Objection to Bowmans Creek Windfarm

I am writing to lodge a formal Objection against the Bowman's Creek Wind Farm (BCWF) near Muswellbrook NSW that is current under development by Epuron.
My name is Peter York and I have two properties (1702 & 1758 Sandy Creek Rd, McCully's Gap, NSW), which cover 92 Ha (223 acres) that will 2.5Km from the Bowmans Creek Wind Farm. My wife and I are both Environmental Scientists who have over 30 years combined experience in Environment and Community Management. We both manage open cut mining operations in very close proximity to Muswellbrook (<3km). We are both highly skilled professionals and well versed in Community Engagement and Environmental assessment. I am also a member of the Bowmans Creek Windfarm Community Consultative Committee as I thought Epuron would be interested in gaining local knowledge and learning from an environmental professional who has an intimate knowledge of Muswellbrook and the surrounding area. It became clear after the first meeting with Epuron that the company had no intention of engaging openly with the community. Epuron have provided minimal information, I believe, in the hope that the assessment would sneak under the radar without opposition from the community.

In September 2018, we discovered that two 120m wind monitoring towers had been constructed by Epuron, without council approval and in breach of the State Environmental Planning Policy (Infrastructure) 2007 (SEPP 2007), Division 4 – Electrical Generating works or Solar energy systems, Clause 39 Exempt development, 1A Wind Monitoring Towers, due to their height. Once my Neighbour raised this non-compliance with Epuron, they then sought retrospective approval through Muswellbrook Council. The statement of Environmental Effects submitted by Epuron was written in a style that leads the reader to believe that the construction of the towers is yet to commence. I feel this is deceptive conduct from Epuron and a major concern, given this was my first interaction with the proposed Bowman's Creek Windfarm.

Epuron stated that they had made a mistake with the tower heights, but as a professional who takes legal compliance seriously, I find this unacceptable. Epuron would have a very detailed understanding of the NSW Planning Laws due to the recent approval of the Liverpool Range Wind Farm. If this was a legal breach by a mining company Muswellbrook Council would undertake proceedings in the land and environment court. The only mistake, as far as Epuron was concerned was they got caught out by a community member. Epuron lowered the height of the monitoring towers to 108m to comply with the SEPP. Epuron have since used all the data collected from their two monitoring towers as the basis for the BCWF EIS. This data is fundamental to the whole environmental assessment process and the viability of the wind resource and they have been rewarded from breaking the law by using this wind data in the EIS. This data must be excluded from the time period where the towers were 120m in height as this data was collected illegally. It does make me wonder how many other monitoring towers Epuron have built across NSW and gotten away with it.

Epuron has now lodged a DA for continued operations of the Wind Monitoring Mast and concede in this application that they do not currently have approval for the monitoring

mast, the application is also written in the style that is misleading once again by stating that the tower is yet to be built, when it has been installed for 31 months!

My other areas of concern are the proposed neighbour and host landholder agreements. My concern is the fact that there is no oversight from DPIE and the windfarm commissioner as to what neighbours and host landowners are signing. Some landholders have felt bullied or pressured into signing agreements. There is no third-party review or dispute resolution if the parties have a disagreement. Any disagreements would need to be resolved through negotiation and potential civil legal action with the windfarm company. This creates a power imbalance between the landholder and wind company. Has the liability for decommissioning been adequately explained and what terms of the landholder agreements are in place? The long-term liability for remediation of the site at decommissioning sits with the landholder. The wind company and the wind industry continually state that the liability sits with the wind company, but this is not 100% correct. If the wind company becomes insolvent (this may be unlikely, but it could happen) the liability to dismantle the turbines and rehabilitate the sites sits with the landholder. This was confirmed during the October CCC meeting were Nicole Brewer from the DPIE confirmed this (see the minutes on the Epuron website). There needs to be a policy established, which sets out the minimum requirements for neighbour and host agreements and a disputes resolution and independent review process facilitated by DPIE or the Windfarm Commissioner. The mining SEPP Voluntary Land Acquisition and Mitigation Policy is a good example of how a similar policy could be developed for windfarms.

As a member of the CCC it has been extremely frustrating to hear Epuron refuse to answer legitimate community concerns around host and neighbour agreements and hide behind commercial in confidence. The CCC have never asked for commercial content and the draft neighbour agreements were supplied with no confidentiality agreement in place. I have only ever attempted to ensure that the agreements protect the host and neighbours from signing documents that appear unfair or illegal. All that we have asked for is transparency.

