

8 March 2021

Department of Planning, Industry & Environment  
Director Resource Assessments  
Attn: Jack Turner

Our ref: 10.121.046.

Your ref: SSD MP09 0161 Mod 2

[Jack.Turner@planning.nsw.gov.au](mailto:Jack.Turner@planning.nsw.gov.au)

Dear Jack,

### **Wongawilli Colliery North West Mains Development (SSD: PA09\_0161-Mod-2)**

Thank you for providing Dams Safety NSW (DSNSW) the opportunity to provide comment on the above proposal. DSNSW has reviewed the supporting documents and understands that the key aspects of the proposal are to modify the alignment of the western end of the mains extending the main headings by approximately 2.9km linear km to access the existing Wongawilli Ventilation Shaft. The project will extend the life of the mine by five years providing significant local and state benefits.

A large section of the proposed mining is within the Avon Notification Area (NA) and under the jurisdiction of the DSNSW. Only first workings are proposed in the development, with no extraction, consequently any surface ground movements are expected to be very small. The documentation regarding proposed surface subsidence indicates that there is no potential for the proposed main heading development roadways to cause surface ground movements of any consequence. Under 'normal' first working conditions that involve a reasonable depth of cover the proposal would cause no concerns.

As it is however, the proposed mining in the current development involves driving main roads under one of the Avon Reservoir arms with depths of cover as low as only 60m. Mining at such shallow depths under reservoirs is unprecedented in the Southern Coal Fields.

The full extent of any structural complexity in the local geology will only be revealed as the workings proceed, however several faults intersecting the strata beneath the reservoir arms have already been identified as has at least one dyke.

Faults and dykes intersected during mining in the Southern Coal Fields have so far been found not to transmit water, with the dykes themselves often being demonstrably impermeable. One of the reasons the faults do not act as conduits for water is because the pressure of the overburden keeps the faults in compression. This might not be the case in the proposed mining due to the shallow depth of cover.

Additionally while local dykes are themselves impermeable they coke the coal into which they intrude and can result in porous permeable regions of cinder. The following is therefore recommended:

- That the mine will develop and implement appropriate subsidence monitoring programs.
- That the mine will undertake in-seam drilling well ahead of main development to establish an understanding of any structures ahead of the mining which might result in connections developing between the mine and surface.
- That the mine undertake water monitoring measuring both volume and hydrochemistry of the waters entering the mine, establishing a base line water fingerprint and water make well prior to mining under the reservoir. This will provide early indications that joints or faults are opening up or that the provenance of the waters are changing for example from groundwater to reservoir water.
- That the mine develop a series of emergency TARPs that include the notification of any relevant organisations (eg WaterNSW, DSNSW) should water make significantly increase.
- That the mine develop a Contingency Plan to prevent or halt inrush, prior to developing roadways beneath the reservoir

Yours faithfully,



H. Middleton  
Manager Mining Impacts  
Dams Safety NSW