

22 August 2025

Our reference: D2025/99574

Ms Melanie Hollis
Principal Planning Officer, Resource Assessments
Department of Planning, Housing, and Infrastructure
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RE Metropolitan Coal Modification Application (MP08_0149-Mod-4) - Longwalls 317 and 318

Dear Melanie,

WaterNSW appreciates the opportunity to provide comments on the Metropolitan Coal Modification Application 4. This modification application is seeking to:

- modify the mine layout through the northern extension of Longwall 317 and addition of Longwall 318 to the west of the approved longwalls,
- extend the approved 300 series Mains to the west,
- relocate the Ventilation shaft 4 (approved in the original application but not constructed yet) into the Woronora Special Area, and
- relinquish approved surface development and underground mining area.

Metropolitan Longwalls 317 and 318 are located within the declared Sydney catchment area and in the Woronora Special Area. Therefore, before approving the modification, Water NSW requests that the consent authority be satisfied that the proposed modification continues to achieve a neutral or beneficial effect (NorBE) on water quality, consistent with the original approval and requirements of Part 6.5 of the *State Environmental Planning Policy (Biodiversity and Conservation) 2021* (the SEPP).

WaterNSW has a statutory function under section 7(1)(g) of the *Water NSW Act 2014* to protect and enhance the quality and quantity of water in declared catchment areas. Therefore, it has a set of [Mining Principles](#) which underpin WaterNSW's decision making in relation to managing mining impacts in the declared Sydney catchment area and on water storage, transfer and supply infrastructure. The Mining Principles include an assessment criterion to maintain and protect the ecological integrity of the Special Areas.

WaterNSW's review and recommendations are based on statutory requirements outlined above.

WaterNSW's Review on Impact Assessment

WaterNSW has reviewed the predicted subsidence impacts and environmental consequences of the proposed Modification in the context of the Approved Layout and with regard to future mine expansion in the Woronora Special Area.

WaterNSW considers the predicted impacts are inconsistent with the Mining Principles, given their potential adverse effects on water quality and ecological integrity, as summarised below and detailed in the **Attachment**:

- Valley closure increases in several areas including Tributary S (500→550 mm), Tributary U (200→525 mm), and Honeysuckle Creek (<20→350 mm), raising the risk of subsidence related surface cracking, especially in deeper downstream sections.
- Six swamps are likely to experience a low but material risk of environmental consequences.
- There is increased risk of stream bed fracturing and further mobilisation of metals in Honeysuckle Creek.

WaterNSW remain concerned that residual risks to swamps, water quality, aquatic ecology, and aboriginal cultural heritage (ACH) persist despite Metropolitan Coal's proposed mitigation measures (e.g., wider pillars, Longwall 317 setback from Swamp S106, and proposed monitoring programs). In addition, the lack of robustness in the assessment (including limitations in monitoring, gaps in data, and uncertainty regarding cumulative impacts) reduces our confidence in the early detection and management of potential impacts. Therefore, WaterNSW considers that potential environmental and heritage impacts cannot be fully mitigated, and that additional measures are required to reduce residual risks, improve monitoring, and ensure appropriate offsets.

WaterNSW's recommendations are outlined below:

1. Complete avoidance of mining beneath Swamp S106 is the only effective protection of the swamp, given the size and sensitivity of Swamp S106, and the difficulty of reversing potential impacts. As such, WaterNSW recommends redesign of mine layout to avoid impact prior to approval of this proposed Modification. Relying on an Adaptive Management Plan (AMP) would not provide adequate safeguards for such a significant and vulnerable swamp, especially when impacts might materialise after it is too late to mitigate them.
2. Relocation of the proposed shaft site should consider to increase setback from Swamp 92 and other sensitive receptors prior to approval of this proposed Modification. An assessment of potential impact of the proposed construction site should include the risk of water quality impacts, sediment load leaving site and vibration impacts on sensitive receivers.
3. WaterNSW recommends that the advice of the Independent Expert Advisory Panel for Mining (IEAPM) be adopted for water quality, groundwater, and ecological monitoring in relation to new mining areas, particularly the Woronora Water Quality advice (2023) and the subsequent advice on the Extraction Plan for Longwalls 311–316 (2024 and 2025).
4. WaterNSW recommends that the aquatic ecology assessment should be revised using standard survey methods for fish, frogs, and rare/threatened species, with improved baseline sampling repeated across seasons at all relevant sites, explicit assessment of impacts on Littlejohn's Tree Frog, platypus, and rare dragonflies, and monitoring of pool water levels and iron staining in all suitable breeding pools within the project area.
5. WaterNSW recommends that a risk assessment should be conducted to consider if Aboriginal Cultural Heritage performance measures will be breached incorporating current approvals and this proposed Modification. Based on this assessment, a contingency plan (or similar) should be prepared to outline proposed steps if a breach was to occur.
6. WaterNSW recommends that Metropolitan Coal should engage Registered Aboriginal Parties in genuine and meaningful consultation. Actions as part of this engagement could include reviewing documents, leading cultural assessments, assisting in developing relevant management plans and input into a risk assessment of breaches to ACH performance criteria.

