Submission
No 325

INQUIRY INTO COAL SEAM GAS

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NATIONAL PARKS ASSOCIATION OF NSW

protecting nature through community action

Submission to the NSW Legislative Council General Purpose Standing Committee No. 5's *Inquiry into Coal Seam Gas*

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1. Introduction

The National Parks Association of NSW (NPA) was formed in 1957 to promote the concept of a network of national parks in NSW under specialist national parks and wildlife legislation and managed by a professional agency. Today NPA continues to build on this work through a network of 18 branches and over 5,000 members and supporters.

NPA has a strong commitment to the protection of Australia's unique natural areas and the biodiversity that depends on them, and welcomes the opportunity to make a submission to this inquiry. We believe that coal seam gas (CSG) exploration and production and associated infrastructure, particularly long-distance pipelines, pose a serious threat to the health, functioning and integrity of important natural areas on Crown land, particularly the Travelling Stock Routes and Reserves (TSR) network and key State Forests. In addition to this, CSG production and infrastructure on Crown lands is likely to have significant negative social and economic impacts in regional areas. We therefore recommend to the Committee that CSG exploration, production and infrastructure development be prohibited on Crown lands.

2. Environmental impacts of CSG activities on Crown lands *(ToR 1d)*

Imminent threat of CSG activities to Crown lands

Coal seam gas activities pose a real and imminent threat to many irreplaceable areas of Crown land. Exploration for coal seam gas has been occurring in the Pilliga State Forest for many years, and a current development proposal by Eastern Star Gas would see the development of a major gas field in the area, primarily within State Forests. The many environmental impacts of this development are discussed below.

The development of the gas field in the Pilliga will also require the construction of long distance pipelines to transport the gas, which are extremely likely to impact on Crown land such as Travelling Stock Routes and Reserves (TSRs), as well as other important natural areas. Pipelines are planned between Narrabri and Wellington (via Coolah), and between Coolah and an export facility in Newcastle. Three of the four proposed routes for the Narrabri to Wellington pipeline use TSRs, with the fourth

proposed route particularly intended to maximise the use of Crown land.[1] There have also been community suggestions to lay this pipeline along the Newell Highway, which bisects the Pilliga Nature Reserve.[2] At a community consultation in Merriwa on August 29, 2011, an Eastern Star Gas representative verbally confirmed that the company is also investigating placing parts of the Coolah to Newcastle pipeline on TSRs, in response to concerns about the effects of pipelines on agricultural land.[3]

Government has also responded to concerns about the impacts of gas pipelines on agricultural land by recommending that pipelines use public land, particularly TSRs. The NSW Liberals and Nationals 2011 Strategic Regional Land Use Policy commits to "promoting the use of Crown land, such as Travelling Stock Routes, for pipeline routes where viable".[4] We believe that this poses a serious threat to these irreplaceable natural areas, particularly if the Eastern Star Gas development sets a precedent for the use of TSRs for pipelines and other infrastructure networks across NSW.

Environmental impacts of CSG activities in State Forests

The proposed development by Eastern Star gas of an extensive gas field within the Pilliga East, Jacks Creek and Bibblewindi State Forest provides a clear example of the environmental impacts that CSG activities are likely to have on iconic natural areas of Crown land. The development would involve the clearance of at least 2,410 ha of native vegetation, in order to construct 550 production well sets as well as infrastructure such as 1,000 km of gas and water pipelines, access tracks, a gas processing and compression plant, a centralised water management facility, offices and workshops.[5]

The Pilliga is the largest remaining temperate woodland in eastern Australia, and is located in a National Biodiversity Hotspot (Brigalow Belt South).[6] It is a refuge for many species, including the endangered Regent Honeyeater (*Xanthomyza phrygia*), the vulnerable Pilliga Mouse (*Pseudomys pilligaensis*) and

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[1] EcoLogical Australia (2011) *Referral of Proposed Action: Eastern Star Gas Narrabri to Wellington Gas Transmission Pipeline April 2011.* http://www.environment.gov.au/cgi-bin/epbc/epbc_ap.pl?name=current_referral_detail&proposal_id=5913. Accessed 5.9.2011

[2] Namoi Valley Independent, "*Anderson's advice on Mullaley pipeline"*, 19.5.2011

[3] T. Finnie, pers. comm., 2.9.2011

[4] NSW Liberals and Nationals (2011) *Strategic Regional Land Use: Triple bottom line assessment to protect our regions*, p. 6

