Winterbourne Wind Project – EIS Submission research

Biodiversity - BDAR

The location of this project adjacent to the Oxley Wild Rivers National Park and Gondwana World Heritage Area has resulted in biodiversity impacts that are not acceptable. These impacts are significant, irreversible and not compatible with biodiversity offsets. The impact assessments have been based on surveys that are not complete or suitable for many of the species, including threatened birds and animals. The biodiversity impact assessment is described in the EIS, the BDAR and the appendices to the BDAR. There are inconsistencies between the different sections of the EIS making the survey methods and impacts very difficult to follow and understand, and in many cases, contradictory. The report in total presents as a disjointed, incomplete and does not correlate with local expert knowledge. If local knowledge was sought, it may well have resulted in more targeted surveys and a more accurate report.

1. Unacceptable impacts as a result of site location.

The aim of 'no net loss' of biodiversity through the implementation of avoidance, mitigation, rehabilitation/restoration and offsetting was not a priority in the site selection of this project and this has resulted in biodiversity impacts that are unacceptable. Poor site selection, with the project adjoining the Oxley Wild Rivers National Park and the World Heritage Gondwana Rainforests will result in significant biodiversity impacts. There are many locations that are more appropriate that would avoid the need for biodiversity offsetting. Biodiversity offsets are not appropriate for critically endangered ecological communities and endangered species.

Connectivity corridors are a feature of the landscape being impacted by the project. These corridors are particularly important as there are limited areas of habitat connecting back into the national park as a result of land clearing in the area. The corridors provided refuge for wildlife during the Black Summer Bushfires of 2019 when much of the adjoining park was burnt. Any damage to this sensitive habitat is significant, particularly damage causing fragmentation.

Page 184 of the BDAR states "*Climate change will continue to induce shifts in the distribution of flora and fauna species. AdamsHosking et al. (2011) identify that current koala distributions, based on their climate envelope, will likely contract eastwards and southwards to many regions where koala populations are declining due to additional threats of high human population densities and ongoing pressures from habitat loss, dog attacks and vehicle collisions. This trend is likely to apply to other native species which reside in the Gondwana Rainforest WHA. Over time, the southern extent of the Gondwana Rainforest WHA (i.e., Oxley Wild Rivers National Park) will have increased importance as a refuge for species that are excluded from their current range by a changing climate*."
We need to be protecting the important environmental areas adjacent to the national park, not shrinking them.

The following examples of biodiversity impacts from pages 136-137 of the EIS are not acceptable.

- *New England Peppermint (Eucalyptus nova-anglica) Grassy Woodlands*, the Project would impact on 14.4 ha, which was considered likely to generate a significant impact to the community

- *White Box-Yellow Box-Blakely's Red Gum Grassy Woodland and Derived Native Grassland*, the Project would impact on 20.1 ha, which was considered likely to generate a significant impact to the community
- *Spotted-tail Quoll Dasyurus maculatus,* the Project would result in the loss of up to 426 ha of potential habitat for this species which may lead to a long-term decrease in the local population, reduce the area of occupancy of the local population and interfere with the recovery of this species, therefore a significant residual impact was considered likely
- *Koala Phascolarctos cinereus* the Project would result in the loss of up to 206.73 ha of potential habitat for this species which may lead to a long-term decrease in the local population, reduce the area of occupancy of the local population and interfere with the recovery of this species, therefore a significant residual impact was considered likely;
- *Greater Glider Petauroides Volans,* the Project may lead to impacts on this species relating to malnourishment or decreased reproductive output, therefore a significant residual impact was considered likely
- *Narrow-leaved Black Peppermint Eucalyptus nicholii*, the Project would result in the loss of 13 individuals of this species which may lead to a long-term decrease in the local population, reduce the area of occupancy of the local population, and interfere with the recovery of this species, therefore a significant residual impact was considered likely
- *White-throated Needletail*, the risk of direct mortality of individuals from turbine strike is a possible threat. In light of the above, the proposal is considered likely to generate a significant impact to both the White-throated Needletail and the Fork-tailed Swift (from page L-XXII BDAR appendix L)

2. **Surveys are incomplete**

Reading the EIS, the BDAR and the appendices to the BDAR, it appears insufficient surveys and studies have been carried out to assess the impacts of this wind farm on the animals in the area. The following are examples.