WaterNSW reiterates that the consent authority in its decision making must consider the cumulative impacts on swamps and watercourses as a result of longwall mining in the Woronora Special Area and declared Sydney catchment area. Any opportunity to prevent any further impacts should be actioned.

Please contact Maria Dubikova or David Bretreger at environmental.assessments@waterNSW.com.au if you wish to discuss any matter raised above.

Yours sincerely,



Rob O'Neill
A / Executive Manager Strategy & Performance

Attachment – WaterNSW's Concerns and Recommendations

Subsidence impacts on swamps

WaterNSW notes that while bedrock cracking is predicted to be minor due to low strain/curvature and deep cover, localised impacts are still expected:

- Predicted valley closure has increased in several areas, including Tributary S (500 mm to 550 mm), Tributary U (200 mm to 525 mm), and Honeysuckle Creek (<20 mm to 350 mm). These increases present a greater risk of cracking, particularly in downstream valley sections where valleys deepen.
- Several swamps located along tributaries remain exposed to valley-related effects such as closure, upsidence, and compressive strain. However, predictions have not been provided for all potentially impacted swamps (Swamps S74 and S128 along Tributary U). Predicted mining-induced tilts are generally lower than natural swamp gradients, but in flatter areas they may still alter flow paths and swamp hydrology. The modification will result in increase in upsidence (from 150 to 175 mm) in swamp S76.

Despite the adoption of wider pillars and shortening the southern end of Longwall 317, residual risks to upland swamps remain. Six swamps are still predicted to experience a low but real risk of more than negligible environmental consequence. In particular, swamps S74 and S106 are considered vulnerable to fracturing of the sandstone substrate, which may result in persistent water losses and water level declines.

Adaptive management has been proposed for swamps. The subsidence report itself recognises that direct monitoring in swamps is difficult. There is uncertainty regarding the subsidence monitoring, as direct ground strain monitoring within swamps is constrained by dense vegetation, and reliance on nearby proxy sites may reduce confidence in early detection of impacts.

Recommendation

1. Complete avoidance of mining beneath Swamp S106 is the only effective protection of the swamp, given the size and sensitivity of Swamp S106, and the difficulty of reversing potential impacts. As such, WaterNSW recommends redesign of mine layout to avoid impact prior to approval of this proposed Modification. Relying on an Adaptive Management Plan (AMP) would not provide adequate safeguards for such a significant and vulnerable swamp, especially when impacts might materialise after it is too late to mitigate them.

Ventilation shaft impact assessment

Impacts related to the construction of the ventilation shaft have not been assessed in adequate detail. WaterNSW holds concerns that during construction activities there may be indirect impacts on the surrounding area. This includes, but may not be limited to:

- Water quality runoff and sediment load leaving site and impacting downstream swamps (e.g. Swamp 92) and the Woronora Reservoir.
- Potential impacts of vibrations from the construction and drilling on fauna, soils and geologic landforms have not been assessed. WaterNSW has specific concerns about if this would impact on soil compaction, especially at nearby swamps ecosystems.

Recommendation

2. Relocation of the proposed shaft site should be considered to increase setback from Swamp 92 and other sensitive receptors prior to approval of this proposed Modification. An assessment of potential impact of the proposed construction site should include the risk of water quality impacts, sediment load leaving site and vibration impacts on sensitive receivers.

Water quality

Tributaries R, S, U and Honeysuckle Creek are predicted to experience valley closure that elevate risk of bedrock cracking and associated water loss, dewatering of pools and alteration of local hydrology and reduced surface water quality. While the surface water assessment concludes that the Modification is

unlikely to cause material or persistent water quality impacts (including in the Woronora Reservoir), several issues raise concern:

- Long-term monitoring shows exceedances of iron and manganese triggers in the Eastern Tributary for almost a decade, as well as recent increases in iron concentrations in the Waratah Rivulet. In addition to this, previous monitoring programs excluded analyses for total metals even in streams with visible iron staining and elevated groundwater iron concentrations, limiting the ability to detect significant impacts.
- The Independent Expert Assessment Panel for Mining (IEAPM)'s review (2023) concluded that available data and analysis were insufficient to confirm mining's contribution to degraded water quality or to fully assess risks to water supply and treatment. The IEAPM's subsequent advice on the Extraction Plan for Longwalls 311–316 (2024 and 2025) noted the lack of firm commitments or timelines to implement monitoring improvements.
- Baseline water monitoring suggest that Honeysuckle Creek is naturally acidic with elevated aluminium. When combined with the predicted closure of 350 mm, this increases the risk of streambed fracturing and mobilisation of additional metals.
- WaterNSW disagrees with the conclusion of Section 11.2 of Surface Water Assessment Report that "it is considered that the Project as modified would have the same adverse impact on water quality when compared to the approved Project and, as such, would have a neutral effect on water quality." WaterNSW requests a revised NorBE Assessment should be undertaken with the historical monitoring data and the predicted impacts of proposed modification.

