

METROPOLITAN COAL MINE LONGWALLS 303 EXTRACTION PLAN Record of Decision

In granting a conditional approval of Metropolitan Coal's Extraction Plan application, I have carefully considered the following:

1. PROJECT APPROVAL STATUS

- The Metropolitan Coal Mine was approved by the Minister for Planning in June 2009 and has since been modified on three occasions.
- The existing project approval allows extraction of up to 3.2 million tonnes of coal per year for 23 years using longwall mining methods.
- The project approval requires an Extraction Plan to be approved by the Secretary before mining in specific longwalls commences.
- Mining is undertaken in two distinct areas: the southern and northern mining domains. Mining is now completed in the southern domain (Longwalls 20 to 27).
- In June 2016, the Department approved first workings for Longwalls 301-303 based on 163 metre panel widths, 45 metre chain pillars and shortened extraction lengths.
- Metropolitan Coal submitted the *Metropolitan Coal Longwalls 301-303 Extraction Plan* to the Department in November 2016. The Extraction Plan outlined the proposed management, mitigation, monitoring and reporting of potential subsidence impacts and environmental consequences in the proposed underground mining area during the secondary extraction of Longwalls 301 to 303 at Metropolitan Coal Mine.
- On 11 May 2017, the Secretary of the Department approved the extraction of Longwalls 301 and 302, subject to strict conditions included in the *Metropolitan Coal Mine Longwalls 301-303 Extraction Plan Record of Decision*. This approval did not approve the extraction of Longwall 303.

2. LONGWALL 303 ASSESSMENT BACKGROUND

- On 6 July 2018, the Department received an application and associated assessment seeking approval to extract Longwall 303 of the Metropolitan Coal Mine.
- The Department sought comments from relevant State agencies and the Independent Expert Panel for Mining in the Catchment (the Panel) on this application.
- On 13 August 2018, the Panel advised the Department that the application lacked sufficient detail to provide finalised advice. The Panel posed several questions requiring a response.
- Based on the Panel's advice, on 16 August 2018, the Department advised Metropolitan Coal that it was not able to approve the extraction of Longwall 303 without first assessing the results of recent monitoring, any revised subsidence predictions and any changes to the environmental management measures proposed. Consequently, the Department requested an update of the existing Longwalls 301-303 Extraction Plan, which was submitted almost two years previously.
- On 19 September 2018, Metropolitan Coal submitted an updated Extraction Plan for Longwalls 301-303. This included revised subsidence modelling and predictions taking into account further shortening of the longwalls proposed since the November 2016 Extraction Plan was prepared.
- The Department sought further comments from the relevant State agencies on 19 September 2018.
- On 21 September 2018, Metropolitan Coal submitted direct responses to the Department and the Panel.
- On 12 October 2018, the Department referred the updated Extraction Plan and accompanying response to both the Department and the Panel's requests to the Panel for further consideration.
- On 6 November 2018, the Panel provided a response to the Department's referral (see Independent Expert Panel Considerations section).

3. SOCIO-ECONOMIC IMPACTS

- The Department estimates that the remaining coal in the northern domain at the mine would provide about \$165 million in State Government revenue through royalties over the next 15 years.
- Metropolitan Coal produces metallurgical coking coal, which is transported by rail to Port Kembla Coal Terminal (employing 120 persons) for shipping to domestic and overseas customers.
- The company provides 245 direct jobs at the mine and is a significant contributor to regional employment.

4. INDEPENDENT EXPERT PANEL CONSIDERATIONS

- A copy of the Panel's advice dated 6 November 2018 is **attached** to this Record of Decision.
- In its advice, the Panel advised that:
 - the principal mining-induced effect that impacts on achieving performance measures for the Eastern Tributary is valley closure;
 - impacts have occurred on the Eastern Tributary at levels of valley closure of less than 200 mm;
 - these impacts are reported to extend at least 430 metres away from the nearest longwall goaf;
 - the proposed mining geometry is very likely to result in an exceedance of performance measures at ponds ETAS to ETAU;
 - if the impact zone extends as far ahead of the face of Longwall 303 as it did ahead of the flank of Longwall 27, then Longwall 303 would need to be stopped at least 430 metres short of ETAU; and
 - the likely extent of the impact zone ahead of Longwall 303 needs to be quantified by Metropolitan Coal.
- The Department's Compliance Branch is currently finalising its investigation into the previous impacts on Eastern Tributary.
- The Department considers that it is important to ensure that there are no further impacts on Eastern Tributary. Consequently, the Department has acknowledged the Panel's comments on the setback of Longwall 303 that would be required to ensure no further impacts occur, and has conditioned this approval accordingly.

