Submission for Modification of Cowal Gold Mine

I first became interested in Lake Cowal when our Landcare Group along with other Landcare Groups from the district visited the area in May 1995. I have been a member of the Young Community Landcare Group, the Young Shire Council Environmental Initiatives Committee and the Lachlan/ Macquarie Advisory Committee.

I have attended the two Commissions of Enquiry and made submissions to both.

I wish to make a submission as an objection to the Extension proposal by Barrick in relation to the Lake Cowal Gold Mine.

When I first started to research Lake Cowal it was listed on the National Estate Register and a significant number of species of fauna had been identified. These include 17 species of amphibians, 62 reptiles, 48 mammals (including introduced) and 276 species of birds. Of all these different species 43 were listed under the NSW Threatened Species Act 1995.

My objections are as follows:-

1 The increase in size and volume of the contaminated mine site. Some of the formations created by the proposed extension are to be over 300 metres high.

Northern Waste Rock stock pile 266 m AHD to 308 m AHD
Southern Waste Rock stock pile 250 m AHD to 283 m AHD

The enclosed photo of the mine taken some years ago gives some idea of the scale of the present mining operation. Further clearing within the mine site is proposed to take place. (Annexures A and B)

2 Increased risk to the Bland Creek Palaeochannel through aquifer collapse and subsidence and potential contamination from the toxic waste water in the pit. The voltaics and hydrology in and around the mine site are complex and variable and not fully understood. Words like "assumed" and "potential impacts" are used. Nothing is certain it would seem. Lack of modeling is commented upon in the Peer Review Section. When the lake is full or empty, when there are dry or wet times or a major rainfall event etc. modeling showing results would be helpful.

3 Increased use of water from all sources including BCPB. "Barrick would therefore seek to remove the 30,000 ML life of mine extraction limit as part of the modification. Barrick has been given approval for another dam to hold approximately 1,500 ML. of water. It certainly looks like a "water grab".

4 The problem of rehabilitation because of the lack of topsoil in which seeds could grow. Also the fact that so much gypsum (because of the Caton effect) has to be

used to make the soil viable. Direct seeding from all accounts (see Peer Review) has been only marginally successful as a planting option. Approximately 1,200 ha of disturbed area (including endangered tree species) are to be offset. An adequate watering regime would be essential for at least the first year of planting if the vegetation is to survive. How will this be achieved on the bund etc.?

"The caton effect". The sub-soils are sodic with high concentrations of exchangeable sodium (Na) magnesium (Mg) and aluminium(Al). Calcium (Ca) and potassium (K) are deficient. Due to the high clay content the caton exchange capacity (CEC) was high.

5 The Up-catchment Diversion System was designed to put water into Lake Cowal, not to be used as a drain for the mine's operation. As detailed in Section A5.2.2,"an exemption to the Water Act, 1912 relating to the management system at the Cowal Gold Mine is currently in place. In particular, this exemption specifically refers to the temporary isolation bund, the lake protection bund, the up-catchment diversion system and the internal catchment drainage system. The order also applied to any additional works which become part of the water management system for the Cowal Gold Mine".

6 The risk to the environment may not show up for years. Barrick will be long gone and the people of NSW (or maybe the Shires of Bland and Forbes) will be left with the bill. A bond of 4 million dollars may not be adequate for rehabilitation purposes. Will we have another Gladstone Harbour contamination to deal with? The Yabbie incident of 2013 may only be the first of many unusual happenings. Will the water dams left after the mine's life is ended become just a repository for the waste leach water? The water in Lake Cowal as at 1996 was considered good quality. What has happened in the meantime?

7 Thanks to a careless camper the lignum on which the Ibis rely on for breeding habitat has been ¾ destroyed by fire. Has any attempt been made to restore the lignum? The feeding grounds on which the migratory wading birds relied is now the mine site. In October, 2013 I telephoned the Forbes Office of Parks and Wildlife to ascertain if a bird breeding event had taken place this year. I was told the Rangers do not visit Lake Cowal. No breeding event has taken place for some years.

8 The CEMCC by which means the public are to be informed of the environmental happenings at the mine site. The minutes of these meetings are so bland that they may as well not exist.

9 The Memorandum of Understanding. Under this agreement certain green groups receive royalties from the mining operation. The Lake Cowal Foundation has been set up as a result of this agreement. When I rang the number given to me by the Parks and Wildlife Office for the Lake Cowal Foundation the telephone was answered by Barrick's Cowal Operational Mine Site. Two education officers are employed by the Lake Cowal Foundation to "educate" school children about the mine and its effects on the environment. "What are they told?" Barrick holds open days at the mine to which the public are invited. These visits are restricted

to certain areas and do not give a true picture of the mine's scale and activities e.g. the tailings dams and bund.

10 The pit is to reach its maximum depth in December, 2020 if the modification is approved. It will have a depth of approximately 470m from the natural surface, an increase of approximately 80 m from the present proposed depth. There does not seem to be much information on how this increased depth will affect the hydrogeology in relation to the Bland Creek Paleochannel. Could it be that the known information is uncertain?

North Ltd. in it's submission in reply to the second EIS 1996 stated " It estimated that the amount of CO^2 produced will be approximately 108,000 tonnes of CO^2 per annum". The new pumping station will add greatly to this figure.

Electricity use as at 1996 was to be equal to a township with a population of 35,000.

40 tonnes of earth would yield enough gold to make a man's signet ring. (David Bolte former Mayor of Bland Shire Council).

It would seem that ML1535 is to become fully used as a waste dump under this modification proposal.

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