

**Senate Environment and Communications Legislation Committee**  
Environment Protection and Biodiversity Conservation  
Amendment (Independent Expert Scientific Committee on  
Coal Seam Gas and Large Coal Mining Development) Bill  
2012 [Provisions]

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Submission by Caroon Coal Action Group – April 2012

**Senate Environment and Communications Legislation Committee**  
Parliament House  
Canberra ACT 2600

## **Introduction**

The Carroona Coal Action Group is a volunteer community group comprised of residents of the Carroona district on the Liverpool Plains, as well as members of the wider community. CCAG was formed and incorporated in April 2006 following the grant of a five year coal Exploration Licence (Carroona EL6505) by the New South Wales Minister for Mineral Resources to Coal Mines Australia Limited (CMAL), a wholly owned subsidiary of BHP Billiton. The company paid the NSW Government a sum of \$100 million for the licence. BHP Billiton proposes to continue exploration activities that include drilling over 300 exploration boreholes until 2011 – a period that has now been extended – after which they intend to apply for a mining lease. In November 2008, Shenhua Watermark Coal Pty Ltd was granted an Exploration Licence (Watermark EL7223) over the Watermark Exploration Area for a record \$300 million. The NSW Government has stated that it is considering offering further exploration licenses in the area.

## **Background**

The Carroona EL covers an area of 344 km<sup>2</sup>, while the Watermark EL covers an area of 195 km<sup>2</sup>. Both exploration licences are located on the Liverpool Plains within the Upper Namoi Catchment, approximately 300 kilometres north-northwest of the Port of Newcastle, to which they are linked by rail and road. The Liverpool Plains spreads 12 000 km<sup>2</sup>, with a climate, soils and unique groundwater that make it one of the most fertile and drought-resistant agricultural areas in Australia. Figures from the Australian Bureau of Agricultural Research indicate that the Liverpool Plains produces on average 40 per cent above the national average for cereal cropping.

Water from this region forms part of the headwaters of the Murray-Darling Basin – the Mooki River drains northward to the Namoi River, progressing by way of the Barwon, to the Darling, right to the mouth of the Murray at Goolwa. This is a riverine system stretching approximately 3,330 km. The groundwater aquifers and surface water flows of the Upper Namoi Catchment provide stock, domestic, irrigation and town water supplies for Carroona and neighbouring towns including Quirindi, Gunnedah, Breeza, Curlewis, Spring Ridge, Tambar Springs, Premer and the Walhallow Aboriginal Community. The area of the Upper Namoi Catchment referred to covers an area of 5,621 km<sup>2</sup>.

All the water from this area flows past the Breeza Mountain across a plain that is 8.4 km wide. If the proposed mining developments take place, 20 million tonnes of coal would be extracted annually from the outcrop ridges to the North and South above this floodplain, bringing to the surface heavy metals, salts and other pollutants that would be stored adjacent to this important water resource.

As the driest inhabited continent on earth, with only an estimated 6 per cent of arable land across Australia, the preservation of these productive lands and finite water systems is clearly of national significance.

## **Water security**

As a case study into the deficiencies of a state based regulation CCAG holds broader concerns for the cultural, environmental, and health impacts that may result from mining on the Liverpool Plains, and stresses the desirability of improved governance and regulation standards, our main concern continues to be the potential damage to the region's natural waterways, particularly to the significant and complex underground alluvial aquifers that lie beneath the flood plain.

Since it was announced in 2005 that exploratory drilling was to commence in the area, CCAG has consistently maintained that an independent and comprehensive water study of the area is an essential and sensible prerequisite to such activity. While stakeholders, including the Federal and State Governments and BHP Billiton, have committed to a full study of the Namoi Catchment area, extensive exploratory drilling has already been undertaken – and continues – posing an unacceptable and ongoing potential risk to the water resources of the region. CCAG also considers that current exploratory drilling methods used in the area are inappropriate and pose a danger to the security of these water resources. CCAG has consistently asked that these practices be revised and improved to take into account the delicate nature of the complex aquifer structure in this region. In proceedings before the NSW Mining Wardens Court 2008/57,58,59,60, evidence was presented to the court by a former driller on serious shortcomings in the drilling methods employed by BHP Billiton, however the Mining Warden refused to rule on any of this evidence.

In July 2009, after months of negotiation, the NSW Government appointed Mr Mal Peters as Chair of the Ministerial Oversight Committee to facilitate the full commissioning of a water study of the Namoi Catchment area. It has now reached the end of Stage 3 as at April 2012. We welcome BHP Billiton's commitment to provide some funding for this study, as well as their undertaking to incorporate the findings of the study as part of any environmental assessment undertaken in the future. In 2009 the NSW Minister for Primary Industries Ian Macdonald also announced that BHP Billiton had assented to amendments to the Special Conditions of EL6505, preventing BHP Billiton from applying for a mining lease that includes any of the following in the Caroonia Exploration License Area:

- Long wall mining underneath the deep alluvial irrigation aquifers;
- Long wall mining underneath the floodplain; and
- Open cut mining.

To date Shenhua has made no such commitment they have stated publicly that they intend to conduct open cut mining in the Watermark area.

While the undertakings from BHP–Billiton are very welcome, CCAG remains cautious in accepting their efficacy and scope. CCAG questions whether alternative types of mining other than long wall or open cut are, or may be, available in the future to mine these areas, and queries to what extent these amendments will restrain future mining activities. It has been standard industry practice to apply for variations to the mine approval condition – including environmental constraints – even before mining begins; whereupon many of the environmental conditions are no longer enforced, a Bioregional Assessment and plan would go a long way to resolve this community’s anxiety.

