Director Energy Assessments
Planning and Assessment
DPIE

23 January 2021

Re: Hills of Gold Wind Farm
Application No. SSD 9679

To Whom it May Concern

I am writing as a resident of Nundle to express my opposition to the development of the "Hills of Gold Wind Farm", Hanging Rock.

My objections relate to concerns around disruption and safety in transport, unsuitable site for the turbines, harm to the aesthetics and character of the Nundle / Hanging Rock area, and environmental damage. I am also highly critical of the speculative, inaccurate and vague text of the Development Application and EIS.

Proposed Transport Routes

Regarding the transport of turbine components, the transport engineer's report states:

"The 2 options to access the Hill of Gold windfarm once the loads arrive at Nundle both have considerable road modifications that would need to take place before they could become a reality..."

(Rex J Andrews Engineered Transport Route Assessment, Newcastle to Hills of Gold Windfarm Project, Appendix G, p159.)

The proponents intend to surmount the problems of transport route Option 2 (via Oakenville St, Barry Rd, Morrison's Gap Rd) by building a private road around the extremely steep and winding Devil's Elbow, along a crest. However, this crest section will also be extremely steep and unworkable.

Using Google Maps to analyse the "realignment prefered option" shown in Appendix G, Figure 3.32, the section from near 2 Mile Walk to the proposed intersection with Barry Rd is around 630m, rising from an elevation of 863m to 1007m. If the rise is 144m and the run is 630m, the grade is 22.8%. The area is karst country and riddled with old mine shafts that accumulate water, including the historic Black Snake Mine. There have been rock falls at 2 Mile Walk, which used to be a popular bush walk, before being closed, due to the land slips. This is information known to locals. The proponent's so-called consultations with the community have apparently not enlightened them. That there is no engineering analysis of this section of the route by the proponents, also shows how speculative the Development Application is.

The proposed routes to the southern side of the project go through the main streets of Nundle, either via Jenkins St, or Gill St, (via Innes St, Gill St, Crawney Rd and Head of the Peel.)

Both routes would cause significant disruption. The Jenkins St route in particular would affect tourism, movement of local motor and pedestrian traffic over a two year period. For example, the morning peak hours for Windfarm traffic movement coincides with the timetable of the High School bus and delivery trucks to local business. Students in Hanging Rock already leave very early to go to Tamworth. Saturday morning is when most tourists arrive.

The Gill St route would involve blades making a hard right turn at a four way intersection at Innes St. onto Gill. The intersection is on a hill, has poor visibility on the left, with the SES on one side and the Council Depot on the other. The depot stores fuel and pesticides. How dangerous (and horribly ironic) would it be, if a truck with a 60+ metre blade, rolled onto the depot, blocking access by the SES?

The DA lists extensive works required in Nundle for hardstand, power lines, fenceline and signage moves. This will prolong the disruption of traffic, in addition to causing noise and dust. Blade swing will cross private property in places.

The traffic analysis for the road section after the Happy Valley turn off into Jenkins Street makes no reference to how much impact there will be to mature street trees that are a feature of the town's character. And a factor in winning Tidy Towns awards.

Further back along the transport route from the New England Highway, there will be bridgeworks and more roadworks required, disrupting transport to and from Tamworth, where many residents work.

Character and Appearance of Nundle and Hanging Rock

Nundle is a beautiful town, situated in a beautiful area. It is a town with a gold rush history, and remains popular with gold fossickers, hunters, tourists and campers. It is fair to say that those who come here value the beauty of the hills, clear night sky, quiet roads and relaxed pace. It's why many of us have chosen to live here. Turbines will be visible at many scenic vantage points, permanently changing their character. A quasi- industrial landscape is not in keeping with the atmosphere.

Any removal or heavy pruning of trees will reduce visual appeal, shade and wreck habitat. Many, if not most street trees in Nundle were planted by the former Garden Club. Around the Peel River and in pockets around town, the Upper Peel Landcare group has put in hundreds of native trees.

The town has placed in the Tidy towns competitions numerous times, is a Tidy Town state winner and National runner up. Looking at the engineer's report on p107 of Appendix G, mature street trees on Jenkins St, between the Swimming Pool and School are not shown, or mentioned. Tall trees line Jenkins Street for most of the town's length. There are also tree plantings in Gill St, Point St, Durbin St.

Oversize, high frequency traffic will also contribute to the loss of character in a town where people routinely stroll on the road of a morning, and cars can be heard a kilometer away on still days. Nundle is popular with motorcycle, classic and vintage car clubs. These visitors will avoid the area if beset with road upgrades and oversize traffic, as will caravaners. This will have an impact on businesses, and detract from the charming reputation of the town. Having endured drought, fire and COVID 19, this is not likely to be a short term inconvenience. It may send businesses to the wall.

Clear night sky is also an asset to the town. In the past, there were guided star gazing activities for tourists. Photomontages of how the proposed windfarm have been displayed. All images were of daylight scenes, (and have been criticized for lacking contrast.) But there have been no images on display of aviation night lights, if CASA deems them necessary.

