

Our ref: OUT25/15907

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NSW Department of Planning, Housing and Infrastructure
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9 December 2025

Subject: **Metropolitan Coal Longwalls 317 and 318 Modification 4 (MP08_0149) – Response to Submissions**

Dear Melanie Hollis,

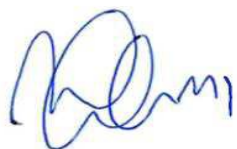
I refer to your request for advice sent on 11 November 2025 to the NSW Department of Climate Change, Energy, the Environment and Water (DCCEEW) Water Group about the above matter.

The NSW DCCEEW Water Group has reviewed the Response to Submissions and determined that the information provided is insufficient to adequately address the key issues previously raised regarding potential impacts to high priority groundwater dependent ecosystems and watercourses. Accordingly, further information is requested to address these issues, in addition to clarifying potential surface water take. DCCEEW Water supports the proponent's construction and decommissioning method for Ventilation Shaft 4 to mitigate groundwater take and potential impacts.

Please see **Attachment A** for more detail.

Should you have any further queries in relation to this submission please do not hesitate to contact the Water Assessments team at water.assessments@dcceew.nsw.gov.au.

Yours sincerely

A handwritten signature in blue ink, appearing to read "M. Isaacs".

Mitchell Isaacs
Executive Director, Water Knowledge
NSW Department of Climate Change, Energy, the Environment and Water

Attachment A

Detailed advice to DPHI Planning & Assessment regarding the Metropolitan Coal LW 317 & 318 Modification 4 – Response to Submissions

1.0 Groundwater and surface water impact assessment and management

1.1 Recommendation – pre-determination

That the Department of Planning, Housing and Infrastructure (DPHI) requests the proponent to apply the correct impact assessment criteria and revise the groundwater model and impact assessment to address the minimal impact considerations of the NSW Aquifer Interference Policy (AIP) for high priority groundwater dependent ecosystems (GDEs).

Explanation

The Response to Submissions uses a 2 metre drawdown trigger for assessing impacts on GDEs which is not consistent with the AIP. The AIP requires that the Level 1 minimal impact consideration for interference to the watertable be $\leq 10\%$ cumulative variation, allowing for climatic fluctuations, measured 40m from any high-priority GDE in porous and fractured rock groundwater sources. The current modelling and assessment needs revising.

The studies provided do not demonstrate that variations exceeding a Level 1 AIP impact will not compromise the long term viability of GDEs. The references to impacts being limited to upper sandstone and regolith profiles is not adequately supported, especially considering the biodiversity report's acknowledgement of potential habitat degradation and partial ecological function loss over time.

1.2 Recommendation – pre-determination

DPHI should consider a minimum 40 m buffer between the mining induced 20 mm subsidence limit for Longwalls 317 and 318 and the boundaries of GDEs (S106, S74) and Honeysuckle Creek, should the revised modelling and assessment detailed in Recommendation 1.1 above indicate the Level 1 AIP minimal impact criteria would be exceeded.

Explanation

Subsidence of the predicted magnitude could significantly alter swamps and watercourses above and downstream of the panels. Historical evidence from the Woronora Plateau region shows that induced fracturing has previously caused stream flow loss and swamp drainage with irreversible impacts.

The proponent has not adequately demonstrated that induced leakage will not occur from GDEs (S106, S74), Honeysuckle Creek or other minor watercourses within the modification footprint. The proposed remediation measures for streambed cracking are unlikely to succeed, particularly for upland swamps, given past attempts have not been successful. Sealing surface rock bar fractures requires observation of open fractures and monitoring the effectiveness of remedial actions. This appears possible only on a limited range of features such as rock bars that do not have varying tensile strength and height above downstream

pools. No evidence has been presented that remediation of sub-surface regolith or rock base underlying upland swamps is feasible.