From my review of the neighbour agreement supplied to me (which I have attached), the terms of the agreement are truly shocking, and I could not understand why anyone would sign one. During my professional life I have undertaken many land holder negotiations (access agreements, architectural treatments and mitigation works, land acquisitions etc) with near neighbours of mining operations and at no time did we put conditions or impose restrictions through easements on the title of their proprieties, therefore impacting their property rights, why is this mechanism used in wind farms? Epuron's neighbour agreements do not appear to include any of the recommendations made by the windfarm commissioner. The wind industry promotes the "shared benefits" of the industry, but the terms of these conditions are extreme and not equitable for the neighbouring landholder. There needs to be policy established by DPIE to ensure that the minimum requirements are included in all neighbour and host agreements.

It has also been extremely frustrating and disappointing to see Epuron fail to comply with the SEARS with regards to the development of the EIS in consultation with the CCC. This is a simple task and normally done via interviews with the CCC members and a social scientist as part of the social impact assessment. To date, Epuron have not interviewed any CCC

members and when we asked basic questions regarding the transport routes, general arrangement for the site layout, batching plant locations – we got stone-walled and told that we can review this once the EIS is available, this does not foster good relationships with the CCC and community members which rely on the CCC to relay accurate information to the community. Epuron's reluctance to be transparent with information, and arrogance in limiting engagement with the community, has created uncertainty and suspicion about the BCWF.
Epuron prides itself as an industry leader, and the founding signatory to the "Clean Energy Councils Best Practice Charter for Renewable Energy Development" but, I feel that Epuron are treating the people of McCully's Gap, Bowmans Creek and Muscle Creek with contempt, by not adequately consulting with the CCC as required by the SEARS. Epuron have made it very clear that they have no respect for the committee members or the CCC Guidelines. I have been involved in environmental assessments & CCC's for the past 15 years and I continue to be shocked by Epuron's approach to community consultation and engagement.
Epuron's arrogance to date does not bode well for a successful development and will only lead to increased community animosity towards the development, which will result in a large number of objections and approval delays, I would have thought that Epuron would understand the concept of "social licence to operate", but I guess not.

I hope that not all wind companies are like Epuron as they appear to be acting in a similar way to mining companies 20 years ago, for a relatively new industry in Australia this is a major concern.

Below are my comments on the EIS. Each comment is to be considered as a separate area that must be addressed by Epuron in their response to submissions.

Regards
Peter York.

1702 Sandy Creek Rd, McCully's Gap, NSW 2333

ENVIRONMENTAL IMPACT STATEMENT REVIEW

Each comment must be addressed in the response to submission.

Note: Each comment is an objection to information contained within the EIS Document.
..... *i*

Comment

The Consultant Hanson Bailey has provided false and misleading information throughout the EIS by using the wind data that has been collected from the non-compliant wind monitoring tower. This tower was used to identify the wind resource and the viability of the whole project. The wind data has also been used as part of the Noise Assessment. This data is fundamental to the whole project! All data collected by the Wind Monitoring

Mast BOW1, must be excluded from the EIS and new data collected and the EIS resubmitted.

Certification	I certify that I have read and am aware of the terms of the Expert Witness Code of the Land and Environment Court of NSW. I further certify that I have prepared the contents of this EIS and to the best of my knowledge: • It has been prepared to fulfil the requirement of Section 4.12(8) of the *Environmental Planning and Assessment Act 1979*; • Meets the form and content requirements of Clauses 6 and 7 of Schedule 2 of the *Environmental Planning and Assessment Regulation 2000*; • It contains all available information that is relevant to this EIS for the activity to which the Statement relates; and • The information contained in the statement is neither false nor misleading.
Signature	
Date	17 March 2021

Comment

An early assessment of the wind resource identified an investigation area comprising several elevated ridgelines that had the potential for hosting wind turbine generators. Preliminary consultation with potential host landholders and wind monitoring commenced in 2017. This investigation area was used as the basis for early consultation activities and to seek feedback from stakeholders about the Project in 2018. This feedback was then considered in the design of the Scoping Report preliminary layout for consultation with the wider community to culminate in the Project presented in this Environmental Impact Statement.

