



Office of Environment & Heritage

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Attention: Joanne Glass

15 February 2013

Dear Ms Glass

**RE: White Rock Wind Farm Modification
(Part 3A Mod 12_5584 (modification 1 to MP 10_0160))**

The Office of Environment Heritage (OEH) has reviewed the exhibited Environmental Assessment for the White Rock Wind Farm Modification, and provides the following submission at Attachment A for consideration by the Department of Planning and Infrastructure.

In summary OEH raise the following issues with regard to the assessment:

- insufficient detail is provided to support the assessment of impacts on native flora and fauna;
- insufficient detail is provided with regard to avoidance measures;
- inadequate details are provided with regard to options for mitigating impacts on biodiversity; and
- the EA does not include a detailed offset proposal.
- The EA needs further detail to show that it has followed the 2005 Aboriginal Community Consultation guidelines.

If you have any questions regarding this matter further please contact David Geering on 02 6883 5335.

Yours sincerely,

ROBERT TAYLOR
Manager, Environment & Conservation Programs
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ATTACHMENT A

BIODIVERSITY IMPACTS

OEH has previously made a number of quite detailed recommendations in regards the adequacy of the Supplementary Biodiversity Assessment for the White Rock Wind Farm Alternative 132kV Powerline. Despite these recommendations the Biodiversity Assessment still lacks sufficient detail for OEH to adequately assess the impact of the power line route.

The failure to adequately identify and quantify the impact to native vegetation is of particular concern. The vegetation mapping provided does not reflect the true extent of vegetation communities impacted. This undermines calculations of the degree of impact and ultimately the quantum of offset required for this impact.

Additional failures include, but are not restricted to:

- Failure to provide a description of dominant vegetation types;
- Inadequacies in identifying potential impacts to threatened species;
- Uncertainty regarding the degree of avoidance and mitigation of the impact; and
- The lack of a detailed offset proposal.

Survey methodology

Issue 1:

Full details of survey effort are not provided.

Background:

The *Draft Guidelines for Threatened Species Assessment* (Dept of Environment & Conservation, 2005), hereafter referred to as the “Guidelines”, stipulate a range of information that should be presented in an Assessment. These include an outline of sampling dates, time and weather conditions and the location and layout of quadrats, traverses and sampling sites, presented as grid references and maps. Other than a reference to a winter sampling period, there is no indication of the on-ground survey effort in the study area.

The inclusion of maps would have greatly enhanced the reader’s ability to determine whether the surveys undertaken were appropriately located to achieve the stated objectives. Unfortunately this is not the case. A general impression is gained from the BA that the survey effort for flora and fauna is inadequate.

The Assessment details a number of specific methodologies however there is no indication what these entailed. For example “Targeted searches for Regent Honeyeater and Swift Parrot” were undertaken but there is no detail as to where, when and how these “searches” were conducted.

Similarly, several objectives are either unrealistic or simply poorly worded, e.g. “locate and identify all daylight active birds”.

Recommendation:

The proponent should be required to provide clear evidence that the survey effort was sufficient to achieve the stated objectives.

Issue 2:

A full range of field survey methods has not been employed

Background:

A range of survey techniques were employed but most of these were largely search based. Of particular concern was the lack of trapping undertaken for small mammals or microchiroptera bats.

Given the number of microbat species, in particular, identified as potentially occurring on the study site it would be expected that ultrasonic call recording and analysis, at the very least, should have been considered.

The assessment contains no discussion relating to the consequences of inadequate surveying for bats.

Recommendation:

That the proponent provides justification for not utilising adequate survey techniques as outlined in the *Threatened Species Survey and Assessment Guidelines*.

Description of dominant vegetation types

Issue 3:

The dominant vegetation types within the study area are not described.

Background:

Four vegetation communities are mentioned in the Assessment with the following comment *"However, while the above vegetation communities are present to variable degrees of ecological integrity, quality and remnant size within the study area, the majority of the study area is cleared or disturbed. Section 2 of the study area has the largest higher quality area of remnant vegetation. The floristic species composition present within the study area is fully described in the Table below"*. The Table mentioned provides a list of flora species recorded within the study area without allocating them to any particular vegetation type.

The vague descriptions given in the Assessment are insufficient to assess the condition of these vegetation types across the study area. The photographs provided give some insight into the vegetation as does the plot data but these should not replace a well written and detailed description of these vegetation communities.

Recommendation:

A full description of each of the vegetation types in the study area is necessary. As recommended by the guidelines details of the structure and floristics, a list of dominant plant species in each growth stratum, disturbance (clearing, logging, fire etc), description of weeds present and their density, and suitability of the area as habitat for species, populations and ecological communities should be provided. Each description should, ideally, be supplemented with a photo of a typical area of this vegetation type.

Avoidance

Issue 4:

It is unclear whether sufficient measures have been taken to avoid or minimise impact.

