

1 November 2012

The Manager
Illawarra, Environment Protection Authority
PO Box 513
WOLLONGONG NSW 2520

Dear Sir/Madam

Application to vary Environmental Protection Licence (No 2504) for the operation of the Westcliff Colliery

Thank you for your invitation to provide comment on the above application specifically in relation to issues associated with discharges from the Brennan's Creek Coal Wash Waste Emplacement Area (Brennan's Creek facility). The consultation process undertaken by the NSW Environment Protection Authority (EPA) as part of its review of this application and involvement of Council in this process is appreciated.

The Brennan's Creek facility is located upstream of the Campbelltown Local Government Area (LGA) within the Upper Georges River Catchment. Potential impacts on the condition of the Georges River and associated ecosystems attributable to discharges from this facility is therefore of high relevance to the Campbelltown LGA and of concern to Council.

The attached submission provides information sought by EPA representatives at the Stakeholder Information Session workshop held on 18 October 2012 on water quality monitoring undertaken by Council. The submission further outlines Council's concerns with the licence variation application which are requested to be considered by the EPA. These concerns include aspects of the adopted methodology in analysing the downstream extent of impacts associated with discharges from the facility and the interpretation of this analysis.

If you require any further information or would like to discuss comments contained in the attached submission, please contact Council's Senior Environmental Officer (Environment Protection and Management), David Henry on (02) 4645 4214.

Yours sincerely



Andrew Spooner
Manager Sustainable City and Environment

Submission on the application by Endeavour Coal to vary the conditions of the Environment Protection Licence for the Westcliff Colliery

This submission provides comments in regard to the Brennan's Creek Coal Wash Waste Emplacement Facility (Brennan's Creek facility) for consideration by the New South Wales Environment Protection Authority (EPA) during its review of the above application. These comments are based on issues raised in Council submissions on the Bulli Seam Project Application which was approved in December 2011 as well as relevant strategies and reports. The submission is comprised of the following structure:

- Overview of Council's position on the Brennan's Creek Emplacement Area.
- Responses to information requested by EPA representatives at the Stakeholder Information Session held at Blair Athol on 18 October 2012.
- Council's concerns with the licence variation application and supporting documentation.

1) Council position on the Coal Wash Emplacement Facility

Approximately 88% of the Campbelltown Local Government Area (LGA) is located within the Georges River Catchment, including approximately 42 kilometres of the Georges River. The southern boundary of the LGA, is located approximately four kilometres downstream from the confluence of Brennans Creek with the Georges River. Potential impacts on the Georges River and associated aquatic ecosystems attributable to discharges from the Brennan's Creek facility is therefore of high relevance to the Campbelltown LGA and of concern to Council.

Council's submission on the Bulli Seam Project Application (dated 18 December 2009) expressed the view that the *'current approach of disposing of coal wash waste at the Brennan's Creek facility was not considered to be a long-term viable option given its location on a major tributary of the Georges River Catchment and potential for significant environmental impacts'*. Council's subsequent submission on the report produced by the Planning Assessment Commission (dated 5 January 2011) welcomed the finding of the Panel that the *'cumulative consequences of the emplacement process are likely to result in increased salinity in the Georges River'*. Consequently, Council supported in principle a condition of consent for the Bulli Seam project approval requiring the preparation and commencement of an underground coal wash waste disposal trial by the end of 2012.

In light of the above, it is Council's preferred position that measures be implemented as a priority to phase out the operation of the Brennan's Creek facility. However, it is noted that the Bulli Approval has permitted the continuation and expansion of this facility up until December 2041 subject to a number of conditions. It is therefore recognised that the strengthening of the Environment Protection Licence (licence) for the Brennan's Creek facility is the most viable and effective means of improving its environmental performance. Consequently, any measures by the NSW EPA to strengthen the requirements of the licence for the facility to reduce the range and levels of pollutants discharged from the facility are imperative in the view of Council. The inclusion of any licence conditions requiring the investigation and adoption of alternate means of coal wash waste disposal are in accordance with the Bulli Approval and therefore should be included as a priority.

2) Information sought by EPA representatives in relation to the licence variation application

a) Water quality testing

EPA representatives at the Stakeholder Information Session held on 18 October 2012 requested information on any water quality monitoring undertaken by Council both upstream and downstream of the confluence of the Georges River with O'Hares Creek. In this regard, Council currently conducts water quality monitoring on the Georges River at Wedderburn Gorge (upstream of this confluence) and Frere's Crossing (downstream of this confluence). Council also carries out monitoring on O'Hares Creek approximately 200 metres upstream of the confluence.

The results from this sampling show that electrical conductivity (EC) is markedly higher at Wedderburn Gorge compared to the sampling points at O'Hare's Creek and Frere's Crossing. This would suggest that the extent of pollutants discharged from the Brennan's Creek facility could extend at least 17 Kilometres downstream, (the distance between Wedderburn Gorge and the facility). This observation is also supported by data provided by the Georges River Combined Council Committee (GRCCC) who carry out monitoring on both the Georges River, (upstream and downstream of Brennan's Creek), and O'Hares Creek. In this regard, it is suggested that the CRCCC monitoring data would provide information on a more localised scale than the data collected by Council.

