Bukit Padang Pty Ltd has operated at Bowling Alley Point, downstream from Nundle on the Peel River since 1925. Disappointingly, impacts on our farm and the adjacent village of Bowling Alley Point have not been taken into consideration as they are located further than 10km from the turbine installation.

Several points of concern for our enterprise are:

Inadequate consideration has been given to slowing the runoff of water from the development site.

- Sediment and debris will contaminate The Peel River, dumping loads on the foreshore of Chaffey Dam and Bukit Padang.

- The biosecurity and economic risk to Bukit Padang by spread of invasive weeds and the subsequent economic burden of weed control and diminished grazing capacity.

- Increased numbers of invasive species and flood debris negatively affects land values.

- Decreased water quality available for stock, domestic and irrigation purposes which will devalue land and raise costs.

- Increased numbers of invasive species and flood debris poses a risk to stock health and mortality which devalues land and increases economic and psychological burdens.

- Silting of Chaffey Dam which will subsequently render that Dam useless as a water supply for a rapidly growing and crucial regional centre. There is no alternate principal water supply for Tamworth. It is unacceptable to proceed with a project that jeopardises the lifeblood of a regional centre, surrounding ecology and vital primary production.

The Peel River and in particular Bowling Alley Point provides vital habitat for several protected, threatened and endangered species.

- Critically endangered Koalas and Booroolong Frogs and species such as Wedge-tailed Eagle, Spotted Quoll and Platypus are found locally.

- Water NSW does not appear to have been consulted or represented in meetings. This is unacceptable as they are the landholders of much of this land and have a responsibility to protect this natural resource and habitat for aquatic life and the health of the Murray Darling and its tributaries.

- We actively protect these species having revegetated areas of native flora on ours and adjacent lands. To have these areas adversely impacted would be devastating.

The threat Cyanobacteria poses, appears to have been overlooked.

- The life-threatening health hazards posed by toxicity associated with Blue Green Algae blooms.

- The soils between the proposed project site and Bowling Alley Point are basalt soils with high potassium loads which have been proven to contribute directly to highly toxic algal blooms in Chaffey Dam [1].

- As testament to the value of locals' generational knowledge about the land (which we are deeply connected to) it must be acknowledged that Derek Hill, a generational farmer brought this fact to the attention of scientists as the cause for the previously misdiagnosed reason for the algal bloom problem in Chaffey Dam.

- Latrobe University has been conducting studies of algal bloom toxicity in Chaffey Dam since 1995 to reduce risk to human and animals, particularly aquatic life. Their studies found that,

'… By reducing the amount of dissolved nutrients, especially phosphorus, in the water column, destratification can reduce the amount of algae that can exist in the reservoir. As all types of algae require phosphorus to grow, a reduction in reservoir phosphorus content will reduce the total amount of all types of algae within the reservoir…' [1]

The report by Latrobe University recognised that,

'.. during normal-wet precipitation years, the catchment may supply 50% or more of the phosphorus that is subsequently converted into algal biomass…'. [1]

- If this wind farm project disturbs the fragile Class 8 soils above Chaffey Dam, the nutrient load carried the Peel River will increase the risk of toxic algal blooms.

- Loss of ground cover and potential for erosion and mass movement on slopes has not been sufficiently considered. The proposed ridgeline and tributaries are already prone to erosion and a further concentration of water runoff due to introduced hard surfaces will force more sediment and debris to concentrate into the local rivers and Chaffey Dam.

This will lead to:

- algal blooms in Chaffey Dam which are known to cause respiratory distress, rashes and nausea in humans and stock

- algal blooms smothering aquatic life and threatening endangered species that live in the region of Chaffey Dam, including the Booroolong Frog

- biodiversity decline, resulting in stress on the existing ecosystem

- economic losses to the camping operations at the Bowling Alley Point Recreational Reserve, land managers and local businesses.

The Australian Government Water Quality Initiative states that, *"Cyanobacteria can cause environmental problems, disrupt drinking water supplies, recreational activities and water-dependent industries, and pose a risk to livestock, wildlife and human health…*

…Nutrients are either naturally present in sediments or are washed into water systems from external sources. In particular, phosphorus may be stored in significant amounts in sediments and released by normal bacterial activity…

Cyanobacterial blooms lead to deterioration of water quality and production of toxins by some species. Exposure to algal toxins has been linked to fatalities of livestock, wildlife and pets.

Decaying algae can reduce dissolved oxygen levels in the water column which can severely degrade aquatic ecosystems and lead to the death of aquatic organisms and a decline in biodiversity.

Economic consequences of cyanobacteria outbreaks can arise from restrictions on the consumptive use of water and recreational activities due to health and aesthetic concerns.

Some species of cyanobacteria can produce:

- *hepatotoxins, which damage liver cells*
- *neurotoxins, which damage nerve cells*
- *cylindrospermopsin, which can damage the liver, kidney, gastrointestinal tract and blood vessels.*
- *allergens or irritants to the skin and eyes*
- *compounds that affect the taste of water and produce unpleasant odours*

In severe cases, the toxins can cause damage to the liver and nervous system and there have been human deaths associated with non-routine exposure to algal toxins through dialysis. [2]

Several other points of concern about the location of this project include;

- The assertion by local wind farm advocates that this wind farm will leave a minimal footprint post construction does not take into account the difficulty of stabilising steep slopes, the resources mined and consumed to maintain such a difficult site, nor the risk to health or the irreversible decimation of already threatened species.
- This project directly risks not only the environment at the construction site but also the Isis, Peel and Barnyard Rivers. These are three tributaries of the Hunter River and the impact negative affects to them have not been fully considered.

- The extent of the Timor Caves in the karst landscape on the Isis River is as yet relatively unexplored and recently multiple new caves and a new species have been found there. Vibrations from construction of a wind farm nearby risks destroying a pristine subterranean environment in ways we cannot yet comprehend.

- Studies have shown that wind turbines cause mortality in bat populations and from lived experience of those living near a site of large-scale earthworks the tremors cause noise disturbance and structural cracks in buildings. It is questionable to risk damage to a cave network and its species population that is so rich with possibility. The National Parks and Wildlife Service in their publication, 'Guide to New South Wales Karst and Caves' reports that,

'… In a biotic sense, caves are important in providing habitat for a variety of highly evolved plants and animals. These include what are often referred to as 'living fossils': cave-adapted invertebrate species, which closely resemble their ancient ancestors and in many cases have no eyes or pigmentation. Cave-dependent animals can provide critical clues in understanding the evolution of life, while the bats that live and breed in caves in their tens of thousands are useful in controlling insect pests…' [3].

The *Speleological Society* reports that Timor caves are home to multiple species of bats and the presence of turbines poses a risk to this population.

- The Timor Caves area can be also considered to have huge tourism potential and ecological value and therefore warrant protection. Engie must be able to guarantee they will not be jeopardising the health of this area.

- Aerial control of bushfires by emergency services will be significantly reduced on the range by the presence of turbines and high voltage power lines. It is well known that bushfires threaten farms and homes in the area annually and the risk to local properties, including Bukit Padang's natural and built resources/infrastructure would be increased by the wind farms presence. Furthermore, fire risk increases insurance premiums causing further economic distress when attempting to insure livelihoods, assets, and investments.

- It is a widely accepted fact that weed propagation and invasive species flourish in areas of soil disturbance. The North West Regional Strategic Weed Management Plan 2023-2027 states:

"..Weeds are a major threat to Australia's natural environment. In 2018, the Centre for Invasive Species Solutions estimated that the total annual cost of weeds in NSW ranged from $1.67 billion to $1.9 billion per annum (McLeod, 2018). Impacts on biodiversity and natural environments are harder to quantify, but equally significant…"[4]

Therefore, recklessly inviting weed propagation and dispersal must be avoided. This unnecessary economic burden for our region must be guaranteed to be mitigated by Engie prior to approval of a project that is on unstable soils in an area prone to heavy storms and eroding run off.