The proponent's response restates groundwater model outputs for Swamp 106, focusing on the spatial extent of predicted drawdown within the underlying regolith. However, no analysis is provided on how the predicted drawdown may alter the ecohydrological function of the swamp. The ecological viability of upland swamps like Swamp 106 is dependent on stable groundwater levels and sustained soil saturation. These swamps provide essential ecosystem functions including water regulation, carbon storage, fire resilience, and specialist habitat for groundwater dependent biota. Even localised declines in groundwater levels, altered hydraulic gradients and changes in shallow flow paths can result in loss of these ecosystem functions. The proponent's response does not address how the predicted 1-2 m drawdown beneath part of Swamp 106 would result in negligible impact to:

- groundwater inputs to the swamp,
- the persistence of saturated swamp sediments,
- the swamp's capacity to regulate baseflows for downstream watercourses,
- vegetation communities, or
- swamp dependent biota.

The proponent's Attachment 5 dismisses a reference to Cairns et al. (2024) from DCCEEW Water's previous response as inappropriate, given that impacts to Swamp 106 are likely to be less severe because predicted subsidence, upsidence, and closure values are smaller and because connective cracking to deeper strata is not expected for S106 (in contrast to the Cairns et al. (2024) case study). It is important to note that ecohydrological degradation of upland swamps can occur under a range of subsidence conditions, including situations where connective cracking to deeper strata does not occur, and impacts manifest as altered shallow groundwater gradients, enhanced basal seepage from the swamp. Even though the magnitude of subsidence and fracturing beneath S106 would be lower than that of the swamp studied by Cairns et al. (2024), the ecohydrological consequences could still be significant, as upland swamps depend on sustained shallow groundwater levels and saturation of peat-forming sediment layers.

The proponent's argument equates "less subsidence/smaller fractures" with "negligible functional impact", which is not supported by the available literature on upland swamp ecohydrology. The proponent's characterisation of predicted baseflow changes as a "redistribution of shallow groundwater flows" does not address the water quality and geomorphic consequences of such redistributions. When surface or near-surface flows are diverted through subsidence fractures, re-emerging water is often of impaired quality (elevated metal concentrations and salinity, and low dissolved oxygen) and can cause localised erosion or scouring.

2.0 Water licensing

2.1 Recommendation – pre-determination

That DPHI requests the proponent to:

- Clarify the maximum annual surface water take due to the project.
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- Demonstrate the ability to obtain the necessary entitlement in the relevant water source.

Explanation

The proponent states there is no water take from surface water sources based on a review of their model and consideration of Figure 7 of the Guidelines for Groundwater Documentation for SSD/SSI Projects. However, it is unclear if this has included water take from:

- all watercourses above the mining area,
- all watercourses within the area of impact such as streams P, R, S and U, and
- stream bed/surface fracturing.

Diversion of surface water to the underlying strata is considered surface water take. The proponent has stated that there will be fracturing of creek beds and a moderate risk of fracturing Swamp 106 which indicates the need to quantify and account for surface water take.

Upon confirmation of the surface water take, the proponent will need to demonstrate the ability to obtain the entitlement, noting that the Access Licence Dealings Principles Order allows assignment of some water rights from WaterNSW to miners, including the Metropolitan Colliery.

2.2 Recommendation – post determination

That DPHI requests the proponent to ensure sufficient water entitlement is held or can be obtained prior to water take occurring to account for the maximum potential water take in all impacted water sources.

Explanation

The proponent has revised the estimates of groundwater take to account for baseflow loss to watercourses to 222 ML/y, however, currently only holds 189.5 units of entitlement in existing Water Access Licences. An additional 39.5 units is therefore required and is to be purchased on the water market. The proponent has not assessed water allocation on the trading market, however a search of recent trading history indicates there is an active trading market.

The volume of surface water entitlement required needs further clarification based on the requests in Recommendation 2.1 above.

The proponent should note that a controlled allocation order registration of interest period is currently open until 19 December 5pm, which includes shares in the Sydney Basin Central Groundwater Source.

End Attachment A
