

Submission to the Federal Government: Failings of the Proposed Offsets for the Whitehaven Maules Ck Coal Mine

Report prepared by North West Ecological Services on behalf of the Maules Creek Community Council and Northern Inland Council for the Environment

Leard State Forest Before Mining



Below Artists Impression of Leard State Forest After Mining



Introduction

The Maules Ck mine will clear 2,077 hectares of vegetation, including 544 hectares of White box – Yellow box – Blakely’s Red Gum Grassy Woodland and Derived Native Grassland Ecological Community (CEEC). The Box-Gum in Leard State Forest is located below 300m elevation on deep soils in the Liverpool Plains subregion of the Brigalow Belt South bioregion. The forest is also recognised as high quality habitat for the nationally threatened Corben's Long-eared Bat, Swift Parrot and Regent Honeyeater.

The proposed offsets for the Maules Ck Coal Mine are purported to encompass 3,304 hectares of mature Box-Gum woodland and 2,004 hectares of the ecosystem in the derived grassland form. Of the total 5,308 hectares of Box-Gum woodland mapped in the offsets, some 4,516 hectares of it is contained in the 'Northern Offsets'. The Northern Offsets are comprised of two properties - Wirradale and Mt Lindesay - that are located high on the Nandewar Range mostly at elevations greater than 900m north-east of Leard State Forest. They are situated in the Nandewar bioregion.

Over the last month, ecologists have conducted a detailed field reconnaissance survey of the proposed Maules Ck offsets. In particular, they have reviewed all areas that can be publicly accessed within the Northern Offsets. The assessment has involved a survey of plant species composition in relation to the definition of Box-Gum woodland under the EPBC Act 1999, a visual assessment of habitat condition and weed impacts, and an expert assessment of faunal habitat value. Photo reference points were collected during the survey. The ecologists also conducted further field reconnaissance of Leard State Forest and recorded a nationally endangered plant species, *Tylophora linearis*, which is listed on the EPBC Act 1999 that was not recorded by the proponents.

IS THIS LIKE FOR LIKE OFFSET?

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| Leard State Forest - Liverpool Plains Old growth White box woodland on gravelly duplex soils at 300 metres elevation - 600mm rainfall - Brigalow Belt Southern bioregion - | Grazing Property - Nandewar Plateau Immature Stringybark open forest on Basalt soil at 950 metres elevation - 1000mm rainfall - Nandewar bioregion - |
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Overall Results from the Survey of the Northern Offsets

The survey of the northern offsets¹ found that:

1. The dominant vegetation community in areas mapped by the proponent as White Box woodland was in fact Stringybark Open Forest and did not contain any White Box. It did not meet the definition of the Critically Endangered Ecological Community.
2. It did not even meet the definition of Grassy Woodland but instead represents a totally different vegetation class of Dry Sclerophyll Forest.
3. The vegetation is not high condition remnant habitat for Swift Parrot, Regent Honeyeater or Corben's Long-eared Bat, of which the proponent claims 5275ha on the properties.
4. The absence of White Box means the vegetation will not produce the quantity of nectar required to support nationally threatened birds such as the Swift Parrot and Regent Honeyeater, and will provide only marginal habitat.
5. Corben's Long-eared Bat is at its altitudinal limit at 900m and is unlikely to occur in Stringybark open forests. There are no records of this species as such an altitude in the area despite extensive surveys in Mt Kaputar NP at this elevation.
6. All of the vegetation on the site was heavily disturbed by previous clearing and logging and there very few hollow-bearing trees, compared with Leard Forest which contains up to 100 hollows per hectare.
7. It is highly unlikely that the area would provide habitat for the endangered plant *Tylophora linearis*.

The definition of Critically Endangered Box-Gum and results from the Northern Offsets

The survey targeted 6 areas mapped as Box-Gum woodland above 930m in the Northern Offset. Vegetation at 31 sites was recorded and a GPS recording and photo reference taken. Only 4 of the sites had the potential to meet the criteria for the critically endangered Box Gum-woodland. The reasons why the majority of the survey sites do not qualify as critically endangered Box-Gum woodland are as follows:

1. **EPBC Definition:** Yellow Box, Blakely's Red Gum or White Box must occur as dominant or co-dominant overstorey trees
Northern Offsets - Although Yellow Box and Blakely's Red Gum are present, they rarely occur as dominant species in the canopy but instead occur as sub-dominant species with Silvertop Stringybark dominant.
2. **EPBC Definition:** The specified dominants must be in a woodland community with clearly separated canopies
Northern Offsets - The vegetation does not qualify as a woodland community but instead meets the definition of an open forest canopy.