Below is summary of events taken from correspondence between near neighbours of the project and Epuron:

"Epuron constructed two wind monitoring masts. One is located in Muswellbrook Shire and another one is located in Singleton Shire. The mast in the Muswellbrook Shire Council (MSC) area was installed during August 2018 to a height of 120m without an approved Development Approval (DA). On September 9th, 2018 I emailed Epuron

questioning them about the construction of the wind monitoring mast and asked them how it could be constructed without a DA. On November 18th, 2018 I sent Epuron a follow up email because they had not replied to my email dated September 6th.

On November 24th, 2018, their Project Manager, Julian Kasby, responded to my question. Mr Kasby confirmed the wind monitoring tower did not have an approved DA and it was not an exempt development under NSW legislation. The relevant NSW legislation is The State Environmental Planning Policy (Infrastructure) 2007 (SEPP 2007), Division 4 – Electrical Generating works or Solar energy systems, Clause 39 Exempt development, 1A Wind Monitoring towers. Mr Kasby informed me that Epuron were in discussions with MSC regarding the issue. He also informed me that Epuron were going through this process and that he would be happy to keep me informed as it progressed. Mr Kasby never kept me informed.

The SEPP 2007 legislation states, "wind monitoring masts are considered temporary structures and are considered exempt development to a maximum height of 110 metres". The masts must also be constructed as described by the legislation to meet the requirements of the clause. The wind monitoring masts were constructed illegally, being above 110 metres in height and not being constructed as described by the Legislation. One of the construction requirements described by legislation is that the construction must comply with the "Blue Book" the blue book – "Erosion and Sediment Control". Neither Erosion or Sediment controls have been put in place.

On April 24, 2019 in a local paper the "Hunter Valley News", Muswellbrook Shire Council advertised the Exhibition of Proposed Development Applications. This included DA 36/2019 for the installation of a 120m tall wind monitoring mast. The advertisement did not indicate that it was a retrospective DA for the wind monitoring mast that was built 8 months prior.

A copy of the Statement of Environmental Effects (SEE) prepared by Hansen Bailey Environmental Consultants was also included in the DA as submitted. The Statement of Environmental Effects was presented as if the tower had yet to be built and did not indicate the tower had already been constructed. The SEE was also written in a manner that indicated Hansen Bailey Environmental Consultants had conducted field work regarding their findings. This was incorrect. The Statement of Environmental Effects report was prepared by Hansen Bailey Environmental Consultants employee, Mr Andrew Wu. During enquiries Mr Wu confirmed to me the report had been prepared as a desk top exercise and neither he nor any other representatives of Hansen Bailey Environmental Consultants had visited the site to assist in the preparation of the report. Mr Wu also confirmed he was aware the tower had been erected however Epuron had instructed on the format required for the report and had also provided the information to be included in the report.

The Statement of Environmental Effects includes the following:

INTRODUCTION

Epuron Projects Pty Limited (Epuron) is seeking development consent for the construction of a wind monitoring tower (the Development) near Bowmans Creek (see Figure 1). Epuron is investigating the suitability of the site for the development of a wind farm. The monitoring tower will provide valuable data on the wind conditions in the area.

Clause 3.1 – Construction: indicates that the site of the monitoring tower is accessible via existing, unsealed access roads off Sandy Creek Road and no new access roads will be developed. This is also wrong. New tracks were established in August 2018.

Mr Kasby indicated the DA for the mast was withdrawn on the January 17, 2020 and the mast height reduction work was undertaken in the last week of January 2020. The mast was lowered to 108 metres.

For a period of 17months the existing wind monitoring masts located in Muswellbrook was not constructed pursuant to the State Environmental Planning Policy (Infrastructure) 2007 (Infrastructure SEPP).

The State Environmental Planning Policy (Infrastructure) 2007 (Infrastructure SEPP). Also indicates a temporary wind monitoring masts can only be erected for a period of 30 months. The 30-month period was to the end of February 2021. The temporary wind monitoring masts located in Muswellbrook shire council area is still erected.

I along with numerous other residents from the vicinity of the proposed Bowmans Creek wind farm have made representation to Muswellbrook Shire Council Executive Manager – Environmental and Planning Services Sharon Pope. I also carbon copied in Muswellbrook Shire Council GM Fiona Plesman and DPIE representative Mr Anthony Ko, DPIE.

