

ASSESSMENT REPORT

WAMBO COAL MINE Montrose East Dam Modification (305-7-2003 MOD 11)

1. BACKGROUND

The Wambo coal mine is located 15 kilometres (km) west of Singleton in the Hunter Valley (see **Figure 1**). It began operations in 1969, and is currently operated by Wambo Coal Pty Limited (Wambo), a subsidiary of Peabody Energy.



Figure 1 - Locality map

Mining operations at the mine are controlled by two Ministerial development consents: one for the mining operations (DA 305-7-2003 granted on 4 February 2004), and the other for the associated rail operations (DA 177-8-2004 granted on 16 December 2004). Under these consents, Wambo is allowed to:

- extract up to 8 million tonnes per annum (Mtpa) of run-of-mine (ROM) coal from its open cut mining operations;
- extract up to 7.5 Mtpa of ROM coal from its underground mining operations; and
- transport up to 15 Mtpa of product coal from the mine via rail.

2. PROPOSED MODIFICATION

The proposed modification involves the construction and operation of a 1500 megalitre (ML) mine water storage dam.

The dam would be constructed as a 'turkey nest' dam with upstream water diversion structures (so that it is independent of its catchment), and have a footprint of approximately 24 hectares (ha) at full capacity (see **Figure 2** and **3**). The dam would be serviced by a 6 metre (m) wide pipeline corridor, and a 20m wide pipeline and power corridor. The water pipelines would be laid on the ground surface while the powerlines would be strung overhead on power poles.

Wambo claims both the dam and its associated pipeline and power corridors have been sited to minimise any potential impacts on known Aboriginal sites and remnant woodland.

The dam is required to store the water currently being stored in the South Dam (see **Figure 2**), which is scheduled to be undermined shortly, but also to increase the water storage capacity of the mine in general as Wambo has been unable to discharge as much water as it expected to recently under the Hunter Salinity Trading Scheme.

All other aspects of the approved mining operations would remain the same.