- It is stated on page (x) and (xi) of the BDAR "*During the public exhibition of the Environmental Impact Statement and the subsequent response to agency and community submissions, the following additional surveys will be completed:*
    - *Additional hollow bearing tree surveys to quantify hollow dependent species habitat.*
    - *Additional camera trapping and hair tubes to confirm lack of detection for Eastern Pygmy Possum and Rufous Bettong. Surveys were done as per proposed methodology, however BCS provided feedback after surveys had commenced that additional survey was required.*
    - *Additional Little Eagle surveys to be conducted during breeding season.*

  We have no evidence that this is being carried out.

- From Appendix E Bird and Bat Risk Assessment - "*Commonwealth Department of Agriculture, Water and the Environment (DAWE) are now recommending 24 months (two years) of bird utilisation surveys (BUS) to provide baseline data prior to construction commencing to inform a Before-After Control-Impact (BACI) design impact assessment study. The aim of the BUS conducted to-date has been to compile a list of species that may use the proposed wind farm site as a flyway or migration route. Further baseline BUS surveys will generate a greater understanding of the utilisation rate of the site by species of birds and*

bats. These data will also identify resident raptor species that occur on the site and their seasonal distribution pattern. These resident raptor species may include Little Eagle, Wedge-tailed Eagle and other raptors.
It appears the surveys carried out to-date are insufficient with only 4 surveys covering 3 seasons.

- Appendix E of the BDAR, Bird and Bat Risk Assessment, recommends further surveys to be carried out. From the reading of this appendix, it appears that the recommended studies have not been completed. "*Further baseline BUS surveys will generate a greater understanding of the utilisation rate of the site by species of birds and bats. These data will also identify resident raptor species that occur on the site and their seasonal distribution pattern.*" Should this have been done before the exhibition of the EIS?

- Appendix E also recommends further surveys for the White-throated Needletail. "The surveys to-date have been limited in scope and thus may not have been at a time suitable to detect this species. It is recommended that further targeted surveys are conducted over the summer months for this species of concern"
  Again, there is no evidence that these have been completed. This needs to be completed in order to make an informed assessment.

- Further investigations into the Glossy Black Cockatoo are also recommended in Appendix E with mapping of the allocasuarina trees and targeted surveys. (page 14 of Appendix E of the BDAR)

- "NGH Consultants Pty Ltd engaged Nature Advisory Pty Ltd to implement bird and bat surveys for the Winterbourne Wind Farm". This is provided in Appendix C- Bird utilisation survey reports. Nature Advisory carried out three of the Bird Utilisation Surveys. A fourth survey was carried out by NGH and this has been hitched on to the end of Appendix C. It is not included in the contents and the pages are unnumbered. It is unclear whether this survey has been included in the BDAR results and discussion. It is a survey carried out in Autumn and there is still no Winter survey. This survey was carried out in March 2022 and again the incorrect RSA (Rotor Sweep Area) values for the turbines were used. The developers knew which turbines were being proposed at this time. The total RSA of the proposed Vestas turbines is over twice the area of the dimensions assumed and used in this survey report.

- The brush-tailed rock wallaby has not been identified in the BDAR despite a local wildlife expert (veterinarian) and local resident being aware of its presence within the project area.

- The Risk Assessment Results outlined on table 6 of Appendix E understates the likelihood of impacts. They are based on incomplete surveys and questionable assumptions.
  1) The "likelihood of risk event" for the glossy black cockatoo is recorded as unlikely – this is despite the casuarina tree being present and the glossy black cockatoo known to be present in the area. If the likelihood is increased to likely, this would increase the risk level to high.
  2) The "likelihood of risk event" for the wedge-tailed eagle is almost certain. Given the particularly high number of wedge-tailed eagles recorded in the BUS, and the known risk

of wind turbines to raptors, this likelihood should be "certain" which would make the risk to wedge-tailed eagles high rather than moderate.

3) The *consequence criteria* (referred to in table 4) for the White-throated Needletail is recorded as moderate. Given these are a vulnerable species that fly in large flocks, is the consequence really going to be moderate, or is it going to be high or severe? This would infer that the risk to the White-throated needletail high or severe.

The risk to birds and bats needs to be measured and understood before the project is approved. How can 'Avoid and minimise' strategies and offsets be calculated if studies are not complete or further surveys are recommended. Shouldn't all surveys be completed before strategies can be developed for mitigation measures?

It seems that the project developers are relying on an adaptive plan but it is too late when the turbines are operational to learn that the impact on birds and bats is too high and adaptive measures need to be taken.

It appears very clear that this report has been rushed into public release, prior to the studies being adequately carried out. It is neither possible for the public or planning department to make informed observations and decisions regarding this project, or for the developer to adequately plan for appropriate mitigation measures, until these reports are completed in full.

3. There are Inconsistencies between the EIS, the BDAR and the BDAR appendices

The biodiversity Assessment Report is very difficult document to navigate. It skips between EIS, the BDAR and the 1000+ pages of the BDAR appendices with inconsistencies between the 3 documents. The 1000+ pages of appendix are not indexed so to navigate to appendices referenced in the EIS or BDAR is very difficult. This points to the poor quality and the rushed nature of the EIS documents, which has perhaps led to these inconsistencies.

There are inconsistencies between the EIS, BDAR and its appendices. Examples include:

- Page 121 of the EIS states "*Field surveys and ground-truthed vegetation mapping confirmed the presence of three Threatened Ecological Communities (TEC) listed under the BC Act and/or the EPBC Act within the Development Footprint and detailed in Table 6-4 and shown in Figure 6-1, Figure 6-2, Figure 6-3 and Figure 6-4*." However, table 1-1 on page (xi) of the BDAR describes **four** TECs (including PCT 567 which is excluded in the above EIS summary). This PCT is included in the figures F6-2, 6-2 and 6-4. It is a significant area that has been excluded. It takes the area of threatened ecological communities in the EIS from 58.1ha to 187 hectares (by adding the 4 areas in the BDAR). This is very misleading to readers of the EIS.
- The area of PCT (Plant Community Type) 567 (TEC) *Broad leaved Stringybark – Yellow box shrub/grass open forest* is said to be 128.9 hectares in table 1-1 on page (xi) of the BDAR but in table 6.2 on page 148 of the BDAR the area is said to be 8.19ha (5.55ha+2.64ha).
- The area of PCT 534*, New England Peppermint Grassy* Woo*dland* (EPBC critically endangered) is said to be 14.4ha, but in appendix L (EPBC Assessment of significant impact) of the BDAR on page LIII, it says the area is 1.42ha.
- Page (xi) of the BDAR says "*The key biodiversity impact for this project is the potential to have ongoing population impacts on birds or bats that are either excluded or injured by operational turbines. Extensive bird and bat utilisation data and risk assessment modelling has been undertaken to ensure that turbine placements minimise potential impacts*".

However, in Appendix E of the BDAR, Nature Advisory recommended that further surveys were required to generate a greater understanding of the utilisation rate of the site by species of birds and bats. I have been unable to find any "risk assessment modelling" in the EIS and Appendix E says this is still to be done following further surveys. Placement of turbines along the ridgelines adjacent to the National Park is not minimising potential impacts to birds.

- 6.1.3.6 on page 132 of the EIS Bird Utilisation states "*BUS and raptor surveys were undertaken over 3 years and 3 seasons to determine the potential collision risk of the target species recorded flying at the rotor swept area (RSA) height (40-150 m*)." Appendix E of the BDAR states that insufficient surveys were carried out. Further surveys need to be carried out in order to develop a collision risk model. The RSA is also incorrect with the correct height being (68-230m). I have been unable to find anywhere in the BDAR and its appendices an estimate of the number of birds and bats that will be killed and injured by the turbines. This is something we would like to know, and need to know, in order to assess the project properly.
- Also, from this section of the EIS, "*Four threatened bird species were recorded during BUS, namely Varied Sitella (Daphoenositta chrysoptera), Speckled Warbler (Pyrrholaemus sagittatus), Diamond Firetail (Stagonopleura guttata) and Glossy Black-Cockatoo (Calyptorhynchus lathami). None of these species behave in a manner that puts them at risk of collision with operating WTGs*" However page 169 of the BDAR says "*Their behaviour may place them at risk from turbine collisions*" The glossy black cockatoo is a high-flying bird and will be at risk of collision with the turbine blades. This seems to be a blatant error.
- From the same section of the EIS "*The risk associated with WTG collision and indirect effects for the Project, for most assessed bird and bat species, was rated as negligible*". This is ignoring the 3 birds listed as moderate risk in the BDAR – the wedge-tailed eagle, the glossy black cockatoo and the white-throated needletail.
- 6.1.3.7 Matters of National Environmental Significance on page 132 of the EIS fails to list the Glossy Black Cockatoo as an EPBC Act threatened species despite it being described as such in the BDAR.
- 6.1.4.6 Matters of National Environmental Significance on page 141 of the EIS says "Appendix G identified the potential for a significant impact to the following MNES:" The threatened species included are the koala, the spotted tailed quoll, narrow-leaved black peppermint and Bluegrass. It does not include the Greater glider or White-throated Needletail which are included in 7.5.1 of the BDAR "*EPBC listed threatened Ecological Communities and threatened/migratory species.*"
- 6.1.4.2 Significant Impact Assessment – MNES on page 136 of the EIS states that "*White-throated Needletail Hirundapus caudacutus a significant residual impact was considered unlikely;*" Appendix L of the BDAR states "*the risk of direct mortality of individuals from turbine strike is a possible threat. In light of the above, the proposal is considered likely to generate a significant impact to both the White-throated Needletail and the Fork-tailed Swift*." The glossy black cockatoo was not listed as a species requiring assessment, despite being present on the project site.

4. Request for further information

We would like to see the recommendations outlined on page 13 of appendix E (Bird and Bat Risk Assessment) carried out and recorded so the impacts on birds and bats can be understood before the project can be considered for approval. These recommendations include:

- "*development of a stronger information base for the WWF to understand the use of the site by the following key species: ▪ White-throated Needletail (temporal and spatial patterns of abundance and activity); ▪ Wedge-tailed Eagle (location of breeding sites); and ▪ Glossy Black-Cockatoo (location of favoured foraging habitat). The additional consideration of the use of the site by these species will further inform project design and other mitigation measures*." Pp15 Appendix E.
- Further surveys be carried out (4 seasons per year over 2 years) and a Before-After Control-Impact design impact assessment study.
- Turbine free buffer areas around raptor nests.
- Further surveys in winter and early spring to locate threatened raptor nests and document flight behaviour.
- Further targeted surveys for the White-throated Needletail involving point-count surveys twice a fortnight from November to April.
- Mapping allocasuarina trees and applying appropriate turbine free buffers from these habitats.
- A Collision Risk Model for species recorded regularly (the wedge-tailed eagle, glossy black cockatoo and white-throated needletail). Note page 14 of appendix E of the BDAR states "*In relation to the White-throated Needletail, if this species is recorded during statistically designed utilisation surveys in moderate numbers at the WWF regularly between November and April, this will generate sufficient information for the development of CRM for this species. There is currently insufficient data to complete a CRM for this species. As no other species had a moderate to high risk from the risk assessment a collision risk model is not necessary for any other species. Sufficient data is required to undertake a collision risk model effectively. A CRM is less accurate for species that have low activity levels across the site and is not recommended to be generated in such circumstances*." The glossy black cockatoo and the wedge-tailed eagle were also listed as having a moderate risk from the risk assessment. Given the high concentration of wedge-tailed eagles in the area and the high likelihood of impact, we would like to see a collision risk model developed for the wedge-tailed eagle.
- A bird and bat adaptive management plan (draft required to be lodged with EPBC Act assessment documentation).
- An elevated lower RSA height and 120m buffer from RSA of turbines recommended as bat impact mitigation measures.

This bird and bat risk assessment (appendix E) was based using the wrong turbine dimensions. Table 1 on page 2 of this appendix describes the rotor radius as 55m; max upper RSA (tip) as 150m; hub height as 95m; lower minimum RSA as 40m and total rotor swept area/turbine as 9504m2. The RSA of the turbines being proposed for the Winterbourne Wind Project is over twice the area of the turbines the assessment was carried out on. The height recordings of the birds throughout the survey are also inappropriate for the turbines being proposed for the project. We would expect to see a risk assessment based on the relevant turbine specifications for the project.

Average collision rates are discussed on page 16 of appendix E of the BDAR. This discussion is based on a separate study with turbines with a rotor-diameter either side of 103m. The rotor-diameter of the proposed Vestas turbines is 162m. How can this data be compared to the Winterbourne Wind

Project when there is such a discrepancy in the size of the turbine? How many birds and bats can we expect to be killed from this proposed wind farm, with a rotor sweep area of more than twice the area of the turbines in the quoted study?

5. Conflict with endangered species – poor project location

If the aim is for no net loss of biodiversity, the loss of any critically endangered ecological communities, threatened species and serious and Irreversible Impacts (SAII) need to be avoided. The concept that these sensitive and critical species can be replaced with biodiversity credits is surely flawed. A project on an appropriate site would not be causing irreversible damage to sensitive species.

The EIS refers to Goal 1 and Direction 5 in the New England North West Regional Plan 2036 (page 15 of the EIS). It fails, entirely, to address Direction 11 of Goal 2, to "Protect areas of potential high environmental value". This direction is reiterated in the New England North West Regional Plan 2041 Objective 12, to "Protect regional biodiversity and areas of High Environmental Value". The map of high potential environmental value shows most of the project footprint laying directly on land of high potential environmental value. Page 35 of the regional plan states the following actions - "*11.1 Focus development to areas of least biodiversity sensitivity and implement the 'avoid, minimise, offset' hierarchy to biodiversity and areas of high environmental value. 11.2 Ensure local plans consider areas of high environmental value to avoid potential development impacts. 11.3 Encourage the identification of vegetated areas adjacent to aquatic habitats and riparian corridors in local plans*." The New England North West Regional Plan 2041 states "*Avoiding impacts on, and protecting, identified HEV land at the planning proposal stage provides greater certainty and reduces the need for further biodiversity assessment and offsetting at development stage. This can drive more efficient and streamlined development processes*." Surely this should preclude the development of an industrial project in this location.

6. Fire risk, resulting from loss of Aerial water bombing ability.

The increased fire danger caused by the Winterbourne Wind Project has not been addressed in the EIS and poses further risk to the flora and fauna of the area. The EIS discusses the risk of fire spreading from the wind farm into the Oxley Wild Rivers National Park but it does not discuss the increased risk associated with the inability to control fires that start in the park. This project is proposed to be located in a strategic zone, for fighting fires. The presence of this wind farm would preclude the use of aerial firefighting activities, which limits the ability for fighting fires and controlling the risk of fires during backburning operations. All the land directly to the east of the proposed project is category 1 bushfire prone land.

The biodiversity impacts of decommissioning have not been considered. The most likely method for decommissioning is controlled fell. This will involve 119 turbines, 230m tall and their blades, crashing down onto the surrounding area. What kind of destruction will this cause on the local flora and fauna?