

The Moolarben Coal Project Stage 2 (08_0135) and Stage 1 Modification 3 (05_0117 MOD 3).

Department of Planning and Infrastructure Director General's Report and Recommended Approval Conditions

OEH Biodiversity Comments

Acronyms and definitions

<i>Biodiversity Offset Strategy (BOS)</i>	As set out in Cumberland Ecology (2014)
<i>BBAM</i>	BioBanking Assessment Methodology
<i>DP&I</i>	Department of Planning and Infrastructure.
<i>DP&I Director General's Requirements</i>	Director General's Requirements – Section 75F of the <i>Environmental Planning and Assessment Act 1979</i> (DP&I 2008)
<i>DP&I Director General's Report</i>	Department of Planning and Infrastructure Director General's Report (DP&I 2014a)
<i>Conditions of Approval</i>	Recommended Project Approval (DP&I 2014b).
<i>NSW Offset Principles</i>	NSW Offsets Principles for major projects (State Significant Development and Infrastructure http://www.environment.nsw.gov.au/biodivoffsets/nswoffsetprincip.htm .
<i>TSPD</i>	Threatened Species Profile Database
<i>PAC</i>	Planning Assessment Commission

The EA requirements of OEH and the Department of Planning and Infrastructure (DP&I) require proponents to present justification of their preferred option based on four key thresholds – including *'whether or not the proposal, together with actions to avoid or mitigate impacts or compensate to prevent unavoidable impacts will maintain or improve biodiversity values'*.

OEH notes that the DP&I Director-General's requirements for Stage 2 included the requirement to include *'A detailed description of the measures that would be implemented to maintain or improve the biodiversity values of the surrounding region in the medium to long term'*. OEH currently evaluates offset proposals against the *'NSW offset principles for major projects (state significant development and infrastructure)* (The NSW Offset Principles) and, where applicable, the current internal OEH *'Interim Policy on assessing and offsetting biodiversity impacts of Part 3A developments'*.

OEH has consistently raised concerns regarding the adequacy of offsets for the Moolarben Stage 2 project throughout the assessment process. This attachment sets out an assessment of the proposed Biodiversity Offset Strategy (BOS) against the NSW Offset Principles and in light of the DP&I Director General's Report, the recommended Conditions of Approval and a new report provided by the Proponent (Cumberland Ecology 2014) following additional flora and fauna surveys of the proposed offset properties. OEH has also taken into account the small variations in area calculations supplied in a letter from YanCoal to DP&I dated 25 March 2014.

NSW Government Biodiversity Offset Principles

1. Before offsets are considered, impacts must first be avoided and unavoidable impact minimised through mitigation measures. Only then should offsets be considered for the remaining impacts.

OEH has few additional comments to make regarding avoidance and mitigation measures.

OEH is concerned to ensure that impacts to the Munghorn Gap Nature Reserve and proposed on-site offsets are avoided to the greatest extent possible. OEH reiterates that a minimum buffer of 50m (preferably 250m) should be maintained between OEH Estate and the Stage 2 open cut.

OEH remains of the view that the proponent should be required to minimise direct or indirect impacts on OEH estate to the fullest extent possible. Such requirements are not specifically included in the draft Conditions of Approval or the Statement of Commitments.

2. Offset requirements should be based on a reliable and transparent assessment of losses and gains

Offsetting decisions should be based on a reliable and transparent assessment of the loss in biodiversity due to the development proposal and the likely gain in biodiversity through the offset. OEH prefers not to rely on simplistic hectare impact to offset ratios as they do not reliably and transparently indicate the adequacy of the likely gain achieved by the offsets.

The adequacy of the BOS is assessed by the proponent (and also in the Director General's Report) in terms of broad ratios and the 'like for like' principle. OEH has however been able to take the information provided to date by the proponent and apply the BBAM at the development site and offset sites to inform the likely quantum of offset required.

OEH has run two BBAM scenarios with different assumptions made about site values. The site value estimates for the development site are considered realistic based on the information presented by the proponent in the environmental assessment. The site value assumptions made for the offset sites were generous and are considered likely to over-estimate rather than under-estimate the likely credit value of the offset sites.

The results of this assessment estimate that 91,813 credits would be required to offset the impacts of the development and provide a 'no net loss' outcome. The proposed offsets potentially provide in the order of 34,118 to 36,933 credits. Application of the proponent's methodology used for estimating the value of credits associated with the Stage 1 (Mod 9) offsets (ie the assumption the offsets would generate 9.3 credits/ha) would indicate a Stage 2 offset credit value of 44,581, suggesting that this method would over-estimate credit values in this case.

Both the estimated credits and the ratio outcomes are discussed further under Principle 3.

3. Offsets must be targeted to the biodiversity values being lost or to higher conservation priorities

Offsets should reflect the biodiversity values, including threatened species and their habitat, that are being lost. This should be on a 'like for like' basis.

OEH generally considers 'like for like' as per listed matches in the credit profile where a proponent has used the BioBanking Assessment Methodology (BBAM) or as the same vegetation community in at least the same IBRA bioregion (same CMA subregion is preferred). Where justified, OEH may agree to broadening consideration of 'like for like' to matching vegetation formations within the same IBRA bioregion, or to regional conservation priorities.

With regard to the 'like for like' concept, the DP&I Director General's Report states that *'Both the Department and OEH are satisfied that the final offset strategy would adequately compensate for all vegetation communities in the medium to longer term'*. Please note that this does not accurately reflect the OEH position.

In terms of direct vegetation type matches, the current BOS is significantly deficient for the majority of vegetation types impacted, with offset to impact hectare ratios generally much less than 1:1. When broadened to consider matching vegetation formations, the offset package delivers offsets for the Box Gum Woodland Endangered Ecological Community (EEC) of 9.4:1 and only 2.5:1 for other native vegetation. The total offset provides an outcome of 3.1:1. With the exception of the EEC, OEH considers the offset ratios to be very low.

The BBAM estimates undertaken by OEH based on the latest data provided by the proponent indicate that the current BOS has an overall shortfall in the order of 54,880 to 57,695 credits or approximately 59 to 62%. Furthermore, a significant portion of this strategy does not adequately address the 'like for like' concept, with 63% of the gain achieved by the BOS being derived from the inclusion of Red Stringybark forest at sites remote from the development site.

OEH has previously questioned the appropriateness of the more remote offset properties which are a significant distance from the subject IBRA Bioregion. The proponent's response to OEH concerns regarding the appropriateness and adequacy of the offset has consistently been that *"the broad habitat types for threatened species to be impacted are represented in the offset properties, therefore valid "like for like" offsetting with respect to threatened species impacts"*.

While recent surveys (Cumberland Ecology 2014) have added further threatened species records, the broad differences between the offset properties in the vicinity of impact site and those more remote have also been highlighted. These surveys confirmed the presence of impacted threatened fauna on the offset properties with the properties in close proximity to the impact site demonstrating their potential to provide gain for threatened species habitat. However, the suite of threatened species at the more remote offset properties, notably the two 'Dun Dun' properties, differs. The presence of the Scarlet Robin and Satin Flycatcher at these latter properties indicates a drier eucalypt forest than occurs on either the impact site or offset properties in its proximity.

Figure 3.2 of Cumberland Ecology (2014) provides a summary of impacted threatened species habitat compared to that on the offset properties. These are generally in the order of 2.2:1 to 3.9:1, with some species as low as 1:1 and 1.28:1, considerably less than the native vegetation offset ratios.

Cumberland Ecology (2014) concludes that *"Good quality fauna habitat opportunities has been confirmed as occurring in the Offset Areas for all threatened/migratory species with the potential to occur within the Project Disturbance Area. Additionally, for some species, habitat exists in the Offset Area that does not occur in the Project Disturbance Area."*

These results provide further confidence to the previous conclusion that the BOS is appropriate for the Project and these surveys strengthen this conclusion given a larger and more detailed body of data."

