all the same. You will have exactly the same issue in each district. Twenty years ago there was 5.4 per cent of arable land in Australia. Last year the statistic was 4.5 per cent. The Queensland Premier just gave away another 2 per cent. At what point do you think Australia will be able to feed itself? Already we actually import 30 per cent of our food production.

The Hon. SCOT MacDONALD: Processed.

Mr CUSH: It does not matter; it is still imported.

The Hon. GREG DONNELLY: Thank you for attending today to provide us with an opportunity to ask you questions. Ms Tydd, on the last page of your submission in the paragraph above the four dot points in relation to coal seam gas you say:

If this can be independently proven then the government needs to give landholders back the rights to CSG under their land ...

How can an independent analysis or evidence be produced to prove safe coal seam gas mining? This theme is common with many witnesses. They say, "If this can be proven to be safe, our eyes might be opened a little about whether we are prepared to support it." I am not sure that people are clear about what that independent evidence would be and who would create that evidence for them.

Ms TYDD: In short, because I do not have all the answers, it must not be funded by the mining companies.

The Hon. GREG DONNELLY: Is the minimum right to refuse access essentially a bottom line position in this whole matter for you in that you want to be able to have the right to deny access of entry on to the property for exploration purposes?

Mr BLATCHFORD: The market would decide what it is worth and all that sort of stuff if farmers had the right to deal.

Ms TYDD: You talk about negotiating. You cannot negotiate from a position where you have zero power. That is not negotiating. If they have the right to take you to arbitration as their full stop and you have nothing, how is that negotiating? If you have the right to let someone in or out, presumably if you can prove it is safe, it will go to the places first where it is not economical and they are going to make more money out of gas than farming. They might want it on their land perhaps because they are not making the best of their farming assets.

The Hon. GREG DONNELLY: But, being the devil's advocate, what if the scenario was that a property owner next to yours for whatever reason decided they wanted to get out of farming and wanted to turn over the land for the opportunity to earn some income through coal seam gas mining?

Mr CUSH: Economics is involved in this. If one person on our road decides, yes, we will let them in, they can do what they like, how do they justify the pipeline to that farm through numerous other farms to get to be able to mine that farm? It will be economies of scale. It will be a community decision. In our PEL, to a man, everybody said no because they can see the risk just to the topography of the land. We are not arguing about what is underneath the ground. We can only argue about what is on top of the ground because that is our speciality and how it would work in our land.

It would be a lot better for an industry to focus on where you are not doing damage, where it will not have an effect—out in the flat country where you do not get the erosion problems. But to go up into ridge country like where we are with soil erosion and everything else, the Government will lead itself ultimately into huge court cases—PEL470 is 150,000 acres—and it will be responsible for the claim. They get in and extensively mine it and it might not happen for 20 years, but they will be up for hundreds of millions of dollars through compensation. For the long term a government has to look responsibly and say, "Well, it can work here, let's look at it." If the people are quite happy to have it there, that is fine. But it will not work there because the risk to government within itself is highly dangerous.

The Hon. PETER PRIMROSE: This question may be too complicated to answer, so feel free to take it on notice. This morning a witness tabled an access agreement from Leichhardt Resources to conduct a well program. One of the conditions in it is the confidentiality agreement that people do not talk about it. I appreciate that one of your fundamental requests is the right to say no access, but assuming that was in, what other conditions, other than what already is in the agreement, would you like to see in a standard agreement?

Mr CUSH: You are saying that somebody already has signed an agreement? There was an agreement that was rescinded. My understanding is that nobody else in our PEL—

Ms TYDD: No, he is saying that he has a copy. It is just a blank one.

The Hon. PETER PRIMROSE: It is an offer that, like any contract, contains a condition. Have you all seen this document?

Ms TYDD: Yes.

The Hon. PETER PRIMROSE: Are there other conditions or alterations to the existing conditions that you would like to see in an offer document in the future?

Mrs BLATCHFORD: This access arrangement is not acceptable in any form. It is a standard document that I think they have just used through a subcontractor. There is lots of information here. I cannot imagine anyone would sign this. What you are asking cannot be answered really because there is nothing in this document that I would agree to, particularly as it has paid-up capital of only \$100. So there is no way I would sign it.

The Hon. JEREMY BUCKINGHAM: Bellata is your brand name but it is a place. You have invested a lot of money in the brand and building up that profile and you market off that. What does it mean to your business if Bellata becomes a broad acre cropping region but also a gas region? Would there be an impact on your brand, on your marketing?

Mr CUSH: You notice on our packaging that there are strict criteria we follow. The way we farm, store our grain through aeration, the way we control insects, the way we run our mill, the way we run our pasta plants through cooling rooms: If we were to go out in the market place and say, but we live in a coal seam gas field and we believe there are other issues now at play, we would have to rethink the marketing strategy.

Ms TYDD: The packaging at the moment says: Located in Australia's golden durum triangle. If that said: located in Australia's burgeoning gas field, would you pick that up off the shelf and say, love, we are having that for dinner tonight? It is common sense that Australia has always called on clean green image when marketing food commodities.

Mr CUSH: I have clients in Thailand, Japan, the Philippines, and Vietnam and we ship 20 containers a month out of our mill. They are sensitive to the way we conduct our business. We got a lot of our business off the back of the way we market. They see us as a clean green image and I believe that is what we are marketing to. Asia has a burgeoning middle class. Rice has reached its maximum. I do not know if you realise in the developing world, the greenhouse revolution, Vietnam, they subsidised urea down to \$20 a tonne, so they threw it at their paddy fields. Places like Sri Lanka produce more rice per acre than their wealthy neighbours. They grow green crops but they did not replace phosphates and trace elements. To do all that it is going to cost them a fortune that is why rice has peaked. The next burgeoning industry has turned out to be noodles over there.

The middle class because they like the European way that we eat food it is another staple: Pasta is coming into its own. We have three new clients coming on line next year, one is Hong Kong/China, that want to buy semolina from us. We have a huge opportunity in northern New South Wales, particularly if you look at that triangle—Goondiwindi, Narrabri, Tamworth—that we can market and that can produce a million tonnes of durum a year. It is highly productive and highly sought after. If the people of the world are starving they are going to come here. Wars are created through starvation, they will not be started chasing coal seam gas. It is food that is the most important thing. At the end of the day if you eroding away the small base that we have left here we will have nothing and will not be able to feed ourselves.

CHAIR: I would like to thank the witnesses for providing us with your time. It has been valuable input. Could you table the statements?

Mrs BLATCHFORD: I have recommendations I did not read.

CHAIR: Table those as well.

(The witnesses withdrew)

CARMEL THERESE FLINT, Spokesperson, Northern Inland Council for the Environment, and

PHILIP HAROLD SPARKS, Adviser, Northern Inland Council for the Environment, affirmed and examined:

CHAIR: Would either or both of you like to make an opening statement?

Ms FLINT: I would like to. My name is Carmel Flint. I am based in Armidale and a member of the Northern Inland Council for the Environment. The council is a network of groups and individuals across northern inland New South Wales who recognise the health of our regional communities is directly dependent to the regional environments. We appreciate the opportunity to present here today. I looked up the word "caution" in the dictionary yesterday and it was defined as, "careful forethought to avoid danger or harm; close attention or vigilance to minimise risk; prudence or restraint in action or decision."

I have been interested to observe that the views of those seeking a moratorium on coal seam gas in New South Wales are occasionally portrayed by some players as extreme, hysterical or emotional. The definition given above illustrates that there is nothing extreme about exercising caution: Quite the reverse. The application of caution one could argue, is an inherently conservative act. There is no doubt, going back to that same definition, that coal seam gas mining represents a real and present danger to the people and environments of New South Wales and the substantial risk it poses have not been minimised.

I believe there are eight major dangers posed by coal seam gas mining in New South Wales as follows: risks to ground water and surface water; alienation of public lands and farm lands; destruction of high conservation value habitats; increased industrialisation of rural landscapes; substantial emissions of greenhouse gases; production of vast quantities of waste and pollutants; social discord and disempowerment and direct and indirect impacts on human health. An industry that comes associated with such dangers cannot and should not be taken lightly but be met with the utmost caution. I do not have time to address each of the dangers identified above but would like to focus on two of those that have perhaps had less attention earlier in submissions today and where I have new information to provide.

The first relates to the threat that coal seam gas represents to natural areas and public lands. This is not just a risk, it is a known threat. If coal seam gas mining is allowed in important natural areas it will lead to substantial degradation of those areas. Exploration in the Pilliga has already had a negative impact on the environment. The Pilliga is unique, not just because it is the largest patch of forest left in inland New South Wales, but also because it is incredibly diverse. The impacts of coal seam gas in the Pilliga will include direct clearing of vegetation and threatened species habitat; fragmentation; the spread of invasive species; and increased fire risk. There is a body of scientific evidence that shows that kind of fragmentation will lead to negative impacts on the wildlife that inhabit the Pilliga.

The Northern Inland Council for the Environment recently engaged independent experts to conduct wildlife surveys in the Pilliga. In just one week those experts recorded 21 threatened and migratory species including the Pilliga mouse, Eastern Pygmy Possum, Black Striped Wallaby and South Eastern Long Eared Bat. A report is still being developed but in a written statement the three principal biologists wrote that: this survey has confirmed the extremely high conservation values of the Pilliga forests and woodlands and heightened concerns about the impacts that coal seam gas mining will have on their function as a major refuge for biodiversity. There is no other forest and woodland block like it and it can never be restored once damaged.

The Pilliga is also notable because it is mostly public land: A mixture of State Forest and State conservation areas with some freehold land. More than 1.3 million hectares of public land that is available to mining is currently under petroleum exploration licences in New South Wales. Coal seam gas mining on public lands will undermine their use for recreation and limit the areas to which the public has access as well as having a major environmental impact. It transforms the public interest in shared natural resources into a private interest held by large companies. Furthermore, there are no inhabitants to speak up for public lands and behoves decision makers to give more attention to the wildlife that inhabit those areas.

