

10 March 2021

WaterNSW Ref. D2021/21308

Jack Turner
Resource Assessments
Department of Planning, Industry and Environment
Locked Bag 5022
PARRAMATTA NSW 2124

Dear Mr Turner,

WaterNSW submission to Environmental Impact Statement - Wongawilli Mine Modification 2 (MP 09_0161 MOD 2)

WaterNSW appreciates the opportunity to comment on the Wongawilli Mine Modification 2 application, including the granting of an extension to provide comments by 10 March 2021.

The proposed modification is partly located within the Metropolitan Special Area of Sydney's drinking water catchment. Under the *WaterNSW Act 2014*, WaterNSW has statutory responsibilities to protect and enhance water quantity and quality in the catchment, and to maintain the ecological integrity of the Special Area.

In order to meet its statutory responsibilities, WaterNSW has adopted a set of Mining Principles for mining proposals in Sydney's drinking water catchment, which are summarised below:

- 1) **Water supply infrastructure** – mining must not result in the integrity of water supply infrastructure being compromised.
- 2) **Water quantity** – leakage from reservoirs as a result of mining activities must be avoided, and regional depressurisation and diversion of surface water flows must be avoided and minimised by adopting a precautionary approach to mine design.
- 3) **Water quality** – all mining activities must have a neutral or beneficial effect on water quality.
- 4) **Ecological integrity** – of the Special Areas must be maintained and protected.

Our comments on this proposal relate primarily to the proposed extension of the North West Mains Drive within the Metropolitan Special Area. In summary, WaterNSW has the following concerns:

1. Potential impacts to Lake Avon:

WaterNSW notes that it is unlikely the modification would result in any noticeable subsidence, strain or tilt, stream bed uplift or bed cracking in Gallaghers Creek. The subsidence assessment undertaken by SCT concluded that cracking from the void would not extend into the Bulgo sandstone or the higher Hawkesbury sandstone.

However, within the project area, WaterNSW notes that that base of Lake Avon is located below the Bulgo Sandstone in the Stanwell Park Claystone. WaterNSW seeks clarification as to how close cracking from the void will be to the base of Lake Avon.

2. Subsidence uncertainties

The proposed modification would extend the main drive through the Wongawilli fault and a known dyke. No subsidence predictions have been undertaken because the impact due to first workings is considered insignificant. Nevertheless, WaterNSW considers that the following matters should be further addressed:

- The potential for increased stresses above the previously extracted Wongawilli Seam.
- The impact of mining through the Wongawilli fault.
- Interactions with the dyke, noting that a steady inflow of water was observed during previous mining, consistent with an increase in hydraulic conductivity. It is acknowledged that this occurred during secondary extraction, rather than during first workings. However, given that this dyke will be intersected by the proposed modification below the surface of Avon Reservoir, it requires detailed assessment.

While no significant subsidence or inflows are expected, WaterNSW recommends a precautionary approach, including:

- a subsidence monitoring program for measuring stresses and pillar performance, and
- drilling ahead to confirm the absence of zones of elevated hydraulic conductivity and to manage any inflows from the reservoir into the first workings.

3. Groundwater assessment:

WaterNSW notes that the groundwater model is heavily reliant on data from Dendrobium Mine (Areas 3A and 3B) with 635 monitoring locations compared to only 14 in Wongawilli Mine. It is also noted that the model is a regional groundwater model, instead of a site-specific model. The lack of site-specific groundwater monitoring data means that the groundwater model predictions may not accurately represent the actual outcomes.

Further, the mass balance results for the predictive models (2020 and 2049) discussed in Section 7.1 do not match with results presented in Table 7-2. For example, rainfall recharge of 59.7 ML/day vs 179 ML/day. It is recommended that the mass balance estimates are updated to remove inconsistencies and provide more clarification on the presented results.

4. Future infrastructure:

The proposal has not considered potential for impacts on a future water infrastructure project, the Burrawang to Avon tunnel (Illawarra Spur Pipeline).

Conclusion

WaterNSW does not object to the proposed modification, however we request that our concerns above are addressed. WaterNSW also requests to continue to be listed as a key agency for consultation on this and other projects by Wollongong Coal in the future.

If you have any further questions, please contact Miles Ellis via email at environmental.assessments@waternsw.com.au.

Yours sincerely

A handwritten signature in black ink that reads "Clay Preshaw".

CLAY PRESHAW
Manager Catchment Protection