Name: [redacted]

Postal Address: [redacted]

Personal Address:

[redacted]

Director - Energy Assessments
Planning and Assessment
Department of Planning, Industry and Environment
Locked Bag 5022
Parramatta. NSW 2124

Date: 2·12·22

TO WHOM IT MAY CONCERN

RE: HILLS OF GOLD WIND FARM APPLICATION NO. SSD 9679

- I am attaching my submission to the above mentioned development application during Public Exhibition of Amendment Report November 2022.

- I hereby declare that I object to the Hills of Gold Wind Farm proposal ID no. SSD 9679.

- I would like my personal details withheld.

- I have not made any reportable political donations in the previous 2 years.

- I acknowledge and accept the Department disclaimer and declaration.

[redacted]

Signature

2/12/2022

Wind turbine submission.

I am writing this submission to express my concern regarding the proposed wind turbines to be located in Hanging Rock NSW.

As a resident, a local and an individual who holds great value to the land of Hanging Rock as my family have been here for nearly half a century, we have always been taught to respect, preserve and protect the land with minimal changes. Much of the land we do own is untouched and untarnished, which was the sole purpose of holding land in our historical Hanging Rock.

There are many factors that I have noted below in regards to being against erecting the turbines as follows:

Environmental impact:

The plastics in the blades are highly toxic, and contain Bisphenol A, which is dangerous to health.

What is Bisphenol A?

Bisphenol A (BPA) is a chemical produced in large quantities for use primarily in the production of polycarbonate plastics

Exposure to BPA is a concern because of the possible health effects on the brain and prostate gland of fetuses, infants and children. It can also affect children's behaviour. Additional research suggests a possible link between BPA and increased blood pressure, type 2 diabetes and cardiovascular disease.

As wind turbine blades erode during operation, the toxins within the epoxy compounds they shed are finding their way into the creeks and our drinking water.

Substances such as Bisphenol A and similar substances do very great damage to the reproduction of most organisms and in us humans. There is a very disturbing study that shows that Bisphenol A causes genetic damage for several generations in rainbow trout. We also risk irreparable damage to the entire environment both on land and at sea if we do not limit or stop the use of such substances, and especially the deployment of new wind power plants in increasingly demanding environments or in the water.

I had the pleasure of visiting your exhibition with one of my children who asked "where will the water be taken from to build the turbines?" Unfortunately, the person did not know and did not have an answer to the plan. Although they were unsure of what they were exhibiting in the information centre, or could provide me information that I required at the information centre they did say it "may be from groundwater."

The protection of groundwater from the risk of possible contamination is important because pollutants could cause health problems in human beings, reduce the quality of agricultural products, make water unsuitable for certain industrial processes, and pose a threat to our countryside and environment including their suitability for recreational purposes. In summary, the contamination of groundwater can not only have health and environmental impacts, but also serious economic consequences.

According to the department of the environment UK:

The development of a wind farm has the potential to impact on groundwater quality, groundwater quantity and/or the established groundwater flow regime. Figure 1 overleaf shows the scale and extent of the foundation of a single wind turbine which could potentially impact on the aquatic environment. Changes to the local water environment can affect receptors such as wells/boreholes, springs, wetlands and waterways, and can also have implications for groundwater dependent ecology and/or land stability.

To provide further information for your viewing, I have also attached a table below for more understanding:

Table 1: Potential impacts on groundwater from wind farms

	Construction Phase	Operational Phase	Decommissioning Phase
Groundwater Flow Regime	**Earthworks and site drainage:** ▪ Reduction in water table if dewatering is required for turbine foundation construction or borrow pits; ▪ Changes to groundwater distribution and flow.	**Physical presence of turbines and tracks:** ▪ Possible changes to groundwater distribution; ▪ Reduction in groundwater storage. **Reduction of forestry in site area:** ▪ Changes to infiltration and surface runoff patterns, thereby influencing groundwater flow and distribution.	**Physical presence of former turbines and tracks:** ▪ Possible changes to groundwater distribution; ▪ Reduction in groundwater storage.
Groundwater Quality	**Earthworks:** ▪ Disturbance of contaminated soil and subsequent groundwater pollution. **Materials Management:** ▪ Pollution from spills or leaks of fuel, oil and building materials.	**Materials Management:** ▪ Pollution from spills or leaks of fuel or oil.	**Use of vehicles and machinery to remove infrastructure:** ▪ Pollution from spills or leaks of fuel or oil.