The second major point I want to raise is that of pollution. Coal seam gas mining is a polluting industry that is not in control of the waste it produces. There have been many previous examples of pollution from coal seam gas in the Pilliga and recently we reported two more cases. Eight dead frogs were found in a poorly

constructed sump adjacent to a well and there is substantial die-back of trees adjoining the major water treatment works. We submitted that report and recently had a response to the department. The response was disappointing because they had basically passed those complaints back to Eastern Star Gas to investigate for themselves. Eastern Star Gas took a water sample of the sump and they also responded to the dead tree incident.

The department admits that the frogs have been killed by the saline brine in the coal seam gas pond but they decided that does not constitute significant harm. Given there are plans for 1,100 gas wells in the Pilliga, we believe eight dead frogs per well if it is replicated across the area will be 8,000 dead frogs. We wonder if the department would consider that significant. In relation to dead trees, the department acknowledged that the trees had died but claimed the cause was unknown. Despite the fact they suggest the issue had been reported previously, they do not have any results from the soil sample. Our complaint does appear to have triggered a sample to be taken. This case highlights a lot of problems with the industry and how difficult it is to regulate mining with such a vast footprint and how inadequate the current approaches are. Furthermore, the reforms currently proposed by the New South Wales Government simply do not go far enough and cannot deal with the dangers that CSG mining presents. Another big threat to surface water in regards to pollution is the treated coal seam gas water that is being discharged into creek systems.

In the Pilliga, water is being treated with reverse osmosis and put into the Bohena Creek. We have recently had independent testing done of that water and we are still awaiting the final results. But it would appear there are major water quality issues with that. I would like the opportunity to put that information when it arrives hopefully in the next week to this Committee so that you can take it into account. There are going to be vast volumes of that water produced and we have real concerns about that going into our creek systems as regards to water quality. To conclude, I would urge you to consider the long sweep of time, the overwhelming concerns of the community and the heavy obligation that is upon us all to pass on a habitable, diverse and productive environment to those who come after us. Please recommend a moratorium on coal seam gas mining in New South Wales and ensure that rigorous scientific studies are done of the risks and that known threats are properly quantified.

CHAIR: Would you like to make an opening statement, Mr Sparks?

Mr SPARKS: I was part of that survey that Carmel referred to. There was a group of ecologists who spent a week out in the forest and we recorded all those species that Carmel referred to. We found it to be highly diverse; there is no doubt about it. The reason it is highly diverse is because it is such a large remnant. That is why it has so many species and threatened species. Of particular significance were the Pilliga mouse, the black striped wallaby and the eastern pygmy possum. We covered pretty much all that area of the PEL where the gas mine lease is to happen. Within that area it appeared to be core habitat of the black striped wallaby, the Pilliga mouse and the eastern pygmy possum. These species do not occur broadly. The black striped wallaby occurs in Queensland and the eastern pygmy possum occurs over on the coast. But in land in this region they are confined to that area of habitat there. What I am saying is that is core habitat for these three species that does not occur much anywhere else within our area. There were a lot of other threatened species as well. The threatened species there is highly significant.

The biodiversity was quite exceptional, 130 species. You just do not get that anywhere. I have surveyed most of the remnants within the Nandewar bioregion and you just do not get that sort of number of species. The impact from coal gas mining, the clearing involved for the roads, the well heads and the pipelines, that is going to be a significant impact because it is going to fragment that forest and fragment it to the detriment of all those species. Not only will there be a loss of core habitat for those species I just mentioned, there also will be an advantage to the feral animals and the weeds. It is likely with that sort of operation in the forest there will be an invasion that will follow and that is likely to lead to an edge effect throughout the forest. The fragmentation will lead to an edge effect and that edge effect will lead to loss of habitat through competition with species such as noisy mynahs and feral animals.

We are talking about the loss of the ecological integrity of the forest. While it does have some tracks through it, the proposal that we see in front of us is of much greater impact. Forestry certainly had some roads through the area but that is nothing like the impact that is being proposed. As Carmel said, we should be applying the precautionary principle. We know that fragmentation leads to loss of habitat, we know that weeds and feral animals lead to loss of biodiversity, so we should be applying that precautionary principle. There is also likely to be an increased fire threat associated with the gas. There is also likely to be increased roadkill of native fauna with increased traffic throughout the area. The other major point that comes up with these sorts of proposals is the offsets through biobanking, which is usually a way for these companies to get what they want.

In this particular case I do not think it applies whatsoever because those three species I have just referred to do not have other suitable habitat in this area. So you cannot recreate the habitat lost for these species in the area. That was the main point I had to raise.

The Hon. GREG DONNELLY: Thank you for coming today. I compliment you on your detailed submission. It is very thorough. Looking at the summary of your key points, which commences on page 2 and going over to page three, as I understand, you are saying there needs to be, from your point of view, an absolute position whereby there could be a denial of the right to explore for coal seam gas in certain areas? In other words, landholders must reside with a right to say no if there is an approach to conduct exploration on their property. Is that your position?

Ms FLINT: That is one of our policy positions. We believe that landholders should have a right to say no but we also believe that governments have a responsibility to say no as well in circumstances where that should be the case. We believe there needs to be a moratorium in place and proper studies done. Even if it is proven safe, there are already known impacts which people have talked about earlier today on farmland and bushland. That should be out of the question regardless in terms of the industrial footprint of this industry and the impact that has on farm incomes and the impact that will have on the bush. There should be places where it is disallowed until if and when after proper scientific study it is shown to be safe.

The Hon. GREG DONNELLY: In terms of the scientific studies and research and related work to be done to establish in people's minds the safety of coal seam gas exploration and mining, do you think there is a long way to go? Do you think progress is being made to produce evidence that is satisfactory or are you sceptical?

Ms FLINT: I am very sceptical. I think there are a lot of problems with the work done by consultancies working for mining companies. We found earlier this year a consulting company that was working for Eastern Star Gas searching for the Pilliga mouse in the Pilliga. They did not find a single record of the Pilliga mouse. We had a group of biologists out in the Pilliga for one week and they recorded 30 records of the Pilliga mouse at eight out of 10 sites. They are very good biologists. You obviously need to know which habitats to trap in and you need to set your traps correctly and you need to work very hard, which they did. With the juxtaposition between those two, the community is having to go out at this point and collect its own data because the data being provided by companies is so poor. It is just not good enough. We see that replicated across every field in terms of water assessments.

We have had to go out and get our own water assessment of the water that is being discharged into the creek. We have that tested for about 100 different chemicals. The coal seam gas companies only provide that—Eastern Star Gas only provided that to the Senate inquiry because it was asked for during that inquiry. But up to that point that data had not been available to the public. They tested for about 15 or 20 chemicals selected by them and they clearly did not get the results that we got. There are big issues. That is why we think that a whole new approach is needed. We need genuine independence, not only while a moratorium is in place to assess it but in the future. There is just too much sway held by these companies over their consultants. They should be independent.

The Hon. RICK COLLESS: When you say genuine independence, who do you have in mind would create that level of support in the community that the research was genuinely independent? Are you saying it should be conducted by a government department or some other body?

Ms FLINT: No, it should be conducted by independent scientists who do not work for government and preferably work in universities and in fields of endeavour where they have not taken money from coal seam gas companies. We have a big problem that a lot of academics have taken a lot of money from coal seam gas companies as well. It is important that we take the money out of this circle. There are definitely some tremendous scientists in this country who have never taken money from mining and therefore can be considered genuinely independent. In a modern democracy we should be able to set up a process that can do that work. I do not think it is a hard thing to do.

The Hon. JEREMY BUCKINGHAM: I accept the science of the threat that fragmentation can cause to habitats and that that is a factor that leads to, as you have said, invasion by feral flora and fauna into key ecological areas. That fragmentation in coal seam gas can occur at the exploration stage. In your submission you say in relation to the exploration stage that the only substantive approvals that are required at the exploration stage are reviews of environmental factors [REFs] under section 111 of the New South Wales Environmental

Planning and Assessment Act. You have said that these are not made available to the public until after they have been approved and often a lengthy time after these activities have actually been undertaken. You also say there are no legal avenues for the community to challenge these consents. Given that the exploration stage can have a significant impact on these habitats and areas, do you believe that an REF deals adequately with the level of impact that is occurring? Do you think there should be an alternative process for the assessment of the environmental impact of the exploration phase of coal seam gas or mining or whatever?

Ms FLINT: We think that REFs as they are currently produced are very inadequate. We are very concerned that such large numbers of exploration core holes can be approved without any cumulative impact assessment being done. They are approved one by one and for each well they say "no significant impact". But they are never considered altogether. There is also real concern that exploratory wells are actually producing gas for commercial purposes. We understood that the petroleum Act was supposed to set up a higher level on production, a higher test so that full assessments were done before gas was commercially produced. But out in the Pilliga under just an assessment lease and an exploration licence gas is going to the Wilga Park power station for commercial use without ever having had a production licence over that area. That is a real issue because the petroleum Act appears to set up a higher test for production but that is not happening here anyway. That is also a big problem. Also, the REFs do not require wildlife surveys before they are approved. They require a very low level of work and assessment and they are completely inadequate compared to what they allow to happen.

The Hon. Dr PETER PHELPS: Ms Flint, has the Northern Inland Council for the Environment ever welcomed any extractive industry development proposal? If so, what was the condition of that proposal that was different from CSG proposals which made you happy to support it?

Ms FLINT: The Northern Inland Council for the Environment is pretty new—we about two or three years old. I am not aware that we have ever welcomed an extractive industry. I do not think we have had to come to grips with one like this before. So I cannot really answer that.

