



Mr Steven Peart  
Environment & Community Manager  
Wambo Coal Pty Ltd  
PMB 1  
SINGLETON NSW 2330

Dear Mr Peart

**South Bates Underground Mine  
Extraction Plan Longwalls 11 and 16 - Approval**

The Department has reviewed the Extraction Plan dated 10 January 2017 for Longwalls 11 to 16 at the South Bates Underground Mine, submitted in accordance with conditions 22C and 22D of Schedule 4 of the Wambo Coal Mine Development Consent (DA 305-7-2003).

The Department understands that Wambo Coal Pty Ltd is planning to commence secondary extraction of Longwall 14 in June 2017.

The Department notes that the Extraction Plan seeks approval for a slightly modified layout of Longwalls 14 to 16 compared to the longwall layout presented in the *South Bates (Wambo Seam) Underground Mine Modification Environmental Assessment (EA)*, dated August 2015 for Modification 15. The Department is satisfied that the revised Extraction Plan mine layout would result in similar or less subsidence related impacts to those approved as part of the EA layout, and can be characterised as being "generally in accordance with" the EA and the Development Consent (as modified).

The Department has reviewed the Extraction Plan and its sub-plans and is satisfied that they generally meet the requirements of the Development Consent. The Department also acknowledges that Division of Resources & Geoscience (formally the Division of Resources & Energy within the Department of Industry) has confirmed that it is satisfied with the sub-plans submitted in accordance with condition 22C(g) of the Development Consent.

Accordingly, I wish to advise that the Secretary approves of the submitted Extraction Plan for LWs 11 to 16.

Prior to submitting the final Extraction Plan, please update the plan to address the minor comments provided in **Attachment A**.

Please note the requirement under condition 14 of Schedule 5 to make copies of all approved plans, programs and strategies publicly available. If you wish to discuss this matter further, please contact Megan Dawson at the details listed above.

Yours sincerely



16/5/17

Matthew Sprott  
**A/Director Resource Assessments**  
as the Secretary's nominee

## Attachment A

### Wambo Coal Mine – South Bates Underground Mine (DA 305-7-2003) – Extraction Plan Comments

<b>Extraction Plan</b>			
<b>Condition 22C, Schedule 4</b>	<b>Satisfactory (Yes/No)</b>	<b>Comment</b>	<b>Action Required</b>
The Applicant shall prepare and implement an Extraction Plan for the second workings within each seam to be mined to the satisfaction of the Secretary. Each Extraction Plan must:	-	Extraction Plan (EP) is considered a well-structured and written document, which includes good quality figures. The EP includes clear summaries of subsidence predictions, impacts, monitoring, management and performance measures. The EP is based on a slightly modified layout for Longwalls 14 to 16, however the revised layout is predicted to result in similar or less subsidence related impacts to those approved as part of the MOD15 EA layout.	Nil
(a) be prepared by a team of suitably qualified and experienced persons whose appointment has been endorsed by the Secretary;	Yes	Section 1.1 indicates that the EP has been prepared by Wambo Coal Pty Ltd (WCPL) with assistance from five specialise sub-consultants. A copy of a letter from the Department of Planning & Environment (DPE) (dated 13/9/16) endorsing this team is provided in Attachment 2 of the EP.	Nil
(b) be approved by the Secretary before the Applicant carries out any of the second workings covered by the plan;	-	-	Include a copy of the Secretary's approval letter in Attachment 2 to the EP, once approved.
(c) include detailed plans of the proposed first and second workings and any associated surface development;	Yes	Figures 2, 3 and 6 in the main EP document provide general figures of the revised longwall layout. More detailed figures comparing the proposed and existing workings, surface features, seam workings and geological sections are included in the Coal Resource Recovery Plan at Attachment G.	Nil
(d) include detailed performance indicators for each of the performance measures in Tables 14A and 14B;	Yes	Table 5 – lists subsidence impact performance measures Table 11 – Water Performance Measures Table 14 – Biodiversity Performance Measures Table 17 – Built Features Performance Measures Performance measures are also included in Appendix A, C, D, E and F of the EP. Performance measures generally reflect those listed in Tables 14A and 14B of the consent.	<ul style="list-style-type: none"> <li>• Amend the slight inconsistency in the wording of the performance measure for Wollombi Brook in the Development Consent (Condition 22 – Table 14A) and in the table on page ii, Table 5 and Table 13 of the Water Management Plan.</li> <li>• Section 1.5 would benefit from a Figure that shows the location of the natural and built features listed in Table 5 (ie. consolidate Figures 3, 8</li> </ul>

Condition 22C, Schedule 4	Satisfactory (Yes/No)	Comment	Action Required
			and 10 but also indicate the location of Wollombi Brook, CEEC/EEC Communities and the Wambo Homestead Complex).
(e) provide revised predictions of the potential subsidence effects, subsidence impacts and environmental consequences of the proposed second workings, incorporating any relevant information obtained since this consent;	Yes	Section 2.1 of the main EP document provides a summary of the revised subsidence predictions, impacts and environmental consequences of the revised longwall layout, including a summary of comparisons with the previous predictions. Technical Report 1 provides a <i>Subsidence Predictions and Impact Assessment for Natural and Built Features for WYLR11 to WYLR13 in the Whybrow Seam and WMLW14 to WMLW16 in the Wambo Seam</i> , prepared by Mine Subsidence Engineering Consultants (MSEC), January 2017. It is noted that the subsidence predictions and impacts are for the revised longwall layout for Longwalls 14 to 16. The subsidence report is considered adequate.	Nil
(f) describe the measures that would be implemented to ensure compliance with the performance measures in Tables 14A and 14B, and manage or remediate any impacts and/or environmental consequences;	Yes	Section 3 of the main EP document 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 relevant Appendices to the EP and are considered adequate.	Nil
(g) include the following to the satisfaction of DRE:	-	-	Include a copy of Division of Resource & Geoscience (DRG) letter of satisfaction in Attachment 2 to the EP.
• a coal resource recovery plan that demonstrates effective recovery of the available resource;	Yes	Coal Resource Recovery Plan (CRRP) included in Appendix G. The CRRP has been updated to include the modified LW14-16 layout.	Nil
• a subsidence monitoring program to: - provide data to assist with the management of the risks associated with subsidence; - validate the subsidence predictions; and - analyse the relationship between the subsidence effects and impacts under the plan and any ensuing environmental consequences;	Yes	Subsidence Monitoring Program (SMP) included in Appendix H. The SMP has been updated to include the modified LWs14-16 layout and monitoring locations above and in the vicinity of LWs11-16. The SMP details the subsidence monitoring to be undertaken and summarises the monitoring of environmental consequences (water, land, biodiversity, built features, etc). Monitoring is generally consistent with MSEC's (2017) recommendations.	In relation to cliff line monitoring, confirm that the subsidence monitoring listed in Table 1 is sufficient to "measure the actual angle of draw to the limit of vertical subsidence.... at the commencement end of WYLR12 and WMLW15", as recommended by MSEC, 2017, p. 55.
• a Built Features Management Plan to manage the potential subsidence impacts and/or environmental consequences of the	Yes	Built Features Management Plan (BFMP) included in Appendix E. WCPL owns all assets within the LW11-16 extraction plan area. Assets include power lines, water	Nil