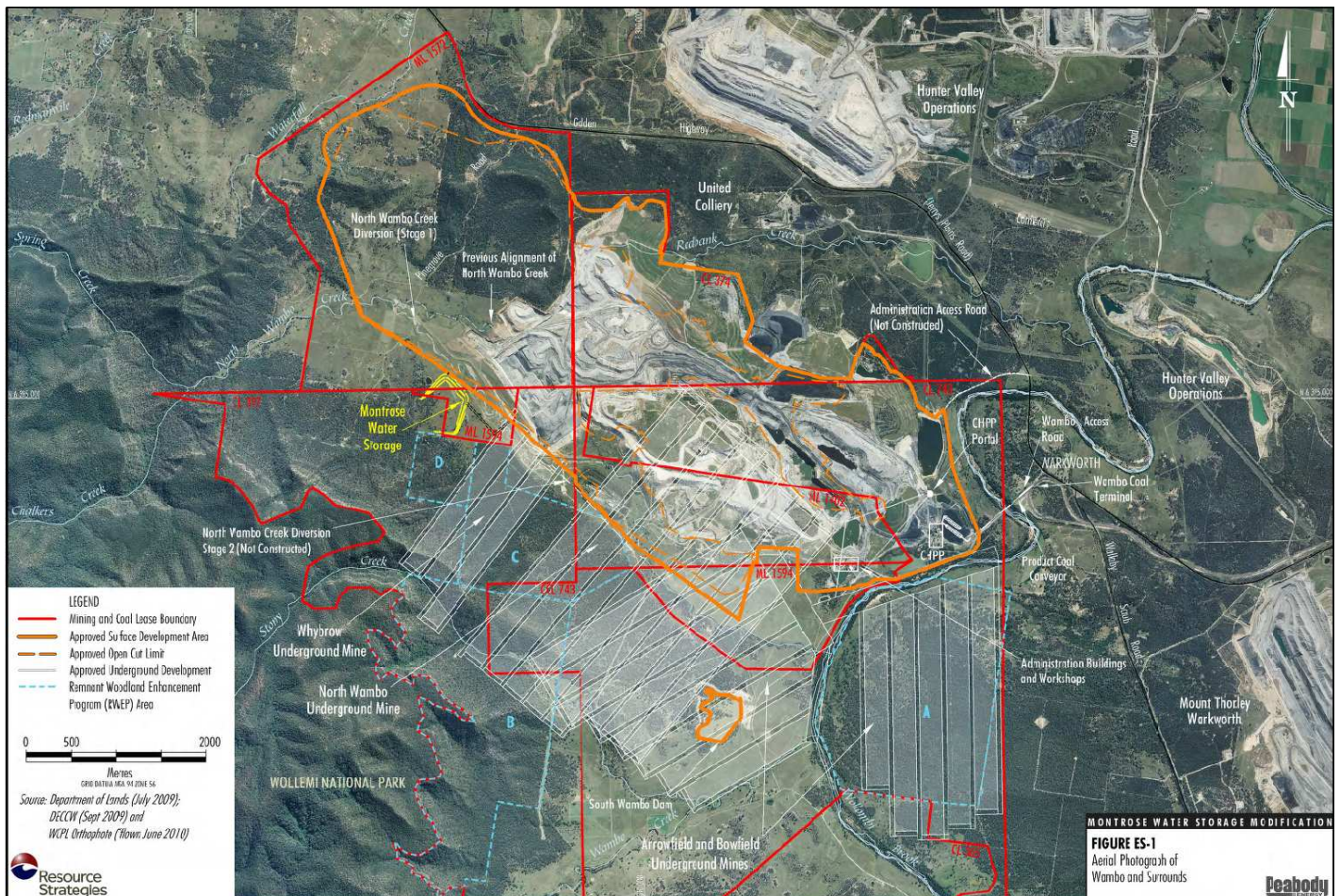


Figure 2 - Proposed location of Montrose East Dam

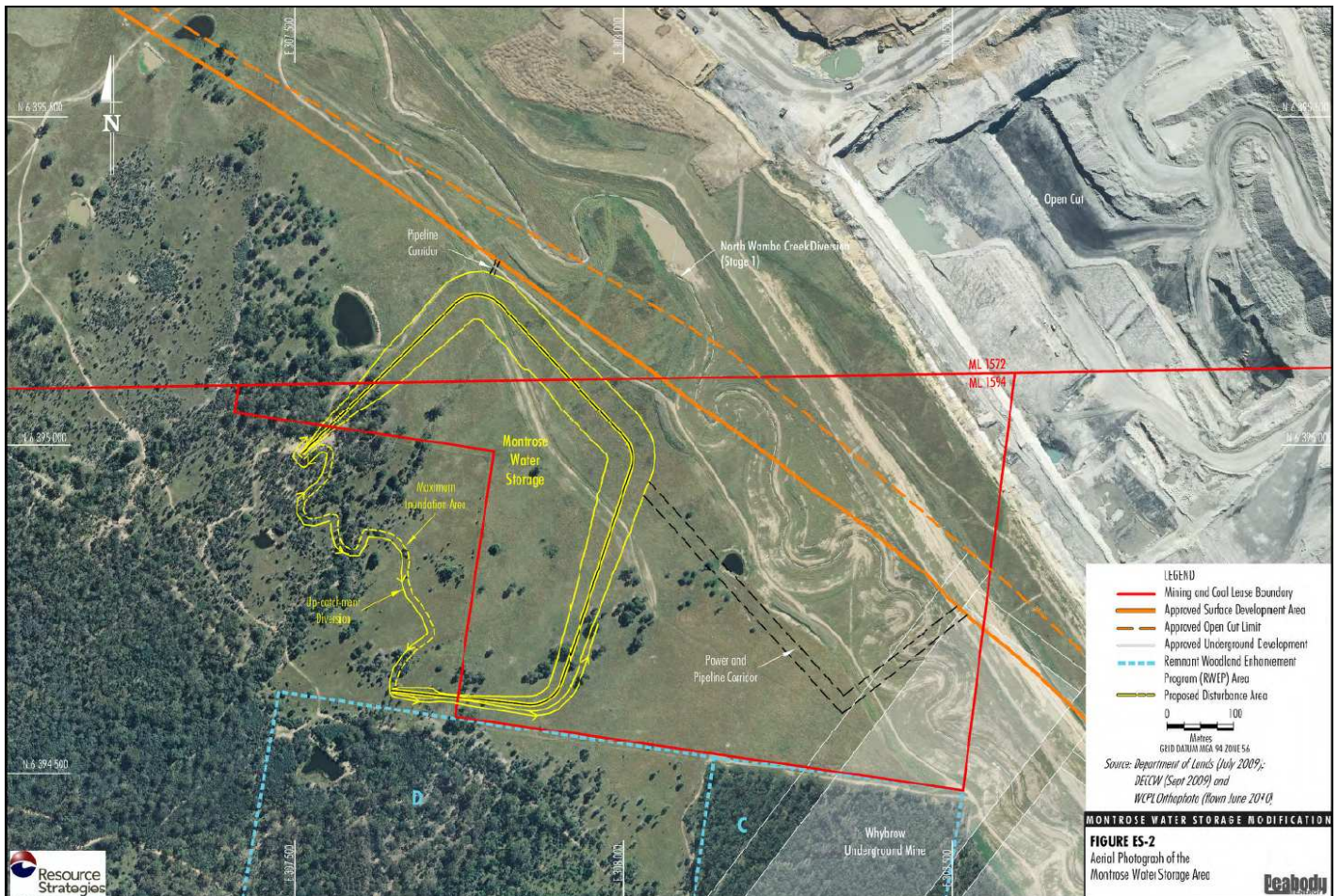


Figure 3 - Proposed layout of Montrose East Dam

2.1 Modification

The development consent (DA 305-7-2003) is classified as a Transitional Part 3A Project under clause 12 of schedule 6A of the *Environmental Planning and Assessment Regulation 2000*. This means, despite the repeal of Part 3A of the EP&A Act, it must still be modified under the former section 75W of the Act.

The Department is satisfied that the proposed modification is within the scope of what is allowed under section 75W of the Act, as it represents a minor change to the water management system on site with little or no consequences for the broader mining operation or its environmental impacts.

2.2 Approval Authority

Under Section 75W of the EP&A Act, the Minister for Planning and Infrastructure is the approval authority for this modification application. However, under the Minister's delegation of 14 September 2011, the Planning Assessment Commission (PAC) must determine the application as Wambo's parent company, Peabody Energy, has made reportable political donations.

3. CONSULTATION

The Department exhibited the application in the local press for 14 days and made the accompanying Environmental Assessment (EA) publicly available on its website, and at the offices of Singleton Council and the Nature Conservation Council. During the assessment process, the Department received submissions from four agencies, one special interest group, and one nearby landowner. Copies of these submissions are included in Appendix C. A summary of the issues raised in these submissions is provided below:

3.1 Agency Submissions