5. ENVIRONMENTAL FEATURES

- Eastern Tributary:
 - The Department notes that during the time of the original assessment of the Metropolitan Coal Project, predicted closure levels of 200 mm or less were considered to be appropriate for protecting surface features and in particular watercourses.
 - However, based on recent data provided by Metropolitan Coal and the Panel's advice dated 6 November 2018, the Department considers that valley closure levels of less than 200 mm may still cause impacts on Eastern Tributary.
 - Consequently, the Department considers a precautionary approach is appropriate and that Longwall 303 should be further set back from the Eastern Tributary (i.e. at least 450 metres from Pool ETAU).
- Woronora Reservoir:
 - The dam is not predicted to experience any measurable vertical subsidence, and only very minor tilts, strains, upsidence or valley closure.
 - The previous Extraction Plan for Longwalls 301-302 required the engagement of independent experts to prepare a *Woronora Reservoir Impact Strategy*, which would provide a staged plan of action for further investigations and a report into the impacts of mining near the reservoir.
 - Professor Bruce Hebblewhite, Dr Frans Kalf and Emeritus Professor Thomas McMahon were endorsed by the Department to prepare the *Woronora Reservoir Impact Strategy* in May 2017.
 - The *Woronora Reservoir Strategy Report - Stage 1* was provided by the independent experts to the Department in September 2017.
 - The Stage 1 report found that the proposed surface subsidence monitoring program appeared to be reasonable and appropriate, given the major limitations of access in some parts of the surface approaching the reservoir (i.e. steep slopes and dense vegetation).
 - The Stage 1 report also included recommendations for further groundwater and surface water investigations and monitoring and was approved by the Secretary for Planning in December 2017.
 - The Department's recommended increased setback for Longwall 303 would further protect Woronora Reservoir from any potential impact until further information can be provided.

- Swamps:
 - There are six upland swamps located above Longwalls 301-303, however they are not listed in the project approval and no specific performance criteria apply to them.
 - Consequently, the Department is satisfied that the predicted impacts to these swamps are consistent with those that were assessed and approved for the original project.
 - The three upland swamps that are listed in the project approval with specific performance criteria would not experience any subsidence impacts as they are located 1.6 km from the longwalls.

6. MINE LAYOUT

- The Department acknowledges that the mine has generally been designed to limit impacts on natural and built features at the surface, including relatively narrow longwall panel widths of either 138 m or 163 m.
- In comparison, other similar underground coal mines in the region extract much wider longwalls, including Dendrobium Coal Mine (longwall panel widths of 300 m) and Bulli Seam Operations (310 m).
- Nevertheless, the Department has adopted a precautionary approach to its assessment of recent Extraction Plans, which places an emphasis on installing additional monitoring and improving our technical understanding of the potential impacts of mining in the catchment.
- Consequently, the Extraction Plan approval only allowed mining to take place in Longwalls 301 and 302, subject to strict conditions. The extraction of Longwall 303 was not allowed until further data had been gathered and a revised assessment had been prepared.
- The Department is satisfied that the Extraction Plan for Longwall 303 has been appropriately updated with all relevant information that is currently available.

7. CONDITIONS ON LONGWALL 303

The Department has imposed a range of strict conditions on the Extraction Plan approval for Longwall 303, which are provided below.

1. This approval only permits secondary extraction of 1,143 metres of Longwall 303.
2. This conditional approval of Longwall 303 in no way endorses or approves the proposed first workings layout for Longwall 304 as proposed in the Proponent's response to the Independent Expert Panel for Mining in the Catchment dated 21 September 2018.
3. This approval in no way supersedes or removes the requirements of the Secretary's approval of Longwalls 301-302 in the Record of Decision dated 11 May 2017. Metropolitan Coal is required to comply with conditions set out in both this approval and the Record of Decision dated 11 May 2017.

 8/11/18

David Kitto
Executive Director
Resource Assessments and Business Systems
as nominee of the Secretary