[5] EcoLogical Australia (2011) *Referral of Proposed Action: Narrabri Gas Field Development April 2011.* http://www.environment.gov.au/cgi-bin/epbc/epbc_ap.pl?name=current_referral_detail&proposal_id=5914. Accessed 5.9.2011

[6] DSEWPaC (2009) *Australia's 15 National Biodiversity Hotspots*. http://www.environment.gov.au/biodiversity/hotspots/national-hotspots.html. Accessed 5.9.2011

south-eastern form of the Greater Long-eared Bat (*Nyctophilus timoriensis*), for which the Pilliga is the primary habitat stronghold.[7] These species, along with many other state and federally listed threatened species of flora and fauna, are likely to be severely impacted by the clearing, fragmentation and probable increase in predation resulting from the development. The species and ecosystems of this unique area are also likely to suffer further impacts due to deliberate and accidental discharges of polluted, saline water, impacts of the drilling and extraction processes on groundwater and aquifers, and increased fire risk due to methane leaks from wellheads and pipelines.

Environmental impacts of CSG activities on the Travelling Stock Routes and Reserves network

Threats to vital habitat and remnant ecosystems on TSRs

The TSR network in NSW is an exceptionally valuable environmental asset, due to its unique management history. Because TSRs were retained as public land, they were not cleared for cropping or grazing. In many cases, TSRs now protect the few remaining, uncleared areas of certain vegetation types, such as temperate woodland in the wheat – sheep belt of central NSW. Unlike the National Reserve system, the TSR network was mostly developed on fertile valley floors, following water sources. Therefore, the vegetation and habitats contained in TSRs are, in many cases, the best remnants of woodland ecosystems adapted to fertile soil conditions, and often contain good-quality riparian and wetland ecosystems.

TSRs are vital refuges for declining and threatened species across NSW. Woodland remnants on TSRs are less degraded and support more species of birds and arboreal mammals than those on private land.[8] The mature, hollow-bearing trees found along TSRs have been shown to provide vital habitat, nesting sites and protection for a range of birds, arboreal mammals and bats.[9] Nationally listed endangered ecological communities, such as the critically endangered White Box-Yellow Box-Blakely's Red Gum Woodland and Derived Native Grassland, are found in the TSR network.[10] Some threatened species with

[7] Department of Environment and Conservation NSW (2005) *Greater Long-eared Bat – profile.* Threatened species. Populations and ecological communities of NSW. http://www.threatenedspecies.environment.nsw.gov.au/tsprofile/profile.aspx?id=10568. Accessed 5.9.2011

[8] Lindenmayer D., Cunningham R., Crane M., Montague-Drake R., Michael D. (2010) The importance of temperate woodland in travelling stock reserves for vertebrate biodiversity conservation. *Ecological management and restoration* **11**(1), 27-30.

[9] Gibbons P., Lindenmayer D. (2002) *Tree hollows and wildlife conservation in Australia*. CSIRO Publishing: Victoria, Australia

[10] Oliver L., McLeish T (2007) *Box Gum Woodlands in Travelling Stock Reserves on the NSW South Western Slopes*. Draft report to Department of Environment and Climate Change (NSW).

extremely restricted habitats, such as the critically endangered Golden Sun Moth and the endangered Grassland Earless Dragon have populations within TSRs,[11,12] and other endangered species such as the Regent Honeyeater use the network for food and nesting areas.[13] Woodland in TSRs also provides important habitat for woodland birds, which are currently experiencing a wave of regional extinctions in central NSW, with more than 25% of all native landbird species threatened or declining.[14]

The clearing of TSRs for pipeline construction or, at a later date, for CSG exploration or production, would be an environmental tragedy in many cases. The 40m cleared construction corridor required by the proposed Narrabri – Wellington pipeline[15] would result in the complete destruction of mature remnant vegetation on some of the narrower TSRs. This would have a particularly devastating effect on the birds, bats and arboreal mammals that rely on mature trees with slow-forming tree hollows for habitat and breeding, and would also be a major threat to any threatened species or ecological communities found on and around the affected TSRs. Where TSRs follow watercourses, any CSG exploration or production would pose an unacceptable risk of damaging or contaminating waterways and associated riparian and wetland ecosystems.