The main issue arising from the agency consultation was a recommendation from the **Office of Environment and Heritage (OEH)** that Wambo should be required to provide a biodiversity offset to compensate for the vegetation clearing associated with the proposal. In its Response to Submissions, Wambo proposed an offset package, which is considered further in the 'Assessment' section of this report below. **OEH** also suggested the inclusion of conditions to update the protocols for Aboriginal consultation and the discovery of unexpected finds on site. The Department has included these suggested conditions in the proposed Notice of Modification.

The **Department of Primary Industries** recommended that the dam be constructed to a suitable standard to prevent the leaching of mine water into the environment. The Department notes that Wambo has committed to minimise the permeability of the dam, essentially by keying the base of the dam into competent underlying base material. While the detailed design of the dam will be finalised following approval, the Department is satisfied that the operational management and ongoing monitoring of the performance of the dam can be dealt with in any updated Water Management Plan for the mine. Further, it is satisfied that there are a range of contingency measures available that could be implemented to further reduce the permeability of the dam in the unlikely event that the proposed design standards are insufficient to prevent any pollution of groundwater resources.

The **Division of Resources and Energy** noted that Wambo would need to secure a mining lease for part of the dam, while the **Environment Protection Authority** noted that it would be able to regulate the impacts of the new dam under Wambo's existing Environmental Protection Licence.

3.2 Special Interest Group Submissions

The **United Mineworkers' Federation of Australia** wrote in support of the project, based on its need and environmental merit.