Background:

The Assessment states that *"White Rock Wind Farm Pty Limited has planned and routed the proposed powerline route in the most environmentally sensitive manner possible taking into consideration to minimise impacts on the most vegetated areas within the vicinity minimising destruction to vegetation communities and fauna habitat values of the study area"* however there is no documentation to support this claim. An inspection of Figure 1 suggests that an alternate route from the substation to Point 11 would largely avoid the woodland in Section 2. There is no indication to suggest that such alternate routes have been considered.

Recommendation:

The proponent should provide evidence that all reasonable effort has been made to minimise the level of impact, in particular the avoidance of Endangered Ecological Communities.

Evaluation of impacts

Issue 5:

Native vegetation has not been adequately mapped and therefore quantum of the impact has not been correctly determined.

Background:

Maps of the proposed power line route have been provided however the vegetation mapping does not reflect the true extent of vegetation communities. The areas mapped as White Box Yellow Box Red Gum EEC, for example, include only the canopy of individual trees rather than the community as a whole. Typically woodland can have inter-canopy spaces of 1 to 20 times the width of individual canopies. As a result the total impact for this Box – Gum Woodland EEC has been calculated to be 2.003 ha. A quick assessment of the maps provided suggests that this is a gross underestimate of the expected impact on this vegetation community.

Areas of Derived Native Grassland as well as “possible Derived Native Grassland” have been identified. A number of these areas should be mapped as woodland, as indicated above. All areas defined as “possible” Derived Native Grassland must be assessed to determine whether these require offsetting or not. There are considerable areas of grassland within the study area that are not mapped. The assumption is that these are exotic grassland. This should be clarified. All grassland within the study area should be assessed, using the BioBanking Assessment Methodology (BBAM), to determine whether or not they are Derived Native Grassland.

Table 5 of the Assessment provides a general assessment of the condition of native vegetation in the study area. For the four vegetation types, these include the assessments “poor to moderate, but mostly poor”, “moderate” and “moderate to good”. OEH recommends use of the BBAM for vegetation assessments. This provides a standardized, clear and simple methodology.

Plot data has been provided for vegetation sampling quadrats. While grid references have been provided, their location has not been marked on any of the maps nor do the maps provide a cadastral grid to assist in placing individual plots. While the data sheets allow for adequate data, the data collected is generally insufficient to determine the condition of the vegetation sampled. BBAM clearly outlines the data required for condition assessment.

It is important that the quantum of the impact is calculated accurately as this is used to inform the requirements of the Biodiversity Offset Strategy.

Recommendation:

Vegetation maps must clearly show each vegetation type, by condition, within the impact area. This should include all native vegetation not just EECs. Ideally, the BioBanking Assessment Methodology should be used to guide these assessments.

Plot data should be made available to OEH to enable independent assessment of impacted vegetation. Plot references should be clearly marked on a map to assist any independent assessment. An assessment of all cleared areas is required to determine the extent and quantum of areas of Derived Native Grassland within the study area.

Issue 6:

Flora & fauna habitats and their importance are not adequately addressed.

Background:

Section 9 of the Assessment states “*There is limited native fauna habitat present throughout much of the study area due to the degree of previous disturbance within most precincts as well as severe habitat fragmentation. The exceptions to this are a larger area within Section 2 and a proportion of Section 6 and Section 7*”. Unfortunately, the Assessment does not elaborate on what the habitat values are within these areas other than generic comments such as “... *the study area (and its various remnant patches of vegetation) is potential habitat to a range of threatened species as well as species of local and regional significance*”. This is not assisted by the lack of detailed descriptions of the dominant vegetation communities in these areas although the site photographs provided do give some insight. This gives rise to a number of uncertainties. For example, the Assessment regards the Turquoise Parrot, a species that is known to occur in the district, to be unlikely to occur on the site as “*Limited habitat present*” yet photographs of Section 2 show habitat that would be expected to be occupied by this species. This is further complicated by comments such as “*This area of high quality vegetation lies just outside of the area of impact by the proposed powerline easement*”.

Section 9 does provide a brief statement relating to tree hollows suggesting that hollows are generally scarce in the study area: “*However, the majority of these tree hollows are located outside of*

the powerline easement and impact area". The Assessment does not provide any indication of the density of hollows and only scant details of the type and size of hollows. This information could be useful in informing the potential impact of hollow-dependant fauna, such as micro-bats, that have the potential to forage across the impact area.

Other than passing comments in various sections of the Assessment little consideration has been given to habitat for threatened flora.

Recommendations:

That the proponent provides a detailed assessment of habitat features of remnant vegetation across the study area for threatened flora and fauna. This should include the number of hollow-bearing trees within the study area and the number of hollow-bearing trees that will be removed within the context of the general density of hollow-bearing trees within local remnants.

Mitigation

Issue 7:

Mitigation measures are not clear.

