

Our ref: DA305-7-2003-i-PA-72

Peter Jaeger
Manager - Environment & Community
Wambo Coal Pty Limited
100 Melbourne Street
South Brisbane QLD 4101

6 December 2023

Subject: Wambo Coal Mine – Approval of Extraction Plan for Longwalls 24 to 26

Dear Mr Jaeger

I refer to the Wambo Underground Coal Mine Extraction Plan for Longwalls 24 to 26 (revision C, dated November 2023), which has been prepared in accordance with condition B7 of Schedule 2 of DA305-7-2003-i.

Since modification 19 was approved in January 2023, the Department acknowledges that there has been a minor amendment to the length of Longwall 24 (reduced by approximately 39 meters at the southern end), which has been reflected in the revised Extraction Plan. The Department considers that the shortening of Longwall 24 would result in similar or less subsidence related impacts compared to that presented in modification 19.

The Department has carefully reviewed the revised Extraction Plan (including its various sub-plans) and considers that it generally addresses the relevant requirements of the development consent (see Attachment A). Accordingly, the Planning Secretary approves the Extraction Plan (revision C, dated November 2023).

However, the Department requests that an updated Water Management Plan and Groundwater Management Plan be submitted by 31 December 2024 to incorporate additional baseline data collected for the new vibrating wire piezometers (DDH1234, DDH1235 and DDH1240) and Waterfall Creek bores (GW40a, GW40b, GW41a and GW41b) and water quality triggers for the Waterfall Creek bores (GW40a, GW40b, GW41a and GW41b).

You are reminded that if there are any inconsistencies between the Extraction Plan and the conditions of consent, the conditions prevail. Please ensure you make the document publicly available on the project website at the earliest convenience.

Should you wish to discuss the matter further, please contact Tegan Cole on 02 9895 6457 or via email at tegan.cole@planning.nsw.gov.au.

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Yours sincerely

Stephen O'Donoghue

Director Resource Assessments

as nominee of the Planning Secretary



ATTACHMENT A

Department's Consideration of the Longwall 24 to 26 Extraction Plan

1. Statutory Context

The Wambo Underground Coal Mine is approved for longwall mining under development consent DA305-7-2003-i. The project is owned and operated by Wambo Coal Pty Limited (WCPL).

The South Bates Extension area is a component of the Wambo Underground Coal Mine. WCPL is approved to extract coal from the Whybrow seam, which produces a low ash thermal coal.

In August 2022, WCPL submitted an application to modify DA305-7-2003-i to allow for the optimisation and continued operations of the South Bates Extension area through the reorientation of Longwalls 24 and 25, and the addition of Longwall 26. This modification (modification 19) was approved on 25 January 2023.

2. Extraction Plan Application Area (Longwalls 24 to 26)

This Extraction Plan applies to Longwalls 24 to 26 in the South Bates Extension area within ML 1572, ML 1806 and MLA 632 (see Figure 1).

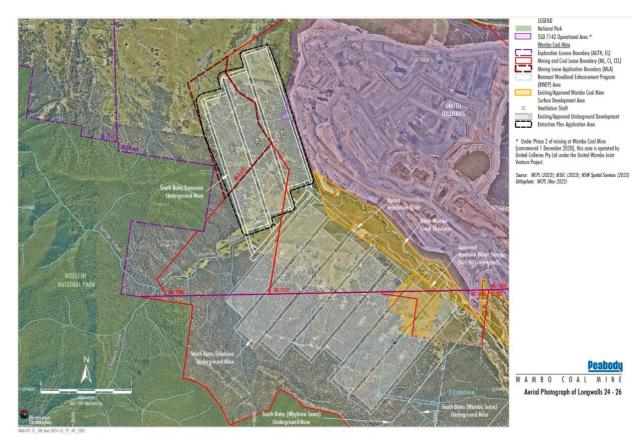


Figure 1 | Longwall 24 to 26 Extraction Plan Area



3. Mining Schedule

WCPL is currently mining Longwall 23. Development (first workings) of Longwall 24 commenced in 2022, with coal extraction (second workings) currently scheduled to commence in Longwall 24 in December 2023.

