

Linda Zanotto
Principal Approvals
Illawarra Metallurgical Coal
Sent via NSW Major Project Portal only

20/11/2024

Subject: Longwall 23 – Area 3C Subsidence Management Plan - Modification 1

Dear Ms Zanotto

I refer to your application dated 14 May 2024, submitted in accordance with Condition 7, Schedule 3 of the Dendrobium Mine development consent (DA 60-03-2001). I note your application seeks to modify the layout of Longwall (LW) 23 approved by the Subsidence Management Plan for Area 3C on 20 December 2022. I also refer to your responses dated 22 May 2024 and 23 August 2024 to the Department's requests for additional information.

This is the first modification (Modification 1) to the Area 3C Subsidence Management Plan. Modification 1 seeks approval to:

- change the mining direction of LW 23 by retreating the longwall from the west towards the east;
- shorten the commencing (western) end of LW 23 by approximately 47 m;
- extend the finishing (eastern) end of LW 23 by approximately 74 m; and
- narrow the overall void width of LW 23 from 305 m to 210.5 m.

The Department acknowledges that the modified layout for LW 23 has been proposed to provide additional setback to an Aboriginal cultural heritage site of high significance located to the north of LW 23. This setback has been achieved by narrowing the void width.

The Department has carefully reviewed your application and notes the following revised subsidence impact predictions for the modified layout compared to the approved layout:

- **Streams:** a small reduction in baseflow losses, cease to flow days per year and water quality impacts for most streams, except LC6. An additional 158m of LC6 would be directly undermined, resulting in small, short-term increases in baseflow losses, cease to flow days and water quality impacts in this tributary;
- **Connective fracturing:** a 15% reduction in the inferred height of connected fracturing, and reduced potential for seam-to-surface cracking;
- **Cordeaux Reservoir:** a negligible reduction (-0.02 ML/day) in seepage from the reservoir;
- **Groundwater:** a reduction in groundwater inflows in the order of 0.2-1.0 ML/d during extraction and a reduction in drawdown in the lower Hawkesbury Sandstone;

- **Swamps:** a reduction in predicted shallow groundwater impacts beneath swamps 7 and 141, and an increase in the likelihood of impacts to Swamp 154. The area of Swamp 154 located within 120m of LW 23 would increase from 45% to 88%. HGEO (2024) has assessed the impact of this change on the potential for shallow groundwater effects to Swamp 154 and concludes that impacts to the swamp are no longer 'possible', but 'likely';
- **Aboriginal heritage:** a reduction in vertical subsidence at Aboriginal cultural heritage site Dendrobium 3 (AHIMS ID#52-2-2219, Shelter with Art) however harm to the site is still predicted.

The Department notes the predicted reduction in impacts to many environmental features, due largely to narrowing the void width from 305 m to 210.5 m. The Department agrees with the view of WaterNSW that these reductions are likely to be nullified by any subsequent adjacent longwalls located to the north of LW 23.

Of key concern to the Department is the increased likelihood of shallow groundwater impacts to Swamp 154. The subsidence impact performance measure for Swamp 154, established by the Area 3C Subsidence Management Plan is for 'minor environmental consequences'. The Department considers that likely shallow groundwater effects in up to 88% of Swamp 154 is unlikely to achieve this performance measure.

Further, condition 1 schedule 2 of DA60-03-2001, requires Illawarra Coal Holdings implement all reasonable and feasible measures to prevent and/or minimise any harm to the environment that may result from the operation of the development.

The Department considers that the proposed extension to the eastern end of LW 23 does not demonstrate that reasonable and feasible measures have been implemented to minimise harm to Swamp 154. Maintaining the existing approved eastern limit of LW 23 would:

- reduce the risk of harm to Swamp 154;
- reduce the extent of tributary LC6 directly undermined by LW 23; and
- not alter the proposed setback to Aboriginal heritage site located north of LW 23.

The Department acknowledges the concerns raised by Illawarra Coal Holdings should an extension to the eastern end of LW 23 not be approved, however notes that the operational matters raised are the result of Illawarra Coal Holdings' risk-based decision to undertake development works that are not consistent with the approved Area 3C Subsidence Management Plan mine plan.

Accordingly, the Planning Secretary has approved the following modifications to LW 23 proposed under Modification 1:

- changing the mining direction by retreating the longwall from the west towards the east;
- shortening the commencing (western) end by approximately 47 m; and
- narrowing the overall void width from 305 m to 210.5 m.

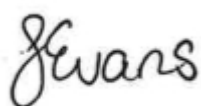
The Planning Secretary has not approved the following modification to LW 23 proposed under Modification 1:

- extending the finishing (eastern) end by approximately 74 m.

You are requested to submit a revised mine plan reflecting the approved layout of LW 23 to the Planning Secretary within 4 weeks of the date of this approval.

If you wish to discuss the matter further, please contact Gabrielle Allan on 9585 6078.

Yours sincerely

A handwritten signature in black ink that reads "J Evans". The signature is written in a cursive, slightly slanted style.

Jessie Evans
Director, Resource Assessments
Resource Assessments

As nominee of the Planning Secretary