The two temporary wind monitoring masts were not built and are currently not compliant with the requirements of The State Environmental Planning Policy (Infrastructure) 2007 (Infrastructure SEPP)"

The viability of the wind resource has been assessed using data from wind monitoring tower the was constructed without approval

Comment

Plate 1 shows a much smaller 160 m turbine – not a 220m Turbine that will be used at BCWF.

Plate 2 showing “Typical Wind Farm Internal Access Roads” The topography is gently rolling and no representative or comparative of the mountains that surround BCWF. Once again the turbines used in the photos are 160m not 220m – Deliberately misleading to downplay the size of the project and the visual impacts. Also, note the photo used shows no erosion and sediment controls and run off from the disturbed area is reporting directly to the farm dam. These flow paths may have deliberately been altered to increase catchment size which will impact the landholders harvestable rights, therefore increasing the % of capture which may result with the land holder being non – complaint with harvestable rights and a water access licence would then be required by the landholder. This has not been considered in the EIS.

It should also be noted the excavated topsoil that is placed in stockpile without adequate shaping to minimise dust generation and no sediment fencing placed around the topsoil stockpile – the photo shows very poor practices, which I would be very concerned about if I was a landholder and this occurred on my property. The excess topsoil extracted material waste stockpile – none of this has been covered in the EIS. Also, missing is the management of the trees and vegetation that will be cleared.

The project overview shows no pictures of the Crane, Cranes Hardstand area, Laydown yards, Substation, Powerlines, monitoring masts – some photos are included in the visual impact assessment. Note the Turbine height at Crookwell 2 windfarm is 160m, much smaller than the 220m turbines proposed at BCWF.

There are no graphical representations of the concrete batching plants and rock crushers. The batching and crushing operations will be substantial, given the concrete and crushed rock requirements – 86,400 tonnes of concrete will be required for the footings of the 60 turbines. The three proposed batching plants will be substantial operations given the size of the project.

“The batching plants will include loading bays, hoppers, cement and silos, truck loading hardstand, water tank and aggregate stockpiles. Coarse aggregate required for concrete production may be sourced from the on-site rock crushers or an external source” No photos are included in the EIS to show the size of the batching operations and no details are provided on production levels, fly ash importation, dust management, or waste water management.

The document states that “Mobile rock crushers will be established at various locations within the site” no details are provided within the document on the location and possible impacts from dust and noise and also the production levels and quantities from these crushers. There is also the issue of transporting the excavated materials across land holder boundaries, as the project does not currently hold nor is Epuron seeking a quarrying approval. It is unclear on the quantities needed, where the crushed material will be transported, and how much will be transported from one property to another. Given the scale of quarrying activities and cement batching requirements with all these extracted materials being generated across the project area, these details should be included in the EIS as approval is required for these activities. The BCWF should be required to hold

additional approvals to extract the material for reuse, as designated under the EP&A Act – Part 4 Designated Development.

The extract from the EP&A Regulation 1994 below clearly shows that the project is an extractive industry due to the re-use of the extracted materials for crushing. Quantities have been conservatively calculated to be in excess of 150,000 m3 in the first 12 months just for the excavation of the turbine footings alone. There is no estimate on the cut and fill volumes required for road construction, which are likely to be in excess of 100,000 m3. The potential total volume of extractive materials could be well in excess of 250,000 m3 over a 12 month period, therefore, by definition, the project should be assessed under the State Environmental Planning Policy (Mining, Petroleum Production and Extractive Industries) 2007 due to the large amount of extracted materials and the disturbance of more than 2 Ha of land – See Below on the definition of an extractive industry taken from the EP&A Regulation 1994.

Appendix 6. Schedule 3 — Designated development

This appendix is an extract from Schedule 3 of the EP&A Regulation 1994 and prescribes extractive industries which are designated under Part 4 of the EP&A Act. This designation only applies to proposals which require development consent under the provisions of a planning instrument.