Background

Along with a list of potential Key Threatening Processes, only basic descriptions of measures to mitigate adverse impacts are provided in the Assessment. For example:

- *"That an ecologist be present during the construction phase to reduce impacts on the study area's biota, the removal and management of fauna that may be present and for micro-siting of powerpoles"*. Micro-siting of power poles is an important mitigation measure but needs to be done well before the construction phase. What potential measures may be undertaken to reduce impact during construction?
- *"That the proposed works associated with the construction and installation of the proposed powerline would be undertaken in an environmentally sensitive manner and that all environmental controls undertaken would ensure that no key threatening processes are triggered"*. This is contradicted by the acknowledged removal of an unknown number of hollow-bearing trees. No mitigation measures have been proposed for this loss of hollows. Note that OEH has concerns regarding the efficacy of artificial nest boxes as a suitable replacement for natural hollows. The viability of nest boxes as a long-term solution to the lack of tree hollows may be hindered by the significant cost required in their installation, maintenance and monitoring. Salvaging hollows, placed appropriately, may provide an acceptable alternative.

Recommendation

The proponent considers the broader implications of impact and proposes realistic mitigation measures to reduce any adverse effects.

Threatened species assessment

Issue 8:

The potential occurrence of a number of threatened species and the impact of the development on these species appears to be underestimated.

Background:

The Assessment identifies threatened flora and fauna species that have been recorded in the study area (ie based on field survey and records from the Atlas of NSW Wildlife) however no maps, as required by the guidelines, are provided.

The brief period, and season, during which flora and fauna were surveyed has potentially contributed to a number of species being overlooked and to a possible misinterpretation of the abundance of some species in the study area.

A number of threatened fauna, particularly microbats, are dismissed as unlikely to occur because *"tree hollows for roosting are very limited"*. The lack of specific survey techniques employed to

identify microbats is unfortunate. Many bat species are capable of travelling considerable distances when foraging. The lack of hollows for roosting does not preclude their presence on the study site. Although there is only very general information provided about the condition of the vegetation in the general area it is apparent from the maps and photographs provided and comments such as “*This area of high quality vegetation lies just outside of the area of impact by the proposed powerline easement*” that reasonably sized remnants are present and these may well contain suitable roosting habitat for microchiropteran bat species as well as woodland birds.

At times, the rationale provided in Table 2 to preclude species from further consideration is contradictory. Some species have not been considered suitable for consideration by a Seven Part Test of Significance on the basis of the comment “*Not recorded. Marginal habitat present only*” yet other species afforded the same comment are considered.

Recommendation:

OEH suggests that a map of threatened flora and fauna records is necessary on the basis of providing context.

Further assessment of the likelihood of occurrence of threatened species is required. Clear statements regarding the rationale to further consider, or not consider, these threatened species is also required. These decisions must be soundly based on the species habitat requirements, ecology and the presence of known records in the district.

Biodiversity Offset Strategy

Issue 9:

The EA does not include a detailed offset proposal. Offset commitments should be demonstrated prior to the approval of the impact.

Background:

Impacts to native vegetation must be offset. As outlined in Issue 5, there are significant issues regarding the full nature and quantum of the impact. OEH maintains that until these issues are resolved it is not possible to establish the quantum of offset that will be required.

A proposed Offset Area has been identified but, as yet, no detailed Offset Strategy has been prepared. The proposed offset comprising two areas of Box – Gum Woodland EEC of 18 ha and 20 ha separated by approximately 500 metres. The OEH document “*Principles for the use of Biodiversity Offsets in NSW*” outlines the principles used when considering environmental impacts and developing offset proposals. One basic principle is that offsets will be of greater value where:

- they protect land with high conservation significance
- management actions have greater benefits for biodiversity
- the offset areas are not isolated or fragmented
- the management for biodiversity is in perpetuity (e.g. secured through a conservation agreement).

Accordingly, OEH would prefer the Offset Area comprise a single block rather than the two smaller blocks proposed.

Recommendation:

A detailed Biodiversity Offset Plan is required prior to consent so that its likely effectiveness in maintaining or improving biodiversity can be analysed. The offset plan should:

- propose an offset which is supported by a suitable metric and addresses the Department’s ‘*Principles for Biodiversity Offsets in the NSW*’.

ABORIGINAL CULTURAL HERITAGE

Issue 1:

Documentation in relation to the requirements of the 2005 Guidelines for Aboriginal Cultural Heritage Assessment and Community Consultation

Background:

The proponent was required to utilise the 2005 Interim Community Consultation requirements for applicants. Evidence has not been provided that the proponent has complied with these requirements in particular stage 3 of these requirements related to *Drafting, review and finalisation of the Cultural Heritage Assessment Report*.

It is unclear from the report if the Registered Aboriginal Parties for this project were afforded the opportunity to provide any comments on the draft report before the report was finalised and, if they were provided an opportunity to offer comments, how their comments were considered in the final report.

Recommendation

The proponent needs to demonstrate that they have complied with stage 3 of the 2005 Aboriginal community consultation requirements: