My name is Melissa Gray, I am a freelance bookkeeper and a Healthy Rivers Ambassador in the Central West of NSW. I have lived in regional communities the majority of my life, and fully appreciate the value of healthy rivers to towns and farm land – culturally, ecologically and commercially.

I object to the expansion of the Moolarben Coal Operations (MCO) Stage 1 Mod 14, Stage 2 Mod 3.

Grounds for my objection:

MCO seek to increase their licenced water discharge into the Goulburn River to 20 million litres per day, further degrading water quality and causing additional ecological stress to the river.

I am worried about a lack of transparency of the processes required to offer the public information about how an operation may impact river health, as the Water Management Plan for previous approvals, which was required by October 2016 is not available.

The groundwater modelling assumptions do not reflect the potential impacts on springs and the upper groundwater systems. The modelling of the mine failed to predict the 5 million litres per day of groundwater that makes its way into Underground One. Groundwater is very important and must be protected, poor current modelling and failures arising from previous modelling used to predict operational impacts on groundwater imply the standards in modelling are not rigorous enough.

The landscape above the mine will be dewatered – the long term effect of draining the landscape has not adequately been assessed.

Salt is damaging to fresh water rivers and to all the life that relies on them. Increasing the total salt load of the Goulburn River will threaten the Goulburn River National Park and impact downstream users.

The Hunter River catchment includes a large proportion of salt bearing sedimentary rocks and soils, and surface and underground drainage from this contributes natural salinity to the river. But activities such as coal mining, power generation, industry and land clearing have increased the level of salinity in the river. The NSW Government's Hunter River Salinity Trading Scheme aims to manage saline water discharges to minimise their impact on irrigation and other water uses, and on the aquatic environment of the Hunter River catchment. Adding salt to the Goulburn River puts pressure on the effectiveness of the trading scheme.

There has been no independent study of the cumulative impact of mining on the headwaters of the Goulburn River. When combined with Ulan Coal and Wilpinjong Coal mines' already approved mine water discharges, the cumulative impact of an increase to MCO's proposed discharge will alter the natural flow regime and dump up to 30 tonnes of salt per day into the river system.

Brine from the water treatment plant used for dust suppression will drain into sediment dams that are designed to overflow into the river, adding more salt that hasn't been accounted for.

The current MCO discharge licence of 10 ML/day has never been used. They are now applying to double it to 20 ML/day, however the existing licence of 10 ML/day should be enough. Wilpinjong Mine has a salt discharge limit of 500 EC (electrical conductivity units), and MCO should have the same limit, not 900 ECs.

An increase in coal production at MCO will not increase job numbers or security. A healthy, resilient river will continually provide communities and wildlife with the essential life giving resource of clean fresh water, and is a much more valuable asset for society as a whole than a bigger coal mine could ever be.