Electromagnetic interferences

Electromagnetic interference (EMI) is any type of interference that can potentially disrupt, degrade or interfere with the effective performance of an electronic device. Modern society is dependent on the use of devices that utilise electromagnetic energy such as power and communication networks, electrified railways, and computer networks. During the generation, transmission and utilisation of electromagnetic energy, the devices generate electromagnetic disturbance that can interfere with the normal operation of other systems.

Wind turbines can potentially disrupt electromagnetic signals used in telecommunications, navigation and radar services. The degree and nature of the interference will depend on:

- The location of the wind turbine between receiver and transmitter.
- Characteristics of the rotor blades.
- Characteristics of receiver.
- Signal frequency.
- The radio wave propagation in the local atmosphere.

Interference can be produced by three elements of a wind turbine: Tower, rotating blades and generator. Tower and blades may obstruct, reflect or refract the electromagnetic waves. Modern blades are typically made of synthetic materials which have a minimal impact on the transmission of electromagnetic radiation. The electrical system is not usually a potential problem on telecommunications because interference can be eliminated with proper nacelle insulation and good maintenance.

Interferences to mobile radio services are usually negligible. Interferences to TV signals have been clearly minimised with the substitution of metal blades with synthetic materials. However, when turbines are installed very close to dwellings, interference has been proven difficult to rule out.

The interference area may be calculated using the Fresnel zone. This area is around and between the transmitter and receiver depending on transmission frequency, distance between them and local atmospheric conditions.

Technical mitigation measures on TV interference can be applied during the planning stage, siting the turbine away from line-of-sight of the broadcaster transmitter. Once the wind farm is in operation there are also a set of measures to mitigate the interference.

One issue with the location of Hanging Rock is that there already are parts with poor reception. If there is an emergency that requires urgent assistance and the are disruptions, this could be a life or death situation.

Providing residence with "walkie talkies" (Which still have NOT been personally discussed with us will not provide any resident a safe exit especially if there is an issue such a snake bite, having to try and connect with the workers via radio to allow access to get out and seek medical help.

Damage to land.

As we can already see, the logging truck that are continuously travelling up and down devil elbow are continuously damaging our roads and causing dangerous pot holes and a very high risk of residents veering off the mountains with the extent on damage that council have not been able to maintain.

Now, taking into consideration, the trucks travelling not just with heavy logs but heavy turbines will be causing further damage to our roads and wear and tear on our vehicles.

Modern wind powered electricity generators consist of three essential structures: a tower, rotors and a nacelle. Turbines are usually arrayed in the landscape with little change to pre-existing land use and thus local populations of fauna are generally not expected to alter from the levels at which they existed prior to construction of a wind farm. Much is equally applicable to a variety of bat species.

The principal risk to birds believed to be posed by turbines, is the potential for individuals to be killed as a result of collision with moving rotors. In Australia the majority of recently built and currently proposed commercial wind farms, use turbines with rotor diameters in the range of 60 to 90 metres. Rotational speeds are generally in the order of 14 to 18 rpm.

The tips of turbine rotors are usually travelling at speeds of between 200 and 300 km/h. In the design of current wind farms, turbines are usually micro-sited in such a way as to maximise wind values and to minimise turbulence from topographic features and other turbines. In practice, this means that there are usually large and variable spaces between turbines. The rotors and nacelle of a turbine are moved in the horizontal plane around the fixed tower in order to face into the wind. The tower and nacelle are generally large, essentially stationary elements which we consider to present negligible collision risk to birds.

Birds that will be affected by this which are in the Hanging Rock region include our eagles and a black cockatoo.

Effects on humans.

According to the National Library of Medicine and Senior Scientist, Dr. Owen Black and director of neurotology research, humans can suffer from wind turbine Syndrome.

Regardless of people not believing facts, it is very important to trust the science and research that has gone into this, which has been researched longer than the research of having turbines erected in Hanging rock. There are many symptoms that occur by residing next to a turbine which include:

• sleep disturbance

Headache

• tinnitus

• ear pressure

• dizziness (a general term that includes vertigo, light-headedness, sensation of almost fainting, etc.)

• vertigo (clinically, vertigo refers to the sensation of spinning, or the room moving)

• nausea

• visual blurring

• tachycardia (rapid heart rate)

• irritability

• problems with concentration and memory

• panic episodes associated with sensations of internal pulsation or quivering, which arise while awake or asleep