Extractive industries that obtain extractive materials by methods including excavating, dredging, tunnelling or quarrying or that store, stockpile or process extractive materials by methods including washing, crushing, sawing or separating and:

1) obtain or process for sale, or reuse, more than 30,000 cubic metres of extractive material per annum; or
2) disturb or will disturb a total surface area of more than 2 hectares of land by:
   a) clearing or excavating; or
   b) constructing dams, ponds, drains, roads or conveyors; or
   c) storing or deposition overburden, extractive material or tailings; or
   ii) Western Division Regional Environmental Plan No. 1 — Extractive Industries; or

b) maintenance dredging involving the removal of less than 1,000 cubic metres of alluvial material from oyster leases, sediment ponds or dams, artificial wetlands or deltas formed at stormwater outlets, drains or the junction of creeks with rivers provided that:
   i) the extracted material does not include contaminated soil or acid sulphate soil; or
   ii) any dredging operations do not remove any seagrass or native vegetation; or
   iii) there has been no other dredging within 500 metres during the past 5 years; or

c) extractive industries undertaken in accordance with a plan of management (such as river, estuary, land or water management plans) provided that:
   i) the plan is:
      • prepared in accordance with guidelines approved by the Director of Planning and includes consideration of cumulative impacts, bank and channel stability, flooding, ecology and

Comment

There is no mention of the Significant Ravensworth State Forest Remanent, which is located approximately 4km south of project boundary.

There is no mention of the Glencore Ravensworth Mine's biodiversity offset area "Hillcrest" on the project boundary to the south west.

There is no mention of the Glencore Liddell Mine's biodiversity offset areas "Mountain Block" and "Mitchell Hills" on the project boundary to the south west.

There is no mention of the Glencore Mount Owen Mine biodiversity offset area "Cross Creek" on the projects south eastern boundary – Approximately 2km away.

It does not appear that any consultation has been undertaken with Glencore, NSW Government (OEH) or the Commonwealth Government on the impact of the Development on the Biodiversity Offsets Held by Glencore – Epuron should provide correspondence logs as an appendix the same as was done for the Hills of Gold Windfarm proposed for Nundle.

Comments covered above

Comment

Epuron has not included any of the Windfarm Commissioners recommendations. None of the recommendations from the Windfarm Commissioners report 2019 have been considered in the development of the Project and the EIS.

In the 2019 report, the Windfarm Commissioner warns "There is also a high risk that project prospectors, who may not have fully considered the implications of these scenarios, inadvertently conduct themselves in a manner that can result in long-term resentment to large-scale renewable developments within local and wider communities where the project is proposed. While these actions may lead to difficulties in relation to the success of the specific project, they also have the potential impact of creating difficulties for other project developers who may be undertaking development of neighbouring projects in the region. At times, these situations have brought and still have the potential to bring the large-scale renewable industry into disrepute."

Comment

There are no details provided on how the three batching plants will operate. Where will the power supply come from? Diesel Generators? I thought this was a renewables project.

The operations and maintenance facility only refer to accommodating 15 personnel. The construction phase will require 156 FTE during the 18months of construction – Has the Operations and Maintenance Facility been sized for the 156 or 15 personnel?

Comment

The Traffic Impacts from the project will be extensive particularly for resident and road users on Hebden, Scrumlo and Albino Roads. Albino and Scrumlo Roads are unsealed and very narrow winding country roads that are not suitable for oversize vehicles and the increased traffic throughout the construction period of the project. The traffic assessment acknowledges this through the large amount of road works required, including the removal of cattle grids, disturbing watercourse through the increase in the culverts sizing and the clearing and trimming on trees along the transport route.

Albino Road and Bowmans Creek Road will see huge increases in traffic from a couple of cars a day to 52,449 trips or average of 112 trips per day - one way! (26 days/month x 18 months/Total trips). This poses and unacceptable risk to people who live and work in the Bowmans Creek area. A number of houses are very close to the road in this area and they will experience traffic impacts along with dust and noise from the 100's vehicles which will pass their homes each day. A condition must be imposed to bitumen seal the unsealed section of these roads to ensure there is no impact to amenity or human health within the project boundary from wheel generated dust. Due to lack of detail in the Air Quality assessment and site water balance regarding dust suppression, I have no confidence that traffic will not generate excessive wheel generated dust.

The document acknowledges that there are boundary issues with the swept areas in several areas along the transport route. It appears that none of the landholders along the transport route are associated with the project. A number boundary/ blade trespass issues are on land

owned by Glencore and from my review of the EIS very limited or no consultation has occurred with the largest landholder in the area. The document does not detail how this issue will be managed or resolved, proposed controls and mitigation strategies and how the property access agreements will be negotiated, more detail and transparency is need on the contents of these agreement prior to approval being granted.