The difference in EC readings between Wedderburn Gorge and Frere's Crossing indicate that the EC levels are diluted by the water entering from O'Hare's Creek which is of a high quality due to its path through the Dharawal National Park. However, the proponent was noted to state (in a press release dated 27 October 2010) an intent to lodge a future application to carry out mining activities within the O'Hares Catchment following further environmental assessment and research. It is considered that such activities would potentially reduce the efficacy of O'Hares Creek in diluting the EC levels in the Georges River.

b) Community related issues

The following provides a response to information sought by EPA representatives at the Stakeholder Information Session held on Thursday 18 October 2012:

Privately held licences for irrigation purposes: Council is unaware of any privately held licences in the Upper Georges River Catchment held for this purpose. However there are a number of orchards in the Wedderburn district that could potentially extract water from either O'Hares Creek or the Georges River for irrigation purposes.

Community feedback received regarding the Brennan's Creek facility: Council has not received submissions from members of the community regarding the Brennan's Creek facility. However, Council has received submissions from a number of residents in the Wedderburn district expressing a range of concerns associated with the Bulli Seam Project.

Impacts on recreational opportunities associated with the Georges River potentially attributable to the operation of the Brennan's Creek facility: There are no currently known recreation destinations on the Georges River within the Campbelltown LGA that are upstream of the confluence with O'Hares Creek. Historically, the Wedderburn Gorge was used as a local swimming hole and the section of the Georges River immediately

downstream of the confluence with O'Hares Creek is still known to be used for swimming activities.

3) Comments on the licence application variation

(i) General comments

a) Purpose of the application

It is noted that the supporting documentation to the licence variation application states the application is being lodged to 'include additional pollutants and concentration limits'. However, there is a lack of background information as well as a description of the purpose of the application. In this regard, it is understood from the Stakeholder Information Session that the application is being lodged primarily in response to the initiation of legal action by a community group over the absence of requirements in the licence for the Brennan's Creek facility relating to water quality (including salinity).

It is therefore requested that the EPA require the proponent to amend the licence variation application to include the following:

- **The reasons that a variation to the conditions of the current licence is being sought.**
- **Specification of the existing analytes and associated load levels currently permitted to be discharged from the facility by the licence**
- **Specification of the variation being sought in relation to the load levels of analytes permitted by the current licence.**

(b) Reference to relevant studies and reports

The licence variation application is noted to include references to a number of studies commissioned by the proponent to investigate the downstream impacts of discharges from the Brennan's Creek Facility on the condition of the Georges River and associated ecosystems. However, there is an absence of reference to current relevant independent reports including:

- *Comparison of Sewage and Coal-Mine Wastes on Stream Macroinvertebrates Within an Otherwise Clean Upland Catchment* (Wright I and Burgin, 2009)
- *Bulli Seam Operations Planning Assessment Commission Report* (Planning Assessment Commission, 2010)
- *Development of regional water quality and catchment guidelines for the conservation of aquatic ecosystems: a case study from the Georges River Catchment* (Wright I Tippler, C and Hanlon A, 2012).

Conclusions regarding the nature and extent of impacts associated with discharges from the facility on the Georges River and associated ecosystems in the above studies as well as the recent Ecotoxicology Assessment by the EPA are noted to be distinctly different to the licence variation application.

The EPA is requested to note the concept of localised water quality guidelines for the Georges River Catchment is supported by Council. This viewpoint is also noted to be

supported by a statement in the ANZECC Guidelines that '*catchment specific guidelines should be established and used in place of the ANZECC generic recommended guidelines*'

It is therefore requested that the EPA require the proponent to:

- **Amend the licence variation application to make reference to recent independent water quality studies when considering the impacts of the Brennan's Creek facility on the Georges River.**
- **Pursue the concept of regional water quality guidelines proposed in the research paper by Wright et al (2012) as a basis for determining permitted pollutant loads by the licence.**
- **Strongly consider the adoption of the trigger values outlined in this research paper for the protection of high quality ecosystems in the amended licence.**

In addition, Council has participated in the GRCCC Community River Health Program and has supported its findings. **It is requested that this data be utilised by the EPA in determining pollutant loads for inclusion in the licence.**

ii) Comments specifically in regard to the supporting documentation to the application

Council recognises that the strengthening of the existing licence for the Brennan's Creek facility to improve the environmental performance of the facility based on available water quality information and research is imperative. In this regard, the following outlines measures to address concerns with the variation application that are requested to be carried out by the proponent as conditions of the updated licence to avoid delays in this process.

a) **Adopted methodology**

The methodology adopted by the licence variation application is recognised as being generally in accordance with the Australian and New Zealand Guidelines for Fresh and Marine Water Quality (ANZECC Guidelines). The sampling and analysis of pollutant levels approximately 50 metres downstream of the confluence of the Georges River and Brennan's Creek is considered appropriate in identifying the immediate downstream impacts of pollutant discharges on the Georges River and associated ecosystems.