3.3 Public Submissions

A landowner located approximately 5 kilometres to the south-east of the proposed dam objected to the proposal. This landowner questioned the applicability of Part 3A to the project, and raised concerns about the:

- potential surface water impacts of the dam, including:
 - o the potential for the dam to over-top and flood the objector's right-of-way;
 - o the potential water pollution risks of the proposal, and the need for suitable water quality monitoring;
- potential construction noise impacts on his property; and
- adequacy of Aboriginal heritage and agricultural impact assessment of the proposal.

These concerns have been considered further in **Table 2** of this report.

4. ASSESSMENT

The Department has assessed the EA (see Appendix C), submissions on the proposal (see Appendix D) and Wambo's response to the issues raised in these submissions (see Appendix E) and considers the key issue to be the potential biodiversity impacts of the proposal.

4.1 Biodiversity Impacts

The proposed dam would result in the disturbance of another 24 hectares at the mine, which would increase the existing flora and fauna impacts of the mine. The EA was accompanied by a flora assessment prepared by Florasearch, and a fauna assessment prepared by Biosphere Environmental.

In any assessment of the merits of the proposal, the Department believes there are three main issues to consider:

- the extent of impacts to flora and fauna;
- the suitability of the proposed offset strategy; and
- whether the arrangements in the existing consent are adequate for securing the offset in perpetuity.

Flora

Wambo states that the proposed dam site was selected, among other reasons, to minimise the need to clear significant vegetation. From a total footprint of 24 ha, the proposed dam would require clearing of 1.8 ha of Central Hunter Box – Ironbark Woodland, which is an Endangered Ecological Community (EEC), and 0.8 ha of Narrabeen Foothills Slaty Box Woodland, which is a Vulnerable Ecological Community (VEC). Wambo proposes a biodiversity offset for this land clearing (see below). The remaining 21.4 ha of the disturbance footprint is secondary native grassland with limited ecological value and no statutory protection. The ancillary infrastructure such as pipelines and power poles would be located on previously cleared land or within the existing approved mine disturbance footprint.

The vegetation communities (including grasslands) are highly disturbed from clearing and grazing. Nonetheless, poor quality soil on the project site has led to limited weed invasion. The woodland communities appear to have recently begun to re-establish (probably after grazing ceased), and for the most part consist of younger, regrowth trees. The flora assessment did not identify any flora

species listed as a threatened species, and concluded that the proposed land clearing is unlikely to significantly affect local populations of threatened flora species. The site is not listed as critical habitat.

The Department considers that, while the dam site is close to the fringe of Wollom National Park, it is highly disturbed and primarily consists of younger regrowth vegetation. Overall, it does not appear to have significant ecological values. The small areas of degraded EEC and VEC to be cleared can be offset with areas of the same EEC and VEC that are both of better quality and better connected to the national park.

Fauna

The fauna assessment was based on targeted surveys of the site. Six threatened avifauna were observed (or their sounds recorded) as follows:

- Grey-crowned Babbler;
- Speckled Warbler;
- Varied Sittella;
- Eastern Freetail Bat;
- Large-eared Pied Bat; and
- Eastern Bentwing Bat.

While land clearing and removal of hollow-bearing trees and deadwood are listed key threatening processes, the young regrowth vegetation in the area to be cleared is unlikely to have any such significant roosting sites. The Department considers that the proposed clearing of woodland is minor in extent (2.6 ha) and is unlikely to sever or fragment other good quality habitat. As can be seen in the aerial photograph in **Figure 3**, there are no contiguous woodland areas to the north, east or south of the dam site.

Wambo already has a Vegetation Clearance Protocol that would apply to the proposed modification to minimise the impact of clearing activity on any fauna species. The protocol requires disturbance areas to be marked, a pre-clearance survey for habitat trees, and the salvage of habitat features for re-use in rehabilitation programs.

Overall, the Department is satisfied that the project is unlikely to have a significant effect on threatened fauna species or their habitats.

Biodiversity Offset

The Department notes that the application did not originally include an offset proposal. In its Response to Submissions (see Appendix D), Wambo proposed to increase its existing biodiversity offset areas to compensate for the clearing of the Box-Ironbark Woodland EEC and the Slaty Box Woodland VEC. However, the size of the proposed area was subsequently increased to increase the size of the Box-Ironbark Woodland offset ratio from 2.8:1 to 7:1 after the Department requested a higher ratio to be consistent with the recently approved Ravensworth Operations Project.

The revised offset area is summarised in **Table 1** below and shown in **Figure 4** (see the area marked D).

Table 1 – Summary of proposed biodiversity offset

Vegetation Community	Cleared amount	Offset amount	Offset ratio
Central Hunter Grey Box – Ironbark Woodland (EEC)	1.8ha	13 ha	7:1
Narrabeen Foothills Slaty Box Woodland (VEC)	0.8ha	2ha	2.5:1
Geijera salicifolia/Notelaea macrocarpa Woosland	-	> 1 ha	-

The proposed offset area includes 'like-for-like' vegetation communities compared to those communities that would be cleared. That is, the Box-Ironbark Woodland to be cleared would be offset by Box-Ironbark Woodland, and the Slaty Box Woodland would be offset with Slaty Box Woodland. Further, the Department is satisfied that the vegetation in the proposed offset area is of considerably better quality than the vegetation in the proposed disturbance area, as it has a superior structure with a full canopy at natural densities, and has been subjected to very little disturbance. Finally, the proposed offset area is contiguous with Wambo's other established offset areas and the Wollemi National Park.

The offset areas would be managed under Wambo's existing biodiversity management plan (termed a 'Remnant Woodland Enhancement Program' under the consent). The areas would be fenced, monitored and enhanced with weed control and supplementary habitat material.

Biodiversity Offset Security

The existing consent required the biodiversity offset area for the mine to be secured in perpetuity by way of a legal deed of agreement with the Minister. However, this deed has never been finalised, principally because of the Department's concern that this was an inferior mechanism to provide long term security for the offset area. With the agreement of Wambo, the Department has recommended that the revised offset area (following the adjustments made as a consequence of the proposed modification) be secured by way of a Voluntary Conservation Agreement (VCA) under the *National Parks and Wildlife Act 1974*. The Department has proposed a condition to this effect. As there is some possibility that OEH may not want to enter into a VCA for all of the land in the offset area at this stage, the condition provides for other suitable mechanisms to be used to secure the remaining land (which is consistent with the conditions in a number of other approvals in NSW, including the approval of the Duralie Coal Project which was granted by the Land and Environment Court).