¹ See Appendix A - Report from field assessment of Wirradale and Mt Lindesay 7th & 9th January 2013

3. **EPBC Definition:** If shrubs are present they must be scattered and not forming a continuous layer
Northern Offsets - a large proportion of the sites had a continuous shrub layer
4. **EPBC Definition:** Ground cover vegetation must be greater than 50% cover of tussock grasses
Northern Offsets - A large proportion of the sites had litter dominating the ground layer

There were only four sites that might potentially meet the definition of the woodland - these were all small areas of immature trees in areas regenerating woodland from derived grassland and were not high quality remnants.

Application of the Federal Government Offset Calculator

The ecologists have applied the Federal Government Offset Calculator² to the proposed Maules Ck Coal Mine, assessing both the figure of 5,000ha of CEEC as claimed by the proponent and also applying a revised figure of 1,000ha which appears to be a more accurate depiction of the community within the offsets based on the recent fieldwork. The results indicate that, due to the very low quality of the current vegetation and the low confidence in the ability to restore the vegetation, the proposed offsets do not and cannot meet the requirements of the Federal Government.

Assessment of Other Offsets

A detailed study was also conducted of the Kelso property³, which is an isolated remnant west of Leard State Forest. The area has been heavily degraded by grazing, clearing and cropping. The ridges have been extensively ring-barked and are now dominated by unnaturally thick immature White Cypress, Narrow-leaved Ironbark, with small sections of Dwyer's Redgum and Silverleaf Ironbark. There are numerous dead and dying trees.

The Environmental Assessment specifies an area of 342 hectares of high condition remnant within the offset. However, the vegetation is not high condition. It is predominantly White Cypress regrowth. The total area of vegetation calculated by independent scientists, using Google Pro, was 263 hectares and the majority of it is very poor condition remnant as shown by a sequence of photos taken at waypoints within the offset. This case study on the Kelso block provides further evidence that the mapping of the offsets by the proponents is incorrect with regard to vegetation type, area and condition.

Ability of the Offset Areas to Regenerate into fully functioning Box-Gum woodland

This study has involved the collection of independent expert opinion⁴ on the capacity of the proposed offset areas to regenerate into a fully-functioning Box-Gum woodland.

² See Appendix C1 and C2

³ See Appendix D Kelso Offset Report and Habitat Condition Assessment 16th January 2013

⁴ See Appendix B Expert Opinions and other Contributors to Federal Submission January 2013

It has revealed that the majority of the offsets are not, in fact, Box-Gum woodland at all. Furthermore, it has provided expert evidence to show that even the areas that are Box-Gum woodland are so degraded as to be very unlikely to ever reach a high quality status again.

Ability of the Mine Site to be Rehabilitated

This study has involved the provision of independent expert opinion⁵ on the ability of the mine site to be rehabilitated to a functioning endangered ecosystem.

The expert advice indicates that the slope and soil depth proposed post-mining are such that they are incapable of delivering a water-holding capacity that can support a woodland ecosystem. The advice indicates that there is no history of successful mine rehabilitation in NSW to suggest that the CEEC can ever be replaced on the site. The survey of the site has indicated that the current rehabilitation to date in the adjoining Boggabri Coal Mine has already been invaded by an aggressive weed which will prevent regeneration of the original ecosystem. The proposal for a final mine 'void' which will leave a deep hole that drains groundwater and accumulates salt and toxins also represents a fundamental failure of rehabilitation.

Other Negative Impacts from the Proposed Mine

There is a body of evidence from overseas research⁶ about the severe and negative impacts that occur from noise and light pollution to surrounding vegetation. The Environmental Assessment by the proponents did not consider these impacts. An expert review of research conducted as part of this study found that there is insufficient data to properly assess the impacts on surrounding ecosystems and populations, but that the impacts are likely to be substantial.

Conclusion

This study indicates that:

- Large areas of critically endangered Box-Gum woodland mapped by the proponent in the proposed offset properties do not exist.
- The offset property mapping is incorrect and over-stated with regard to vegetation type, area and condition.
- The approval of this mine with the proposed offsets would breach the Federal Government offsets policy and offset calculator

⁵ See Appendix B Expert Opinions and other Contributors to Federal Submission January 2013

⁶ See Appendices E and F for an assessment of the potential impacts of noise and light on Leard State Forest

- The high condition Critically Endangered Box Gum woodland and habitat for nationally threatened species in Leard State Forest is simply not present in the offsets proposed to replace it.
- The proposed revegetation in the offsets and rehabilitation of the mine site will not produce a functioning endangered ecosystem in high condition.
- The overall impacts of the mine have not been properly assessed because the impacts of noise, light, dust and blasting on surrounding ecosystems has not been quantified.

The Federal Government should reject the Maules Ck Coal Mine due to the severe damage it will cause to one of the most threatened ecosystems in Australia, and the fundamental inadequacy of the proposed offsets and rehabilitation plans



Photos 1 and 2 CEEC in Leard State Forest: Photos 3-6 Northern Offsets: Photos 7 & 8 Kelso Offset