Office of Environment & Heritage

Date	16th August 2013
Your reference:	MP 11_0033
Our reference:	DOC13/43817
Contact:	Liz Mazzer
	(02) 6883 5325

Alison Nash
Department of Planning and Infrastructure
GPO Box 39
Sydney, NSW 2011

Dear Ms Nash

RE: Crudine Ridge Wind Farm
(MP 11_0033)

The Office of Environment Heritage (OEH) has reviewed the response to submissions and Preferred Project Report for the Crudine Ridge Wind Farm.

In general, OEH considers that most issues raised in our submission dated 19th March 2013 have been adequately covered. However, there are still some issues, detailed in Attachment 1, that require further consideration, in particular:

- OEH wishes to be consulted early in the development of the monitoring plan. Some factors to be included in the monitoring are listed in Attachment 1.
- The mitigation measure of changing the wind speed trigger to reduce blade strike at times of high bat activity requires further consideration.

If you have any questions regarding this matter further please contact Liz Mazzer on 02 6883 5325.

Yours sincerely,

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ATTACHMENT 1

BIODIVERSITY IMPACTS:

1. Assessment of Impacts

Issue 1:

The EA does not provide detail of the monitoring methodology proposed for monitoring impacts of strike.

Background:

The proponent aims to set up a monitoring program to monitor impacts of strike across the wind farm. The proponent has indicated that it would consult with OEH and SEWPAC for recommendation of frequency of monitoring and reporting, including the thresholds for which impacts are considered unacceptable. Consideration was given to OEH's previous comments regarding feathering and / or temporary shutdown of turbines during high risk periods where the monitoring program shows that bird and bat strike exceeds thresholds. The EA, however, does not provide detail of the methodology that will be adopted by the proponent to monitor the impacts of bat and bird strike.

Proponent response:

The purpose of the EA is not to provide this level of detail. The development of the monitoring plan will be in consultation with OEH and SEWPAC.

OEH response:

OEH wishes to be consulted early in the development of the monitoring plan.

The monitoring should include pre- and post-construction monitoring, based on the Before-After-Control-Impact principle to determine the extent of:

- displacement and disturbance of breeding and/or non-breeding birds;
- collision mortality (with turbines, buildings and overhead power-lines);
- the barrier effect to dispersing and/or migrating birds.

When addressing collision mortality the Monitoring Plan should specifically address difficulties relating to quantifying bird and bat strikes due to:

- carcasses falling outside the search area;
- search efficiency and/or detectability of carcasses; and
- scavenger removal.

Issue 2:

Assessment of powerline easement is inadequate.

Background:

OEH understands that the proponent has not undertaken fauna surveys along the entire length of the power line easement. The EA justifies this on the grounds that there is limited fauna habitat in this area in comparison to the remainder of the study area. OEH considers this justification an inadequate reason, especially considering that EPBC and EEC listed Box-Gum Woodland occurs along this easement line.

OEH recommended that fauna surveys be conducted to complete the assessment of likely impacts of the powerline easement on fauna habitat.

Proponent response:

The entire length of the transmission line easement was traversed as part of the flora survey. A stratified sampling methodology was employed to determine the potential for threatened fauna within the transmission easement. Detailed fauna surveys were conducted across other parts of the study area that support similar and/or better quality habitat than that located within the proposed transmission line easement. In addition, the assessment of potential habitat of and impact on threatened species has been conservative, whereby vegetation and habitat type have been used to inform the potential occurrence of threatened species or their habitat.

The proponent and ecological consultant are of the view that the fauna data captured across the Project, along with a traverse of the external transmission line easement, was sufficient to inform the likely assemblage of species within the easement.

OEH response:

Given the presence of moderate to good condition woodland along sections of the transmission line easement OEH is of the view that more detailed fauna surveys should have been conducted in these areas. However, we note that the above approach, while not ideal, is sufficient given the relatively small area of woodland and the largely cleared nature of vegetation along the transmission line easement.

Issue 3:

The EA has not adequately justified conclusions related to the risk of bird and bat collision and the significance of this impact.

Background:

The EA does not adequately discuss the likely influence of common weather conditions at the site on bird collisions. Sites which experience poor weather and/or low visibility conditions need to be assessed taking this into account because it is likely to influence flight behaviour and increase the likelihood of impacts.

Although the EA discusses the risk factors for affected bat species based on habitat requirements and behaviour, some additional factors, not considered, that could potentially influence their susceptibility may include:

- Tree-roosting species may perceive turbines as potential roost trees;
- Ridge-top sites might coincide with availability of insect prey;
- Migrating bats may rely on sight (rather than echo-location) to navigate, being drawn to large structures on ridge-tops;
- Bats may investigate moving blades as movement may be mistaken as evidence of prey;
- Audible sound from turbines may attract bats from considerable distances; and
- Mating behaviour of tree-roosting bats may be centred on the tallest prominent feature in landscape.
- Risk of concussion from passing through low-pressure areas near turbines.

These factors are all relevant considerations for an adequate impact assessment on all bat species known and likely to occur at the site.

Proponent response:

Section 5.5 of the EA discusses direct impacts while Appendix F and G present a risk matrix for bats and birds which includes discussion on weather conditions, light winds, baratrauma and migration (birds).

Further information is presented relating to effect of weather conditions on bird and bat collisions, potential for bats to view turbines as roosts, migrating bats relying on sight and aggregations of prey is provided.

OEH response:

OEH continues to have concerns as to how potential bird and bat strikes may be mitigated. Appendix F (risk matrix for bats) details three mitigation strategies:

- locating turbines greater than 30m from hollow-bearing trees,
- utilising lighting that minimises attraction of insects, and
- turbines orientated north-south rather than east-west to minimise impact on migration.

These mitigation measures are considered minimal. Furthermore, the latter measure does not take into account potential local shifts in migratory direction related to topography etc.

Changing the wind speed trigger to reduce blade strike at times of high bat activity is discussed in the EA but is followed by the caveat that this may not be possible due to the potential loss of productivity.

OEH requires stronger assurances that effective mitigation measures relevant to the potential threats will be implemented. Given the potential to reduce blade strike by bats by altering the wind speed trigger at appropriate times, this mitigation measure requires further consideration.

2. Offset Proposal

Issue 4:

The EA incorrectly states that a Tier 2 offset can be met and fails to provide detail for the justification for exclusion of a BVT.

Background:

The EA states that each of the potential offset properties are capable of meeting Tier 3 or Tier 2 offset outcome in section 6.5. When referring to Table 31 in the EA however, it is clear that none of the properties contain Broad-leaved Peppermint – Brittle Gum – Red Stringybark dry open forest BVT. According to the OEH policy regarding offsetting biodiversity impacts, Tier 2 outcome requires no variation to offset type. The lack of Broad-leaved Peppermint – Brittle Gum – Red Stringybark dry open forest and the Tussock Grassy Woodland BVT's present in any of the offset properties means that only Tier 3 can be met.

The EA provides justification for the exclusion of Tussock Grassy Woodland BVT in the offset calculations, however no justification is provided for the exclusion of Broad-leaved Peppermint – Brittle Gum – Red Stringybark dry open forest BVT in the offset package.

Proponent response:

Confirmation that only a Tier 3 offset can be met. The proponent has entered into an Option to Purchase Agreement with the owner of an offset property. A surplus of White Box-Blakely's Red Gum-Yellow Box Grassy Woodland on the offset site will be used to meet the offset requirement for the Broad-leaved Peppermint BVT.

OEH response:

Noted.