The turn onto Hebden road is very busy especially at shift change 0600-0700- 1800-1900 the addition of an extra 100 vehicles per day particularly at shift change at Mt Owen and Glendell mines, will cause major delays on the New England HWY with queuing volumes to push onto the road outside the turning lane causing congestion.

Comment

The Australian Government is developing a regulatory framework to enable the exploration, construction, operation and decommissioning of offshore wind and other clean energy technologies and associated infrastructure such as transmission, in Commonwealth waters (i.e. beyond three nautical miles), including Australia's Exclusive Economic Zone - The discussion paper *(Australian Government, Department of Industry, Science, Energy and Resources – Offshore clean energy infrastructure regulatory framework: discussion paper, January 2020)* recommends that a commercial license is not issued on commonwealth land until the decommissioning bond security is lodged.

The on-shore windfarm decommissioning risk is currently being managed by confidential 25 -year lease agreements between the hosting landholder and the wind company. There is no transparency or DPIE review on the lease conditions with no security bonds held by NSW Government to protect land holders if the wind company defaults or become bankrupt.

The establishment of security bonds with NSW State Government would be considered best practice and Epuron should commit to this in their EIS.

"Disturbed areas will be rehabilitated to meet the intended final land use and be comparable with pre-construction conditions in consultation with landholders"

Any disturbance must be returned to the Plant Community Type that was disturbed as defined in the flora assessment. This should not be as agreed with the landholder, but as per the conditions in the rehabilitation management plan.

"The dismantled infrastructure components will generally be sold as parts or scrap materials. All waste will be recycled where practical, or where necessary disposed of in a relevantly licensed facility as described in **Section 7.17**"

Scrap Steel Value of Each Turbine Mild Steel $100/Tonne = 667Tonnes of Salvageable Mild Steel $Value = $66,700/ Turbine. Typical Decommissioning Cost can run at $400,000 per turbine.

Decommissioning also does not consider the removal of the overhead powerlines as these would be redundant if the windfarm was decommissioned.

None of the recommendations from National Windfarm Commissioner have been considered with regards to the proposed decommissioning of the site.

Comment

No evidence provided of the 100 meetings held with Epuron and the community – This should be included as an appendix. A good example is the "Hills of Gold - Nundle" EIS, which included a detailed chronology of meetings and responses. This must be included in the response to submissions. The 100 meetings should also be categorised as the number of meetings with associated land holders, non-associated landholders, near neighbours, Council, NSW Government, and Federal Government.

Comment

Land holders who do not have residential dwellings on their properties have not been considered in the EIS.

Comment

If CASA require lights to be installed, the Visual Impact Assessment must be redone.

Throughout my discussions with Epuron over past 2 years, there has been no discussion or disclosure of the proposed new monitoring tower that was released in the EIS located on the ridge above my property. Both Martin Poole and Julian Kasby stood on my veranda when the photomontages were delivered and they both mentioned that no turbines or infrastructure will be visible on the hill above my house. Turbine 57 was stated to be the closest part of the windfarm development to my property.

The monitoring tower does not appear in any of the documentation provided by Epuron prior to the lodgement of the EIS. I was shocked when I opened the document and I saw the monitoring tower above my property. The photomontage supplied by Epuron does not include the monitoring tower.

The monitoring tower was not included in the draft neighbour agreement that was supplied by Epuron, which I have declined. The positioning of the monitoring tower does not appear in any of the community newsletters or CCC presentation or Community Information sessions that were held prior to the lodgement of the EIS.

The monitoring tower must be removed as there has been no community consultation with any of the near neighbours regarding its siting or the justification for its location in the EIS.

Figure 26 PM Dwelling H11-1

Epuron is attempting to manage the visual impact of the wind turbines through the "offering of neighbour agreements" Any agreement can be offered, but it is meaningless unless it is signed.

Therefore, a development consent condition must be imposed on the development to ensure that before any wind turbine or associated infrastructure is installed within 3.6 km from a non-associated residence a neighbour agreement must in place. The contents of this agreement must be approved by DPIE prior to negotiation taking place with near neighbours.

Epuron has had over 2 years to negotiate neighbour agreements, but from my review of the document there is not one property that has signed a neighbour agreement.

This was my response to Epuron after my review of the proposed neighbour agreement.

