

3 McDonalds Lane
ROCKY RIVER NSW 2358

Objection: Thunderbolt Wind Farm SSD-10807896

I wish to object to the development of Thunderbolt Wind Farm due to the inadequacy of the Environmental Impact Assessment in the following areas:

- 1. For many of the issues raised the mitigating measures have been defined in a qualitative rather than quantitative manner. This approach does not allow measurable monitoring of the mitigating measures. Consequently, there is no way of knowing if the measures have been successful.**

Risk: Several issues will be addressed by “having plans developed” or have “will be mitigated”. There are no quantitative statements that lend themselves to monitoring and management. Where plans are proposed there is no mention of the standard of the plans, the standard of the work or who will have the ultimate decision as to whether or not the actions proposed by the plans to mitigate the issues are adequate; or whether the resultant actual implementation is adequate.

For example:

- i. Sediment and erosion control: It is proposed that *“Erosion and sedimentation risk during operations will be controlled through the establishment of effective site stabilisation measures following construction in relation to maintenance of access tracks, waterway crossings and other areas susceptible to erosion.”* There does not appear to be any oversight of the design or implementation of erosion and sediment control works. In forest areas gravel roads are the major and a significant source of soil erosion and consequent aquatic habitat siltation. Given the length of roads and the substantial increase in impervious area the *“implementation of appropriately designed erosion and sediment controls (ESCs)”* should be oversighted by Council, Local Land Services or the EPA.
- ii. Dust control: Will be managed through a Construction Environmental Management Plan (CEMP). As this is not a controlled activity under the EP and A Act this needs to be developed and implemented to the satisfaction of the local council. This will be at a cost to council that should be borne by the proponent.

Solution: A organisation responsible for oversighting the mitigation measures that can define quantitatively the impact of the measures, should be specified in the documents along with options for the proponent to bear the financial responsibility for this oversighting.

- 2. The failure to adequately address disposal of solid non-recyclable waste management issues.**

Risk: That local waste management facilities may be overwhelmed with the cumulative impact of receiving non-recyclable waste from renewable energy projects. The facilities that will receive the non-recyclable waste have not been specified or defined.

“The SEARs require the EIS to quantify and classify the likely waste streams to be generated during construction and operation, and describe the measures to be implemented to manage, reuse, recycle

and safely dispose of this waste.” The Environmental impact statement has classified the likely waste streams. However, the EIS does not consider this issue in detail and only proposes the development of a Waste Management Plan and a Decommissioning Plan.

Solution: Additional details be provided regarding where the non-recyclable component of the waste stream will be disposed of and it be specified in the EIS that the Waste Management Plan and Decommissioning Plan will be developed to the satisfaction of the Local Council and the EPA.

3. The failure to adequately address the cost and responsibility for decommissioning.

Risk: That the owner of the infrastructure when decommissioning is required, will not have sufficient resources to safely and effectively decommission the infrastructure. The cost will then fall to the Landowner, the Shire council, or the State Government.

In our free market economy, there are little constraint on who a company can be sold to. If the owner of the infrastructure in 25 to 30 years does not have the resources to decommission there will be no recourse. There is also no reason why the dividends to investors could not be paid out at a level that will allow the accumulation of sufficient resources for decommissioning. This is the reason why mines and large quarries have bonds imposed during the development approval process.

Solution: The lodgement of a bond with the State Government as either an upfront payment or an annual payment calculated on a 30 year life of the project is necessary to ensure sufficient resources are available for decommissioning.

4. Failure to identify the source of water or to take into account the potential impact on Council roads and road users of water cartage for concrete production and dust suppression.

Risk: Construction of the infrastructure on the site will require up to 100ML of water over eighteen to twenty-four months. Two batching plants for concrete will be operating continuously for some months, road construction will require water to enable compaction, and there will be a major need for water for dust suppression during construction and an ongoing need for water for dust suppression and potentially fire-fighting during operation of the wind farm. If this water is carried on any council roads it will have a considerable impact on road condition and on other traffic.

The potential source of non-potable water has not been specified, with different sections of the report having conflicting statements. One section p144 states *“100% of the construction water requirements are currently planned to be imported from external sources in both Tamworth and Armidale.”* P195 states *“Sources for non-potable water demands to meet construction water demands may include:*

- *harvested runoff from disturbed areas captured in excavations or sediment basins/traps constructed to prevent sediment transport off-site*
- *harvested runoff from farm dams under agreement with host or local landholders*
- *groundwater from licenced bores under agreement with host or local landholders*
- *purchasing and transporting water to site by tanker.”*

Solution: Either the source of water should be identified and impact on local infrastructure defined or potential options described along with local infrastructure impact and how they will be addressed.

5. Inadequate proposed water quality monitoring to detect the impact of soil erosion and sedimentation

Risk: That monthly water quality monitoring will not pick up changes caused by significant short-term events.

Page 194 dot point states *“monthly downstream water quality monitoring (pH, turbidity and TSS). An appropriate downstream water quality monitoring location(s) will be identified during preparation of the CEMP.”*:

Page 197 under Fluvial Geomorphology includes the statement *“No significant impacts on the fluvial geomorphological characteristics of the streams are predicted as a result of this Project.”*:

No evidence is presented to support these statements.

Given the low order of the catchment streams it is likely that significant soil erosion and sedimentation will occur during major events (ie events with a less than 5% recurrence interval). The impact of such an event on the streams below the project area could be very significant with the production of sediment slugs in stream lines that could take years to work downstream. These events will not be picked up by monthly water quality monitoring

Solution: The CEMP include a base line video survey of all streams to in the project area and there be a condition placed on development that in the event of there being degradation of these streams as a result of the project, the applicant be required to restore the streams to the original or better condition.

6. Inadequate provision for the movement of fire-fighting appliances.

Risk: The property, and neighbouring properties, will not be properly protected from the spread of wildfire. The presence of the wind turbines will considerably restrict the ability of the Rural Fire Service to control fires by aerial water bombing. Thus, there will be need to use the access roads constructed for turbine construction and maintenance.

One of the key factors taken into consideration by an RFS Crew Leader in determining whether or not to take an appliance into an area is safety of the crew. Safety requires at least two access points that a vehicle can traverse in a forward direction without turning around. There is only one primary access point to the site and many of the proposed internal roads only have one entry point.

Solution: Apply bushfire management planning to the location of roads on the site to the satisfaction of the local brigades. This may require substantial changes to turbine locations to get the roads in the right place.

7. Negative impact on visual amenity

Risk: There is no doubt the turbines will dominate the skyline. Some individuals find them intrusive to the extreme in an otherwise rural landscape. However, in addition to their overall appearance I see potential major issues with shadow flicker and night lighting impacting on individuals.

Shadow flicker has been considered in detail in the report and despite the EIS conclusion on the bases of geometric modelling only (no comparative field data) that the project *"is predicted to meet the applicable shadow flicker limits and it is not expected that specific mitigation measures will be required to meet shadow flicker limits"* potentially affected residents remain unconvinced.

Night lighting has two components. Light pollution resulting from security lighting of the infrastructure into this otherwise dark landscape and the red obstacle lights. Despite the EIS analysing and discussing both these components affected residents remain unconvinced that appropriate shading will be effective or that there will be no need for obstacle lighting.

Solution: Favourable determination of the project in relation to these issues should only occur if the theoretical analyses can be supported by the demonstration of acceptable impact from residents affected by similar developments.

Thank you for the opportunity to comment.

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