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8 December 2017

Planning Assessment Commission
Level 3, 201 Elizabeth Street
Sydney NSW 2000

Attention: Mr Gordon Kirkby, Chair for DA 305-7-2003 MOD 17

Dear Gordon,

RE: WAMBO COAL MINE MOD 17 – CLIFF LINE PERFORMANCE MEASURE

Wambo Coal would like to take the opportunity to provide comment on the proposed subsidence impact performance measure for low level cliffs in the Draft Notice of Modification prepared by the Department of Planning and Environment.

Description of the Low Level Cliffs

The low level cliffs (cyan hatch in attached figure) are located near the bottom of the steep slopes above the south-western ends of the proposed Longwall 20 and Longwall 21. These cliffs have heights varying between 10 and 15 m and are generally discontinuous.

The total length of the low level cliffs located above the proposed longwalls is approximately 150 metres, with a face area of approximately 2,000 m².

These cliffs:

- are located on Wambo Coal-owned land and therefore any rock falls would not present a public safety risk;
- are not visible from public land and therefore any rock falls would not have a visual impact; and
- are less significant than the larger cliffs along the escarpment that are located outside the angle of draw of the longwalls.

Photographs of these cliffs are also enclosed with this letter.

Subsidence Impact Predictions for Low Level Cliffs

The Subsidence Assessment (Appendix A of the EA) notes the inherent difficulty in assessing the likelihood of cliff instabilities (e.g. due to factors include jointing, inclusions and weaknesses within the rockmass that are difficult to quantify). It is also noted that cliffs are subject to natural weathering processes. It is therefore possible that cliff instabilities may occur from time to time (including during mining) that may be attributable to either natural causes, mine subsidence, or both (Section 5.6.4 of the Subsidence Assessment).

The Subsidence Assessment uses data collected across 2,000 metres (plan length) of cliff line previously undermined at other mines with similar subsidence levels to estimate the area of the cliff that may be potentially impacted. Based on this empirical data, MSEC predicts that approximately 7 to 10 % of the total length, or approximately 3 to 5 % of the total face area, of the low level cliffs located directly above the proposed longwalls could be impacted.

The assessments of environmental consequence (e.g. in the Fauna Assessment) were made cognisant of this uncertainty in the predictions, also noting that the cliffs above the MOD 17 longwalls represent a very small portion of the cliff habitat available in the Wambo area.

Proposed Subsidence Impact Performance Measure

Wambo Coal does not consider that the application of a subsidence impact performance measure to the low level cliffs is appropriate for the following reasons:

- The feature is not of particular significance to warrant a subsidence impact performance measure.
- The area of cliff is too small to effectively apply a statistical approach as a rigid, inflexible performance measure. The performance measure would only apply to 2,000 m² of cliff face (150 metres of length), and therefore the performance measure would be exceeded with dislodgement of a boulder with a face area of 100 m² (i.e. approximately 15 metres x 7 metres, or potentially only one rock fall).
- Subsidence impact performance measures are applied to encourage an adaptive management approach across several longwalls. In this case, the performance measure would relate to cliffs associated with only two consecutive longwalls. Therefore, an exceedance of the proposed performance measure would not drive any adaptation of future longwall design or management approaches.

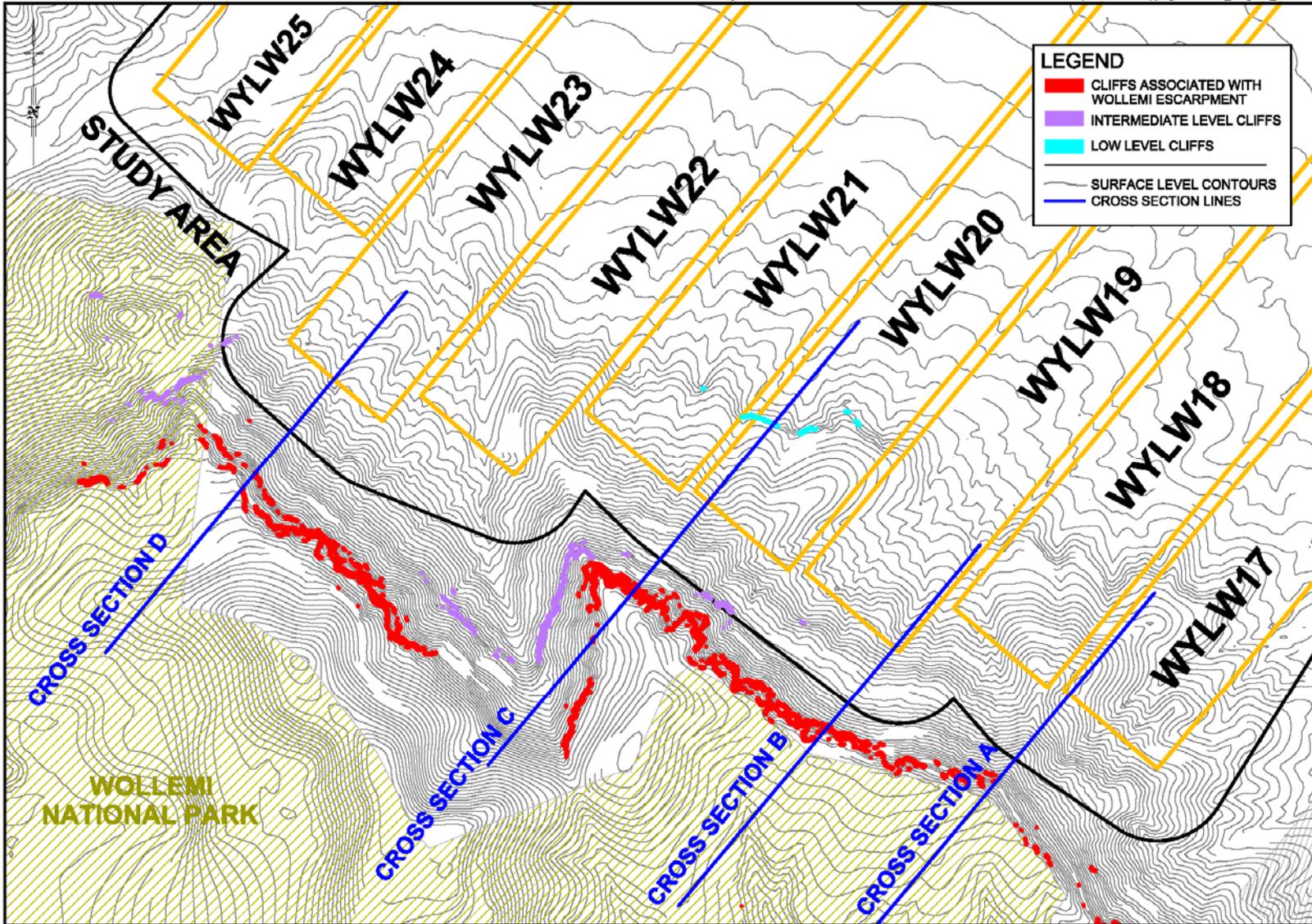
It would be Wambo Coal's preference that the proposed subsidence impact performance measure is not included in the final Notice of Modification. Notwithstanding, it is noted Wambo Coal generally accepts the draft conditions and does not wish to materially delay any determination.