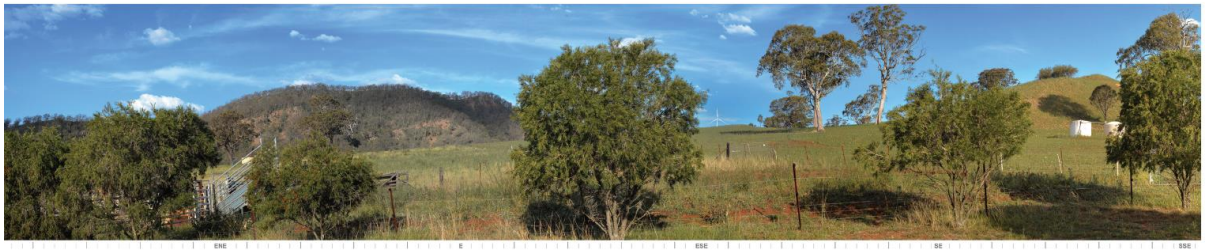
"We do not agree to the terms of the proposal as they are currently written. The proposed agreement places an unacceptable burden on our property title by the way of a visual easement.

Epuron's attempt to secure a neighbour agreement reinforces our concerns that we will be significantly affected and visual mitigation measures are unlikely to be effective or practical given the surrounding topography.

Therefore, we request that turbines 57, 51 and 52 are removed from the site layout."

Photomontage from my property H12-3 and H11-1 showing that no monitoring tower is present in the Photo's.

Figure 28 PM Dwelling H12-3



Glenn Innes windfarm

The DPIE recently refused the MOD4 of the Glen Innes wind farm due to visual impacts. This is a similar situation to BWCF. The terrain is steep with the turbines towering over a number of properties. The Departments refusal statement is below:

> The Department considers that the nature and extent of the impacts means that vegetation screening as a mitigation measure alone is unlikely to be effective or practical. The Department also notes that due to the surrounding landform, spatial restrictions and small number of project turbines, there are limited opportunities to mitigate the visual impacts of the modification without limiting the heights of the majority turbines, which would materially reduce the benefits of the proposed modification.
>
> Consequently, the Department considers that mitigation of the impacts attributed to the larger turbines could be achieved by Nexif securing landowner agreements with significantly affected residences. However, the Department notes that despite having had almost 3 years from the end of exhibition to secure agreements, Nexif has not reached agreements with any of the significantly impacted non-associated residences located within 3.6 km of a project turbine.

There have been no agreements signed by any near neighbours over the past two years to mitigate the visual impacts from the turbines. Based on my experience with Epuron they have not even attempted to negotiate an agreement that is equitable for both parties. Near neighbours will be impacted and the only mitigation measure is an agreement.

Visual screening of any form will be inadequate and Epuron must make a commitment to not install any turbine within 3.6km of a non – associated property (should not matter if a dwelling exists on the property or not) Until an agreement is signed no turbines or associated infrastructure within 3.6km of a non-associated property can be installed.

Comment

The SA 2009 noise guideline has been used for the noise assessment. This guideline refers to the ISO9613-2. This standard was developed to predict noise for noise sources to a maximum heigh of 30m. The early application of this standard was to small turbines with a hub height of 30m, overtime as the size of the turbines has increased, so has the disparities with the intended design constraints of ISO9613-2. ISO9613-2 is now being used to assess noise impacts from turbine height at 220m at BCWF. The Standard was never designed to be used at such heights as wind shear was never considered in ISO9613 -2. In other words the empirical model (ISO9613-2) is not valid outside its "parameter space". The standard as experienced application creep since its approval in 1996. A new standard must be developed to account for the larger height of the turbines proposed by BCWF to ensure that the predictions made in the noise assessment are accurate and do not cause a loss of amenity to non-associated properties.

ISO 9613-2 also assumes that noise source and the receiver is on level ground. This is clearly not the case with BCWF. Other industries are moving towards probabilistic noise modelling, which determines the percentage of time at the development is likely to exceed the criteria under a range of meteorological conditions. This allows operations to be altered during high risk meterological conditions. There appears to be no discussion in the EIS on noise controls other than the curtailment strategy. How is this managed? What are the triggers? A realtime noise management system must be installed to ensure that noise is being adequately managed.

