



Mr David Koppers  
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Independent Planning Commission NSW  
Level 3, 201 Elizabeth Street  
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*David*  
Dear Mr Koppers

**United Wambo Open Cut Coal Mine Project (SSD 7142)  
Additional Information for the Independent Planning Commission**

I refer to your letter of 22 March 2019, requesting that additional information is provided by the Department to facilitate the Commission's determination of the above project.

The Department's responses are provided in Attachment A, including additional information on the Department's approach to setting conditions of consent.

If you wish to discuss this matter, please contact me on [REDACTED]

Yours sincerely,

*Howard Reed*

Howard Reed  
Director  
Resource Assessments

*17.4.19*

## Attachment A

### 1. **Approach to Conditioning**

I note that a few of the Commission's questions relate to the Department's recommended conditions of consent, and therefore it seems appropriate to provide some additional context on the Department's conditioning practice.

Firstly, section 4.17 of the *Environmental Planning and Assessment Act 1979* (EP&A Act) sets the rules around imposing conditions. Secondly, as part of its Environmental Impact Assessment Improvement Project, the Department has recently prepared an *Approach to Setting Conditions* guideline which describes how conditions are developed and the role they play in mitigating impacts. While this guideline has not been finalised, its draft content is useful. This draft guideline can be viewed using the following link <https://www.planning.nsw.gov.au/-/media/Files/DPE/Guidelines/guideline-7-draft-approach-to-setting-conditions-2017-06.ashx>.

Generally, the Department imposes conditions of consent to ensure that a project achieves acceptable environmental, social and economic outcomes and that impacts of the project are appropriately avoided, minimised or offset. The Department endeavours to draft conditions that are valid, relevant, reasonable and achievable, specific and unambiguous, enforceable and proportionate to the level of impact. The Department takes a risk-based approach to drafting these conditions, which means that conditions will commonly only be developed for aspects of higher risk or higher concern, ie key issues that warrant close regulation.

Thirdly, for State significant mining projects, the Department has developed a robust set of template conditions that seek to strike a balance between providing clear and certain expectations and limits, while also ensuring that conditions are sufficiently adaptive to allow for continuous improvement over the long operational life of a mine. This framework commonly relies on performance-based conditions which identify criteria or objectives that must be complied with to achieve necessary environmental outcomes but do not specify how those outcomes are to be achieved. This 'how to' is instead generally further developed outside of the consent in management plans or strategies which can be tailored to the site and the advancement of the development and refined or otherwise adapted over time.

The template conditions for open cut mining have been progressively developed over many years and have been tested and improved over time to ensure they are effective and provide for close regulation without being unnecessarily arduous. As discussed in section 4 of the FAR, these conditions are also based on the Department's indicative standard administrative and reporting conditions for State significant development released in August 2018. These template mining conditions can be viewed using the following link <https://www.planning.nsw.gov.au/-/media/Files/DPE/Other/standard-conditions-for-state-significant-development-mining-projects-2018-08.pdf>.

### 2. **Recommendation 30: The FAR notes that the Rehabilitation Management Plan would include a protocol for progress reviews to demonstrate that the target vegetation communities are on track to being achieved. Could the Department provide further details regarding this protocol and how the success of mine rehabilitation areas would be monitored?**

One component of the project's biodiversity offset strategy is to re-establish and conserve 878 ha of native woodland on rehabilitated mined land (ie ecological mine rehabilitation). This include a commitment to restore:

- 506 hectares (ha) of Central Hunter Valley eucalypt forest and woodland (CHVEFW), a critically endangered ecological community (CEEC) listed under the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) which conforms to HU905 Narrow-leaved Ironbark – Grey Box grass woodland of the central and upper Hunter;
- 159 ha of Central Hunter Grey Box - Ironbark Woodland, an endangered ecological community (EEC) listed under the *Biodiversity Conservation Act 2016* (BC Act) which conforms to HU816 Spotted Gum – Narrow-leaved Ironbark shrub – grass open forest of the central and lower Hunter; and
- 213 ha of HU905 Narrow-leaved Ironbark – Grey Box grassy woodland of the central and upper Hunter.