Recommendation

3. WaterNSW recommends the advice of the Independent Expert Advisory Panel for Mining (IEAPM) be adopted for water quality, groundwater, and ecological monitoring in relation to new mining areas, particularly the Woronora Water Quality advice (2023) and the subsequent advice on the Extraction Plan for Longwalls 311–316 (2024 and 2025).

Aquatic ecology

The aquatic ecology assessment is considered incomplete and inadequate. Survey effort was minimal, relied on non-standard methods, and was limited to a single sampling event, preventing reliable determination of species presence and abundance. Key concerns include:

- Omission or insufficient assessment of threatened and near-threatened species. Platypus, Littlejohn's Tree Frog, and rare dragonflies were not adequately addressed despite suitable habitat being present.
- Baseline sampling requirements should be improved to provide comprehensive baseline survey results (one-off sampling is not sufficient). Sampling should be conducted at all relevant sites, including previously omitted ones, and repeated across multiple seasons (at minimum spring and autumn) to capture temporal variation and provide a robust representative dataset.
- Standard survey methods should be adopted. This includes standard methods for fish surveys, frog-specific surveys as per BC Act requirements and target surveys for rare/threatened species (e.g. Giant Dragonflies, Littlejohn's Tree Frog, Giant Frog).
- Threatened and near-threatened species assessment must address potential impacts on Littlejohn's Tree Frog and platypus and recognise the potential occurrence of rare dragonfly species (e.g., Sydney Hawk, Adam's Emerald) in suitable deep, cool, permanent-flow habitats within the project area.
- Pool water levels and iron staining should be monitored in all suitable breeding pools within swamps, Tributary U, and Honeysuckle Creek

Overall, the assessment cannot be relied upon to evaluate the potential impacts of the Modification.

Recommendation

4. WaterNSW recommends that the aquatic ecology assessment should be revised using standard survey methods for fish, frogs, and rare/threatened species, with improved baseline sampling repeated across seasons at all relevant sites, explicit assessment of impacts on Littlejohn's Tree Frog, platypus, and rare dragonflies, and monitoring of pool water levels and iron staining in all suitable breeding pools within the project area.

Aboriginal Cultural Heritage impacts

WaterNSW is committed to delivering better landowner relationships with Aboriginal communities to achieve best practice Cultural heritage outcomes, protection and management of Country. WaterNSW acknowledges and supports the comments made by the Illawarra Local Aboriginal Land Council (LALC). The Aboriginal Cultural Heritage (ACH) report developed for this Modification have disregarded concerns by the Registered Aboriginal Parties (RAPs) (including the Illawarra LALC). Importantly this includes that the proposed Modification will result in irreversible damage to Country itself and that all sites within this landscape, known or otherwise, have a high cultural and social value. These concerns have not been addressed in a meaningful way.

There is concern that cumulative impacts to ACH may exceed performance criteria. Thirteen ACH sites have already been impacted due to previous mining, and only two further impacts would result in exceedance of the 10% performance criteria threshold. This risk of exceedance is due to:

- There are 25 sites that have been identified as potentially being impacted by subsidence leading to a partial loss of value.
- Predicted tensile strains of up to 1.5 mm/m at open sites and shelter sites, exceed the 0.5 mm/m level at which sandstone fracturing may occur.
- Three of the identified sites are also predicted to be in a location sensitive to valley closure movements which increases risk of impact from rock fracturing.
- Further cumulative impacts remain possible from extraction of already approved Longwalls 312–316 before Longwalls 317–318 are mined, increasing the likelihood of performance criteria exceedance.

Recommendation

5. WaterNSW recommends that a risk assessment should be conducted to consider if Aboriginal Cultural Heritage performance measures will be breached incorporating current approvals and this proposed Modification. Based on this assessment, a contingency plan (or similar) should be prepared to outline proposed steps if a breach was to occur.
6. WaterNSW recommends that Metropolitan Coal should engage Registered Aboriginal Parties in genuine and meaningful consultation. Actions as part of this engagement could include reviewing documents, leading cultural assessments, assisting in developing relevant management plans and input into a risk assessment of breaches to ACH performance criteria.