The Hon. Dr PETER PHELPS: But certainly gold and coalmines have been under proposal in northern and central northern New South Wales?

Ms FLINT: Certainly, the council is very concerned about the coalmines in this area as well and the cumulative impact of coalmines and coal seam gas in this area is likely to be very severe.

The Hon. Dr PETER PHELPS: Would it be fair to say that you are opposed to all extractive industries?

Ms FLINT: No, that definitely is not our policy position. I think you can see from our position that we are asking for a moratorium on this industry until such time as fair and rigorous independent studies have been conducted and we will look at the results of that and develop our position.

CHAIR: Mr Sparks, will your research on the biodiversity survey be published anywhere?

Mr SPARKS: We have just handed it over to the Northern Inland Council for the Environment.

CHAIR: Is it likely to be published?

Ms FLINT: It is. We are passing it on to an expert, hopefully, from one of the universities to review the data in relation to the scientific literature, write it up and present it to both governments. We would like to get a copy to you as well.

CHAIR: Do you have a time line on that?

Ms FLINT: We are hoping for February/March.

CHAIR: Subject to your organisation's approval, irrespective of whether we have concluded this inquiry, could you forward a copy of it to the Committee secretariat?

Ms FLINT: Absolutely. We would be very happy to do that.

CHAIR: Thank you for attending to give us the benefit of your experience. Unfortunately, we are out of time. This session has concluded.

(The witnesses withdrew)

JON-MAREE BAKER, Executive Officer, Namoi Water, affirmed and examined:

CHAIR: Thank you for agreeing to attend to talk to the Committee today. Before proceeding to questions, would you like to make an opening statement?

Ms BAKER: Yes I would. First, welcome to Narrabri. Namoi Water represents water access licence holders—they are farmers, families and community members of the Namoi Valley. You have heard a great deal from many concerned communities and on the other hand you will hear of the business plans and opportunities and assurances from coal seam gas companies. No doubt, you will be privy to the proposed regulation and legislative changes proposed by both sides of government. At a recent forum held this week in Narrabri the question of coexistence was put to us in terms of the requirement for coal seam gas companies to operate with a social licence from the community. You are seeing the effects of coal seam gas companies that do not have a social licence to operate, and whilst this may be confused with the emotion of the debate it needs to be separated and given your due consideration.

Social licence or goodwill is built by open and transparent processes, good communication, forward and proactive planning to mitigate and manage risk, advances in technology and dedication to research and scientific undertaking that build an industry's capacity to answer the community's questions and concerns. This inquiry must take into account how much social licence the coal seam gas industry has and what it is doing to avail itself of a social licence to operate in our community. Namoi Water outlined in its submission a number of concerns and issues associated with current coal seam gas operations underway in this valley. In terms of social licence, it clearly demonstrates deficiencies that need to be addressed.

What do we know about coal seam gas in the Namoi? There are production licences for coal seam gas in this valley. There are evaporative ponds in place that have been breached during rain events. There is discharge into a creek system that is connected to the Namoi River. There have been incidents of environmental contamination of chemicals into waterways. There has been co-produced water dumped on the side of the road. There is information missing from government department websites in relation to coal seam gas operations in this valley. There is no isotope testing of coal seam gas water to test the age of water and determine if induced recharge is occurring. There is no metering of water from well heads or at intake ponds. There is flaring and fugitive emissions being released into the environment.

These are some of the issues that are occurring now in this valley. We are on the precipice of the coal seam gas industry changing rural Australia. At the moment we are at the cross-road of government legislative changes, industry expansion, market profitability and energy diversification and it is the convergence with community and dissemination of knowledge that disconnects resulting in discontent. When you go back to your homes away from coal seam gas expansion and commence your deliberations after this inquiry at what point do you say to yourselves that this is the tipping point? How transparent is the current process to the community that is impacted most? Is it 1,000, 10,000 or 100,000 wells across New South Wales? The answer to this question is that we do not actually know. Not enough information is available for regional studies to provide certainty for the protection of our water resources. As the Namoi Water representative on the stakeholder advisory group for the Namoi Catchment

Water Study we are developing one of the only regional water studies in New South Wales into the potential cumulative impacts on water resources. This has highlighted a significant lack of data in relation to coal seam gas. Namoi Water supports the Namoi Catchment Management Authority in its forward planning for a cumulative risk assessment tool to provide layers of best available science and to assess impact measured against the community's catchment action plan targets which cover all areas of biodiversity, water, community and environment. From this process and hearing today we request that you hear our message for the need for a strategy to be designed with community involvement, like our catchment action plan, to implement environmentally sustainable coal seam gas and coal industries with a view to transitioning to renewable energy. In particular, I draw your attention to our submissions and concluding statements to request for certainty in the absolute protection of our water resources. Thank you.

Document tabled.

The Hon. SCOT MacDONALD: Page 1 of your submission states:

The Water Sharing Plan processes are based on the precautionary principle in regard to managing water resources, the CSG industry regulation is not based on the same principle yet is dealing with the same resource—water.

My understanding is that any operating extractive industry that takes more than three megalitres a year now has to have an entitlement. Does that satisfy in your mind that they are now part of the water sharing plan and come under the national water initiative, have to buy the licence and that it is going to the highest end user to which we all signed up for in the national water initiative? Are you more satisfied now? That regulation came in in July, which might have happened when you were writing your submission?

Ms BAKER: I suggest that the regulation for the metering of water for extractive industries is an important first step, but it certainly is only one step in a process that is considerably lacking in transparency. They currently do not meter off the well head in exploration. They are only metering as it is going out of the reverse osmosis plant into the discharge point at Bohena Creek, for example, in Eastern Star Gas's case. So I do not think that that change in actually metering water extracted over three megalitres is a conclusive water balance answer to the complex issue of coal seam gas extraction in our area.

The Hon. SCOT MacDONALD: So as far as you are concerned that measurement is not happening at the well head?

Ms BAKER: That and the fact that the New South Wales Office of Water actually is not currently involved in the process until it moves to production. I find that extremely concerning, given that if you were truly adhering to a precautionary principle it would be involved at an exploration phase and currently it is not.

The Hon. Dr PETER PHELPS: Has Namoi Water done any previous examination or study of water extraction for agricultural industries and the effect that might have on surface and different level aquifers?

Ms BAKER: The Namoi is the most studied valley in the whole of New South Wales. The answer to that question lies in the science and information that was provided for the water sharing plant process sustainable yield. There is a history of two decades of research and information that informed what we now call water sharing plans. As we move forward into a basin planning process, the evidence we have on behalf of the irrigation industry is significant. Pre-production, I guess our industry is extremely regulated. It is extremely well understood from the scientific background.

The Hon. Dr PETER PHELPS: Was Namoi Water able to find any evidence of large-scale interconnectivity between various aquifers?

Ms BAKER: The aquifers are well understood at alluvium level. The interconnectivity that you are talking about between alluvial and coal seam gas areas I do not believe is well understood. Nor do I believe that it is well researched. In our endeavours to establish concrete scientific independent information, we certainly are not turning up a significant amount of studies. A majority of the data rests with the coal seam gas companies. That will be included in the Namoi Water Study, but the data is actually lacking because there are so many gaps between the science and where the data is held. Can you extrapolate the amount of data held from one well head sitting here across the whole region?

For example, where they are operating in the Pilliga is actually the recharge area for the bulk of the lower Namoi from a groundwater resource. Where you are having the conversation about strategic cropping land and strategic land use, the water recharge areas also are an important part in that discussion and debate to inform where you can and cannot have extractive industry because potentially you are impacting on the amount of water that is recharged into groundwater systems by where the current licences exist now in the Namoi Valley.

CHAIR: An earlier witness, which may have been the mayor for the Moree Plains shire, was asked whether she could provide the Committee with some data on the number of artesian bores in her area. Does Namoi Water hold that sort of data for the whole area?

Ms BAKER: For artesian bores or irrigation?

CHAIR: For any sort of bore? My point is that if there was a recommendation that wide-scale baseline monitoring should take place, do you have sufficient data to know where bores are located so that a plan could be set up to start measuring in those areas?

Ms BAKER: If you go to the New South Wales Office of Water's website there is a geographic map that you can bring up for any area. All of it is GPS referenced. There is significant data held already by the New South Wales Office of Water. There are full-time equivalent hydrologists used to manage the water resource and sharing plans as they stand today. That information is available.

The Hon. JEREMY BUCKINGHAM: One key issue with water management around coal seam gas is salt, how produced water is managed and where it ends up. What is Namoi Water's preferred or suggested management strategy, if it has one, for the billions of litres of produced water and the salt load that will be produced from a potential coal seam gas industry?

Ms BAKER: In our submission we highlighted that, for example, Eastern Star Gas operation is currently discharging into Bohena Creek. As you are aware in the Murray-Darling Basin plan process, one of the key parts is ecosystem function and in-stream health. Obviously a component of that is salinity and management of salinity. The co-produced water is one of the biggest issues. It is the impact on third parties that has significant potential. Do we have a position on reinjection or on how that is managed? I do not think we have enough data to say we could support reinjection. I have been working on this for over 12 months and I have read a significant amount of reports and spent as much time as I can with coal seam gas companies asking them to provide me with that evidence. I do not think they have that evidence. I think we need to operate from a precautionary principle in that regard because I do not believe the information is available for us to make the best decision.

The Hon. GREG DONNELLY: On the bottom of page 7 going on to the top of page 8 of your submission there is a rhetorical question: Is the Government assured that industry best practice is enough to prevent interference and will not be degradation over time, 50 to 100 years, resulting in contamination of overlying aquifers. Then you say: The time lag between cause and effect between CSG development and impact must be part of the legislation to safeguard the environment and water resources. Could you elaborate on that particular point? What do you have in mind by saying that?