Environmental Damage

The report states that there were 33 candidate threatened species of animals, to investigate in the project area. Seventeen terrestrial species were confirmed and a further four deemed highly likely.

Aside from land clearing of 207 ha of native vegetation (possibly including 57 ha of threatened Ribbon Gum / Snow Gum, 13 ha of threatened Box and 51 ha of koala habitat), there will be noise levels considered unhealthy for humans, with an unknown impact on wildlife, in two nature reserves. It's possible CASA will require aviation lights, which could affect nocturnal behaviours of bats, owls and insects. There could be altered wind patterns over Ben Hall's Gap and Crawney, possible change to water flow in the landscape next to areas of sensitive protected native moss, soil erosion or compaction, contamination from fuels and ice throw from blades. Most of these effects haven't been well studied, but must not be ignored for having potential consequences, simply because there is insufficient data. It is common sense to see a 30 - 50m "buffer" between turbines and nature reserves as grossly inadequate.

Turbines and powerlines have potential to cause fires. Turbines hamper aerial water-bombing efforts. In recent fires at Hanging Rock, water-bombing was essential for controlling fire in the inaccessible hills. As with much of NSW, the ecosystem has been damaged and species decimated. The true picture for many species of flora, such as alpine gums, and fauna including koalas, gliders and quolls are simply not known. More than ever, native forest is precious.

The report doesn't mention the risk of barotrauma to bats that fly into areas of low pressure behind turbines, or how construction, transport and turbine noise might impact their radar.

It does say that Nankeen Kestrels and Wedgetail Eagles nest in the area. It says nine Wedgetails were noted in the area and suggests a bird-strike rate per annum of five. That is totally appalling and unacceptable.

There will be 18km of power lines with 60m easement, where tall trees cannot be re grown.

This is a unique area. How can anyone mitigate and offset that which is unique?

Soil and water.

There is as yet no site-specific soil and water plan for the project area, only a "Conceptual Soil and Water Management Plan" (CSWMP). The wind farm proponents have already shown that their thinking is based on wrong assumptions.

For example: In Appendix O, 1.6.1, page 9, the report states:

"Monthly rainfall data from the Nundle Post Office (055041), which has been operational since 1890, was considered a more robust data source for average rainfall offering extensive historical data for the mean monthly rainfall in the region."

"Table 1-3 Monthly Precipitation Data for 1890[1]-2020 (mm)" lists Nundle LPO's mean annual rainfall (**elevation of 595 m**) as 833.8 mm.

But Hanging Rock State Forest rainfall statistics from the Bureau of Meteorology from 1927 to 2000 at **elevation 1253m**, show a mean rainfall of 1431mm.

A large proportion of the project site is on land with LSC Class 8 soils.

"Class 8 land is not suitable for any agricultural production due to its extremely severe limitations. Class 8 land includes precipitous slopes (>50% slope) and cliffs, areas with a large proportion of rock outcrop (>70% area), or areas subject to regular inundation and waterlogging (swamps, lakes, lagoons, stream beds and banks).
…Recommended uses are restricted to those compatible with the preservation of natural vegetation including water supply catchments, wildlife refuges, national and State parks, and scenic areas."
(The land and soil capability assessment scheme, 3.3.8, p26, Office of Environment and Heritage, 2012)

While there is discussion of using various ways to mitigate erosion, they are "Conceptual" and refer heavily to *urban* control methods. Engineering studies are

deferred and to be site specific. This does not give planning authorities, landholders or the proponents themselves information that may be necessary to evaluate the soundness of the project plan. Surely that is the point of an EIS, or Development Application.

There is no mention of the problems that may be posed by compaction, in land locals describe as a “sponge”. Springs feed Sheba Dams and underground water feeds into the caves at Timor. The project area is a water catchment for three major rivers, with many first order watercourses.

The report states there will be approximately 48 km of maintenance roads in the project area, which must take the weight of hundreds of over-mass trucks, components and cranes, as well as the turbines.

“It is assumed that access roads will be constructed to 5.5 m wide with 1.5 m shoulders on either side and with approximately 0.3-0.4 m depth of onsite and/or imported road base/aggregate that would need to be laid and compacted… Crane hardstands of approximately 115 m by 60 m will need to be constructed adjacent to the base of the WTGs to enable the erection of the turbine. Each pad will be constructed from cut and fill material and compacted ” (Appendix O, p16)

There is only conjecture as to which of three methods described will be used for building turbine bases. Will drilling and blasting rock be needed to anchor the bases? Would those activities result in changes to the water dynamics in the area? What risk is there of landslips?

Thank you for considering these objections. Like many of my fellow Nundle residents, I am pro renewable energy projects, but object to the siting of this one. The state government has recently declared a renewable energy zone further north in the New England. I wonder how essential this project is, in the light of that.

Regards

Karlee Burgess