The governments strategic plan for the region outlines that,

"…in articulating the shared responsibility principle of the NSW Biosecurity Act 2015 (the Act) and communicating weed control obligations. As per s.15 of the Act, the Plan prioritises weeds that:

• out-compete other organisms for resources

• cause harm to other organisms through toxicity

• otherwise reduce the productivity of agricultural systems or the value of agricultural products

• damage infrastructure

• reduce the amenity or aesthetic value of premises

• harm or reduce biodiversity…" [4]

In terms of Engie's responsibility to assist land managers to meet the requirement of the strategic plan's one must consider the Local Land Services of NSW's statement titled *'*General biosecurity duty 'outlined as:

'Any person who deals with a plant that poses a risk of causing an adverse effect on the economy, the environment or the community and who knows, or ought to know about the risk the plant poses, has a legally enforceable duty to prevent, eliminate or minimise the risk of that impact occurring.' [4]

Clearly, Engie must take responsibility for the ongoing costs of control of weed propagation and dispersal on land at the site and downstream from it prior to this project's approval.

Historically Bukit Padang's directors, tenants and employees have been responsible for much of the revegetation of land devastated by gold mining, and flooding in the area of Bowling Alley Point. The company's 100-year-old Mission Statement has always been to act in order to leave the land in better condition than we found it and serve the community. Whilst there are opposing parties who also want to do the right thing by our environment and boost the economic viability of this area it is clearly not Engie's philosophy. This wind farm proposals lack of social licence and total disregard for the environment and our community are highlighted below in an extract from a Local Lands Service publication which identifies the key risks to the region to include:

- *Potential for biosecurity hazards to impact on the regional economy and communities, the environment and human health*
- *Natural disasters including bushfires and floods*
- *Changing climatic conditions and droughts (rainfall, temperature, and extremes)*
- *Decrease in water quantity and quality*
- *Invasive species (feral animal and weed species)*
- *Degradation of natural landscape and ecosystem services*
- *Changing socio-economic profile (such as population movement in and out of region, long-term viability of small family farms)…"* [5]

Supporters of the wind farm are urged to consider the following points:

Why give social licence to a project that unnecessarily endangers our community and the habitats of critically endangered species?

Why is the advice of scholars in the field of natural resources, and water quality control agencies such as Water NSW being ignored as to how to protect our water for future generations?

What peril do we invite with ambivalence to water quality in Chaffey Dam?

How it can be justified as morally appropriate to possibly knowingly poison a regions water supply and smother aquatic life?

How much damage to the planet are we willing to allow for a paltry sum from Engie's coffers, a multinational company more interested in shareholder targets than the environment and our community?

How much pressure is there to risk the health of our forest, community, and waterways to meet government targets of reducing greenhouse gas emissions?

Are there not many safer and more appropriate sites for wind farms than an area that has fragile soils and ecology?

In conclusion the Directors of Bukit Padang Pty Ltd thank the committee and reassert that it is our firm belief that this project (for the financial benefit of those upstream and a multinational company) poses an unnecessary and real threat to humans, flora and fauna on land held by us and others, including the multitudes of people and businesses who rely on Chaffey Dam for their water supply. We understand the need to pursue sustainable energy in order to save the environment, but this should not happen at such a high environmental, economic and social cost. A more suitable site without the inherent problems detailed above should be found for this project.

References:

[1] https://opal.latrobe.edu.au/articles/report/The_Chaffey_Dam_Story/22240456

[2]https://www.waterquality.gov.au/issues/blue-green-algae

[3]https://www.environment.nsw.gov.au/resources/geodiversity/10104nswkarstcaveguide.pdf

[4] https://www.lls.nsw.gov.au/__data/assets/pdf_file/0010/722917/North-West-Regional-Strategic-Weed-Management-Plan-2023-2027.pdf

[5] https://www.lls.nsw.gov.au/