Ms BAKER: The New South Wales Office of Water has a stacked aquifer policy, which is how they treat the water resources as alluvial and transferring down into the various layers of water resource. The aquifer interference policy is attempting to answer that question. Will the aquifer interference policy address that concern? I guess that really depends on the regulatory strength and how that is resourced. We can have the best regulation and best legislation but unless it is well resourced and you have staff who are able to use the data generated to regulate the industry as it is my belief this is an industry that is currently operating under self-regulation. They are calling for better regulatory process. We need to make sure the departments and the resourcing is adequate for them to use the data that is generated in a way that safeguards the water resources for the future. I do not know that we have the confidence in the current legislative process and I would welcome this Committee's findings.

The Hon. GREG DONNELLY: This issue of regulation, do you envisage that there needs to be, if this industry was to proceed, a real stepping-up of, I use the phrase, people on the ground in terms of those working for a regulator to ensure that the standards that are set are maintained? Do you see any other way other than having quite a few people on the ground overseeing and ensuring the regulations are enforced?

Ms BAKER: I will take my Namoi Water hat off and put my farmer hat on. We live next door to a coal seam gas well site. We were not provided with any neighbour notification when that well site was being drilled. It was basically drilling 24-hours a day with great big lights. We have had no approach from that company in regard to their operations or planned process. During the flood the position of the well head was in a floodway and the chemicals that left on site leached into the waterway. That whole that well head site went under water during the flood. They were warned of that by the people whose land that well head sits on.

They were warned they were putting it into a waterway. They did not heed the caution and they did not take notice of the local knowledge and information. I understand why they wanted to put it there because it was the furthest point from the houses and the homes in that area, but does that not just say if you have been given a warning that you should not be putting it in a waterway, do you not as a company stop and think is that the best place? Where is the pause button? To answer your question absolutely there needs to be staff on the ground. Currently the industry is being left to their own devices to a certain extent and unless you have people on the ground there will be no monitoring or measurement and there will be no change.

CHAIR: I will ask a question that will demonstrate my ignorance: Namoi Water is an extractive licensing body?

Ms BAKER: No. Namoi Water represents licence holders in the Namoi Valley. There are 3,000 access licences in the Namoi. There are 1,200 licence holders and we represent those holders.

CHAIR: They cover a range of types of extraction or is it only large extraction irrigation?

Ms BAKER: No. The Namoi Valley stretches from Tamworth to Walgett. In our introduction our irrigators irrigate lucerne, wheat, cotton, they have intensive farming, and intensive industries. It is a whole range, it is an \$800 million industry per year. The Namoi Valley is a significant contributor to the economy and it needs to be taken into account. Are we looking short term gain from an extractive industry for very little consideration of the long term benefits of the sustainable regional agricultural production?

CHAIR: Could you give the Committee some sort of an idea how large is the extraction of the members of your group?

Ms BAKER: There are licences for 86,000 megalitres.

CHAIR: Total?

Ms BAKER: Of groundwater in the lower Namoi. There are 122,000 megalitres of groundwater in the upper Namoi and 256,000 megalitres of regulated surface water entitlement.

CHAIR: Most of that is going into production?

Ms BAKER: Yes.

CHAIR: Are there any further question? You have them stumped.

Ms BAKER: That must mean my submission was excellent.

The Hon. JEREMY BUCKINGHAM: It was very thorough.

CHAIR: When you put forward detailed submissions it is hard for people to find a question to ask because they do not know what you have left out.

The Hon. Dr PETER PHELPS: Does not Namoi Water consider it an opportunity, the possibility of having additional flows of reverse osmosis water into the system? Is not more water going into the system good as far as agricultural producers?

The Hon. RICK COLLESS: Particularly given it is going to be there all the time as opposed to river water which is sometimes there and sometimes not there.

Ms BAKER: We have a regulated and unregulated system, so the reliability of our system is high. We are one of the largest groundwater users in the State and we do that sustainably. It is an interesting question. Do we support it for the access to future water sources? In Santos' presentation on Monday they were saying they were only going to produce 5 gigalitres. Five gigalitres is a drop in the bucket in comparison to the potential damage that may occur if you frack or induce recharge from an alluvial water source or contaminate a water source. It bears the question the chemicals that are being used to remove the guar from the fracking process are acid based so what is their half life? It throws up a new dynamic of complexity. I am not definitively saying no, I am not definitively saying yes: The Murray-Darling Basin Authority says that if there are extractive industries and the water can be put through reverse osmosis and it is accepted by irrigators it will additional to our sustainable water.

At the same time the quality parameters and the treatment processes which are primarily aimed at salt extraction are not necessarily to a standard that would be accepted. In that reverse osmosis process they are changing the micronutrients. What happens over time if we actually put water into the system that has a lack of micronutrients, what does that do to our water sources and habitats? What does that do to our riverine systems and ecosystem function, from a practical level, and how does that play out to a sustainable rivers audit, which

will be the bench mark that this valley is audited against to the basin plan. It is a connected process. I cannot genuinely answer that question because it is so connected to some significant legislative change in the basin plan that will make a change to how we actually use water in this valley.

The Hon. JEREMY BUCKINGHAM: I am not an engineer, I am a stone mason so I am pretty silly. I am learning about petajoules and mega and gigalitres. Am I right in your submission you said then there was about 480,000 megalitres coming out of the Namoi?

Ms BAKER: Correct. That is what is licensed, usage is a different matter.

The Hon. JEREMY BUCKINGHAM: Is that half a gigalitre?

Ms BAKER: No, that is 480 gigalitres of water. The usage to that is significantly different.

The Hon. JEREMY BUCKINGHAM: The National Water Commission said that in their submission said that coal seam gas could, in terms of co-produced water could produce, across the whole basin, could extract 300 gigalitres of water. It is a significant amount. I would assume that Namoi would be largest extractions in the State.

Ms BAKER: The Namoi is comparable, from a northern basin perspective, we have a significant reliance on groundwater and how that is being used in a sustainable yield perspective.

The Hon. JEREMY BUCKINGHAM: On the figures that the National Water Commission is working on and figures you have of 480 gigalitres there is potential for there to be competition for groundwater between the users at the moment and coal seam gas. Is that a threat to your industry? Is that something you are planning for: A competition for licences? It is a market place and those licences can be bought and sold by Government, or whoever, and they are not allocating any more, is that a threat to the people who are members of Namoi water?

Ms BAKER: There are two parts to that: One, tomorrow I am quite sure that Santos and the coal seam gas companies will say we are operating in a confined layer where the coal seams are and we are operating at 1,000 metres below and the alluvial aquifer is within the first 200 metres. They will say they do not require any water out of alluvial system and the water they are producing is from an old water source. The recharge capacity of that water source is significant because it covers such a vast area. The recharge is calculated much more slowly for that water source. Essentially New South Wales Office of Water will provide data to inform the debate in that regard. Those old water sources do not recharge the same way that the alluvial aquifers do. It takes hundreds of years for them to recharge and they may not recharge at all. They are operating in this valley, given the data we are presented with at the moment, in a different water source.

The second part of that is if they do induce recharge potentially they will have to be licensed in the above aquifers and they will have to buy licences out of the GAB or alluvial aquifers if they do induce recharge, and that is what the aquifer interference policy primarily in the draft was about licensing rather than preventing damage. The concern we have in the water source that they are going to be licensed in, there is an unsigned water portion and in the dealings with the with Murray-Darling Basin Commission the New South Wales Government advocated for, not growth in use, but when they were setting the caps there was history of use or predicted use. The New South Wales Government advocated for predictive and that gives them unsigned portion of water which they can licence to coal seam gas companies. They have allowed capacity for them to licence coal seam gas extraction and the volumes of water we are talking about in that instance. There is the challenge. It is the third party impacts that are the most concerning to us. It is not a competitive nature as to potentially they will have an impact on the alluvial water source unless they are inducing recharge and then it is on for young and old.

The Hon. GREG DONNELLY: One question on notice: In your second last paragraph you talk about the issue of data gaps.

Ms BAKER: Yes.

The Hon. GREG DONNELLY: As a question on notice, I would be keen to gather from you your thoughts about the different headings and subheadings of data gaps you see. There are gaps you are concerned about and subsections of those gaps but list down all the areas you think there are deficiencies in data.

Ms BAKER: The easy option for that is the Namoi water study phase 3 report will be out in December. Part of that report will include data gaps. I will be able to table that for your consideration.

(The witness withdrew)

(Short adjournment)

FRANCESCA ANDREONI, Strategic Planning Manager, Namoi Catchment Management Authority, sworn and examined:

CHAIR: Ms Andreoni, before we proceed to questions from the Committee would you like to make an opening statement?

Dr ANDREONI: Mr Chairman and members of the Committee, firstly, the Namoi Catchment Management Authority [CMA] would like to thank you for the opportunity to provide further input to the inquiry on an important issue for the Namoi catchment. The Namoi CMA strongly supports the Government's inquiry into the environmental, economic and social impacts of coal seam gas. The challenge with coal seam gas, as we see it, is to balance those growth opportunities in the industry with the maintenance of critical catchment assets today and in the future. In our written submission we highlighted catchment issues, our extractive industries policy and a scoping study we are undertaking into developing a framework for assessing the cumulative risk of extractive industries in relation to the biophysical assets of the Namoi catchment.

As per our submission, I would like to table copies of this report which has been peer reviewed and released publicly. Briefly, if I may, I will highlight some of the issues we have raised in our submission. The first point I would like to highlight is that as catchment managers our perspective is the whole of the catchment. We see managing the entire social and ecological system of the catchment together as the critical challenge—the community, the environment, the industries. We view the catchment as the most appropriate scale to be effectively planning, integrating and managing natural resource management and, in particular, strategic regional land use planning in relation to important developments such as coal seam gas development.