4. Changes to Extraction Plan – Longwalls 24 to 26

Since modification 19 was approved in January 2023, the southern end of Longwall 24 has been reduced by approximately 39 meters, which has been reflected in the revised Extraction Plan. The Subsidence Assessment titled 'South Bates Extension Underground Mine Longwalls 24 to 26 Extraction Plan' prepared by Mine Subsidence Engineering Consultants (Report 1 of the Extraction Plan), incorporates the revised layout and concluded that the maximum predicted subsidence effects are the same as, or slightly less than, those presented in the modification 19 modification report titled 'Wambo Coal Mine Longwall 24 to 26 Modification' dated August 2022.

Accordingly, the Department considers that the shortening of Longwall 24 would result in similar or less subsidence related impacts compared to the currently approved impacts.

5. Extraction Plan Requirements

As required by condition B7 of Schedule 2 of the development consent DA305-7-2003-i, WCPL submitted an Extraction Plan for approval, which must be approved by the Planning Secretary prior to the commencement of second workings in Longwalls 24 to 26.

The Department considers that the Extraction Plan (including its various sub-plans) addresses the relevant requirements of the development consent (see Table 2).

6. Agency Consultation

The Extraction Plan has been revised to address comments provided by the Biodiversity Conservation Division (BCD), Heritage NSW (including the Heritage Council of NSW), the Resources Regulator and DPE Water.

The Department considers that the revised Extraction Plan (including its various sub-plans) addresses the relevant comments made by agencies (see **Table 2**).

7. Subsidence Predictions

The subsidence predictions for Longwalls 24 to 26 are summarised below in Table 1.

The maximum predicted subsidence effects for Longwalls 24 to 26 are:

- 1950 mm vertical subsidence (e.g., 65 % of the maximum extraction height of 3.0 m):
- 75 mm/m tilt (i.e. 7.5 % or 1 in 13); and
- greater than 3.0 km-1 curvature (e.g., a minimum radius of curvature less than 0.3 km).



The maximum subsidence effects are predicted to occur above the eastern parts of Longwalls 24 to 26, where the depths of cover are the shallowest. Although the layout of Longwall 24 has slightly changed from when modification 19 was approved (shortened at the southern end by approximately 39 m), the Department acknowledges that there are no changes to the maximum predicted subsidence effects, including vertical subsidence and tilt.

Table 1 | Maximum Predicted Subsidence for Longwalls 24 to 26

Longwalls	Depth of Cover to the Whybrow Seam (m)	Subsidence (mm)	Tilt (mm/m)	Hogging Curvature (km ⁻¹)	Sagging Curvature (km ⁻¹)
Longwall 24	60 to 240	1,850	70	> 3.0	> 3.0
Longwall 25		1,950	75	> 3.0	> 3.0
Longwall 26		1,950	75	> 3.0	> 3.0
Cumulative Subsidence		1,950	75	> 3.0	> 3.0

Note: mm = millimetres; mm/m = millimetres per metre; km-1 = per kilometre.

8. Mining and Resource Recovery Parameters for Longwalls 24 to 26

The total resource recovery is 5.7 million tonnes of run of mine coal from the Whybrow seam with an Extraction Plan surface area of approximately 118 ha.

9. Key Issues

The key issues associated with the modification include potential impacts on key natural and built features, surface water, groundwater, biodiversity, greenhouse gas emissions and Aboriginal and historic heritage. For further information on the Department's assessment of these issues, refer to the 'Departments Assessment Report Mod 19' under 'Determination' on the Department's website at:

https://www.planningportal.nsw.gov.au/major-projects/projects/wambo-coal-mine-mod-19modification-longwalls-24-26

10. Conclusion

The Extraction Plan and its component plans set out a range of impact avoidance, mitigation, monitoring, review, and adaptive management measures developed with consideration of feedback from agencies, Registered Aboriginal Parties, members of the community, and infrastructure owners.

The Department has reviewed the revised Extraction Plan and its sub-plans as relevant to Longwalls 24 to 26 and consulted with a number of other relevant agencies regarding their content. The Department notes that the Extraction Plan seeks approval for a slightly modified layout of Longwalls 24 to 26 compared to the layout presented in the



modification 19 modification report titled 'Wambo Coal Mine Longwall 24 to 26 Modification', dated August 2022.

