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Nature Conservation Saves for Tomorrow

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NSW Environment Protection Authority review of EPL 726

Preamble

The Blue Mountains Conservation Society has a membership of about 850. Although predominantly drawn from the Greater Blue Mountains area, the members range from the Sydney region down past Wollongong and northward into the Northern Rivers region, whilst inland they extend to Oberon, Canberra, the Bathurst-Orange district, and up through the upper Hunter region.

The Society has extensive dealings directly and indirectly with the EPA in relation to happenings in the Western Coalfield, impacts on Sydney's water-supply catchment, and on waters entering the Greater Blue Mountains World Heritage Area (GBMWHA).

1. The Environment Protection Authority (EPA) and Environmental Protection Licence (EPL) 726

The role of the EPA should be to protect the environment and affected communities from impacts arising from mining processes, coal-seam gas exploitation, agricultural activities, forestry and other forms of development, irrespective of their scale but with due regard to the cumulative nature of such impacts over the broader region. This can be encapsulated as protecting, restoring and enhancing the quality of the environment within the context of ecologically sustainable development.

The above require the EPA's staff to cover a very wide range of legislation and to have an equally wide range of in-house expertise. The EPA should therefore have the financial, human and technical resources to devise an appropriate Environmental Protection Licence (EPL) and to ensure compliance with the licence.

In relation to EPL 726, its conditions must ensure the ecological health of the Wollangambe River is not damaged. This is critically important because the Wollangambe is a declared wild river which enters the Blue Mountains National Park, part of the Greater Blue Mountains World Heritage Area, and effectively impacts listed wilderness.

It follows that EPL 726 should ensure that Clarence Colliery does not discharge polluted mine waters into the headwaters of the Wollangambe River. It should be doing this by stipulating that the chemical and physical properties of the discharge waters should be treated such that they do not detract from the quality of the receiving waters. Likewise, the EPA should closely

monitor outcomes arising from the discharge, in order to ensure the EPL's specifications are fully complied with.

2. The EPA and EPL 726: the reality!

EPL 726 permits Clarence Colliery to discharge 18ML/day of physically and chemically contaminated effluent into the headwaters of the Wollangambe River. This causes a plume of intense contamination which drastically impacts the water quality and the macroinvertebrate fauna; and this has a flow-on impact on other fauna such as fish, amphibians, yabbies and (less directly) certain snake and bird species.

The above statement is based on the research of Mr Nakia Belmer and his co-workers. Their peer-reviewed findings were presented to over 150 people at a meeting convened by BMCS on August 17, 2014. Their work has also been formerly published[1]. It is clear that upstream of the discharge site the salinity (expressed as the mean electrical conductivity – EC) and the pH are low and acidic (30.0µS/cm and pH 5.6), whereas below the discharge point EC is eleven times greater at 342 µS/cm and the pH has increased to 7.2. Below the discharge point the water-temperature increases by at least 2.5oC, and high-toxicity zinc is recorded at 101.5 µg/L[2] and nickel (although not regulated by the EPL) is twice that stipulated in the ANZECC guidelines. These changes in water quality below the discharge site have cumulatively resulted in the macroinvertebrate family richness decreasing by 65% and the overall macroinvertebrate abundance by 90%.

The data of *Belmer et al. (2014)* clearly demonstrate that the EPL 726 must be reviewed and its deficiencies rectified as a matter of urgency. It is blatantly obvious that the mine's operations and the enabling regulatory system inadequately deal with the impacts of the mine on the downstream National Park and World Heritage listed waterways. EPL 726, which states that *"only pollutants listed on the EPL can be discharged"*, does not include electrical conductivity and nickel. The direct implication of this is that Clarence Colliery is not operating in accordance with its licence and is therefore polluting illegally. It is also obvious that the limit allowed for zinc is outrageously high; it would seem to have been selected to ensure that Clarence Colliery's operations are never likely to cause a zinc exceedance, irrespective of zinc's toxicity.

The history of this discharge of effluent variously eastward to the Wollangambe River and westward to Farmers Ck into Lithgow's water supply is protracted. Mr Keith Muir of the Colong Foundation has documented it in his submission to this review dated September 5, 2014. The Society does not proposed to reiterate much of this history, but notes that in 1999 Centennial Coal acknowledged Clarence Colliery's inability to meet the water quality discharge standard for 'Protected Waters', yet it is still happening. The EPA must surely have been aware that the effluent constituted a very real problem, so why has it continued to tolerate this outrageous situation?

BMCS appreciates that attitudes towards 'pollution' has evolved over the last few decades. It also is aware that a significant part of the EPA's role has been to 'negotiate' practicable outcomes which reconcile ongoing mining with a degree (but insufficient in the Society's opinion) of environmental protection. Some of this approach is embodied in the following items:

(a) Various schemes to transfer the effluent to Lithgow's water supply dam and the nearby power stations effectively came to nothing, although the partial objective was to reduce discharges to the Wollangambe River. Likewise, Clarence Colliery's installation of a water treatment plant (2004) to improve water quality failed to meet expectations. The EPA was presumably a party to these various 'solutions' and should not, as seemingly appears to have happened, accepted the unsatisfactory outcomes and placed the issue in the 'too hard' basket.

(b) Government seemingly found an administrative solution in 2006 by repealing the Clean Waters Act, 1970. This meant that CC was not in conflict with the act in relation to discharging into the Wollangambe River and/or Farmers Ck. In other words, the eco-toxic and saline Clarence Colliery effluent was seemingly deemed 'acceptable', and was apparently of little or no concern to the EPA of that time.

(c) Even more reprehensibly, in 2007 and 2010 the EPA **weakened** the waste discharge standards for Clarence Colliery and, as is now demonstrated by *Belmer et al's 2014* paper, the pollution continues.

3. Conclusion

Irrespective of past happenings and the less than impressive record of the EPA in relation to EPL 726, it is now time for the EPA to accept its responsibilities and ensure that the Wollangambe River is protected from this highly polluting discharge. EPL 726 must be revamped such that it imposes environmentally realistic limits on all the eco-toxic contaminants. Furthermore, the EPA should immediately issue Clarence Colliery with a clean-up notice for the removal of contamination from the discharged waters. Clarence should be required to provide a short-term plan for rapid implementation, whilst concurrently devising a longer-term plan which will ensure that its discharge waters do not detract from the physical and chemical properties of the receiving waters of the pristine Wollangambe wild river.

Dr Brian Marshall,
For the Management committee.

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[1] Belmer, N., Tippler, C., Davies, P. J. & Wright, I. A. (2014). Impact of a coal mine waste discharge water quality and aquatic ecosystems in the Blue Mountains World Heritage area, in Vietz, G; Rutherfurd, I.D, and Hughes, R. (editors), Proceedings of the 7th Australian Stream Management Conference. Townsville, Queensland, Pages 385-391.

[2] The EPL permits a ridiculously high discharge-level of 2500 µg/L, which is 10 times higher than recommended in ANZECC guidelines for the protection of ecosystems.