I also would like to highlight the Namoi Catchment Action Plan. It is based on a resilience approach which we think is critical in terms of how we manage developing industries in the catchment. The Namoi Catchment Action Plan is based on an application of resilience thinking at the catchment scale. Essentially, resilience is about the capacity of the system to absorb shocks and changes and retain the same identity and the same structure and function. In the Namoi Catchment Action Plan and associated documents we describe the socio-ecological systems of the catchment, identify the drivers of change and look at the critical thresholds in relation to those important underpinning assets.

The reason why this is important is that the catchment action plan identified very clearly three important drivers of change for this catchment in the future. One was climate change, another was changes to policy around water and the third, which was strongly voiced by our catchment community, was the expansion of extractive industries and the associated land use change. I cannot overemphasise just how much it came through from the community when we ran our public consultation last year that the growth of extractive industries is of great concern to the catchment community and how that is handled is of great relevance to what this catchment might look like in the future.

Through that catchment action plan we have identified critical thresholds which if crossed could potentially lead to irreversible or undesirable change in that system, in this case the catchment and the social and ecological systems within it. Through that catchment action plan we have identified and acknowledge that extractive industries developments have the capacity to drive this catchment over some of our identified thresholds, in particular, relating to issues such as biodiversity, native vegetation and the like, surface water and groundwater and soil health. We also can see how potentially extractive industries can lead to real shifts in the social fabric of the catchment as well as in terms of creating potentially dual economies or impacts on social cohesion and wellbeing.

We also acknowledge in that catchment action plan that positives may flow from the industry. These are most likely to be socioeconomic in terms of increased per capita income or infrastructure and the like, whereas those negative impacts are more likely to be crossing those biophysical thresholds. The Namoi CMA on the basis of these acknowledged concerns about the impact potentially of extractive industries has developed an extractive industries policy which fundamentally is based on the precautionary principle. This was supplied as part of our written submission. In that policy, again we effectively recognise the catchment as being the right scale to be looking at these types of industries and how they are developed and we acknowledge that on the one hand extractive industries such as coal seam gas compete for resources and have a range of negative impacts whilst they also have a range of benefits, particularly for the life of that extractive industry.

Given the challenge of managing and balancing these impacts, we feel the coal seam gas industry needs some really clear guidance on minimising the potential adverse environmental impacts, applying best management practice and maximising the socioeconomic benefits where coal seam gas development is considered to be appropriate and goes ahead. I must point out that whilst we are catchment managers and we put together catchment action plans, we are not one of those determining or consenting authorities. We do not play that role. Our role, we feel, is to inform and support the best possible decision-making for this catchment. We essentially oppose new approvals for extractive industries such as coal seam gas in the absence of a rigorous risk assessment, particularly of cumulative impacts, because we can see how that is one of the critical challenges around these industries and in particular looking at the four key areas of land, water, biodiversity and the community. We also further state in that policy that baseline data is important to manage going forward and we support the 10 International Council of Mining and Metals principals, which are in that policy.

The issue I did want to flag in particular which relates to the report that has just been tabled is the cumulative risk assessment work we have been undertaking. Given that particular concerns have been raised about cumulative impacts in relation to the expansion of extractive industries in the Namoi catchment, we have commissioned a peer-reviewed scoping study entitled "Proposed framework for assessing the cumulative risk of mining on natural resources assets in the Namoi catchment". I will not go into that in great detail but essentially it presents a framework for quantifying the unmitigated risk of whatever scenarios you choose to test on nine biophysical assets in the Namoi catchment, the idea being that we use the best available science and up-to-date social data and modelling. The Namoi Water Study, for example, would be one of the layers that would underpin this tool.

The framework is consistent with the Australian standard for risk assessment based on those four broad steps of establishing the context, identifying the risk, analysing the risk and evaluating the risk. The idea is that it is spatially represented and you could run and rerun different scenarios. So if you have three open cuts, four coal seam gases and one longwall, or whatever it is you choose to test, you could run that scenario based on all these underpinning layers that describe the natural resources assets of the catchment and the associated risks with a range of types and sizes of mining or extractive industry developments. The output of that would be a statement of cumulative risk for each scenario that one chooses to test as well as for each individual development and an associated map. So it is taking advantage of all the spatial data, modelling and technology that nowadays we can use. This report was produced in mid-September and has been tabled today and is available publicly on our website.

Finally, in conclusion, the Namoi CMA would urge that the Namoi Catchment Action Plan and its targets be considered carefully in any strategic regional land use planning process and that the cumulative risk work can be a very useful tool to inform that sort of strategic land use planning. Just making a call, for example, between agriculture and mining alone, whether it is coal seam gas or another, will not cut it. It does not take into account the complexity of the catchment and the systems that are underpinning both of those industries. Decisions about extractive industries and coal seam gas need to be made on the basis of a thorough understanding of the catchment in which that activity is proposed. So we see this cumulative risk approach as being a much more equitable and sensible approach using a full range of scientific information across all the natural resource assets in the catchment. As I have indicated, the catchment action plan and associated assessments and the cumulative risk work is all available publicly on the Namoi CMA website.

CHAIR: Thank you for tabling that document. I am sure it will provide a great deal of information that otherwise we would not have been able to obtain. Does the Namoi Catchment Management Authority have any regulatory functions or compliance functions?

Dr ANDREONI: We have no compliance functions as such. We have a regulatory function in association with the native vegetation Act. That is the only piece of legislation that we have a role in directly administering. That is in the guise of developing up property vegetation plans and giving clearing approvals.

CHAIR: It is unfortunate it was not done 12 months ago. You could have handed it to the Murray-Darling Basin Authority, which could have used it to assess the relativities between agriculture and the environment. Previous speakers, I believe from local government, have expressed a view that because of the spatial distribution of extractive industries such as coal seam gas rather than a mine here and a mine there, the requirements for field assessors, compliance officers and so on were probably well beyond the current structure that the State Government has in place. Let us say coal seam gas goes ahead and, therefore, we need to assess any impacts. How best would you do that work? Do you think it should be done on a catchment-by-catchment basis? Do you think the State Government should undertake an expansion of technical assessment roles and

apply it statewide? What sort of approach would the Namoi Catchment Management Authority take, if that was your problem?

Dr ANDREONI: If it was my problem to solve, so hypothetically speaking, there are a couple of important resourcing issues around this. Firstly, you need to be undertaking good and thorough assessments at the front end of developing a resource region. We know that requires resources.

CHAIR: Baseline studies?

Dr ANDREONI: Baseline studies. For example, the Namoi CMA to date has invested something like \$4 million to \$5 million in mapping and baseline data around the natural resource assets of the catchment. So the investment in terms of information needs to be good and it needs to be done in a targeted fashion.

CHAIR: As a point of clarification, do you have any permanent monitoring facilities around your catchment for water, be it surface water or groundwater?

Dr ANDREONI: We have some role in surface water, but we are one of many players and it is other agencies that do a lot of that. Certainly, wherever we are investing collaboratively on the ground with landholders or industry groups, obviously there is monitoring associated around that. So we also do monitoring and evaluation at various scales and levels, but we certainly would not be the main player in monitoring water, for example. We need to get the regulatory frameworks right and in doing so that also means that you need to be resourcing the various entities and authorities that have a role to play in assessing and approving and then following up with monitoring and compliance. I would hope, given the importance of the sorts of regions we are talking about, that State, Federal and local governments, all levels of government, can potentially play a part in that.

CHAIR: How large is the area for which the Namoi Catchment Management Authority is responsible?

Dr ANDREONI: Off the top of my head I cannot remember how many thousands of square hectares it is. Essentially, it goes from Walcha in the north-east right across through to Walgett in the west, including all of the Pilliga.

The Hon. JEREMY BUCKINGHAM: It is 1.5 million hectares.

Dr ANDREONI: That is right. The whole centre of the catchment essentially is under exploration licence, coal seam gas and other mining interests.

The Hon. PETER PRIMROSE: We have been told consistently about coal seam gas that the drilling is done, metal casing is then put down, concrete, metal casing and never the aquifers shall meet. I then look at pages 30 and 33, which are diagrams—I am happy to give you a copy to remind you—that relate particularly to groundwater depressurisation and drawdown. The document expresses concern that mixing of groundwater may also impact individual bore holders to the extent that surface water contamination takes place. A number of references appear to present that as the water is taken up by the coal seam gas depressurisation process there will in fact be a natural mixing of the water table from various aquifers. Can you address that?

Dr ANDREONI: Essentially, with each type of mining activity, with coal seam gas in particular, there are some primary and secondary risks that have been identified. The primary risks are exactly as you have noted. One is to do with depressurisation or certainly impacting on the aquifer in that way and the other is to do with potential contamination. The other primary impact that we note in the report is to do with clearing. The secondary impacts around those two are, on the one hand, depressurising or contaminating the aquifer or, for example, loss of habitat for threatened species or whatever it may be. They are the two key risks that at this stage with this work have been identified in relation to coal seam gas as a type of extractive industry.

The Hon. PETER PRIMROSE: To clarify for myself, my impression is that drilling, casing goes down, and the intermixing occurs, we have been told, if there is a problem with the casing. What you are presenting in these illustrations and the references is that the casing, in fact, could be perfect; it is the extraction of the water that will affect the surrounding hydrology of the area and could cause the mixing of the aquifers?

Dr ANDREONI: Yes. Potentially, that is right, I guess in relation to the first part of your point that one puts down a casing and there is concrete as well, et cetera. It was interesting at a forum on Monday here in

Narrabri to do with mining and agriculture that some landholders were commenting on their own bores that were 30 years old now and there had been some issue or problem with the casing or whatever. I am not an expert in the technology to do with coal seam gas but, clearly, that is a risk with that piece of infrastructure that you are putting into the ground. It is one aspect that needs to be considered.

The Hon. RICK COLLESS: The issue Mr Primrose is getting it is that there is a drawdown through the aquitard material on top of the coal seam. As he said, if the casing was perfect and there was no leakage along it, the only way that water can get down into the coal is by going through the overlying strata, is that correct?

Dr ANDREONI: Yes.

The Hon. RICK COLLESS: What information do we have regarding the hydraulic conductivity of those aquitards above the coal? If they are impermeable, it may well take millions of years for that water to seep through into the coal seam. That will not have any impact on the aquifers at a higher level because it simply will not be able to move down through that aquitard, is that correct?

Dr ANDREONI: Yes, and I preface my answer by saying again that I am not an expert hydrologist by any means. It is an interesting, challenging nuanced area of study. My understanding is that, essentially, the coal seam gas is tapping into much lower strata and that a lot of the water bodies being used by other industries are sitting above that. However, the geology and the hydrology of the Namoi catchment is complex. Whilst it is one of the better studied catchments in Australia, there are still some real challenges in understanding the relationships between aquifers, how the groundwater is interacting and also the interactions between surface and groundwater, which are quite complex.

The Hon. RICK COLLESS: How can we get that information?

Dr ANDREONI: The idea of the Namoi Water Study, which lands in March, is that it will give us 3D modelling of the aquifers and the groundwater across the catchment. That is why we see that as a really important piece of information to inform the sorts of decisions we might be making around coal seam gas. Ideally, we want to have as good a handle as possible on some of the relationships between aquifers and aquitards and where there are restriction points in the catchment et cetera. Some parts of the catchment are already well studied, but it is by no means as comprehensive as we would like.

The Hon. GREG DONNELLY: Thank you for your detailed report. My question goes to a phrase used by various witnesses about baseline information being so important in helping to come to a considered or qualified decision about whether to proceed with coal seam gas mining. Could you explain the notion of baseline information and the categories that might apply as, presumably, we are talking about baseline information in a range of areas? By definition, does baseline information really require an elapse of time, in fact, a reasonable period of time to actually enable a data set to be created to give some confidence that you have some solid information?

Dr ANDREONI: Yes, certainly. Baseline information is critical not just when you are assessing or deciding what to do. More importantly, once you have decided to proceed with a particular activity and you have run your analysis and you expect that the system will react in particular ways and that you can mitigate particular risks or issues using particular strategies or actions, it is then monitoring going forward through time that will tell you whether things are proceeding as you expect them to and will allow you to adaptively manage that situation. Without establishing a baseline, you cannot then tell what has changed or not and thus what might be driving that change. If we say, for example, that we need to protect the groundwater quality, for example, the Namoi Catchment Action Plan has thresholds around groundwater quality that we do not want it to drop into the lower categories.

You would need to have a good handle on the current groundwater quality and be monitoring that over time to track for any changes that you were expecting or, indeed, hoping not to see. The time frame for monitoring and seeing changes will vary, depending on what sort of asset you are looking at or talking about. For example, for some groundwater systems the lag times can be very long. Again, one of the challenges is to be as strategic as you can in identifying even, for example, lead indicators, things that start changing before the critical change you are tracking may occur. So, it is almost an advance warning. That issue of baseline data really is important so that you can have informed debate and discussion about what impacts are or are not occurring.

The Hon. JEREMY BUCKINGHAM: You said that the catchment management authority already had spent \$4.5 million or thereabouts in NRM. It has a significant amount of data. You would be aware that the State Government is developing strategic land use policies for the upper Hunter, New England and the north-west?

Dr ANDREONI: Yes.

The Hon. JEREMY BUCKINGHAM: You say in your submission that the Namoi Catchment Management Authority already has developed an extractive industries policy and also the Namoi Catchment Action Plan. You say further that these policies should be integrated into the New South Wales planning framework, including the yet to be developed New South Wales Government's strategic land use policy. I accept that it should be. The question is, is it being integrated? What level of consultation is the CMA having with the Department of Planning and Infrastructure? Is the department taking it on board? What has been the level of engagement? What has been the process? Are you confident that what the CMA has worked on over years is going to appear and be reflected in the new policy? Would you elaborate on that?

Dr ANDREONI: We have been one of a range of stakeholders that have been involved in several levels on committees, technical panels and the like. We have worked very hard to try to ensure that the best available data as a first point is being used with all the regional information, the catchment scale information that we have and the catchment planning and assessment that we have undertaken to date. We certainly have presented several times through that process over the course of the year on our key priorities and issues from a catchment scale and how they might relate to strategic regional land use plans.

We have also presented specifically on the cumulative risk assessment approach because we see that as a really useful tool in informing strategic regional land use plans. Certainly, we are being listened to as one of a range of voices in that debate. We are not yet entirely sure of the outcome of that whole process. What has caused some concern at some points was the narrowing of the debate into a sort of two-sided argument between agriculture on the one hand and mining on the other. We see that strategic regional land use planning, if it is to be effective, as about much more than just those two industries. That relates to the point I made earlier about needing to sustain the entire system that underpins both of those industries.

At various points there has been some concern that it has been drifting into just this two-sided approach. We have advocated quite strongly to broaden that by looking at the catchment, looking at the social and ecological systems within catchments and using the very best data to inform our decision-making. That old-school style of just drawing lines on maps based on where agriculture wants to be and where mining wants to be will not cut it. It is not taking advantage of the best data, modelling and technology that we have. There are all sorts of perverse impacts that occur depending on what side of the line you end up on. They are the kinds of discussions and debates we have been having. Certainly at this stage I cannot predict what the final policy will look like.

The Hon. JEREMY BUCKINGHAM: Are you receiving drafts? You have presented and it has been taken away, is there a process of engagement with the Department of Planning and Infrastructure or is it just a matter of you making a presentation? Is the department consulting with you on a draft?

Dr ANDREONI: Yes. I have not seen any particular drafts written up as such. I have seen some components of what is being considered. For example, there was a presentation on Monday from the New South Wales Office of Water on the aquifer interference issues. It is still very much in play, is where it is at.

The Hon. SCOT MacDONALD: Can I take you back to your opening statement and you talked about tipping points. I think you referred to them as biophysical tipping points. Mining, according to the study, occupies less than 0.1 per cent of the catchment at present. What is the tipping point: Is it 0.02 or 0.5, or 1 per cent? I am not trying to be clever but we are looking at scales here. We looked at the Pilliga the other day and I think the figure was 1.8 or something like that. It is not to denigrate the cumulative impact, but how do you arrive at a tipping point with figures that are almost immeasurable?

Dr ANDREONI: The issue about thresholds and tipping points relates to the other end of the picture. It is not about how much mining you have before you cross a threshold. It is about given what we understand about the social and ecological system of the catchment, and we identified some critical assets that underpin that whole system and keeps it functioning, and they are things like surface water flow, vegetation, ground water,

ground cover, et cetera. That, quite apart from which industry it may or may not be, or which sort of development it may or may not be, what we have identified through our studies is that ideally we want to be retaining, for example, 66 per cent of the natural flow in the rivers. What we know is we want to maintain as a bare minimum 70 per cent ground cover across the catchment. What we know is in any subregion we do not want to drop below 30 per cent extent remaining of what was the original tree cover. In the more intact regions where you have a lot of remnant vegetation remaining there is a 70 per cent threshold you do not want to be under.

The tipping points and thresholds relate more to the key assets in the system. Whatever sort of development it might be, whether a coal seam gas footprint, other extractive industries or other industries altogether. What we are saying is those industries need to take into account where they will be taking us up to or over those thresholds. We are looking at the unmitigated risk through this cumulative risk work. There is obviously a whole other level of work where there are mitigation activities that can be undertaken. That is where that idea of tipping points and thresholds sits in relation to coal seam gas.

The Hon. Dr PETER PHELPS: Has the CMA done any base line surveys itself of pressure and quality for existing bores in the catchment area?

Dr ANDREONI: That work is done largely through the Office of Water and a network of bores, some specifically for monitoring and some for extraction. That is not something we are directly involved in.

The Hon. Dr PETER PHELPS: There would be base line data for existing alluvial bores?

Dr ANDREONI: Some, yes.

The Hon. Dr PETER PHELPS: Some or lots?

Dr ANDREONI: You would need to talk to the Office of Water about their network of monitoring bores, I would be talking out of turn to say anything.

CHAIR: That was a really excellent presentation. Thank you very much. You were able to answer every question just like that which gives us the greatest amount of information. Thank you for tabling this extensive document. I am sure if the Committee has any questions regarding the document the secretariat will contact you for clarification.

(The witness withdrew)

ANTHONY JOHN PICKARD, Farmer, sworn and examined:

CHAIR: Before we proceed to questions from the Committee would you like to make an opening statement?

Mr PICKARD: Mr Chairman, committee members, let me try to describe to this Committee what it is like to be someone who has the strength of character to stand up and ask questions of a process and an industry that admits that there are cowboys in the ranks, in an area where the Nimby spirit is alive and well, and most local, State and Federal politicians just do not want to come and see the environmental damage in the Pilliga State Forest.

Narrabri Shire is a great place to live, just do not stand between those who want power and wealth and the supposed source. In Eastern Star Gas's submission they make a big thing of not going on private lands for a number of years and they say this will enable the landholders to see for themselves the low impact of the project. As you are aware from my submission, number 177, I am living next door to the production well pilot Dewhurst 8 and within a 20 kilometre radius of almost the entire Eastern Star Gas operation. The owner of the land where Dewhurst 8 is located and I were friends once, now it is a strain to be civil. The traffic, dust, road noise from at least four to 20 movements of heavy, medium and light vehicles per day, six to seven days per week, is nerve-wracking and dangerous at times and especially on the narrow dirt road.

As a recent example; on Friday 4 November, the dust generated by a water tanker returning to Dewhurst 8 to collect another load of coal seam gas water to take to the Bibblewindi complex, generated such a cloud of dust that 50 kilometres per hour was all that was safe, but this truck stopped in the middle of the road and as the dust obscured his movement we almost ran into the back of him. The point here is that dust suppression of the road should have been carried out as Eastern Star Gas as it says it will, but again the tanker that does the suppression was carrying the highly saline water for Eastern Star Gas, so no dust suppression—so much for public relations or honouring the REF or given commitments.

We have found it impossible of late to obtain a valuation of our land, yet in September 2009 we got a valuation on another property seven kilometres away within 24-hours. So what has changed in that time? Eastern Star Gas has started drilling exploration and pilot production wells and facilitates in our immediate area. So how will this affect our land values and the ability to negotiate a fair settlement in the future and hence our retirement quality will be affected. And do not forget the stress and mental effects that these types of unknowns have on people and relationships. My land is not prime agricultural, however it is in the area known as the southern recharge of the Great Artesian Basin and does produce good quality wool. With the set-up we have, small paddock cells, it is just not conducive to cohabitation with coal seam gas mining.

I hold very grave fears for the water in the greatest aquifer of them all the GAB, which is also the aquifer that I take my water from and we now find that the rock stratum that separates the GAB from the blackjacks formation coal seam are classed as minor aquifers. Previously Eastern Star Gas claimed it was an aquitard. The Namoi water study table 7-11 states differently. Hence water can pass through and because of this the sealing off of the second casing at the napperby and deriah formations is useless for complete water interchange prevention as explained by the gas companies. Because of this minor aquifer situation to remove the water pressure on coal side will surely cause the water to flow from the GAB to the coal seam below, in much the same way as the operation of reverse osmoses functions, pushing water through a fine membrane under pressure. We really must get the true facts for this water study, not the misleading and well out of date data that is currently being used. To that end I suggest that the study halted at least west of Narrabri until the proven true and verifiable information made available.

I can show you that the best water they found for TBS was 230 and the best water they found for sodium was 40 odd. In the study commissioned by the Namoi catchment area a few years ago they did a water analysis study of a few properties here. We had our results back at 22 sodium and 85 total dissolved solids. Eastern Star Gas's information came from the Namoi alluvium which is nowhere near their operation, yet they have bores in that area. You were speaking to one of the gentlemen who has had a bore put down by Eastern Star Gas. They should have analysed his and they should have analysed their own at Bibblewindi. The analysis differs to the analysis they have given in 2006 for the water treatment at Bibblewindi—also attached in previous submissions.

I have witnessed many events of wilful environmental pollution, some of it with government departmental sanction, but much without that sanction, and this is what is annoying, when this unsanctioned environmental pollution is brought to the attention of the authorities nothing is done, or I and others get the blame for it. These events include, but are not limited to: unlined drill ponds, overflowing drill ponds, coal seam water spilt over the drill sites, so much that parts of the pads turned white with salt—I sampled the deposits—drill pond decommissioning where salt and chemical laden material is simply buried in a hole after the removal of the waterproof liner, outside vent valves left open spewing water and gas and then, when caught, they opened the vent valves inside the pad area and vented it into 1000 litre plastic tanks, 17 kilometre diesel spills, grey drilling fluids leaking out on the local roads and Newell Highway—this is but just a sample list—my submission contains a more detailed one. The DPI Maitland has a more comprehensive list.

On the table beside me is a sample of drilling fluid and coal seam water taken from the overflowing pipe at Dewhurst 6C in 2009. As you can see there is a grey sludge at the bottom. That is the drill chemicals. Roughly a fifth or sixth of it is drilling chemicals. If Eastern Star Gas used only 15 tonnes of chemicals per well hole and Eastern Star Gas has drilled say 100 wells, then that equates to 1,500 tonnes of this grey toxic sludge. Where is it? And by the way the stated amounts of chemicals used is on the low side, because at one core hole—that was Culgoora 2 where the flooding event occurred—it was established that there was 17 tonnes of potassium chloride, 10 tonnes of sodium chloride and 20 by 20-litre containers of a drilling fluids. They are photographed and they are in submission 177.

I have a bore on my place that the office of water used to measure the water depth. It is located one kilometre from the Dewhurst 8 complex and is registered with the number GW003587. Yet since 2009 that bore has not been read and it has fallen off the official records, when I checked last, according to Office of Water Tamworth.

I have been requesting of Eastern Star Gas a consultation on a regular basis since the DPI organized one in August 2009. Eastern Star Gas called it off after 5 minutes. I have even sent in questions in writing as requested by Eastern Star Gas and Eastern Star Gas has never responded or even consulted with me about anything—especially the situations at Dewhurst 8, along with the Bohena and Bibblewindi well series and the water treatment works at Bibblewindi and Wilga Park, and the road usage. Why? When eventually Narrabri Council got totally fed up with none or selective consultation they pushed Eastern Star Gas for a community consultation. It took Eastern Star Gas almost 12 months to do something. However, Council found that it was not of an approved standard and to date has not been a party—so much for good public relations in public places.

I will not take up much more of your time as each of you has undoubtedly read and watched the entire 4.8 gigabyte presentation and you are aware of the many problems and pressures that surround those who question this industry. That brings me to the matter of my supplementary submission. It is intended to show in part to you that no matter who the company is there is always a tendency to mislead in some way. Some do it in a small way and some do it in a big way. We have only just started to open the box.

Mr Grant King of Origin Energy quoted Alexis de Tocqueville's maxim: "It is easier to believe a simple lie than a complex truth". I believe that by providing you with all the evidence and attachments I have given you the complex truth. I will table this document and also table my supplementary submission in CD form.

The Hon. PETER PRIMROSE: Have you had an analysis done of the sample?

Mr PICKARD: No, we have not.

The Hon. GREG DONNELLY: Thank you for your two submissions and testimony this afternoon. I will ask my question in general terms. There are obviously competing industries, one with the desire to exploit a resource under the ground versus those wishing, for a single reason or a range of reasons, for that to not proceed. Do you see any way of reconciling those competing positions or is it your position that they are mutually exclusive, that there is no middle ground and that there is no way of reaching the point of intersection where this can proceed in a safe way in some circumstances? Are they in a mutually exclusive position?

Mr PICKARD: No. In my submission I put my position on mining. I am not opposed to mining but mining must be done with respect to the environment, the local people and the laws of the land. If they can do that they can mine. It is simple; that is it.

The Hon. GREG DONNELLY: How are those criteria met? There is no simple formula for meeting those three criteria you have just laid out.

Mr PICKARD: Consultation, talking to people, that is a simple one. You talk to people, you do not take the attitude like most of these gas companies of "stick it in your ear and I will do what I like". Eastern Star Gas takes that attitude. Regarding the laws of the land, you do not pollute the environment, you do not make deliberate spills and you do not drop the stuff at Molly Creek. You make sure you have safety officers on site. At a couple of places Eastern Star did not have a safety officer. You make sure your security systems are ready.

The Hon. GREG DONNELLY: It is a question of regulation?

Mr PICKARD: Yes, regulation and you obey the laws of the land. If the exploration licence tells you that you have to pay for your road damage, you pay for the bloody road damage. If the council estimates \$450,000, you pay \$450,000, you do not pay \$125,000 roughly two years later. Then you make sure the council spends that money where it is supposed to and not pocket \$26,000. They have responsibilities within their licences which they have to abide by. The third part, respect for the environment, that is an easy one. You have not seen it yet because you did not get on the ground to see it. Mr Buckingham has seen it. I am talking about the massive environmental damage caused by the early operation of Eastern Star Gas at the Bohena sites and the Pilliga State Forest.

Eastern Star Gas claim they never caused it. How come they went to one site, Bohena 2, they pulled one well up entirely and pulled the water pump out of the other one? And now they are working on Bohena 4L and are about to move to Bohena 7. They are all their wells. I will go on further and say why the hell did they have unlined drill ponds at Bibblewindi 22 and 16? Why is there a massive tree kill out the back of Dewhurst 5 all from pumped-out water? What is going to happen to the environment when eventually this salt and these drilling chemicals in large quantities leach out of the bottom of the ponds where they have been put back in after the removal of the liner? That is responsibility for the environment.

I could go on further if you want me to. It is a simple one. They could have done that. Why are they venting straight into the atmosphere from Bohena 26H? They are flaring at the Bibblewindi treatment works but they are venting straight into the atmosphere. Why did they dump the gas direct from the automatic venting valves on Bibblewindi 24 and 25 into plastic containers, after Mr Buckingham pointed out to Mr Hartcher there were little bubbles coming out of a pipe out in the middle of the bush? Earlier on that month I had a councillor out there and the bloody valve was almost full open and it was squirting up. We did not open the damn thing up; Eastern Star Gas did. We did not turn the blessed thing into plastic containers in the middle of their well sites; Eastern Star Gas did. That is environmental damage. That is what I am saying; it is simple things.

The Hon. JEREMY BUCKINGHAM: Mr Pickard, are you an environmentalist?

Mr PICKARD: No.

The Hon. JEREMY BUCKINGHAM: Before you became aware of Eastern Star Gas, were you a card-carrying member of The Greens, an eco-activist? What caused you to get involved in the whole issue of coal seam gas?

Mr PICKARD: In 2008 Eastern Star Gas erected a mining camp on private property without putting in a development application. They are basically flaunting the local rules and regulations. From that day on I started to watch the company and watch what they did and it is not hard to pick them up. No, I am not an environmentalist. I am a bloody farmer, excuse me. I have a biodiversity area on my property of 200 hectares, only because I cannot clear it because of the native vegetation Act and the CMA was kind to give me a biodiversity area. But I am not a member of The Greens. In fact I will tell you something, I used to be National Party and my father, William Jasper, stood for the then safe Labor seat of Parramatta in 1958 or 1959. I can remember going to street corners and my father being heckled. Up until this last election I am 100 per cent National. I am now a swinger, excuse the expression.

