

I am non-associated neighbour and I object to this proposal. I have many concerns but the most important are the following:

1) Partial blade throw - critical safety issue – new information not addressed in Amendment Report for Winterbourne Wind Farm.

In early September 2024, at the Golden Plains Wind farm in Victoria, there were partial blade failures with debris thrown up to 800 metres away from the turbines and into a non-associated neighbour's property. This was reported in the ABC and other media outlets. Work Safety Victoria is now involved. These blades are produced by Vestas and are the same turbines proposed for the Winterbourne Wind project. After reading about the partial failure of the blades, I read the Amendment Report expecting that Winterbourne Wind would address the issue to allay public safety fears. There is no mention of this failure. Reviewing the original EIS (p 214), it says "the scenario of a blade fragmenting is very unlikely and is not discussed further in this assessment". In the EIS, they are suggesting that the maximum throw distance is less than 500 meters (p 216). They quote Sarlak & Sorensen (2015) to calculate the distance of a blade throw. This same research paper investigates partial blade failures (such as has occurred at the Golden Plains wind farm) where distances of 1.8 klms are within a possible debris field for the size turbine Winterbourne proposes. Winterbourne Wind chose to ignore this part of the Sarlak & Sorensen paper.

As Winterbourne Wind has already used the Sarlak & Sorensen paper to calculate the possible distances of blade throw, they should accept that the safety distance must be increased from 500 meters to 2 klms. The Golden Plains incident has confirmed that pieces of the blades can be thrown far in excess of the 500 meters quoted as a safe distance. This is also confirmed in overseas examples of partial blades penetrating buildings etc at distances in excess of 500 meters. To ensure the safety of non-associated neighbours, the World Heritage National Park, and the general public the safety distance should be a minimum of 2 klms.

In 2014, the Finnish Ministry of Health called for a minimum distance from houses of 2 klms; In 2016, Bavaria adopted this proposal; in Nebraska they have US 3-mile separation from dwellings and 5 miles from villages and towns. According to Gcube Insurer, London, the largest insurance provider for wind farms "Our data shows that blade failure is the most common accident with wind turbines closely followed by fire". *Wind power monthly*, 2015.

This information is taken from Caithness Wind Farm Information Forum. Winterbourne Wind used this same Forum in its EIS but again, only selectively, and limited it to the Australian context only (p. 216). They do the

same with the Sarlak & Sorensen paper (2015). They overlook the partial blade failures mentioned in Sarlak & Sorensen and the Caithness website – which allows them to argue that the placement of turbines can be a lot closer to neighbours' houses and the World Heritage area.

Public safety should be at the forefront of any wind farm approval. By ignoring the risk of partial blade failure that has now been documented in Australia (Golden Plains) and the increased distance of debris thrown, proves that Winterbourne Wind has not presented the safety aspect correctly in the EIS or the Amendment Report. This needs to be called out, acknowledged, and addressed.

This is important for those turbines abutting the World Heritage Wild Rivers National Park. We recommend a 2 klms exclusion buffer along the boundary to protect the National Park from possible debris from blade failures. Turbines: B056; B066A; B068; B069A; B070A; B107; B108; B109A; B100A; B110A; B111A; B112A; B13A; B15A; B16A; B118A; B119; B140A; B141A; B142A; B144; B145 – 22 turbines have to be relocated or removed.

There are other turbines that are within the 2 klms of non-associated properties. These should be moved/removed as well. All non-associated neighbours and the general public must be protected from this risk.

2) Wind Blade erosion and decommissioning:

There were several submissions that referred to the toxic chemical Bisphenol A (BPA) resin used in the manufacture of the wind turbine blades. Whilst some research indicates up to 62 kilos of blade material could be eroded every year, Winterbourne Wind in their response to these submissions indicates up to only 50 grams of material (through leading edge erosion) per blade per year (a not insignificant amount considering the current size of the proposed wind farm with 354 separate blades). Winterbourne Wind argues that their maintenance of the blades will be sufficient. Real world research has confirmed that the paint is removed well within 2 years and to prevent leeching each blade of every turbine would need to be fully painted every 2 years. If the Winterbourne Wind project is approved, an independently verified maintenance regime must include the repainting of every blade every two years to ensure that BPA's are not released into the surrounding environment. It would also be prudent that annual measurements of BPA in the soil and water are conducted by an independent government body. These should be conditions of any approval.

Winterbourne Wind accepts that the BPA chemicals are harmful to the environment but in their response to submissions propose that when the plant is decommissioned, they recommend the controlled demolition and cutting up of blades onsite for transportation at the end of the project. This is in place of the more expensive (but safer) option of dismantling the turbines and removing blades uncut. The demolition option will release large levels of BPA into the surrounding soil especially if they use water suppression (for dust). Winterbourne Wind has no intention of treating these blades with the respect for the environment, humans, and the food chain.

The method of decommissioning must be by dismantling and removal of the blades intact and outside of the Walcha LGA. This needs to be decided now rather than wait until six years prior to decommissioning otherwise it may be impossible for Winterbourne Wind to put aside enough funds to rehabilitate responsibly. This process must have close oversight by the NSW government.

The best analogy is that each wind turbine blade should be considered as **23 tonnes of asbestos** and treated accordingly.

The only difference between asbestos and the BPA chemical is that asbestos remains relatively localized whereas BPA can be taken up into plants, water, grass, and into our food chain through livestock. BPA has the potential to be the next generations' asbestos health and environment catastrophe. How the NSW government responds now to this problem, will be reviewed and considered in years to come.

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