Condition 22C, Schedule 4	Satisfactory (Yes/No)	Comment	Action Required
<p>proposed second workings, and which: – addresses in appropriate detail all items of public infrastructure and all classes of other built features; and</p> <ul style="list-style-type: none"> <li>- has been prepared following appropriate consultation with the owner/s of potentially affected feature/s;</li> </ul>		<p>pipelines, wells, fences, access tracks and gates. Management measures for the assets are considered adequate.</p>	
<ul style="list-style-type: none"> <li>• a Public Safety Management Plan to ensure public safety in the mining area; and</li> </ul>	Yes	<p>Public Safety Management Plan (PSMP) included in Appendix F. LWS11-16 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.</p>	Nil
<ul style="list-style-type: none"> <li>• appropriate revisions to the Rehabilitation Management Plan required under condition 94C; and</li> </ul>	Yes	<p>Rehabilitation Management Plan (RMP) included as a Mine Operations Plan (MOP) in Appendix I. This approach has been endorsed by the DP&amp;E. RMP was updated to Revision G (Amendment D) in November 2016, however does not appear to fully incorporate the mining operations approved by MOD15.</p>	<ul style="list-style-type: none"> <li>• Update Figure 2 to show the new layout of LWS14-16;</li> <li>• Update Section 1.1.6 to note that the RMP (MOP) has also been prepared to address Condition 22(g) of DA305-7-2003 and should provide a description of this mining.</li> <li>• Update Section 1.6.1 to include the current status of the Conceptual Mine Closure Plan (due to be revised in early 2016).</li> </ul>
(h) include a:			
<ul style="list-style-type: none"> <li>• Water Management Plan, which has been prepared in consultation with EPA and DPI-Water, 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: <ul style="list-style-type: none"> <li>- surface and groundwater impact assessment criteria, including trigger levels for investigating any potentially adverse impacts on water resources or water quality;</li> <li>- a program to monitor and report groundwater inflows to underground workings; and</li> </ul> </li> </ul>	No	<p>Water Management Plan (WMP) included as Appendix A and includes a Trigger Action Response Plan (TARP) (Attachment 1), Surface Water Monitoring Program (SWMP) (Attachment 2), Groundwater Monitoring Program (GMP) (Attachment 3) and Surface and Groundwater Response Plan (SGWRP) (Attachment 4).</p> <p>The WMP main document does not include information on consultation with the EPA or DPI-Water. It is noted that Table 7 of the EP indicates that the draft WMP was provided to the EPA and DPI-Water on 23 Dec 2016. Table 7 also indicates that DPI-Water previously provided comments on the GMP. The SWMP and GMP only include DPI-Water comments in relation to LWS 8-10A. The SGRP provides comments received from DPI-Water (6 Nov 2015) on the EP for LWS11-13, however it is not clear how the matters raised have been addressed in the water-related plans.</p>	<ul style="list-style-type: none"> <li>• Add a section to the WMP which summarises consultation undertaken with the EPA and DPI-Water in relation to the water-related plans, and how the matters raised have been addressed.</li> <li>• Amend typo error in last para of Sections 2.2.1 of SWMP and GMP. Update these sections to the latest approved mining operations.</li> <li>• Update the SWMP, GMP and SGWRP to reflect the modified layout for LWS14-16 and the most up-to-date and recommended monitoring regimes provided in Technical Reports 2 and 3.</li> <li>• Amend the monitoring programs in the EP and water-related plans to ensure</li> </ul>