As discussed in Section 2.3.4 of the final assessment report (FAR), the Department has recommended conditions to reduce uncertainty and risk around establishing ecological mine rehabilitation on post-mining landforms. This includes setting rehabilitation objectives for native woodland and specific objectives for credit-generating native woodland (see abbreviated table below). The Applicant must be able to demonstrate that the ecological mine rehabilitation conforms to State-recognised plant

community types, meets the relevant EPBC Act or BC Act listing criteria for CEEC or EEC, and aligns with reference/analogue sites in the local area.

<i>Feature</i>	<i>Objective</i>
Areas proposed for Ecological Mine Rehabilitation	<ul style="list-style-type: none"> <li>• Restore self-sustaining native woodland ecosystems that:               <ul style="list-style-type: none"> <li>– align with reference sites in the local area; and</li> <li>– use State-recognised plant communities to meet the applicable EPBC Act or BC Act listing criteria for the CEEC or EEC in Table 5</li> </ul> </li> </ul>
Areas proposed for native woodland	<ul style="list-style-type: none"> <li>• Establish a minimum of 1,300 hectares of Open Woodland Revegetation to satisfy condition B55</li> <li>• Restore self-sustaining native woodland ecosystems using species found in the local area and complement the areas proposed for Ecological Mine Rehabilitation</li> <li>• Establish areas of self-sustaining:               <ul style="list-style-type: none"> <li>– riparian vegetation, within any diverted and/or re-established creek lines and retained water features;</li> <li>– habitat resources for threatened flora and fauna species, particularly the Swift Parrot, Regent Honeyeater, Spotted-tailed Quoll and Koala; and</li> <li>– vegetation connectivity and wildlife corridors, as far as is reasonable and feasible</li> </ul> </li> </ul>

If the ecological mine rehabilitation is unable to meet the above objectives, then the Applicant must provide supplementary offsets to make up for any shortfall. The Department notes that it can take approximately 20+ years to restore self-sustaining native woodland ecosystems that are both resilient and functional. This length of time is generally required for ecosystem development as vegetation generally needs to go through one lifecycle to demonstrate that it is capable of self-recruitment/natural generation.

Due to this long lead time, it is important to set measurable performance and completion criteria and monitor progress against these criteria to demonstrate that rehabilitation is on track to meet the rehabilitation objectives. If the rehabilitation is not trending towards a successful outcome, then the Applicant should have sufficient time to change its rehabilitation techniques or implement remedial actions.

For ecological mine rehabilitation, it will be important for the Applicant to demonstrate that the target vegetation communities are on track to being successfully developed. The Applicant would be required to develop indicators such as plant species diversity, density/coverage and health, weed and disease control, soil quality, habitat features and fauna re-colonisation to quantifiably measure rehabilitation success. These indicators would be progressively monitored (annually to 5 yearly), scored and compared against progressive targets based on local analogue sites.

The Applicant would be required to report on ecological mine rehabilitation progress in its Annual Reviews and to be independently audited every three years to confirm progress and effectiveness of rehabilitation techniques. Both the Department's Compliance Team and the NSW Resources Regulator would closely regulate rehabilitation, including reviewing reports and audits and undertaking site inspections.

The Department considers that these measures, along with the additional requirements under the *Mining Act 1992*, would appropriately mitigate the risks associated with establishing ecological mine rehabilitation.

**3. Noise operating condition B4(e): advise of the anticipated frequency of this condition being triggered, including evidence and source of this information? and describe what would constitute 'reasonable steps'?**

Condition B4(e) states that the Applicant must take all reasonable steps to minimise the noise impacts of the development during noise-enhancing meteorological conditions when the noise criteria in the consent would not apply.