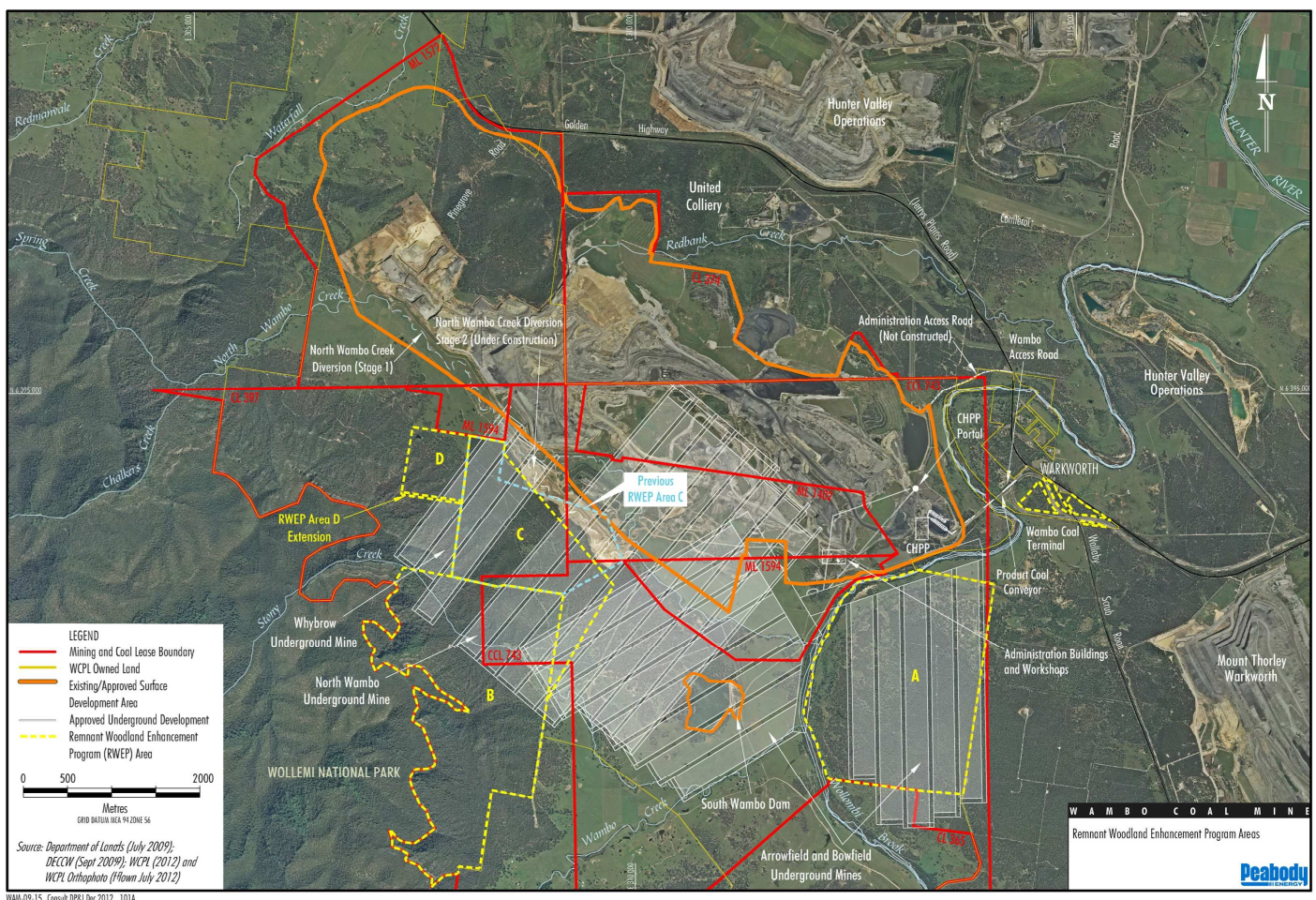


Figure 4 - Locations for proposed biodiversity offsets

Conclusion

The Department considers the potential ecological impacts of the proposed modification to be low, and is satisfied that the proposed offset will adequately compensate for the impacts associated with the vegetation clearing of the proposal. It is also satisfied that these impacts can be further minimised with the implementation of the measures in the existing Flora and Fauna Management Plan. The Department has also recommended conditions requiring Wambo to secure the revised offset package for the mine by entering into a VCA under the *National Parks and Wildlife Act 1974*.

4.2 Other impacts

The Department is satisfied that the other impacts of the proposed modification are likely to be minor, and has summarised the findings of its assessment of these impacts in Table 2.