The Department considers that the revised layout would result in similar or less subsidence related impacts to those approved as part of the modification 19 layout.

The Department considers that the environmental consequences associated with the extraction of Longwalls 24 to 26 are within the range of impacts approved under DA305-7-2003-i (as modified).

The Department also considers that WCPL has developed an Extraction Plan and range of component plans such that any unexpected impacts can be appropriately managed in accordance with the relevant requirements of DA305-7-2003-i and other relevant approvals.

Accordingly, the Department considers that the Extraction Plan for Longwalls 24 to 26 (revision C, dated November 2023) should be approved.



Table 2 | Department's Review Comments for Wambo Extraction Plan - Longwalls 24 to 26

Wambo Underground Coal Mine Consent (DA305-7-2003-i) (Schedule 2)	Satisfactory (Yes/No)	Comment
SUBSIDENCE Performance Measures – Natural and Heritage Features etc. B1. The Applicant must ensure that underground mining operations under approval of Modification 9 comply with the performance measures in Table 1: Subsidence impact performance measures – natural and heritage feature	n Table 1. res etc Yes	Section 3 of the Extraction Plan provides a summary of the management, monitoring, performance indicators and contingency measures for water, land, biodiversity, heritage, built features and public safety. These are included and expanded upon in the appendices to the Extraction Plan and are considered adequate.
Performance Measures – Built Features B4. The Applicant must ensure that underground mining operations under approval of Modification 9 comply with the performance measures in Table 2: Subsidence impact performance measures – built features.	V	Section 4 and Appendix E and F of the Extraction Plan details the mitigation, monitoring and management measures implemented to ensure compliance with this condition.



Wambo Underground Coal Mine Consent (DA305-7-2003-i) (Schedule 2)		Comment
Performance Measures		
B5. Any dispute between the Applicant and the owner of any built feature over the interpretation, application or implementation of the performance measures in Table 2 is to be settled by the Planning Secretary, following consultation with the Resources Regulator. Any decision by the Planning Secretary shall be final.	Yes	Table A1-2 of the Extraction Plan indicates that the surface area above Longwalls 24 to 26 is located entirely within WCPL owned land. Further information is provided in section 4 and Appendix E of the Extraction Plan to address this condition.
Extraction Plan B7. The Applicant must prepare an Extraction Plan for all second workings on the site to the satisfaction of the Planning Secretary. Each Extraction Plan must:		The Extraction Plan is considered a well-structured document that includes clear summaries of subsidence predictions, impacts, monitoring, management and performance measures. The plan is based on a slightly modified layout for Longwall 24, however the revised layout is predicted to result in similar or less subsidence related impacts to those approved as part of the Modification Report (Modification 19) layout.
(a) be prepared by a suitably qualified and experienced person/s whose appointment has been endorsed by the Planning Secretary;		Section 2.1 and Attachment 2 indicates that the Extraction Plan has been prepared by Wambo Coal Pty Ltd (WCPL) with assistance from seven specialist sub-consultants from Mine Subsidence Engineering Consultants (MSEC), SLR Consulting Pty Ltd (SLR), Alluvium Consulting (Alluvium), South East Archaeology, Eco Logical Australia (ELA) and Resource Strategies. The appointment of the team of suitably qualified and experienced persons has been endorsed by the Planning Secretary on 24 March 2023 (ref: DA305-7-2003-i-PA-69).