The Hon. JEREMY BUCKINGHAM: That is on the record now; there is nothing you can do about it.

The Hon. RICK COLLESS: Mr Pickard, in relation to the sludge bottle you have there, the way I interpreted what you said was that the material settled out of it and that is the reason there was a difference in the water level.

Mr PICKARD: It was originally this level here. Do not forget, I have had it since 2009. It is hot up here in the sheds and the water level has evaporated down to that level there.

The Hon. RICK COLLESS: How long have you been on your property?

Mr PICKARD: Where we are now since 2005 but the previous property since 2000.

The Hon. RICK COLLESS: You mentioned you have a bore on your property that has not been monitored.

Mr PICKARD: That is correct, yes.

The Hon. RICK COLLESS: Is that bore still functional?

Mr PICKARD: No, they will not monitor it as a functioning bore. It is not an equipped bore. It is still functional and it is still there. You could put a pump down if you want to. But one of the criteria from the Office of Water was that we did not use the bore because if we used the bore we would draw the aquifer system down, therefore they could not get a regular static level of water.

The Hon. RICK COLLESS: You do not use the bore now?

Mr PICKARD: No, we have never used the bore.

The Hon. RICK COLLESS: Why would they not want to continue to monitor it?

Mr PICKARD: You tell me and we will both know. It has dropped off the official records. I have talked to the Department of Water, the senior hydrologist. He cannot even find it on their records.

The Hon. RICK COLLESS: Is it a registered bore?

Mr PICKARD: Yes, it was put down in 1938 by the Government.

The Hon. RICK COLLESS: Do you have any other bores on your property?

Mr PICKARD: Yes, I do.

The Hon. RICK COLLESS: When were they put in?

Mr PICKARD: One was put in—it was equipped last year—about 2008, 2009, somewhere around that figure. That was the last bore. The previous bore to that was put in at the house by owners somewhere around the mid-1950s.

The Hon. RICK COLLESS: The recent one is still functional?

Mr PICKARD: The recent one I put in was put in because the bore that it replaced we could not get any water out of it. We had a fracking event down at Bibblewindi and a couple of bores in the area stopped producing in large quantities.

The Hon. RICK COLLESS: What caused that?

Mr PICKARD: The fracking, an earthquake, earth movement. My sheep and dogs went beresque when it happened. We were not the only people affected. The person next door was also affected. He got a bore out of Eastern Star Gas. Eastern Star Gas does not want to do anything with us.

The Hon. RICK COLLESS: I am a bit confused. The fracking event happened at Bibblewindi—

Mr PICKARD: In 2006.

The Hon. RICK COLLESS: How many kilometres distance?

Mr PICKARD: Approximately 11 kilometres distance.

The Hon. RICK COLLESS: What depth was that fracking operation?

Mr PICKARD: That would be at the full depth of the Bibblewindi wells at that stage. It is around 1,100 metres, somewhere around that figure.

The Hon. RICK COLLESS: Your bore that was interrupted by that event—

Mr PICKARD: It was around the 72-metre mark.

The Hon. RICK COLLESS: When was that bore put in?

Mr PICKARD: In the 1950s. It was solid. Eastern Star Gas claimed it collapsed. My wife and I pulled the old pump out with the aid of a 13-horse power tractor, a 44 gallon drum and the old rural poly pipe, not the new beaut stuff. It was still full of water.

The Hon. RICK COLLESS: What sort of casing did it have in it?

Mr PICKARD: Plastic top and it was steel lined all the way from about the 10-metre mark.

The Hon. RICK COLLESS: Where was the fracture? Where was the damage done to it?

Mr PICKARD: It was not.

The Hon. RICK COLLESS: You said it was damaged by the fracking process.

Mr PICKARD: What happened, it actually collapsed the aquifers, the gravel pack. The shaking of the ground collapsed the gravel pack and it slid down and blocked the water flow.

The Hon. RICK COLLESS: How did you get that information? Who gave you that information?

Mr PICKARD: The Department of Water in Narrabri. It was from the description I gave them. They asked me how did I know. I explained about the sheep going berserk and the dogs barking like crazy. He said, "Did anything else happen?" and I said, "Yes, our water stunk of hydrogen sulphide for two blessed days."

The Hon. RICK COLLESS: The Department of Water Resources person in Narrabri—

Mr PICKARD: Peter Kewell in Narrabri.

The Hon. RICK COLLESS: Are you the manager of a website called Save Our Recharge Environment?

Mr PICKARD: Yes, I am. I am the owner of it, the sole person.

The Hon. RICK COLLESS: Are the images on the website images you have taken personally?

Mr PICKARD: That is correct.

The Hon. RICK COLLESS: There is one under the heading "Fair water use Australia".

Mr PICKARD: Is that the one where the water is going through the bush after a rain event?

The Hon. RICK COLLESS: It says underneath "contaminated effluent escaping into the east Pilliga State Forest".

Mr PICKARD: That is correct, that is from Dewhurst 8 complex Christmas time around about 31 December 2009.

The Hon. RICK COLLESS: That pond shows that it is full and overflowing?

Mr PICKARD: That is correct.

The Hon. RICK COLLESS: Obviously, it is stormwater that is running out of it?

Mr PICKARD: Yes.

The Hon. RICK COLLESS: What was in the pond prior to the storm event and how much?

Mr PICKARD: It was chock-a-block full. The reason it flowed out is that Eastern Star Gas did not construct the site properly as it is supposed to and put a gutter around it on the high side. It does not show you in the photograph, but it is at the bottom of a hill. If Eastern Star Gas had put a gutter around the hole the water would not have entered. It did not enter only that one; it also entered the one next door and the one on top of the ridge.

The Hon. RICK COLLESS: Was it full of this fluid or stormwater?

Mr PICKARD: It was full of this fluid before the event, reasonably full.

The Hon. RICK COLLESS: Had there been rain before that particular day?

Mr PICKARD: No. It started Christmas Day that year.

The Hon. RICK COLLESS: It had been dry up until that point?

Mr PICKARD: It had been basically dry until that time.

The Hon. RICK COLLESS: It is my information that that pond in fact had only a few inches of that remaining fluid in the bottom of it prior to the rain event and that it filled with stormwater and then overflowed. Are you saying that is incorrect?

Mr PICKARD: That is totally incorrect. That is the usual Eastern Star Gas explanation—the same as Dewhurst 6. If you want, I can show you the whole series of photographs of Dewhurst 6 and tender all the rest of them that show that the actual levels in there are quite high.

The Hon. RICK COLLESS: Did you say that that pond in that image is on Dewhurst 8?

Mr PICKARD: Dewhurst 8, yes. I think the site is around about 17, something like that.

The Hon. RICK COLLESS: On whose property is that?

Mr PICKARD: You spoke to the gentleman yesterday: Mr Owen Lane.

The Hon. RICK COLLESS: When you went in to take that photo—

Mr PICKARD: He gave me permission to go in there.

The Hon. RICK COLLESS: —did you have permission from Mr Lane?

Mr PICKARD: That is correct because I just helped him that morning get his excavator out of the dam at his place because he was away over Christmas and he left his excavator in the bloody dam and he asked me to look after the property and that entitled me to drive on. At the time it had poor boundary fences.

The Hon. RICK COLLESS: I put it to you that you did not have authority to go and take that photo. That is the information I received. How do you respond to that?

Mr PICKARD: I challenge that sincerely because I have not entered his property since those dates.

The Hon. Dr PETER PHELPS: What is the essence of your complaint about the water discharged into Bohena Creek?

Mr PICKARD: The water discharged into Bohena Creek is of a greater value than what is already there. In other words, its TDS and sodium levels are greater than what is already there and greater than what is already in the natural environment around there. Therefore, they are raising the level of sodium, bicarbonates and all the rest of it and also the alkaline content. It is an acid soil area and they are pouring alkaline water. It gives good growth for a while and you end up killing it at the end.

The Hon. Dr PETER PHELPS: Presumably, if we go into production there would be a full reversal osmosis process put in place as well as saline evaporation?

Mr PICKARD: No evaporation ponds anymore. That was pointed out to us last Monday.

The Hon. Dr PETER PHELPS: Assuming there is no evaporation, you still would have high levels of sodium bicarbonate, which would be valuable for the chemical industry?

Mr PICKARD: That is terrific. Let us see them put in an application for it. Then we can knock them back on the mining issue because sodium then falls directly under mining law. That is another problem we have because it becomes a by-product under the Mining Act.

The Hon. SCOT MacDONALD: You made a couple of assertions that you had talked to the mining or environment department.

Mr PICKARD: I got it off their website.

The Hon. SCOT MacDONALD: The suggestion we have often heard from the Chair is that if you see something that is wrong, you need to report that to the authority.

Mr PICKARD: We do. We report it directly to the authority. In fact, you have examples: 26 complaints went off to DPI. So far I have not heard a word back from them.

CHAIR: Over what period of time?

Mr PICKARD: Complaints started last Christmas. The bulk of them occurred within a month of it being sent away in July.

CHAIR: Since then you have not received any reply to your complaints?

Mr PICKARD: The DPI at Maitland has not replied.

CHAIR: Thank you for that.

Mr PICKARD: You have censored his name out.

CHAIR: Thank you very much for providing us with that information. Have you tabled those documents?

Mr PICKARD: Yes.

CHAIR: We appreciate you coming to give evidence.

Mr PICKARD: Thank you very much.

CHAIR: That concludes this session and also the public hearing.

(The witness withdrew)

(The Committee adjourned at 4.35 p.m.)