Table 2 - Assessment of other impacts

Issue	Consideration and Assessment	Recommendation
<i>Water</i>	- The proposed dam would be constructed as a 'turkey nest' dam independent of its surface water and groundwater catchment. Its 24 ha surface area represents 0.49% of the North Wambo Creek catchment and 0.01% of the Wollombi Brook catchment. - The site is not located on alluvium and the dam would be constructed with a low permeability base with its walls keyed into competent underlying base material to properly contain mine water and prevent sub-surface leaching. - The site is above the 1:100 year flood level for the North Wambo Creek diversion and the dam would be constructed with sufficient freeboard to store a 1 in 100 year, 72-hour rainfall event. - While the objector raised concern over the potential for the dam to over-top and flood a downstream right-of-way, Wambo would also manage the dam under updated site water management and monitoring plans. The likelihood of the dam over-topping would be remote. The fact that the dam is isolated from the surrounding surface water catchment and is only filled by pumping provides compelling evidence that this scenario is remote. - The Department is satisfied that impacts to ground and surface waters are unlikely to be significant.	Wambo to prepare an updated site water balance and water management plan.
<i>Agriculture</i>	- The project involves disturbance of about 24 ha of former grazing land. - The EA was accompanied by a specialist Agricultural Resource Assessment. The report, based on field surveys and soil testing, concluded that the site is not a significant agricultural resource because of poor quality soils. The Department is satisfied that the site does not satisfy the criteria for Biophysical Strategic Agricultural Land in the Government's Upper Hunter Strategic Regional Land Use Plan. - The Department notes that the proposed dam would be independent of and is unlikely to impact on the surrounding catchment. - The Department is satisfied that the project would not have significant impact on agriculture or agricultural resources, or related aquifers.	No additional conditions necessary.
<i>Rehabilitation</i>	- Wambo has committed to update its Rehabilitation Management Plan to include the dam site and, following mine closure, either retain the dam for the benefit of future land owners or decommission it and rehabilitate the site. - The Department considers it appropriate to update the rehabilitation conditions in the existing consent with contemporary standard conditions and has recommended conditions to this effect.	Wambo to prepare a revised Rehabilitation Management Plan for the mine satisfying contemporary standards.
<i>Noise</i>	- Dam construction would occur only during daytime hours. - Construction and operational noise would not exceed the existing mine operational noise levels and the project specific noise criteria in the existing consent would continue to apply. - An objection was received concerning potential noise impacts. The objector's property is 5 km from the dam site, and more distant than operational parts of the existing mine. Noise impacts from construction and operation of the dam are most unlikely at the objector's property.	No additional conditions necessary.
<i>Visual</i>	The proposed dam is unlikely to be seen from any significant public vantage point and, in any case it would form a visually contiguous part of the collection of visual elements that comprise the Wambo mine.	No additional conditions necessary.
<i>Air Quality & Greenhouse Gas</i>	- Wambo would be obliged to comply with the air quality and dust-deposition criteria in the existing consent. - However, the Department considers that it is appropriate to update the air-quality management conditions in the existing consent with contemporary standard conditions. The update would include operational performance requirements and an Air Quality Management Plan (in addition to a monitoring program). - Dust emissions from dam construction can be readily managed under these amended conditions.	Wambo to prepare an Air Quality Management Plan for the mine.

Aboriginal heritage

- The EA was accompanied by an Aboriginal Heritage Due Diligence Assessment based on both desk-top and field surveys. It concluded that no Aboriginal objects were located on the project site.
- Wambo has committed to fencing known sites outside the project site to prevent impacts during construction and to ongoing consultation with the Aboriginal Community.
- The objector raised an issue with the adequacy of the Due Diligence Assessment, suggesting that historical data relating to the site from before 2003 had not been accounted for. However, both the Department and the OEH are satisfied that the assessment complies with OEH's Guidelines for Due Diligence Assessments and that further assessment is not required.
- The Department is satisfied that impacts to Aboriginal objects or places are unlikely.

Wambo to comply with updated conditions, primarily to deal with any unexpected finds during site clearing or construction.

5. RECOMMENDED CONDITIONS

The Department has drafted a recommended notice of modification (see Appendix A) for the proposal as well as a consolidated version of the consent as it is proposed to be modified (See Appendix B). These conditions would require Wambo to minimise the potential impacts of the dam, and strengthen the protection of the revised biodiversity offset package for the mine. The Department notes that several of the administrative conditions and defined terms in the existing consent are out-of-date, and has included updated versions of these conditions in the notice of modification.

Wambo has reviewed the proposed conditions, and does not object to their imposition.

6. CONCLUSION

The Department has assessed the merits of the proposed modification in accordance with the requirements of the EP&A Act.

This assessment has shown that, with the implementation of suitable mitigation measures, the proposed modification can be carried out with minimal environmental impact. The Department has drafted conditions to ensure that Wambo undertakes the work to an appropriate standard.

With these conditions in place, the Department is satisfied that the proposed modification is in the public interest and should be approved.

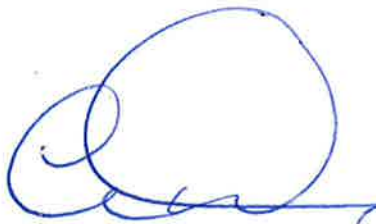
7. RECOMMENDATION

It is **RECOMMENDED** that the Planning Assessment Commission, as delegate of the Minister:

- **considers** the findings and recommendations of this report;
- **determines** that the proposed modification is within the scope of section 75W of the EP&A Act;
- **approves** the application, under section 75W, subject to conditions; and
- **signs** the notice of modification in Appendix A.

DKitto 10/1/13

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11.1.13