Wambo Underground Coal Mine Consent (DA305-7-2003-i) (Schedule 2)	Satisfactory (Yes/No)	Comment
(b) include detailed plans of existing and proposed first and second workings and any associated surface development;	Yes	Section 1.3 and Appendix G of the Extraction Plan includes detailed plans of existing and proposed first and second workings and any associated surface development.
(c) provide updated predictions of the potential subsidence effects, subsidence impacts and environmental consequences of the proposed mining covered by the Extraction Plan, incorporating any relevant information obtained since this consent;		Section 2, 3 and 4 and Technical Reports 1 to 4 (Subsidence Predictions and Impact Assessments, Groundwater Assessment Review, Surface Water Assessment Review and Subsidence Risk Assessment) of the Extraction Plan provides updated predictions of the potential subsidence effects, subsidence impacts and environmental consequences associated with the area (above Longwalls 24 to 26).
(d) describe in detail the performance criteria to be implemented to ensure compliance with the performance measures in Table 1 and Table 2, and manage or remediate any impacts and/or environmental consequences to meet the rehabilitation objectives in condition B104, including:	Yes	The performance criteria and performance measures are included in section 3 and 4 and Appendices A to I of the Extraction Plan. They generally reflect the performance measures listed in Tables 1 and 2 of the consent.
i. a trigger action response plan to identify risks and specific follow up actions to avoid exceedances of the performance measures; and	Yes	Table 22 and Appendices A to F of the Extraction Plan includes information regarding the trigger action response plans for when monitoring results indicate that impacts are exceeding (or likely to exceed) predicted or approved limits. Table 22 defines the levels of responsibility within WCPL and reporting requirements for the trigger action response plan scenarios.
ii. a contingency plan that expressly provides for adaptive management where monitoring indicates that there has been an exceedance of the performance measures, or where any such exceedance appears likely;	Yes	Contingency measures are summarised in section 5 of the Extraction Plan and detailed in in Appendices A to F.
(e) include the following to the satisfaction of the Resources Regulator (or MEG, as the case may require):	Yes	The Coal Resource Recovery Plan is included in Appendix G of the Extraction Plan. As per letter dated 3 July 2023 (see Attachment 2), the Resources Regulator confirmed the proposed Extraction Plan (Wambo Mine Extraction Plan Longwalls 24 to 26) satisfies the requirements of condition B7 (e) of schedule 2 of DA305-7-2003-i.
i. a coal resource recovery plan that demonstrates effective recovery of the available resource;	Yes	The coal resource recovery plan is included in Appendix G of the Extraction Plan.
 ii. a Subsidence Monitoring Program to: provide data to assist with the management of the risks associated with subsidence (conventional and non-conventional); validate the subsidence predictions; and analyse the relationship between the subsidence effects and impacts under the plan against those predicted and any ensuing environmental consequences. 		The Subsidence Monitoring Program is included in Appendix H of the Extraction Plan and details the subsidence monitoring to be undertaken with regard to the environmental consequences (water, land, biodiversity, built features, etc).



Wambo Underground Coal Mine Consent (DA305-7-2003-i) (Schedule 2)	Satisfactory (Yes/No)	Comment
 iii. a Built Features Management Plan to manage the potential subsidence impacts and/or environmental consequences of the proposed second workings on built features, and which: addresses, in appropriate detail, all items of public infrastructure and all classes of other built features; and has been prepared following appropriate consultation with the owner/s of potentially affected feature/s; 	Yes	The Built Features Management Plan is included in Appendix E of the Extraction Plan. The plan indicates that WCPL owns all assets within the Longwalls 24 to 26 impact area. Assets includes wells, fences, access tracks and gates. Management measures for the assets are considered adequate.
iv. Public Safety Management Plan to ensure public safety in the mining area; and	Yes	The Public Safety Management Plan is included in Appendix F of the Extraction Plan. Longwalls 24 to 26 are located wholly within WCPL owned land, therefore risks to public safety are considered limited. Management measures to reduce public safety risks are considered adequate.
v. appropriate revisions to the Rehabilitation Management Plan required under condition B107; and	Yes	The Rehabilitation Management Plan is included in Appendix I of the Extraction Plan.
 i. Water Management Plan, which has been prepared in consultation with EPA, DPE Water and NRAR, which provides for the management of the potential impacts and/or environmental consequences of the proposed second workings on surface water resources, groundwater resources and flooding, and which includes: surface and groundwater impact assessment criteria, including trigger levels for investigating any potentially adverse impacts on water resources (level, yield and quality); a program to monitor and report on compliance with the surface and groundwater impact assessment criteria; a program to monitor and report on groundwater inflows to underground workings; and a program to manage and monitor impacts on privately-owned licensed bores; 	Yes	The Water Management Plan was revised to incorporate Longwalls 24 to 26 and is included in Appendix A of the Extraction Plan. The following plans address this condition: • Trigger Action Response Plan (Attachment 1); • Surface Water Monitoring Program (Attachment 2); • Groundwater Monitoring Program (Attachment 3); and • Surface and Groundwater Response Plan (Attachment 4); and • Water Monitoring Program (Attachment 5). The Water Management Plan was revised to address the DPE Water recommendations (see letter dated 19 July 2023, OUT23/10807). The Department considers that the revised plan addresses the relevant comments made by DPE Water, noting that WCPL committed to updating the Water Management Plan and Groundwater Management Plan by December 2024 to address the DPE Water recommendation 2.1 (b) and (d) which requires WCPL to: • include baseline data for the new vibrating wire piezometers (DDH1234, DDH1235 and DDH1240), installed in late 2022, and Waterfall Creek bores (GW40a, GW40b, GW41a and GW41b), installed in October 2023. • include water quality triggers for the Waterfall Creek bores (GW40a, GW40b, GW41a and GW41b).