There have been different, and inconsistent, approaches taken in the assessment of suitable habitat for woodland birds in Stage 1, Modification 9 and Stage 2. For example, EMM (2013) noted that *"Regent Honeyeater and Painted Honeyeater habitat in open forests on hillsides and ridges is only represented in Shrubby White Box Forest, therefore is equal to 30.5 ha when combined with Footslope Grassy Woodlands"*. This is consistent with the habitat preferences for these species in the Threatened Species Profile Database (TSPD) (which supports the BBAM and assigns all threatened species to biometric vegetation types (BVTs) at the Catchment Management Area level). However, in the assessment of the Stage 2 offsets, Cumberland Ecology (2014) has taken a much broader view by regarding all forest and woodland habitat to be suitable habitat for the Regent Honeyeater (Table 3.2). Table 3.3 details the vegetation types defined as woodland and forest. This contains vegetation types, notably Red Stringybark, Scribbly Gum, Red Box, Long-leaved Box shrub, tussock grass open forest in the NSW South Western Slopes Bioregion, which the TSPD does not regard as suitable habitat for the Regent Honeyeater.

If no alternatives are available which adequately address the 'like for like' concept, as previously agreed with DP&I OEH would accept a variation in the offset requirement to allow:

- the inclusion of the 'Avisford 1' and 'Avisford 2' properties within the offset strategy as they are logical OEH Estate additions and could in that sense be considered a regional conservation

priority, despite their remoteness from the impact site and 'like for like' deficiencies. The exclusion of approximately 41ha of cleared land to be retained by the landowner was to be reflected in the offset quantum.

- The inclusion of 'Dun Dun West' and Lot 79 of 'Dun Dun East' as these are of higher value than Lot 80 of 'Dun Dun East' and show some potential for gains if extended to Pyramul Creek.

These agreements did not however negate OEH concerns about the substantial shortfall in offset quantum, and were also predicated on the implementation of supplementary offset measures targeting woodland birds, particularly the Regent Honeyeater, as detailed under Principle 6 below.

Regarding the 'Avisford 2' property, the DP&I Director General's Report appears to have indeed excluded the 41ha area (to be retained by the landowner) from the offset quantum, as has the proponent in updated information supplied in a letter from YanCoal to DP&I dated 25 March 2014.

Similarly, the DP&I Director General's Report (page 53) states that Lot 80 of 'Dun Dun East' has indeed been excluded from the offset quantum. However in a meeting with OEH on 21 February 2014 the proponent insisted that Lot 80 had not been removed from the offset quantum and that the DP&I report was in error. OEH maintains that if the 'Dun Dun' properties are to be accepted within the BOS, Lot 80 of 'Dun Dun East' should be excluded from the offset quantum. It also appears that the BOS has not been expanded to include the Pyramul Creek riparian areas.

It is also worth noting that OEH has attempted to work with the proponent on locating alternative offset properties by providing them with a list of properties considered to have potential as suitable offsets for Stage 2. A number of these properties had been the subject of a rapid assessment and vegetation mapping by OEH and identified as priority properties for inclusion in the OEH estate (particularly Goulburn River National Park). These properties do not appear in the Stage 2 offset strategy and the extent to which the proponent has investigated these alternatives is not clear.

In the Stage 1 (Mod 9) Response to Submissions (EMM 2013) the proponent stated that *'There are no readily available biodiversity credits available to be purchased to meet the small shortfall in offset area required on a 'like for like' basis. Properties currently for sale that have the appropriate vegetation types would provide an enormous surplus area making the land purchase proposition financially unviable and unwarranted'*. It is not clear whether the proponent has assessed the suitability of the 'enormous surplus area' available against the Stage 2 offset requirements.

4. Offsets must be additional to other legal requirements

OEH notes that the 'Avisford 1' property has an existing covenant. In recognition of this the proponent has 'discounted' this offset property by 20%, in accordance with previous OEH recommendations.

5. Offsets must be enduring, enforceable and auditable

OEH is currently unclear as to whether all properties within the proposed offset strategy have been purchased by the proponent or are under agreement with existing landholders.