Threats to the connectivity conservation value of TSRs

As well as being important as individual areas of remnant vegetation, TSRs also form an extensive network across NSW, which joins with the Stock Route network of Queensland. This continental-scale network of habitat corridors and 'stepping stones' is globally unique and extremely valuable. The links provided by TSRs allow species to disperse between remnant vegetation areas, promoting interbreeding

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[11] Department of Environment and Conservation NSW (2005) 'Golden Sun Moth- Priority Actions', *NSW Threatened Species,* http://www.threatenedspecies.environment.nsw.gov.au/tsprofile/pas_profile.aspx?id=10791. Accessed 14.6.2011

[12] Department of Environment and Conservation NSW (2005) 'Grassland Earless Dragon- Priority Actions', *NSW Threatened Species,* http://www.threatenedspecies.environment.nsw.gov.au/tsprofile/pas_profile.aspx?id=10817. Accessed 14.6.2011

[13] Harris J. 'Northern NSW: Latest News', *Birds Australia* http://www.birdsaustralia.com.au/the-organisation/northern-nsw.html. Accessed 14.6.2011

[14] Reid J. (1999) *Threatened and declining birds in the NSW sheep-wheat belt I: Diagnosis, characteristics and management.* Consultancy report to NSW National Parks and Wildlife Service. CSIRO Wildlife and Ecology: Canberra.

[15] EcoLogical Australia (2011) *Referral of Proposed Action: Eastern Star Gas Narrabri to Wellington Gas Transmission Pipeline April 2011.* http://www.environment.gov.au/cgi-bin/epbc/epbc_ap.pl?name=current_referral_detail&proposal_id=5913. Accessed 5.9.2011

between populations and allowing species to colonise new or abandoned habitats.[16] Ultimately, the TSR network may facilitate movement of animals and plants (over longer time scales) in response to extreme seasonal conditions, changing weather patterns or long-term climate change. The destruction of parts of this network due to CSG activities, therefore, has negative environmental consequences beyond the affected TSRs, by fragmenting and disrupting the connectivity of the network as a whole.

Environmental impacts of CSG activities on the National Parks estate

Coal seam gas exploration and production also poses threats to other lands vested in the Government. In particular, NPA is concerned about the impact of CSG activity on the National Parks estate, which is a cornerstone of biodiversity conservation in NSW. A number of lands with underlying coal seams, which were reserved under the National Parks and Wildlife Act primarily for their natural, cultural and historic values, have been categorized as State Conservation Areas so that their potential for mineral and petroleum resources can be ascertained and may be exploited in the short or long term. A prime example of this is the Pilliga East SCA, an area with significant environmental values that is included along with the Pilliga State Forest in the development proposal by Eastern Star Gas.[17]

It is important that the reasons that such areas have been reserved are acknowledged and provisions made to minimise adverse impacts of CSG activities on their integrity and long term viability, with a view to sustaining and restoring these values once non-renewable resources exploitation has concluded. If the exploration phase, which may also incorporate pilot production, is allowed to progress on these lands, it should be subject to rigorous assessment and appropriate regulation in order to mitigate the adverse impacts.

3. Social and economic impacts of CSG activities on Crown lands *(ToR 2)*

Social and economic importance of TSRs

On July 28th, 2011, the National Parks Association of NSW convened the second NSW Travelling Stock Routes and Reserves Conference. Roughly 100 delegates attended, representing a wide range of interest groups including recreational TSR users, Aboriginal groups, government agencies, farmers, environmental and conservation groups and scientists. It became clear from this conference that TSRs

[16] Reid J. (1999) *op. cit.*

[17] EcoLogical Australia (2011) *Referral of Proposed Action: Narrabri Gas Field Development April 2011.* http://www.environment.gov.au/cgi-bin/epbc/epbc_ap.pl?name=current_referral_detail&proposal_id=5914. Accessed 5.9.2011

are of great cultural, social and economic value to many Australians. A number of major shared concerns were identified in discussion groups on the day, and these indicated that CSG activities on TSRs would have significant social and economic impacts for many user groups. (For full notes arising from the conference and discussion groups, please see NPA's document, 'NSW Travelling Stock Routes and Reserves Conference: Discussion group priorities and proceedings'.[18])

Loss of access

Loss of access to TSRs (and other Crown lands) was identified at the TSR conference in July as a significant issue for many recreational users, such as anglers and field naturalists, and for Aboriginal groups. The construction of CSG-related infrastructure, such as pipelines, on TSRs is likely to cause at least temporary loss of access for a wide range of TSR users, including farmers and drovers, Aboriginal groups and recreational groups. Any CSG exploration or production on TSRs in the future is likely to cause permanent loss of access to those TSRs, and any associated pollution of waterways will impact particularly severely on users like recreational anglers.