The noise criteria for the project were developed under the *Industrial Noise Policy (INP)*. This policy sets out that noise criteria apply during all weather conditions that are characteristic of the site (ie weather conditions that occur more than 30% of the time). However, the criteria do not apply under extreme meteorological conditions such as temperature inversions or high winds, as these conditions can enhance noise levels by up to 20 dB. Such extreme conditions are unpredictable and the INP does contemplate regulatory limits being able to be met under such circumstances.

For the project, the criteria do not apply when wind speeds are greater than 3 metres/second (m/s), temperature inversion conditions are greater than 3 °C/100 metres (stability category G) or a combination of wind speeds greater than 2 m/s and temperature inversion conditions between 1.5-3°C/100 metres (stability category F). The Department notes that the Applicant has separately provided the Commission with historical wind data from Wambo Coal Mine in an attempt to identify the likely frequency of these conditions. This data shows that, on average, winds are less than 3 m/s for 63% of the time. This data does not infer that, for 37% of the time, wind would enhance noise at any particular sensitive receiver. At the receiver level, this frequency would be much less. For example, the meteorological data from the Noise Impact Assessment (NIA) indicates that the most consistent winds greater than 3 m/s come from the west-northwest during winter days for less than 20% of that season. This also includes 6% of the time when that wind's speed is greater than 5 m/s and therefore likely to mask any industrial noise with extraneous foliage and wind noise.

The Department notes that the Applicant did not provide a similar analysis of temperature inversions, which occur predominantly on calm still nights during the winter months. In its NIA, the Applicant has modelled the INP default condition of a category F inversion coupled with a 2 m/s source-to-receiver wind and considered the presence of category G conditions. Appendix F of the INP notes that for the Hunter Valley, category F inversion coupled with a 2 m/s source-to-receiver wind is likely to represent the most adverse type of inversion condition that would occur. It is therefore unlikely that there would be many time periods that would be considered 'invalid' due to the parameters used in the NIA. In summary, noise criteria would apply to the vast number of potential meteorological scenarios with the only likely exceptions being a limited range of higher wind speeds between 3 and 5 m/s.

Further, when extreme meteorological conditions occur, there would be periods when the weather conditions transition and fluctuate between valid and invalid conditions. Therefore, mines typically take a conservative approach and operate as if conditions are valid.

Nevertheless, the Department has recommended condition B4(e) to ensure that the Applicant still takes all reasonable steps to minimise the noise impacts of the development during extreme meteorological conditions when the noise criteria in the consent would not apply. The Applicant would be required to operate a real-time meteorological and noise monitoring system to promptly identify and respond to noise-enhancing scenarios. The Department considers that reasonable steps would include restricting the operation of noisy plant and equipment and/or relocating activities to shielded locations. These adaptive management measures would be further detailed in the Noise Management Plan for the project.

**4. Air quality operating condition B28(d): advise of the anticipated frequency of this condition, including evidence and source this information? and confirm that, unlike B4(e), air quality criteria will continue to apply during conditions.**

Condition B28(d) states that the Applicant must minimise the air quality impacts of the development during adverse meteorological conditions and extraordinary events. As per note C to Table 3 in that condition, 'extraordinary events' are events such as bushfires, prescribed burning, dust storms or fire incidents (ie extreme or unpredictable weather events). Whilst undefined, 'adverse meteorological conditions' are generally conditions which may lead to elevated ambient particulate matter concentrations or deposited dust levels, when additional mitigation measures would typically be implemented on the site to ensure compliance with the air quality criteria.

Following review of operating data from Wambo Coal Mine, the Applicant advised that additional mitigation measures (due to adverse meteorological conditions) are typically implemented 120 days per year. A similar frequency would be expected for the project.

With regards to extraordinary events, the proposed air quality criteria for the project include three annual average limits for PM<sub>10</sub>, PM<sub>2.5</sub> and TSP. These cumulative criteria include all sources of dust (ie project plus background) and therefore the Department's recommended conditions allow for dust concentrations arising during extraordinary events to be excluded from the annual averaging periods for these criteria, as they are considered outliers. This means that annual average criteria do not apply during these extraordinary events, but they do apply during adverse meteorological conditions.

