

**Murray Dalton
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13th December 2022

**Department of Planning
Major Projects**

**RE Hills of Gold Wind Farm - Nundle & Crawney Area
I Oppose the Proposed Development**

I am a member of the Newcastle & Hunter Valley Speleological Society Inc (NHVSS) which has previously raised objection to the proposed Hills of Gold Wind Farm (the 'Project') in a letter dated 23/12/2020. The recently amended development proposal has not addressed the main issues that are of concern.

The main concerns are detailed below in regard to the bat populations within the project area.

Bat concerns

1. Foraging and migratory flight paths

Table 3-3 of the Submissions Report (December 2020) lists the risk to bats communities as a key matter raised in Community Submissions (Objections). We believe the removal of 5 turbines to increase spacing for foraging, roosting, and migrating, falls short of what is required to ensure safe passage between regional cave roost sites. No scientific evidence is provided.

The regional Large Bent-wing Bat populations and specifically their flight paths between the significant roost sites at Barrington Cave (Tomalla), Main Cave (Timor), Barry Cave (Barry Station) and Crawney Pass Caves, has been completely overlooked. Barrington Cave has in the past been observed to have hundreds to thousands of individual Large Bent-wing Bats (Rutledge in Rutledge, J. 2003; Helman in Rutledge, M. 2002; Scott in Rutledge, M. 2001). The Submissions Report indicates that the project design avoids impact to breeding habitat for threatened microbats but failed to recognize that the protection of the foraging and the migratory flight paths themselves is what conserves the breeding behaviours and therefore populations.

The proposed project is well within the nightly foraging range of bats from these caves as well as the forest dwelling bats.

2. Bat and Bird Monitoring program

The Bird and Bat Adaptive Management Plan (BBAMP) is not detailed (Table 5-3: EES_9a and 9b). More details are required on who is responsible for the monitoring program and if these reports will be available publicly, and how often.

I vehemently rejects the assertion that risks of harm to microbat populations, including their habitat, has been mitigated. The very fact that a monitoring program has been introduced to the Submissions Report (Table 5-3: EES_9a and EES_9b) confirms that genuine concerns are held by the Biodiversity Conservation Division of DPIE's Environment Energy and Science division.

There are only 8 species of microbats recorded in the project EIS study, however there are at least 12 species of micro bat which have been recorded in the Timor area (Rutledge et al. 2008) just 5 km from the 2 project sites. This indicates that the EIS study is cursory and was not conducted over an appropriate time period nor covered sufficient area to be credible. The EIS study is deficient.

3. Blade strike

A recent UK study (Richardson et al. 2021) found that wind farms negatively affected over 30 bat species and have potential consequences for bats population viability, particularly species which already have low numbers.

Richardson et al.(2021), determined that even if bats were foraging closer to the ground, they would still be at risk of collision with the blade tips as they neared the ground. The turbine blade minimum sweep height above the ground at many sites where bat kills occurred, was 30 m above the ground and the bats were also being killed with blades with a clearance of 40 m above the ground.

The UK based study by Richardson et al. (2021) found that. "Given that more than 50% of bat fatalities in Europe are *P. pipistrellus*, these findings help explain why Environmental Impact Assessments conducted before the installation of turbines are poor predictors of actual fatality rates".

It would be logical to assume that the Project's EIS was lacking as at least 4 additional microbat species have been found 5 km away at Timor. We consider the EIS bat surveys undertaken as inadequate as they were carried out at just a few selected locations. As determined by extensive studies overseas, a pre-wind farm assessment is a poor predictor of likely bat fatalities.

4. Raptors

One of the other concerns is the documented destruction of eagles and hawks directly attributable to wind farms. The Hills of Gold Wind Farm has been deliberately placed at the top of the Crawney escarpment which is a location with significant updrafts that would favour eagles and hawks hovering during their foraging. The proposed wind turbines are directly where the raptors will hover for foraging. The submission has not addressed the threat to the Wedge Tailed eagles known to frequent this area.

Vegetation and Vulnerable species

The proposed wind farm should not proceed because it significantly impacts on the threatened ecological community of the White Box-Yellow Box-Blakely's Red Gum Grassy Woodland. There were also endangered and vulnerable fauna species found on the study site which include the Koala, Large-eared Pied and the Spotted-tailed Quoll and Greater Glider to name a few. Clearing habitat of these threatened and endangered species and others not listed here is no justification to build a wind farm.

The impact on threatened forest dwelling bat species identified in the Environmental Impact Statement (EIS), such as the Eastern False Pipistrelle, Eastern Coastal Free-tailed Bat and Yellow-bellied Sheath-tailbat would be substantial. The Yellow-bellied Sheath-tail-bat and Eastern False Pipistrelle relies on mature hollow-bearing trees offered by the native forest woodlands along the ridges proposed for construction of

wind turbines. Likewise, the Eastern Coastal Free-tailed Bat relies on mature trees with hollows or loose bark to roost under. Loss of suitable habitat is unacceptable to these vulnerable species.

The EIS states, “*Thirteen threatened terrestrial fauna species were directly observed within the Development Footprint, including Koala, Greater Glider, Spotted-tailed Quoll, Southern Myotis, Large-eared Pied Bat, Little-Pied Bat, Eastern False Pipistrelle, Eastern Coastal Free-tailed Bat, Little Bentwing Bat, Large Bent-winged Bat, Greater broad-nosed Bat, Eastern Cave Bat and Grey-headed flyingfox. In addition to the threatened fauna species directly observed within the Development Footprint, the detailed habitat assessments identified a high likelihood of occurrence for an additional four fauna species; Booroolong Frog, Border Tick-tailed Gecko, Eastern Pygmy Possum and Squirrel Glider. The field surveys identified two species of raptor most at risk of collision, Nankeen Kestrel and Wedge-tailed Eagle.*”

Clearing such a huge amount of established vegetation will enable soil erosion to occur, which could affect the downstream karst areas (Crawney Pass Caves) which contain caves and specialized ecological systems. This project is not environmentally sound.

References

Helman M. in Rutledge M. 2002, (Ed.) Gloucester and Barrington Caves in Newcaves Chronicles, No. 18, Newcastle & Hunter Valley Speleological Society.

Lintott P.R., Richardson S.M., Hosken D.J., Fensome S.A. & Mathews, F. (2016) Ecological impact assessments fail to reduce risk of bat casualties at wind farms.

Curr. Biol. **26**, R1135–R1136. Richardson S.M., Lintott P.R., Hosken D.J. *et al.* (2021). Peaks in bat activity at turbines and the implications for mitigating the impact of wind energy developments on bats.

Scientific Reports. 11, 3636 www.nature.com/scientificreports/ Rutledge, J. in Rutledge, J. 2003, (Ed.) Barrington Cave on the Pigna Barney Karst in Newcaves Chronicles, No. 20, Newcastle & Hunter Valley Speleological Society.

Rutledge J., Smith G.K., Brainwood M., Baker A.C., (2008). *Timor Caves Hunter Valley, New South Wales*, Newcastle & Hunter Valley Speleological Society Inc.

Scott, D. in Rutledge, M. 2001, (Ed.) Barry Cave (BA1) Barry, NSW in Newcaves Chronicles, No. 17, Newcastle & Hunter Valley Speleological Society.

Yours faithfully

A handwritten signature in black ink, appearing to read 'M Dalton', with a stylized, cursive script.

Murray Dalton