NATIONAL PARKS ASSOCIATION OF NSW
protecting nature through community action

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Submission to the Department of Planning, Gujarat NRE Modification Application 1 to MP10_0046

September 2012

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Authorised by Helen Wilson, 4283 3033
3 September 2011

The Illawarra Branch of the NPA has over 130 members and like other branches of the NPA it is engaged in both conservation work and conducting outdoor activities with the aim of fostering appreciation and protection of our natural heritage. The branch has a special interest in the Illawarra Escarpment, and is concerned about possible threats to its ecosystems and biodiversity.

NPA Illawarra submit that the Gujarat NRE Modification Application 1 to MP10_0046 should be rejected because it presents significant potential such threats. Our concerns are outlined in the following submission.

1. The Illawarra Escarpment and the Woronora Plateau

The Illawarra Escarpment is an iconic feature of the Illawarra region, providing a spectacular natural backdrop to the adjacent coastal urban areas. It is located approximately 60 kilometres south of Sydney, and the escarpment extends from Royal National Park south for approximately 50 kilometres. The Woronora Plateau lies above the escarpment and is an important part of the water catchment area for the Sydney area.

Both the escarpment and the Plateau are biodiversity "hot-spots" for plants and wildlife and many of its plant communities are rare or restricted to the Illawarra. The National Parks Association of NSW (NPANSW) has for some time been advising the government of the need to provide protected connectivity between the current parks and reserves of the area. Protection is needed to ensure the survival and recovery of endangered species, and secure vegetated connectivity is needed to nurture biodiversity as habitats are displaced by the increasing influence of climate change.

There are some areas of the Plateau which are particularly "special" and in March 2012 they have been declared to be endangered under the Threatened Species Conservation Act: these areas are the Coastal Upland Swamps. There are seven upland swamps in the vicinity of the mining area and NRE Longwall 5 is proposed to go directly underneath the swamp CCHS3 and underneath parts of CCHS4 and CRHS1.

The upland swamps have been formed over many thousands of years and are dependent on water (rainfall and groundwater) for their existence. Losing them will mean a huge loss of biodiversity, of plants and animals found nowhere else in the world. NPANSW considers the swamps to be sufficiently important that we are beginning the process of applying for Ramsar listing. (Ramsar is the most important international treaty for the conservation and sustainable utilization of wetlands).

NPA Illawarra submits that the longwall mining underneath the upland swamps should not be allowed to proceed. In the risk assessment for the project it was deemed that longwall mining should not go underneath Mt Ousley Rd, as it was considered too risky, due to the strains on the road surface and possible subsidence and yet it is proposed to mine under the upland swamps.

How should we make a balance between the economic benefits of the project and the state of our world in the future? Do we consider roads more important than biodiversity? Humans can exist without roads but not without biodiversity. We submit that the economic benefits to society from this additional longwall mining by Gujarat NRE are far outweighed by the risk of highly adverse effects to the special environments of the Woronora Plateau.

2. The Company and the Application Processes

Gujarat NRE gained approval for Preliminary works on the No. 1 colliery in October 2011. On February 24 2012 the company announced to the Sydney Stock Exchange that they were commencing mining of LW4 on March 13th. On 26 March 2012 they gained approval for LW4 but not LW5. Looking at the proposed modification it follows a similar business plan of developing Maingates 6,7 and 8 in spite of the fact that no approval has been given for the major expansion. It would appear that the overall business plan of Gujarat NRE is to go ahead with their expansion, purchase and commission machinery and get approvals later.

BHP Billiton has recently been in the process of seeking an extension for its Olympic Dam Project. The company prepared an extensive EIS, released in 2009, followed by 14 weeks allowed for public consultation. The submissions received resulted in a response by BHP Billiton in a further Supplementary EIS and final approvals were received from the governments involved. This demonstrates the process which should happen, rather than the course which Gujarat NRE has chosen. BHP Billiton has now decided not to go ahead with the expansion as first planned, but this is a business decision based on sound (and legal) approval processes.

It appears that Gujarat is assuming that they will gain approval for their major expansion project in spite of the fact that it runs very close to or underneath the Cataract dam and in spite of the demonstrated previous damage to the water systems of the Woronora Plateau caused by longwall mining.

The public has only been allowed 3 weeks to make submissions, despite a number of requests for extensions. It appears to us that the EA main report text does not accurately reflect some of the findings made in the Consultants' reports in the Appendices but the time available does not permit a proper analysis. For example,

Pells (Appendix E) expresses concerns as to the impermeability of the Bald Hill claystone. It is to be hoped that the PAC will be able to commit time to studying any discrepancies. We also note the difficulty of using the Appendices, which have been prepared for the original modification then updated.

In 2008 the NSW Department of Planning published the important document ***Impacts of underground coal mining on natural features in the Southern Coalfield: strategic review.*** The review detailed the many environmental impacts of underground coal mining. The Waratah rivulet is a demonstrated example of the damage caused which cannot be remediated, in spite of efforts to do so. There is also evidence that subsidence has caused the collapse of overhanging valley walls and has affected groundwater.The review made a number of recommendations which seem to have been entirely ignored by Gujarat NRE, for example early consultation with stakeholders, increased monitoring and back analysis. The Community Consultative Committee only had its first meeting in August 2012.

The company has recently purchased LIDAR monitoring equipment to assess subsidence effects but has not released any evidence to show that it has been monitoring water tables, subsidence, vegetation loss etc since planning and carrying out the mining of LW4, which the company says is now completed.