Based on data published from the Upper Hunter Air Quality Monitoring Network, the Department understands that extraordinary events occur in the Hunter Valley approximately 6-8 days per year, particularly during hot summer months when bushfires are more prevalent. However, in reviewing Wambo Coal Mine's previous three Annual Reviews (2016, 2017 and 2018), Peabody reported

compliance with all annual average criteria and did not report any extraordinary events. The Department notes that there may have been extraordinary events during this time, but they may not have been significant enough to affect Peabody's compliance reporting.

Nevertheless, the Department has recommended condition B28(d) to ensure that the Applicant continues to minimise the air quality impacts of the development during adverse meteorological conditions and extraordinary events, should they arise. The Applicant would be required to operate a real-time meteorological and air quality monitoring system to promptly identify and respond to adverse meteorological conditions. The Department considers that reasonable steps would include modifying operations, reducing dust-generating activities or adding additional dust controls, such as running more water carts. These adaptive management measures would be further detailed in the Air Quality Management Plan for the project.

**5. Rehabilitation offsets condition B56: what is the genesis of the 25% calculation? and what would be the implications of amending the threshold percentage to reflect the actual percentage of credits that the applicant can achieve.**

As discussed in section 2.3.4 of the FAR, the 25% limit was a self-imposed cap volunteered by the Applicant. Neither the State or Commonwealth's current offsetting policies include a formal cap on the use of mine site rehabilitation to offset biodiversity impacts (even if these impacts are to threatened species or communities). However, the use of rehabilitated land as offsets is generally self-limited by the area of impacted land and the heavily discounted credits that can be generated from rehabilitation (approximately a 75% reduction compared to using remnant native vegetation).

The Department understands that the genesis of the 25% threshold (relative to the total biodiversity credit requirements) came from the draft Upper Hunter Strategic Assessment (UHSA) Biodiversity Plan (see section 13.4.3 of Appendix 13 of the EIS for more context). Due to delays in finalising this policy, the Applicant subsequently provided a revised biodiversity assessment prepared in accordance with the *NSW Biodiversity Offsets Policy for Major Projects* and associated *Framework for Biodiversity Assessment* (FBA).

The FBA does not restrict the use of ecological mine rehabilitation, however, the Applicant committed to maintain this threshold for both overall credit obligations and CEEC credit obligations. Based on the current conceptual rehabilitation plan, the actual proposed percentages are less than this. Of the total 26,383 ecosystem credits required, 4,230 would be satisfied using ecological mine rehabilitation, equating to 16%. Of the 14,477 CEEC credits required, 2,437 would be satisfied using ecological mine rehabilitation, equating to 17%.

The Department has recommended that condition B56 reflect the 25% commitment, rather than the currently mapped 17%, because it saw no reason to constrain the Applicant to a lower threshold, if 25% was considered acceptable. Further, the Department also wanted to avoid any unintended consequences by proposing an unnecessarily strict precedent for future projects.

**6. Agency consultation: the FAR sets out draft conditions of consent recommended by relevant agencies and the Department. Please confirm that the draft conditions of consent referenced in the FAR have been incorporated in the draft conditions of consent, including summary of issue and draft condition of consent reference.**

The Department has developed recommended conditions of consent in consultation with all key Government agencies. This was an iterative process and the amount of engagement varied between agencies. Some agencies provided advice on conditions throughout the assessment process and other agencies reserved their comments until the end when they were satisfied with all assessment components.

To ensure there were sufficient opportunities to comment, the Department provided a draft set of conditions to all agencies to review. Any residual issues were discussed and resolved directly with each individual agency. The Department values the input of Government agencies and considers that this collaborative approach is one of the reasons why the conditions are robust, comprehensive, contemporary and provide a sound basis for effective regulation and management of the project.

Section 1.6 of the Department's FAR summarises the consultation with each agency and, the Department considers that it has satisfactorily incorporated all agencies' recommendations into the final recommended conditions of consent.