



I N L A N D  
R I V E R S  
N E T W O R K

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PO Box 528, PYRMONT NSW 2009  
**email** inlanddriversnetwork@gmail.com  
**web** inlanddriversnetwork.org  
**ABN** 34 373 750 383

Anthony Ko  
Department of Planning and Environment  
PO Box 39  
Sydney NSW 2001

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### **Objection to Ulan Mine Modification 4**

The Inland Rivers Network (“IRN”) is a coalition of environment groups and individuals that has been advocating for healthy rivers, wetlands and groundwater in the Murray-Darling Basin since 1991.

IRN objects to the application for the fourth modification of Ulan Continued Operations approved in 2010 (Mod 4) because of the cumulative impacts on the Talbragar River and the NSW Murray-Darling Porous Rock Groundwater Source.

#### **1. Talbragar River**

The Talbragar River is an important tributary to the Macquarie River system with downstream connection to the Ramsar listed Macquarie Marshes.

The Talbragar is a non-perennial stream relying on rainfall inflows with some connection to alluvials in the vicinity of the Ulan Mine area of impact. Alluvial deposits associated with the Talbragar River extend from Birkall Road to 6 km south of Dunedoo.<sup>1</sup>

While the groundwater assessment considers drawdown of alluvials in Mona Creek, a tributary of the Talbragar, it does not discuss the regional drawdown from the whole project and the cumulative impacts on groundwater sources.

The Talbragar River has been identified as having high instream value.<sup>2</sup>

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<sup>1</sup> NSW Office of Water, 2011. Report Card for the Talbragar Alluvial Groundwater Source.

<sup>2</sup> NSW Office of Water, 2011. Report Cards for the Upper & Lower Talbragar River Water Sources.

The Mod 4 proposal will increase base flow losses and extend the period of time of groundwater and surface flow recovery.

There is no assessment of the impact of loss of base flows during dry conditions.

IRN considers that the proposed expansion of Ulan Mine underground operations is posing a threat to the hydrology and ecology of the Talbragar River system.

## 2. NSW Murray-Darling Porous Rock Groundwater Source

IRN is concerned that there are not sufficient water licences held by Ulan Coal in the NSW Murray-Darling Porous Rock Groundwater Source to offset the volume of aquifer interference predicted for Mod 4.

The predicted groundwater interception from this aquifer system is 6,629 ML/year at peak production in 2022. This is a substantial volume of groundwater extraction from the landscape.

Ulan Coal currently have a licence to take 1,454 ML/yr and are in the process of acquiring an additional 2,200 ML/yr access licence from this water source.<sup>3</sup>

However, this leaves a shortfall of 1,975 ML/yr unlicensed.

IRN recommends that Mod 4 should not be considered for approval until such time that Ulan Coal demonstrate the availability of all licenced requirements for the predicted groundwater take.

## 3. Groundwater model

The conceptual groundwater model for previous approvals developed by Mackie Environmental Research (MER) was considered to still be valid for the Mod 4 assessment. While the model was updated and calibrated for Mod 3 in 2015 a number of changes were made to assist with prediction for Mod 4, however, these changes were not calibrated.

Groundwater Assessment, Appendix E Figure 8.1 predicts that Triassic sandstone aquifers in the Talbragar catchment will be drawn down by up to an additional 50m due to Mod 4 at the end of underground mining.

The impact of this draw down on the surrounding landscape and water sources has not been adequately assessed.

There are a number of examples where predicted decline of Triassic aquifers in the model has been less than the actual measured decline. This indicates greater mining impacts on Triassic hydro-stratigraphic units than suggested by the model.

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<sup>3</sup> Eco Logical Australia, 2018. Environmental Assessment Report. Longwall Optimisation Project p 14

This evidence also calls for better calibration of the changes made to the model for Mod 4.

## Conclusion

Inland Rivers Network considers that the impacts of Ulan Mine operations on river and groundwater systems of the Murray-Darling Basin are already excessive and unsustainable.

Furthermore the cumulative impacts of Mod 4 on these water sources have not been adequately identified or assessed.

We recommend that this coal mine expansion be rejected.

For more information about this submission please contact:

Anne Reeves

Secretary

[inlandriversnetwork@gmail.com](mailto:inlandriversnetwork@gmail.com)