Please do not hesitate to contact me on (02) 6570 2209 if you have any queries in regard to the above or require additional information.

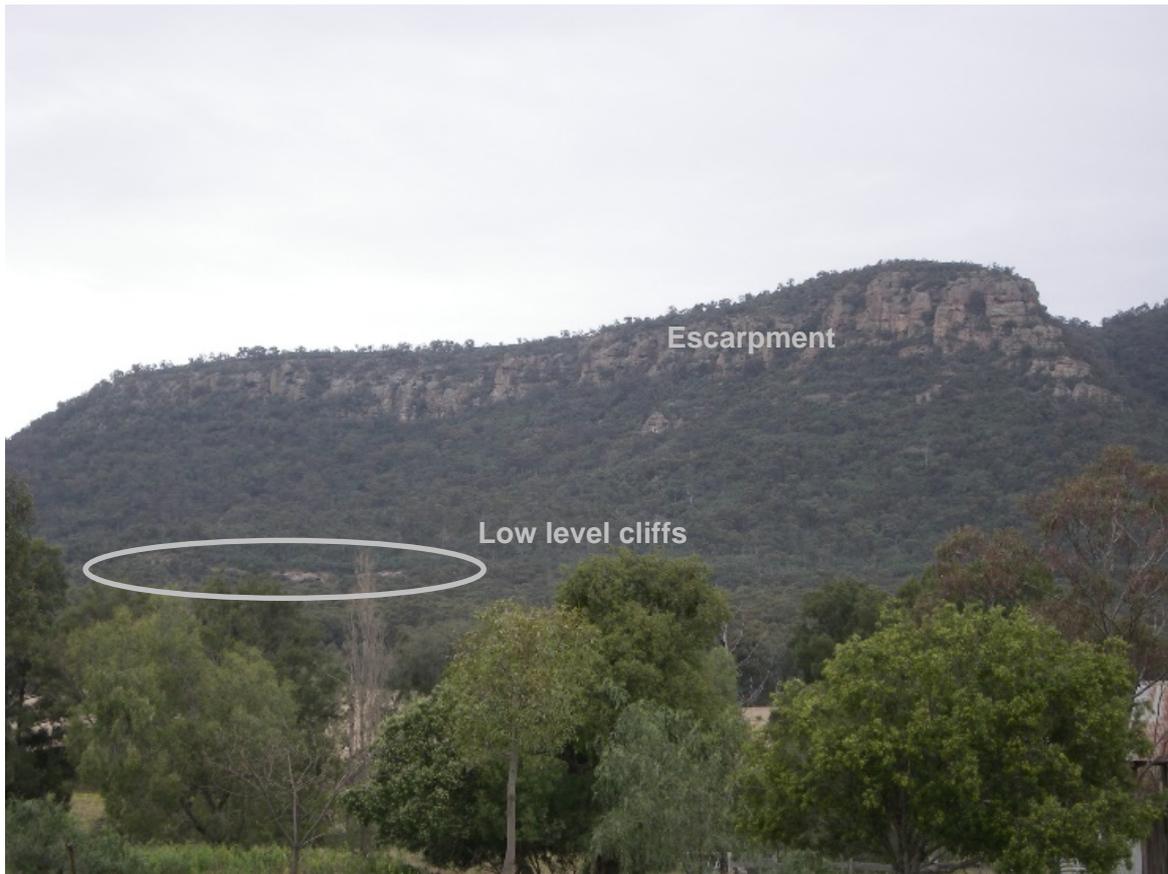
Yours faithfully



Steve Peart
Environment and Community Manager
WAMBO COAL PTY LIMITED



Location of Cliffs Relative to MOD 17 Longwalls



Photograph of Cliffs to the South-West of Longwalls 19 to 23

Note: Low level cliffs are circled in grey on the photograph

Source: MSEC (2017)



Photograph of Low Level Cliffs Taken by an Unmanned Aerial Vehicle