

13 December 2017

Rose-Anne Hawkeswood  
Department of Planning and Environment  
Lvl 14, 338 Pitt Street, Sydney

**Subject:      *Submission for Sunrise Nickel/Cobalt Mine modification 4  
to approved development (DA 374-11)***

Dear Rose-Anne,

Thank you for the opportunity to make a submission in relation to modification 4 to the approved development for the sunrise nickel/cobalt mine within the Lachlan Shire Council, approved as a part of DA 374-11.

Forbes Shire Council makes the following submission in response to modification 4 to the approved development for the sunrise nickel/cobalt mine within the Lachlan Shire Council.

**Water supply from the borefields and Surface Water Extraction from the Lachlan River**

The raw water supply intake for the sunrise nickel/cobalt mine is proposed to be drawn from the southern borefield and Lachlan River, drawing water from the Lachlan Formation groundwater system and Lachlan River.

The approved development initially was drawing a raw water supply from the Lachlan Formation only from groundwater extraction from the southern borefield. This modification proposes to extract water from both groundwater and surface extraction from the Lachlan River.

The raw water demand for the operation of the mine was originally estimated and approved up to approximately 17.5ML/D or an annualised basis, up to 6,387 ML/year.

An optimisation study has since been completed by Clean TeQ resulting in the opportunity to increase the efficiency of the mining and process operations, as well as increasing the recycling of water on-site and therefore reducing the water demand from external water supply sources. It is estimated that 662 ML/year to 789 ML/year of the raw water will be comprised of recycled water.

This will reduce the demand for raw water extracted from the borefields within the Lachlan formation to 5598 ML/year to 5725 ML/year. This water could be supplied solely from the groundwater extraction from the Lachlan

borefields which have the capacity to pump 6308 ML/year based on the long term trial that has been carried out on the constructed borefield.

If the recycled water was not provided this would result in a deficit of 79 ML/year based on the maximum capacity of the Lachlan formation borefield.

Given the analysis above why would the Sunrise Nickel/Cobalt Mine need to secure 350ML/year from general access licences (surface water extraction) from the Lachlan River?

At most they would only need to secure the deficit of 79 ML/year from general access licences (surface water extraction) from the Lachlan River.

The Water Management Assessment also specifies that "*where available they would obtain further surface water extraction general access licences to the Lachlan River*". If Sunrise Nickel/Cobalt Mine have secured adequate water supply from the general access water licences (surface water extraction) which equate to 350 ML/year and extract 6308 ML/year from the borefields within the Lachlan formation, why would further general access licences need to be obtained? And how many would be obtained?

Obtaining further surface water extraction general access licences from the Lachlan River would negatively impact on the primary production (irrigated and non-irrigated) agricultural sector within the Forbes Local Government Area.

The agricultural sector is the largest sector of the economy of Forbes LGA and the loss of this resource from securing general access licences (surface water extraction) from the Lachlan River would be significant. A local agronomist has quantified the loss in agricultural production would equate to \$1.2 million.

A socio-economic assessment should be prepared to assess and quantify the impact from the loss of general access licences (surface water extraction) from the Lachlan River on agricultural sector within the Forbes Local Government Area.

The socio-economic impacts have not been previously assessed and have not been addressed as a part of this modification.

Should you have any enquiries, please contact the undersigned on **6850 2344**

Yours faithfully



Paul Bennett  
**Director**  
**ENVIRONMENTAL SERVICES & PLANNING**