We also emphasise the critical importance of the ridge formations around the flood plain and their contribution to the recharge of the underground aquifer and surficial aquifer. In a report previously supplied to the Government, ‘Deep Drainage and Runoff Estimates for Coal Exploration Leases EL6505 and EL7223’(BANKS) shows, should these areas be mined, water run off to the rivers and aquifers will be greatly impaired and will still be subject to other impacts that are experienced in every mining region around the country. This will undoubtedly have a profound influence on the Upper Namoi Catchment’s contribution to the Murray Darling System–thereby crossing state boundaries and illustrating the need for the involvement of the Commonwealth.

Maintaining and managing the integrity and quality of water resources has been a major project in the Liverpool Plains region. Since large–scale irrigation for agriculture commenced in the 1960s, water policy has evolved significantly at both a state and a federal level.

When, in May 1980, the Minister for Mineral Resources first granted an authorisation to prospect for coal in the Caroonia area, pursuant to the *Coal Mining Act 1973*, water security did not appear on the mainstream environmental or political agenda. Rather, water resources were seemingly abundant and largely unregulated. Widespread and severe drought in the 1980s in particular raised awareness of the issue, prompting concern that the area could not sustain the historical level of water extraction. In 2000, the NSW Government acted by introducing the *Water Management Act 2000*, with the intention to provide for the protection, conservation and ecologically sustainable development of the water resources of the State. This had the effect of reducing the water entitlements of users in Zones 1 – 12 of the Namoi Valley catchment by 62 per cent in order to attain sustainable yields. The Department of Infrastructure Planning and Natural Resources calculated the sustainable yield at 201,443 ML per year.

Such a drastic reduction indicates the concern for water resources that were, quite rightly, held at that time. In stark contrast though, we draw your attention to the

fact that at a state level the NSW *Mining Act 1992* does not recognise the vital importance of water resources and, in fact, does not even mention the word 'water' once anywhere in the legislation. The granting of exploration or mining licenses in the Caroon area without proper regard for these same water resources is wholly inconsistent and irresponsible consequent management, allowing mining companies to explore the resources of the region without a proper understanding of the spatial relationship between coal and water resources.

Access to a reliable source of water is an essential requirement for coal mining, used variously to drill for the coal, to wash the product, to manage dust, and so on. Current reports provide statistics showing that at least 200 litres of water can be consumed for every tonne of coal produced, however this may vary according to operation practice and circumstance, and may be as high as 1000 litres. This represents a huge volume of water that is removed from the Murray Darling Basin, while remaining water may be irretrievably damaged through salinity, subsidence and cross-contamination.

It is apparent that the land within the exploration leases as well as the added strain of the granting of Petroleum Exploration Licenses (PEL) over the same region will have major impacts on both surface and groundwater flows in the region. Significant changes of land use within the areas of an exploration or mining lease could cause highly significant reductions to both surface and groundwater flows, as well as posing a significant risk of damage to the irrigation aquifers themselves and thereby threatening the entire basin system which would have national ramifications.

## **Legislative Change**

To date there has been no State or Federal legislative recognition of the risks that are posed to Agricultural Water resources by extractive industries. Most based State Legislation is overridden by industry regulation or exemption, when addressing harm to water resources. An amendment to the EPBC Act that recognises and regulates potential damage of projects that are likely to have a significant impact on water resources; in large-scale coalmines and CSG projects across state boundaries would be a very welcome progression in the long term protection of Agricultural investment.

As an illustration of the deficiencies of legislation at a state level, the NSW Government has recently proposed Aquifer Interference Regulation (currently on exhibition in NSW). Following consultation with the mining industry the NSW Government have now proposed exempting major projects from this regulation. It is vitally important that the Nations water resources are protected for the long-term viability of regional Australia. The granting exemptions on commercial grounds alone cannot achieve this.

It is an appropriate space for the Commonwealth Government to take the lead on these issues, there can then be a harmonised approval processes, an arms length arbitrator who is far away from the incentives of the State based Mining Royalties.

The Bioregional plan and scientific committee would form part of a new, science-based framework introduced in this amendment to provide more certainty for regional communities around coal seam gas and large coalmining developments, jobs and investment, and the protection of water resources. Under this proposed amendment the minister would have access to independent scientific advice on coal seam gas and large coalmining projects when he or she considers applications for these types of developments. The framework set out in the establishment of this committee would also provide local communities and other stakeholders with accessible and reliable scientific information that would build community confidence in around the assessment processes. This is something that has long been missing in the current process and has lead to much community anger.

It is set out that the bill would formally establish the committee and make it a requirement that the environment minister must seek and take account of the committee's advice in certain specific circumstances. The bill would also establish a number of functions for the committee. The committee would provide scientific advice on proposed coal seam gas or large coalmining developments that are likely to have a significant impact on water resources. This scientific advice will be provided within two months of the date of the request thereby not unduly delaying investment.

Under the proposed legislation the committee would also scope and advise on bioregional assessments in areas where coal seam gas and/or large coalmining developments are underway or planned, including priority areas for these assessments. It would advise on research priorities that address critical gaps in scientific understanding, including in circumstances where further information is required to assist in regulatory decisions. It would provide advice on ways to improve the consistency and comparability of research on coal seam gas and/or large coalmining developments, including possible standards for protecting water resources from these impacts. The independent expert scientific committee is structured to be an open committee that would provide regular public updates of its work on a dedicated website and publish its advice and the outcomes of bioregional assessments and commissioned research.

It is essential that these land-use conflicts across the nation be resolved by proper scientific understanding of the challenges posed by natural resources management issues.

The proposed legislation is welcomed by the CCAG as a means to provide the security essential for Agricultural and Mining Investment and development on a National scale as opposed to the project-by-project assessment that is currently accepted.

The Bioregional plan is a major step in providing industry surety and resolving the land wars that are becoming more and more common in Regional Australia.