Condition 22C, Schedule 4	Satisfactory (Yes/No)	Comment	Action Required
<ul style="list-style-type: none"> <li>- a program to manage and monitor impacts on groundwater bores on privately-owned land;</li> </ul>		<p>Section 1.1 of the main WMP document indicates that the WMP draws on conclusions from Technical Report 2: <i>Groundwater Assessment Review</i> (Hydro Simulations, Jan 2017) and Technical Report 3: <i>Surface Water Technical Report for South Bates Underground Mine (Longwalls 11-16)</i> (Alluvium, Dec 2016). However, the key attachments to the WMP (ie. SWMP, GMP and SGWRP), pre-date these Technical Reports. The attachment plans do not include the modified LW14-16 layout and do not appear to reflect the described and recommended monitoring regimes provided in the Technical Reports.</p> <p>There are inconsistencies between the monitoring points and names in the main EP document and the WMP sub-plans (eg. additional flow monitoring points on Figure 12 of the EP and those listed in Table 5 and Figure 5 of the SMP). Section 4.1.5 of the GMP does not include groundwater inflow monitoring of the South Bates Underground Mine.</p>	<p>consistency.</p> <ul style="list-style-type: none"> <li>• Include monitoring regime for inflows to underground workings of LWs14-16 in the GMP.</li> </ul>
<ul style="list-style-type: none"> <li>• Biodiversity Management Plan, which has been prepared in consultation with the OEH, which provides for the management of the potential impacts and/or environmental consequences of the proposed second workings on flora and fauna;</li> </ul>	Yes	<p>Biodiversity Management Plan (BMP) included in Appendix C. Section 1.2 indicates that comments on the BMP were received from OEH on 16 August 2016 and that these comments have been addressed in the BMP. It is unclear where and how these comments have been addressed in the BMP.</p> <p>Appendix L provides a separate assessment of the potential environmental consequences for the South Bates Underground Mine, which are confirmed to be consistent or less than those approved.</p>	<ul style="list-style-type: none"> <li>• Amend typographic error in 4<sup>th</sup> para of Section 2.1 (date comments received from DoEE).</li> <li>• Include a table in Appendix B to the BMP which describes how the matters raised by OEH have been addresses and any matters not resolved.</li> </ul>
<ul style="list-style-type: none"> <li>• Land Management Plan, which has been prepared in consultation with any affected public authorities, to manage the potential impacts and/or environmental consequences of the proposed second workings on land in general;</li> </ul>	Yes	<p>Land Management Plan (LMP) included in Appendix B. No privately owned land or public roads are located in the LW11-16 extraction plan area. AI; lands are owned by WCPL, so no external consultation is required.</p> <p>LMP adequately provides for monitoring of cliffs, fences, ground surfaces, etc. Erosion and Sediment Control Plan is appended to the LMP.</p>	<ul style="list-style-type: none"> <li>• Amend typographic error in Table 6 (10<sup>th</sup> row) to indicate visual cliff monitoring will be done for LWs 11 to 16 (not 15).</li> <li>• Note comment on the SMP in relation to cliff monitoring, and reflect in LMP if necessary.</li> </ul>
<ul style="list-style-type: none"> <li>• Heritage Management Plan, which has been prepared in consultation with OEH and relevant stakeholders for Aboriginal and non-Aboriginal heritage, to manage the potential environmental consequences of the proposed second workings on heritage sites or values; and</li> </ul>	Yes (provided any comments received from OEH and/or RAPs are adequately addressed)	<p>Heritage Management Plan (HMP) included in Appendix D. HMP updated in January 2017 to include LWs13-16 (and modified layout). Section 1.5 indicates that the draft version of the HMP was provided to OEH and the registered Aboriginal parties (RAPs) in December 2016, but no comments had been received by the time this version of the plan was submitted to the Department. It is understood that WCPL has</p>	<ul style="list-style-type: none"> <li>• Address any comments received from OEH in relation to the HMP.</li> </ul>

<b>Condition 22C, Schedule 4</b>	<b>Satisfactory (Yes/No)</b>	<b>Comment</b>	<b>Action Required</b>
		subsequently received comment from OEH. Appendix C of HMP provides environmental consequences of subsidence impacts on Aboriginal sites within LW11-16 extraction area, and relevant management and monitoring. These are consistent with previous management and monitoring measures implemented on-site and are considered adequate.	
(i) 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 considered adequate.	Nil
<b>General comments</b>			

<b>Condition 22D, Schedule 4</b>	<b>Satisfactory (Yes/No)</b>	<b>Comment</b>	<b>Action Required</b>
The Applicant shall ensure that the management plans required under condition 22C(h) above include:			
(a) an assessment of the potential environmental consequences of the Extraction Plan, incorporating any relevant information that has been obtained since this consent;	Yes	Potential environmental consequences of LW11-16 mining are summarised in Section 2.1.1 of the main EP document and detailed in Appendices A to F.	Nil
(b) a detailed description of the measures that would be implemented to remediate predicted impacts; and	Yes	Management measures are summarised in Section 3 of the main EP document and detailed in in Appendices A to F.	Nil
(c) a contingency plan that expressly provides for adaptive management	Yes	Contingency measures are summarised in Section 3 of the main EP document and detailed in in Appendices A to F.	Nil
<b>General comment</b>			
<ul style="list-style-type: none"> <li>Update all references to the Division of Resources &amp; Energy (DRE) to Division of Resources &amp; Geoscience (DRG).</li> </ul>			

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