

Review of field assessment of vegetation types on 'Wirradale' and 'Mount Lindesay' undertaken by North West Ecological Services in January 2013.

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Introduction

In reviewing the report 'Results from field assessment of Maules Creek Coal offset properties Wirradale and Mt Lindesay, targeting sections of vegetation mapped as White Box – Stringbark grassy woodland' by North West Ecological Services (NWES 2013), I have referred to the following data sources, in conjunction with my field-based knowledge of the subject area and its characteristic vegetation types:

- New South Wales Vegetation Classification and Assessment database (NSWVCA, Benson *et al.* 2010);
- Vegetation map for the Horton 1:100 000 Map Sheet (Cannon *et al.* 2002);
- Composite vegetation map for the Namoi and Border Rivers-Gwydir CMAs (Eco Logical Australia 2008, which incorporated and updated the abovementioned Horton vegetation mapping);
- Version 7 map of IBRA bioregions (based upon Thackway & Cresswell 1995).
- 'Vegetation Information System', the OEH systematic flora survey database (OEH 2013).

Discussion

The results and conclusions contained within NWES (2013) are supported by this review. The following specific comments are pertinent:

Vegetation Communities on the offset properties: The vegetation mapping undertaken by Cumberland Ecology does not accurately reflect the type and extent of plant communities that would be expected to occur on the subject properties. The mapping undertaken by Cumberland Ecology for the Environmental Impact Assessment (EIA) differs significantly from the mapping of the same properties for the Biodiversity Offsets Management Plan (BOMP). Whereas the majority of the properties were mapped as White Box Grassy Woodland in the EIA mapping, the mapping for the BOMP is very different and more complex. The vegetation types of the BOMP mapping appear to be named in accordance with the Regional Vegetation Communities (RVCs) of Eco Logical Australia (2008), with the notable difference being that where the majority of the vegetation is described by Cumberland Ecology as 'grassy woodland', the Eco Logical Australia (2008) composite map describes the RVCs as mostly 'shrubby woodland' or 'shrubby open forests'.

Most of the area mapped as 'White Box – Stringybark grassy woodland' by Cumberland Ecology has been shown by NWES (2013) to be devoid of White Box, dominated mainly by a Stringybark (most likely *E. laevopinea* or *E. macrorhyncha*), and, for the most part, shrubby. Therefore, most of those areas do not represent the Grassy Box Woodland EEC or CEEC.

It is possible that Apple Box (*E. bridgesiana*), which is common in the subject area, was mis-identified as White Box by Cumberland Ecology personnel during field studies. A review of the 11 existing flora survey plots (5 full-floristic and 6 overstorey plots) within the boundaries of the subject properties (OEH 2013) reveals no records of White Box, but four of the 11 plots recorded

Apple Box in the overstorey. Whatever the reasons, it appears that Cumberland Ecology has greatly overstated the areal extent of White Box grassy woodland on the subject properties.

The vegetation communities that occur within the subject properties do not equate to any vegetation communities that occur within the proposal area on Leard State Forest.

IBRA bioregions: The two proposed offset properties occur within the Peel and Kaputar subregions of the Nandewar IBRA bioregion (Thackway & Cresswell 1995), whereas the location of the proposed development on Leard State Forest lies entirely within the Liverpool Plains subregion of the Brigalow Belt South bioregion. This disparity immediately indicates that the offset properties are not equivalent to the development site with regard to characteristics of elevation, geomorphology and, most significantly, biological features.

Conclusion

The Cumberland Ecology mapping of the grassy woodland EEC and CEEC within the two offset properties 'Wirradale' and 'Mt Lindesay' has been shown by NWES (2013) to be incorrect. The finding of NWES is supported by this reviewer. It is considered that the Cumberland Ecology vegetation mapping is inadequate for the purposes of environmental impact assessment and biodiversity offset assessment. It is recommended that potential offset properties that occur within the same bioregion and subregion as the proposal be identified and assessed accordingly. It is also strongly recommended that vegetation mapping of any properties be undertaken by suitably qualified botanists with recognised knowledge of the local vegetation and flora.

References

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- Cannon, G., Cannon, M., Harding, W., McCosker, R., Spinner, B., Steenbeeke, G. and Watson, G. (2002) *Native Vegetation Map Report Series No. 3: Bellata, Gravesend, Horton and Boggabri 1:100 000 map sheets*. NSW Department of Land and Water Conservation. Centre for Natural Resources. Parramatta.
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OEH (2013) Vegetation Information System (VIS) – the OEH Vegetation and Flora Survey Database. NSW Office of Environment and Heritage. For further information refer to <http://www.environment.nsw.gov.au/research/Vegetationinformationsystem.htm>

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