Wambo Underground Coal Mine Consent (DA305-7-2003-i) (Schedule 2)	Satisfactory (Yes/No)	Comment
		Section 1.1 of the Water Management Plan document indicates that the plan draws on conclusions from the Surface Water Report (Report 3) prepared by Alluvium (dated May 2023) and the Groundwater Technical Report (Report 2) prepared by SLR Consulting Pty Ltd (dated May 2023). These technical reviews were conducted with reference to the modification 19 assessments for Longwalls 24 to 26, the Groundwater Assessment prepared by SLR Consulting Pty Ltd (2022) and the Surface Water Assessment prepared by Alluvium Consulting (2022).
ii. Biodiversity Management Plan, which has been prepared in consultation with BCD, which provides for the management of the potential impacts and/or environmental consequences of the proposed second workings on flora and fauna, with a specific focus on threatened species, populations and their habitats, EECs and groundwater dependent ecosystems;	Yes	The Biodiversity Management Plan is included in Appendix C of the Extraction Plan. The Biodiversity Management Plan was revised to include Longwalls 24 to 26. As per letter dated 23 June 2023 (DOC23/496437-2) the BCD reviewed the revised plan and had no further comments.
iii. Land Management Plan, which has been prepared in consultation with any affected public authorities, which provides for the management of the potential impacts and/or environmental consequences of the proposed second workings on land in general, with a specific focus on cliffs, minor cliffs, rock face features, steep slopes and agricultural enterprises;	Yes	Land Management Plan included in Appendix B of the Extraction Plan. Section 1.1 of the Land Management Plan indicates that the Longwalls 24 to 26 Extraction Plan area is wholly located within WCPL owned land and that no privately owned land or public roads are located in this area. The Land Management Plan adequately provides for monitoring of cliffs, fences, ground surfaces, etc. A Land Management Plan trigger action response plan (Attachment 1) and Erosion and Sediment Control Plan (Attachment 2) are appended to the plan.
iv. Heritage Management Plan, which has been prepared in consultation with BCD and relevant stakeholders for Aboriginal and non-Aboriginal heritage, to manage the potential impacts and/or environmental consequences of the proposed second workings on heritage items; and	Yes	The Heritage Management Plan was revised to include Longwalls 24 to 26 and is included in Appendix D of the Extraction Plan. As per letter dated 3 July 2023 (DOC23/487602), Heritage NSW indicated that it had no further comments on the plan as it complies with the issued Aboriginal Heritage Impact Permits and previous advice from Heritage NSW. Appendix C of the Heritage Management Plan provides environmental consequences of subsidence impacts on Aboriginal sites within Longwalls 24 to 26 extraction area, and relevant management and monitoring. These are consistent with previous management and monitoring measures implemented on-site and are considered adequate.



Wambo Underground Coal Mine Consent (DA305-7-2003-i) (Schedule 2)	Satisfactory (Yes/No)	Comment
(g) include a program to collect sufficient baseline data for future Extraction Plans.	Yes	A program to collect baseline data for future extraction plans is included in Attachment 3 and is consistent with previous baseline monitoring programs and is considered adequate.