3. Impacts of the project

Gujarat NRE is already having a damaging impact on the community including noise, dust, stockpiles of unwashed coal, health impacts from coal mining, the visual impact of the works, transport by trucks etc. We will however focus on the environmental impacts of the proposed modifications, particularly on the effects of subsidence on the Coastal upland swamps and on the creeks feeding Cataract Dam. There are, of course, further environmental implications on the wider environment such as the amounts of greenhouse gases emitted from these "gassy" mines and by the transport of coal.

As outlined in Section 1 above, coastal upland swamps are vital for Sydney's clean drinking water supply. They are also unique and irreplaceable. According to the NSW Scientific Committee:

> *Coastal Upland Swamp in the Sydney Basin Bioregion is the name given to the ecological community in the Sydney Basin bioregion associated with periodically waterlogged soils on Hawkesbury sandstone plateaus, generally where mean annual rainfall exceeds 950 mm. Coastal Upland Swamp is generally associated with soils that are acidic and vary from yellow or grey mineral sandy loams with a shallow organic horizon to highly organic spongy black peats with pallid subsoils. They vary in depth from a few centimetres to at least 4 metres...*

The 2008 Dept of Planning Review on Southern Coalfields states that

> *It is therefore the Panel's view that the issue of, and mechanisms associated with* ***swamp impacts from mining-induced subsidence is an extremely complex one****, for which there is no simple generic explanation at the present time. On the evidence available, it would appear that there is a distinct possibility that undermining of valley infill swamps has or will cause drainage, water table drop and consequent degradation to swamp water quality and associated vegetation. But without additional research, this remains only a possibility, which is complicated by a number of other non-mining factors in most instances.*

The land on which the Gujarat coal lease exists is owned by the Sydney Catchment Authority and is part of the Special Areas providing drinking water to Sydney. The public is not permitted access to the Special Areas. Some SCA areas have been protected by the Nor Be regulations of SEPP 58 which state that developments in catchments must have a Neutral or Beneficial effect on the water. However, Part 3A applications were exempted from the Nor Be test. Obviously the project under consideration would not pass the test.

Wollongong City Council's LEP 2009 classifies the land as E2, Environmental Conservation, making virtually any development inappropriate. Furthermore the EA itself states that the land is currently in good condition: "The surface is covered by relatively undisturbed natural bushland containing creeks and small wetlands." However, a company spokesperson informed us that one of the upland swamps has been damaged and that the company has been fined $1500 by EPA as a result. We have not had time to follow up on the accuracy of this statement, but submit that it is unacceptable for such damage to occur.

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.

Multi seam mining is the process which will occur for this project, since the Wongawilli seam lies under the Bulli and Balgownie seams which have previously been mined and collapsed. The Subsidence Report (Appendix A - Seedsman) makes it clear that multi seam mining such as this is a new and uncertain process and that subsidence effects will certainly occur. Seedsman recommends a risk management approach to operation. The modelling of subsidence is complicated by this multi seam environment and modeling is inherently uncertain. Despite this, the company appears to have made little effort to establish monitoring.

Consider the statement such as the one following from Appendix A Seedsman, page 50:

> *The many uncertainties with the subsidence prediction in the multiple seam layouts required in the 2 areas means that it is not appropriate to seek to quantify the subsidence deformations at this time. There will be a need to closely monitor the subsidence that develops as the walls are extracted and use this data to refine the controls.*

This statement does not appear to agree with the text of the EA. And from Appendix A, page 51:

> *With regards to the pillar loadings in the overlying seams**, it is not possible to accurately model** the complex and possibly temporal changes in pillars stresses in the Bulli and Balgownie Seams. This is one of the reasons why we have avoided making detailed subsidence predictions and adopted the risk management approach of elimination in key areas.*

From Appendix A page 41:

> *The mechanisms for valley closure and upsidence are not fully understood and are hence not amenable to an analytical engineering prediction. The raw data is not available in the public domain and only modified incremental data is presented. Extrapolation to multiple seams is fraught with problems.*

The uncertainties outlined by Seedsman are added to by Appendix E - Pells report, but this is not reflected in the EA. For example Appendix E : Pells page 30:

> *The available monitoring data does not provide a confident assessment of the water tables in the Upper Hawkesbury Sandstones across the site, and hence does not provide quantifiable insights into the groundwater dependency of streams. Similarly, there is no stream gauging data. The available data does not support a confident assessment on impacts to surface water systems, and it will be difficult for the monitoring to perceive and quantify impacts to surface water features from mining.*

And Pells page 47:

> *We are of the view that groundwater modelling cannot provide definitive answers as to impacts on creeks and swamps. We consider that the modelling completed to date for the NRE No 1 project does not properly consider the likely ranges of permeability and storativity parameters, but notwithstanding this limitation, does indicate that the existing workings, and the proposed mining will have negative impacts on the groundwater regime.*

4. Conclusion

The Precautionary principle has recently been used by the Department of Planning in regard to the development of wind farms: should it not also be used in the case of this Modification Application where considerable uncertainty exists in the area of multi seam mining? We submit that the economic benefits to society from this additional longwall mining by Gujarat NRE are far outweighed by the risk of highly adverse effects to the special environments of the Woronora Plateau and ask for this Modification Application to be rejected.

Yours sincerely
Helen Wilson
Secretary