

Clay Preshaw - Gujarat NRE's Modification

From: Jeffrey Quinn <jeff@frontrunnerlearning.com.au>
To: <plan_comment@planning.nsw.gov.au>
Date: 9/3/2012 7:58 AM
Subject: Gujarat NRE's Modification

Mr Jeffrey R Quinn
 11 Eastview Road
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 30th August 2012

Attention: Director, Mining and Industry Projects
 Major Projects Assessment
 Department of Planning
 GPO Box 39
 Sydney NSW 2001

To Whom It May Concern,

Objections to Proposal MP 10_0046 - MOD 1

I write to object to the acceptance of this proposal as a modification to the Preliminary Works Project MP 10_0046. The extent and impacts of the proposed additions to the Preliminary Works Project, reflected in the increased coal volumes and the use of documentation from the (withdrawn) expansion project, make it clear that this proposal cannot sensibly be regarded as simply a modification to the Preliminary Works project. Gujarat NRE (GNRE) is attempting to incrementally establish their expansion project.

Given its errors and omissions, the Environmental Assessment Report (EA) for the current proposal is unacceptably misleading and confusing. That it has been released to the public reflects poorly on the Department of Planning and Infrastructure (DoPI). Furthermore, the DoPI failed to identify and act upon a number of non-compliance matters and it was left to community members to point out the failures in a series of complaints. While the DoPI clearly goes out of its way to accommodate the interests of the proponent, it seems it acts on the concerns of the public with great reluctance. The EA and its associated documentation contain a large amount of material for which the general public were given only three weeks to respond. Requests for an extension of the public comment period were refused. This further disadvantages the public voice in this matter.

I also strongly object to the proposal for the additional reasons given below.

Longwall mining under the Sydney Water Catchment Area poses unacceptable risks to our water supply threatening the population of Sydney

The extraction of coal from Longwalls 4 and 5 will cause subsidence within an area that includes Cataract Creek and several upland swamps. Cataract Creek has been recognised by the Planning Assessment Commission (PAC) as having "*highly significant values*" making it "*worthy of protection*" (Bulli Seam Operations report, 2010). Subsidence impacts on swamps, surface waters and groundwater has been described in detail in the Southern Coalfield Inquiry report and the PAC reports for the Metropolitan Coal and Bulli Seam Operations (BSO) projects. These reports recognise the importance of swamps both as water stores and filters, and as biodiversity pools of very high conservation value. I note with alarm that the May 2012 end of panel report for Longwall 7 in Dendrobium Area 3A reports serious impacts on swamps 12, 15b and 16. The evidence that swamps cannot be safely undermined is overwhelming. Remediation of swamps is not possible and there are no examples of 'self-healing'.

Swamps CRHS1, CCHS3 and CCHS4 have special significance status under DECCW (now OEH) 2011 draft guidelines, and CCHS3 and CCHS4 include rare Tea-Tree communities. Recommendation 18 of the Metropolitan Coal PAC report includes the following; "*swamps of special significance will be protected from negative environmental consequences*". Aboriginal site 52-3-0322 is located on the edge of CRHS1 and Aboriginal site 52-3-0320 is on the edge of CCHS3. CCHS3 and CCHS4 overly Longwall 5 and CRHS1 is within the subsidence zone of Longwall 5. Approving Longwalls 4 and 5 would approve the loss of these swamps.

Two first order streams join together directly over Longwall 5 to form a second order tributary to Cataract Creek; these streams will be severely impacted by the subsidence over Longwall 5. There is also a first order stream that appears to commence over or at the edge of Longwall 5. Low order streams play a vital role in connecting upland swamps to higher order streams.

Subsidence, increased strata permeability and strata depressurisation risks redirection and loss of surface and ground water from the Cataract catchment, as the Sydney Catchment Authority believes has occurred as a result of damage to the Waratah Rivulet. Recent work by Professor Philip Pells (Thirlmere Lakes report and addenda, and research accepted for publication in Australian Geomechanics) shows that the Bald Hill claystone layer cannot be counted on to protect surface and near surface waters from depressurisation and water loss.

In Appendix E Pells cites examples highlighting the uncertain nature of subsidence prediction. The severe damage to two kilometres of the Waratah Rivulet provides another example of modelling and prediction failure. The widths of the longwalls that caused the catastrophic damage to the Waratah Rivulet were much the same as the width of Longwalls 4 and 5. Compounding this uncertainty, there appears to be little precedent for multi-seam mining, for which additional subsidence factors of up to 80% have been suggested. Such risks and uncertainties are unacceptable in relation to our water supplies and the need for biodiversity conservation.

The Gujarat EA is misleading in several respects, for instance it suggests that a report by Geoterra (Appendix I) indicates little or no impact to swamps over Longwalls 4 and 5. This report refers specifically to CRHS1, which is not located above the longwalls, and makes no mention of the swamps that are directly over the longwalls. The EA provides no subsidence information, predicted or observed, for Longwall 4. Longwall 5 would reactivate and compound the subsidence of Longwall 4. There appear to be no predictions for valley closure or upsidence, other than a mention of upsidence in CRHS1. Appendix J does not seem to contain monitoring and management plans referred to in the EA. The EA provides essentially no mitigation information. The Metropolitan Special Area is a Schedule 1 area for which SCA consent is required, it is not a Schedule 2 area as the EA suggests. The EA makes no reference to the Sydney Drinking Water SEPP or its embodied Neutral or Beneficial Effect (NorBE) on water test.

The water catchment area is not ours to risk. We have a responsibility to preserve the catchment special area and its underlying land and aquifers undamaged, so that future generations of this area can have the access to drinking water that we have taken for granted in our lifetime.

The location of the Gujarat NRE No. 1 Colliery in a residential area is unacceptable

Residents in the vicinity are exposed to airborne particulates from the colliery's operations. These operations include; a coal stockpile located just 200m from people's homes; a resizing (crushing) facility; an enormous ventilation fan that blasts air from the underground mine directly at homes in West Corrimal; and, trucking of coal past people's homes to Port Kembla Coal Terminal.

Airborne particulates from coal mines are increasingly associated with serious respiratory and other health complaints. In particular, particulates smaller than 2.5 micrometres are known to damage health (NSW Environmental compliance and performance report: Management of dust from coal mine, Dept of Environment, Climate change and water NSW in collaboration with NSW Dept of Planning and Industry and Investment NSW, 2010, p3). This Modification proposal does not even measure or model small particulates. The only air quality monitoring data is from an air quality monitor located in Wollongong 6 kms away. The exposure to particulates of 2.5 microns and less may extend for kilometres and could reasonably be expected to impact on at least 1000 to 2000 homes in the area. It is unacceptable for DoPI and the Government of NSW allow this kind of exposure.

Residents are also exposed to noise pollution from colliery operations and trucking. Countless complaints about noise remain unresolved.

Greenhouse Gas Emissions

The coal seams of the Illawarra are known to be gassy and typically release 10 or more cubic metres of gas for each tonne of extracted coal. The composition of the gas varies from being primarily methane to primarily carbon dioxide. Assuming all of the fugitive gas is carbon dioxide, a considerably weaker greenhouse gas than methane, the coal to be extracted under the current proposal would add 32,000 tonnes of carbon dioxide to the 44,000 tonnes of fugitive carbon dioxide released by the Preliminary Works project.

Combustion of the extracted coal would further add 4.8 million tonnes of carbon dioxide emissions to the 6.6 million tonnes of carbon dioxide emitted from combustion of the coal from the Preliminary Works project

GNRE has demonstrated that it does not have the capacity and resources to operate this colliery

Since the Preliminary Works approval GNRE have proved that they are not capable of self-regulation. They have failed to even comply with basic conditions imposed on them by DoPI and the PAC, including: implementing management plans for noise, air quality, greenhouse gas emissions, traffic, biodiversity, water, heritage, and many more areas by the due date of 13 April, 2012 (still outstanding at the end of August 2012). Their implementation of a Community Consultation Committee or approved alternative was months overdue. The EAs account of the so called consultation process is highly misleading.

It appears that extraction of longwall 4 (a component of this Modification application and an activity that is already virtually completed as a result of another very controversial approval process) has been problematic, due to longwall misalignment and that this error has resulted in the contamination of all the extracted coal. Not only is the subsidence much greater than predicted, the extracted coal has little value.

GNRE does not appear to have the resources, or the will to bring the antiquated infrastructure at No. 1 Colliery up to modern standards. Irrespective of the drawbacks or merits of this proposal, GNRE is not an appropriate corporation to extract this coal or operate this colliery.

I recognise that jobs and royalty revenues may be lost with the rejection of this entirely unacceptable proposal. (Although, I note that this modification cuts jobs from the Preliminary works commitment by about 100 jobs or a third of the No.1 Colliery workforce.) However, the broader community interest and inter-generational considerations are of greater significance. The number of jobs at stake is small relative to the regional work force and likewise the royalty revenues are very small relative to annual State and Federal incomes. The value of the natural assets that would be put in harm's way by this proposal cannot be sensibly quantified; they are priceless.

Futhermore, I cite "Alteration of habitat following subsidence due to longwall mining - key threatening process listing NSW Scientific Committee - final determination

<http://www.environment.nsw.gov.au/determinations/LongwallMiningKtp.htm>

8. The extraction of coal and the subsequent cracking of strata surrounding the goaf may liberate methane, carbon dioxide and other gases. Most of the gas is removed by the ventilation system of the mine but some gas remains within the goaf areas. Gases tend to diffuse upwards through any cracks occurring in the strata and be emitted from the surface (ACARP 2001). Gas emissions can result in localised plant death as anaerobic conditions are created within the soil (Everett *et al.* 1998).

9. Subsidence due to longwall mining can destabilise cliff-lines and increase the probability of localised rockfalls and cliff collapse (Holla and Barclay 2000, ACARP 2001, 2002). This has occurred in the Western Coalfield and in some areas of the Southern Coalfield (ACARP 2001). These rockfalls have generally occurred within months of the cliffline being undermined but in some cases up to 18 years after surface cracking first became visible following mining (ACARP 2001). Changes to cliff-line topography may result in an alteration to the environment of overhangs and blowouts. These changes may result in the loss of roosts for bats and nest sites for cliff-nesting birds."

<http://www.environment.nsw.gov.au/determinations/LongwallMiningKtp.htm> ".

Moreover "...the following threatened species and ecological communities are known to occur in areas affected by subsidence due to longwall mining and their habitats are likely to be altered by subsidence and mining-associated activities:

Endangered Species	<!--[if !vml]--><!--[endif]-->
Epacris hamiltonii	a shrub
Eulamprus leuraensis	Blue Mountains Water Skink
Hoplocephalus bungaroides	Broad-headed Snake
Isodon obesulus	Southern Brown Bandicoot
Petalura gigantea	Giant Dragonfly
Vulnerable species	<!--[if !vml]--><!--[endif]-->
Acacia baueri subsp. aspera	<!--[if !vml]--><!--[endif]-->

<i>Apatophyllum constablei</i>	<!--[if !vml]--><!--[endif]-->
<i>Boronia deanei</i>	<!--[if !vml]--><!--[endif]-->
<i>Cercartetus nanus</i>	Eastern Pygmy Possum
<i>Epacris purpurascens</i> var. <i>purpurascens</i>	<!--[if !vml]--><!--[endif]-->
<i>Grevillea longifolia</i>	<!--[if !vml]--><!--[endif]-->
<i>Heleioporus australiacus</i>	Giant Burrowing Frog
<i>Ixobrychus flavicollis</i>	Black Bittern
<i>Leucopogon exolasius</i>	<!--[if !vml]--><!--[endif]-->
<i>Litoria littlejohni</i>	Littlejohn's Tree Frog
<i>Melaleuca deanei</i>	<!--[if !vml]--><!--[endif]-->
<i>Mixophyes balbus</i>	Stuttering Frog
<i>Myotis adversus</i>	Large-footed Myotis
<i>Persoonia acerosa</i>	<!--[if !vml]--><!--[endif]-->
<i>Potorous tridactylus</i>	Long-nosed Potoroo
<i>Pseudophryne australis</i>	Red-crowned Toadlet
<i>Pteropus poliocephalus</i>	Grey-headed Flying Fox
<i>Pterostylis pulchella</i>	<!--[if !vml]--><!--[endif]-->
<i>Pultenaea aristata</i>	<!--[if !vml]--><!--[endif]-->
<i>Pultenaea glabra</i>	<!--[if !vml]--><!--[endif]-->
<i>Tetratheca juncea</i>	<!--[if !vml]--><!--[endif]-->
<i>Varanus rosenbergi</i>	Rosenberg's Goanna

Endangered Ecological Communities

Genowlan Point *Allocasuarina nana* Heathland

Newnes Plateau Shrub Swamp in the Sydney Basin Bioregion

O'Hares Creek Shale Forest

Shale/Sandstone Transition Forest

Species and populations of species not currently listed as threatened but that may become so as a result of habitat alteration following subsidence due to longwall mining include:

<i>Acacia ptychoclada</i>	<!--[if !vml]--><!--[endif]-->
<i>Almaleea incurvata</i>	<!--[if !vml]--><!--[endif]-->
<i>Darwinia grandiflora</i>	<!--[if !vml]--><!--[endif]-->
<i>Dillwynia stipulifera</i>	<!--[if !vml]--><!--[endif]-->
<i>Epacris coricea</i>	<!--[if !vml]--><!--[endif]-->
<i>Grevillea acanthifolia</i> subsp. <i>acanthifolia</i>	<!--[if !vml]--><!--[endif]-->
<i>Hydromys chrysogaster</i>	Water rat
<i>Lomandra fluviatilis</i>	<!--[if !vml]--><!--[endif]-->
<i>Olearia quercifolia</i>	<!--[if !vml]--><!--[endif]-->
<i>Pseudanthus pimelioides</i>	<!--[if !vml]--><!--[endif]-->

16. Mitigation measures to repair cracking creek beds have had only limited success and are still considered

experimental (ACARP 2002). Cracks less than 10 mm wide may eventually reseal without active intervention provided there is a clay fraction in the soil and at least some water flow is maintained. Cracks 10-50 mm wide may be sealed with a grouting compound or bentonite. Cracks wider than 50 mm require concrete (ACARP 2002). Pattern grouting in the vicinity of Marhnyes Hole in the Georges River has been successful at restoring surface flows and reducing pool drainage following fracturing of the riverbed (International Environmental Consultants 2004). Grouting of cracks also appears to have been relatively effective in Wambo Creek in the Hunter Valley. Installation of a grout curtain in the Cataract River, however, has been only partially successful and it was concluded in 2002, after rehabilitation measures had taken place, that the environment flows released from Broughtons Pass Weir by the Sydney Catchment Authority were insufficient to keep the Cataract River flowing or to maintain acceptable water quality (DIPNR 2003). Mitigation measures themselves may have additional environmental impacts due to disturbance from access tracks, the siting of drilling rigs, removal of riparian vegetation, and unintended release of the grouting material into the water. Furthermore, even measures that are successful in terms of restoring flows involve temporary rerouting of surface flows while mitigation is carried out (generally for 2-3 weeks at each grouting site). Planning for remediation measures may also be hampered by the lack of predictability of some impacts, and difficulties gaining access to remote areas where remedial works are needed. The long-term success of mitigation measures such as grouting is not yet known. It is possible that any ongoing subsidence after grouting may reopen cracks or create new ones. Further, it is not yet known whether the clay substance bentonite, which is often added to the cement in the grouting mix, is sufficiently stable to prevent shrinkage. Grouting under upland and hanging swamps that have no definite channel is probably not feasible.

17. Empirical methods have been developed from large data sets to predict conventional subsidence effects (ACARP 2001, 2002, 2003). In general, these models have proved more accurate when predicting the potential degree of subsidence in flat or gently undulating terrain than in steep topography (ACARP 2003). A major issue identified in the ACARP (2001, 2002) reports was the lack of knowledge about horizontal stresses in geological strata, particularly those associated with river valleys. These horizontal stresses appear to play a major role in the magnitude and extent of surface subsidence impacts. The cumulative impacts of multiple panels also appear to have been poorly monitored. The general trend in the mining industry in recent years toward increased panel widths (from 200 up to 300 m), which allows greater economies in the overall costs of extraction, means that future impacts will tend to be greater than those in the past (ACARP 2001, 2002).

18. In view of the above the Scientific Committee is of the opinion that Alteration of habitat following subsidence due to longwall mining adversely affects two or more threatened species, populations or ecological communities, or could cause species, populations or ecological communities that are not threatened to become threatened.

Dr Lesley Hughes

Chairperson

Scientific Committee

Proposed Gazettal date: 15/07/05

Exhibition period: 15/07/05 - 09/09/05

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I reiterate that for the reasons listed above object to the acceptance of this proposal as a modification to the Preliminary Works Project MP 10_0046. I

I have not made a reportable political donation.

Yours sincerely,

Jeffrey R Quinn
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Jeffrey Quinn
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I acknowledge the Guringai people as being the traditional owners of the land on which I live and work. I pay my respects to the spirits of Guringai people.

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