For users such as drovers, graziers and apiarists, loss of access to TSRs is likely to lead to a loss of livelihood. For other users, such as Aboriginal groups and various recreational users, loss of access will have social and cultural impacts.

Loss of heritage

Heritage was one of the key focuses of the TSR conference. Scarred trees, middens and artefacts have been found on many TSRs, reflecting their rich Aboriginal heritage. Many TSRs are believed to have been developed along ancient Aboriginal travel lines across the landscape.[19] Clearing of TSRs for CSG activities poses a threat to the tangible and intangible Aboriginal heritage that they protect.

The TSR network is also a key part of the Australian droving heritage, which is an important theme in folklore, song, art and poetry. TSRs, with their remnant vegetation and many uses, are an embodiment

[18] NPA NSW (2011) *NSW Travelling Stock Routes and Reserves Conference, 28th July, 2011. Discussion group priorities and proceedings*. Available from http://www.npansw.org.au/index.php?option=com_content&view=article&id=728:the-2011-nsw-travelling-stock-routes-and-reserves-conference&catid=101:travelling-stock-routes&Itemid=461#Discussion

[19] Spooner P., Firman M., Yalmambirra (2010) Origin of Travelling Stock Routes. 1. Connections to Indigenous traditional pathways. *The Rangeland Journal* **32**, 329-339

of this spirit and heritage. It would be a terrible shame if the droving poems of Banjo Paterson, Henry Lawson and the like had to be rewritten by current generations to tell of the cleared pipelines, the gas wells and the methane leaks that overtook the TSRs and banished all the Australians who loved and used them.

Loss of tourism opportunities

Allowing CSG activities on the TSR network would also have an economic impact on regional areas through the loss of income from tourism. A range of tourism programs currently focus on TSRs, including the 'Long Paddock' cultural tourism initiative in Western NSW, and a range of ecotourism and birdwatching initiatives across the state. Indeed, the Namoi CMA has published the booklet "Bird Routes of the Western Namoi Floodplains",[20] listing eight TSRs in the CSG-threatened Pilliga region which are of particular interest for bird watchers. The potential for this kind of cultural and ecotourism is likely to be significantly reduced by CSG activities on TSRs.

4. Need for strong and consistent regulation of CSG industry under existing environmental legislation *(TOR 4)*

The impacts of CSG activities, particularly clearing of any natural areas and use of water resources, needs to be strongly regulated. There is currently significant disparity between the regulation of clearing in extractive industries and in agriculture. NPA believes that CSG activities should be regulated under the *Native Vegetation Act 2003* and the *Water Management Act 2000*. Furthermore, legislation controlling activities on public lands needs to be strengthened, both to require assessment of environmental impacts prior to exploration, and if these are considered to be acceptable then to mitigate any impacts of CSG activity, including pilot production activities. Such legislation must be updated to better interact with the Commonwealth *Environment Protection and Biodiversity Conservation Act 1999* during CSG exploration.

[20] Namoi CMA. *Bird Routes of the Western Namoi Floodplains: Wee Waa – Pilliga – Burren Junction*. http://www.visitnarrabri.cfm.predelegation.com/files/uploaded/file/Information%20Leaflets/BirdBrochure_small.pdf. Downloaded 5.9.2011

5. Conclusions

There are many legitimate concerns about the devastating impacts of CSG activities on prime agricultural land. However, allowing the industry to instead compromise important natural areas on Crown lands is not an appropriate alternative. It is not worth destroying irreplaceable environmental, social and economic resources such as the TSR network and the Pilliga State Forest to support an unsustainable industry that is primarily aimed at the export market.

NPA therefore joins other leading environmental organisations in calling for:

1. A **full moratorium** on all forms of coal seam gas drilling until the environmental, social and health impacts have been rigorously and independently assessed.

2. Coal seam gas exploration and mining to be made subject to all relevant **environmental legislation**, including the native vegetation and water management laws.

3. The **provision of standing** to ensure that the community has full legal rights to challenge and enforce environmental laws under which coal seam gas companies are operating.

4. The **provision of a right** in the Petroleum (Onshore) Act to allow landholders to refuse consent for coal seam gas exploration or production on their land.

5. A **prohibition** on coal seam gas exploration and mining in important bushland, valuable farmland, groundwater aquifers, residential areas and public lands.

6. A requirement that all chemicals used in coal seam gas drilling or fracking must be assessed by the **chemical regulator** for use for that purpose before being approved for use.