However, it is considered the proponent has not carried out sufficient monitoring that would allow for an accurate determination of the full downstream extent of impacts of discharges from the facility on the Georges River and associated ecosystems. In this regard, the current licence for the Brennan's Creek facility issued by the EPA is noted to not require the proponent carry out monitoring beyond 50 metres downstream of the confluence of Brennan's Creek with the Georges River.

It is therefore requested that the EPA require the proponent to conduct the following as conditions of the updated licence for the Brennan's Creek facility:

- **Additional water quality monitoring at suitable downstream locations on the Georges River and analysis of the collected data.** Council officers can provide assistance in the identification of suitable monitoring sites if this would be of benefit.
- **A comprehensive analysis of water quality data to determine the full extent of impacts associated with all discharged pollutants from the Brennan's Creek facility on the condition of the Georges River and associated ecosystems.** It is further requested that this analysis be peer reviewed and be made publicly available.

b) Analysis of the behaviour of discharged pollutants from the Brennan's Creek facility

The readings for aluminum at monitoring sites contained in the supporting documentation to the licence variation application are noted to be in excess of the ANZECC Guidelines. In this regard, further research regarding the bioavailability of this trace metal to aquatic plants and animals within the affected sections of Georges River is required as there is limited available information on this matter.

It is requested that the EPA require the proponent carry out more expansive monitoring and analysis of aluminum levels entering the Georges River from the Brennan's Creek facility and its bioavailability to aquatic plants and organisms as a condition of the updated licence.

The observation in the application that a number of metals such as nickel and zinc, discharged from the facility become significantly less toxic to aquatic life when bicarbonate levels are high is generally agreed with. In relation to this matter, an EPA representative advised at the Stakeholder Information Session that the Ecotoxicological Assessment concluded that bicarbonate anion concentrations in the discharge from the facility were likely to be a major contributor to the observed effects of salinity present within the Georges River. It is consequently important that the conditions of the amended licence application contain suitable requirements that reflect the downstream behaviour and associated impacts of all pollutants discharged from the Brennan's Creek facility on the condition of the Georges River and associated ecosystems.

It is requested that the EPA require the proponent to conduct further research into the effects of bicarbonate concentrations on the bioavailability of trace metals and its contribution to electrical conductivity within the Upper Georges River Catchment as a condition of the updated licence. It is further requested that the EPA utilise this analysis to determine suitable pollutant load limits that would satisfy regional trigger values for the protection of aquatic ecosystems within the Upper Georges River Catchment for inclusion in a future upgraded licence or as part of a Pollution Reduction Program.

c) Interpretation and conclusions

It is apparent that justification for the additional pollutant loads and concentrations sought by the licence variation application is based on conclusions that high salinity levels in the discharge from the facility has not adversely impacted on aquatic biodiversity and downstream water quality levels are in accordance with ANZECC Guidelines. Council is of the view that this observation and conclusion is without adequate foundation due to the aforementioned concerns.

It is therefore requested that the EPA base its decision on recent research and studies such as the Ecotoxicological Assessment and studies contained in Section 3 of this submission rather than the analysis within the variation application.

4) Conclusion

Previous Council submissions in relation to the Bulli Seam Project Application expressed the view that disposing of coal wash waste at the Brennan's Creek facility was not a viable long-term option due to its location on a major tributary of the Georges River Catchment and potential for significant environmental impacts. Council continues to be of the view that alternate options for the disposal of coal wash waste must be investigated and implemented

in the short-term, as the use of the Brennan's Creek facility is not a viable long-term option. However, it is recognised that the strengthening of the EPA licence for this facility presently represents the most effective means of improving its environmental performance in light of the approval for the Bulli Seam Project Application permitting its continuing operation and expansion until December 2041.

This submission has provided information sought by EPA representatives at the Stakeholder Information Session held on 18 October 2012 in regard to water quality monitoring undertaken by Council. This monitoring has indicated the impacts of salinity related discharges from the Brennan's Creek facility extend to the confluence of the Georges River and O'Hares Creek where traces of discharged pollutants are diluted due to the largely pristine nature of O'Hares Creek.

This submission has outlined Council's concerns with the variation licence application based on issues raised in previous Council submissions and relevant studies and reports for consideration by the EPA during its review. The key deficiencies relate to: inadequate reference to relevant studies and reports; insufficient water quality monitoring to determine the full extent of downstream impacts of discharges from the Brennan's Creek facility on the condition of the Georges River; and the downstream behaviour of these discharges. It is requested that the EPA require the proponent address these deficiencies as a condition of the upgraded licence to avoid delays in the strengthening the requirements of the current licence that would improve the environmental performance of the facility.