OEH notes that the draft approval conditions require *'By the 30 June 2015, unless the Director-General agrees otherwise, the Proponent shall make suitable arrangements to protect the offset areas in Table 11 in perpetuity to the satisfaction of the Director-General'* (Condition 28).

The OEH Parks and Wildlife Group has indicated an interest in the Avisford 1 and 2 offset properties being added to the Avisford Nature Reserve, contingent on the provision of management funding. OEH does not have an interest in any other currently proposed Stage 2 offset properties being added to OEH estate.

OEH's preference is for any offsets within the final BOS, which are not considered suitable for OEH estate addition, to be secured via a BioBanking Agreement.

OEH also notes that the DP&I Director General's Report includes mine rehabilitation within the Biodiversity Offset (Table 10, page 35) and states that *'...MCM has committed to protecting rehabilitated mine areas for in perpetuity conservation after mining'*. OEH does not support the inclusion of mine rehabilitation in the offset quantum in this way. Furthermore, in a meeting with OEH on 21 February

2014, the proponent stated that the mine rehabilitation would not be included within the BOS. This matter should be clarified.

6. Supplementary measures can be used in lieu of offsets

In relation to OEH recommendations for supplementary measures, the DP&I Director General's Report states that *'The Department is satisfied that significant areas of habitat for the Regent Honeyeater existing in the offset areas, and has recommended conditions requiring the regeneration of vegetation within the offset areas to be focused on the re-establishment of flora species typical of EECs which are known habitat for the Regent Honeyeater'*.

While the proposed Stage 2 BOS will protect some 'like for like' habitat for the Regent Honeyeater there remains concerns that the loss of habitat and the immediate reduced capacity of this species to move across the landscape has not been addressed. OEH again strongly recommends that the precautionary principle be applied in relation to the immediate loss of habitat for threatened woodland birds, in particular the Regent Honeyeater.

While significant areas of former woodland are to be revegetated, for example on the Old Bobadeen and Ulan offset sites and, ultimately, the disturbance area, there will be a considerable lag time before they can be potentially occupied by many of the declining woodland bird species. This time lag may have serious implications for the Critically Endangered Regent Honeyeater. This has not been adequately addressed by the proponent. In light of the BOS failing to deliver significant gains in the short to medium term, OEH stands by its recommendation that the proponent consider alternate mitigation measures to reduce the immediate impact on the Regent Honeyeater. This can be in the form of support to the National Regent Honeyeater Recovery Team who is currently implementing a number of actions including:

- captive breeding,
- population supplementation through the release of captive bred birds,
- investigation the modelling of movement patterns through the radio-tracking of surrogate honeyeater species and/or flying foxes
- genetic analysis of the population.

A captive breeding and release program in North-east Victoria, commenced in 2008, has demonstrated that released captive-bred birds are capable of long-term survival in the wild and have successfully bred with both other released and wild individuals. Such a program has the potential to support failing wild populations until mitigation measures such as habitat restoration and rehabilitation provide viable resources.

7. Offsets can be discounted where significant social and economic benefits accrue to NSW as a consequence of the proposal.

OEH has not sighted any adequate justification on social or economic grounds for reducing the offset quantum required.

The application of this principle is a matter for DP&I and the PAC.

RECOMMENDATIONS

OEH recommends that:

OEH Estate

- a) The proponent be required to provide no less than a 50m buffer between any open cut operations or infrastructure and the adjacent Munghorn Gap Nature Reserve.

- b) The proponent be required to implement all feasible and reasonable methods to minimise any direct or indirect adverse impacts on the value of land managed by OEH and ensure there is no diminution of amenity on OEH land due to the Stage 2 project.
- c) The proponent be required to identify and survey the entire boundary of the Stage 2 project with the Munghorn Gap Nature Reserve, in consultation with OEH.
- d) The proponent be required to establish a Memorandum of Understanding with OEH in regards to access, survey, pest management, fire management and the conducting of works in proximity to either the Munghorn Gap Nature Reserve or the Goulburn River National Park.

Biodiversity Offset Strategy

- e) In considering the adequacy of the existing Stage 2 Biodiversity Offset Strategy and any recommendation for approval, the PAC consider the above assessment of the strategy against the NSW Principles for Biodiversity Offsets.
- f) Should the PAC agree to accept the more remote offset properties (the 'Avisford' and 'Dun Dun' properties):
 - i. The Avisford 1 and Avisford 2 properties be secured via transfer to OEH Estate with management funds as agreed with OEH;
 - ii. Lot 80 DP 704159 of 'Dun Dun East' be removed from the Stage 2 offset quantum; and
 - iii. The proponent should be encouraged to extend the remainder of the 'Dun Dun East' offset to include Pyramul Creek on adjoining Crown Land with development of an appropriate revegetation proposal for this area. The purpose is to maximise the value of this proposed offset in light of concerns regarding remoteness and 'like for like' matching.
- g) The PAC consider the merit of a precinct approach to securing the outstanding offset quantum associated with Stage 2, in conjunction with the Stage 1 Modification 9 offset requirements, future Moolarben Coal proposals and nearby mines (including for instance the proposed Bylong Coal Mine).
- h) Any references to preferred in-perpetuity conservation mechanisms within the Approval Conditions include reference to both BioBanking Agreements and OEH Estate additions.

References

Cumberland Ecology (2014) *Moolarben Coal Project Stage 2 Biodiversity Offset Strategy – Additional Fauna and Flora Surveys*. Report dated 14 February 2014 prepared for Moolarben Coal by Cumberland Ecology, Carlingford Court, NSW.

DP&I (2008) *Director General's Requirements – Section 75F of the Environmental Planning and Assessment Act 1979*. MP08_0135, dated 11 September 2008
<https://majorprojects.affinitylive.com/public/804affb57c16f9ef88b82c8f6773ce68/Moolarben%20Stage%20%20Project%20-%20DGRs.pdf>

DP&I (2014a) *Preliminary Assessment: – Moolarben Coal Project Stage 2 & Stage 1 Modification (MOD 3)*. Director General's Environmental Assessment Report, Section 75I of the *Environmental Planning and Assessment Act 1979* dated 4 February 2014.
<https://majorprojects.affinitylive.com/public/f03d2d7294ce95da4dcdfc1a460b2131/11.%20Moolarben%20Stage%20%20Project%20%20-%20Preliminary%20Assessment%20Report.pdf>

DP&I (2014b) *Project Approval. Section 75J of the Environmental Planning & Assessment Act 1979. Moolarben Coal Project Stage 2 (08_0135)*

<https://majorprojects.affinitylive.com/public/c26094802059bfd5f803db62cc3dcd80/2.%20Moolarben%20Stage%202%20Project%20%20-%20Recommended%20Conditions%20of%20Approval.pdf>

EMM (2013) Moolarben Coal Project Stage 1 Optimisation Modification Response to Submissions. Report prepared for Moolarben Coal Operations Pty Ltd, September 2013.

https://majorprojects.affinitylive.com/public/559e6797e3008e3039da4d520834e30c/Moolarben%20Stage%201%20MOD%209_%20RTS.pdf

Attachments

Doerr, V.A.J., Doerr, E.D. and Davies, M.J. (2011) *Dispersal behaviour of Brown Treecreepers predicts functional connectivity for several other woodland birds*. **Emu** 111:71-83.

Geering, D (2004) Unravelling movement mysteries. *Where the Regents Roam* **13**, 3-4. (newsletter of the Regent Honeyeater Recovery Effort).

Geering, D.J. and Mason, T. (2009) *Capertee Valley Regional Regent Honeyeater Works Plan*. Unpublished report to the National Regent Honeyeater Recovery Team and the Hawkesbury – Nepean Catchment Management Authority.

NSW Scientific Committee Final Determination to list Regent Honeyeater *Anthochaera phrygia* as a Critically Endangered Species in Part 1 of Schedule 1A of the Threatened Species Conservation Act.