The measured background noise measurement in the EIS are extremely low, this is caused by high windshear conditions ie low ground speed winds, due to height of the turbines above the landscape this will cause an increase in noise levels at the receiver ie winds will be stronger at higher elevations. Therefore, noise will be propagated down towards a receiver more often. This is a major shortcoming in the use of ISO9613-2 and through the use of this methodology we have no confidence that noise will not impact our residence.

There needs to be more background noise monitoring undertaken, there has been no background noise monitoring undertaken in the McCully's Gap or Davis Creek Area – The results from 4 locations are being applied across an area of 17,000Ha…

It is likely that CASA will require lights on the turbines. If this happens the visual impact assessment must be redone to manage the light impacts from the turbines.

Comment

The EIS acknowledges the impact most likely on avifauna and microbats. Why then was microbat survey effort constrained to just 4 nights in January, whilst birds were sampled seasonally (Sept, Oct, Nov 2019, Jan, March 2020). Also note that no surveys conducted in April / May when large scale bird migration is underway.

Why was microbat survey effort constrained to just 4 nights in January? It is unacceptable that microbats were only sampled on 4 nights in one week when ecology survey work spanned 7 months.

In Section 6.3.2 page 142 no reference is made to Squirrel Glider as candidate species credit species for further assessment, despite multiple records in the locality. East coast Freetail-bat, not considered likely to occur, despite Mt Owen Mine area being one of few sites in NSW where the species is regularly recorded.

Only 91 bird species recorded in EIS, despite Mt Owen Mine recording 172 species, including 16 threatened birds (as of March 2021). No assessment of altitudinal migrants such as Flame Robin and Scarlet Robin, both listed threatened species. There is a high potential for impact on local population which has not been considered.

Bird species assemblage based on own survey or *data provided by local birdwatchers*!!! Please, what about literature review using BioNet, which has all of Mt Owen Mine's records since 1995. This assessment was very poorly researched.

Page 151 indicates the occurrence of threatened bat species was rare to uncommon, including Eastern Coastal Freetail-bat, which contradicts the work at Mt Owen Mine in which the species is one of the more commonly recorded.

All this data is freely available on Bionet and Also via the Glencore Website.

Grey – headed Flying Fox

There appears no reference to Grey-headed Flying-fox (threatened) and Little Reddish Flying-fox, I would have considered these species at higher risk of collision and habitat loss.

Nationally important camps are those that have contained ≥ 10,000 Grey-headed Flying-foxes in more than one year in the last 10 years, or have been occupied by more than 2,500 Grey-headed Flying-foxes permanently or seasonally every year for the last 10 years (DoE 2015). There is one nationally important Grey-headed Flying-foxes located on Muscle Creek near the Hunter River in Muswellbrook. This camp is well within the 50km foraging radius of the turbine layout. There are also another four flying fox camps located within 50km of the

Development. The camps are located at Aberdeen, Scone, Muscle Creek, Allan River – the location of these can be viewed on the Australian Government – Department of Agriculture, Water and Environment's National Flying – Fox monitoring viewer.

Records from the Mt Owen Mine Fauna Reports clearly show that the Grey Headed Flying Fox are regularly found in the area surrounding the Ravensworth State Forest and Biodiversity offsets. The species has been recorded 10 years of the 25-year according to Mt Owen Mine Species list. The most recent observation was in 2019 were 10+ Grey Headed Flying- Fox at Site MH01 foraging. The Grey-headed Flying-fox was detected foraging on fruiting Ficus rubiginosa trees in Mitchell Hills Offset. The Mitchell Hills Biodiversity offset is located on the Project boundary.

The flying fox was also observed foraging on a Nectarine Tree each night for one week during December 2020, between 5-10 individuals were observed eating the fruit from the trees in our yard at 1702 Sandy Creek Rd, McCully's Gap. This tree is 2.5 Km from Turbine 57. Flying foxes are also regularly observed flying towards the project area on dusk heading toward foraging sites.

Electrocution on power lines Grey-headed Flying-foxes are vulnerable to accidental injury and death from various artificial obstacles (Tidemann 1999, Tidemann and Nelson 2011) This has not been considered as an impact with installation of the 16km of overhead Powerlines. The species have not been considered in the blade strike and Barotrauma section of the EIS.

The impacts to the Grey headed Flying Fox have been understated in the EIS and the development does not align with the objectives of National Recovery Plan for the Grey-headed Flying-fox. This project will have a landscape impact on protected and threatened species and cannot be dismissed as negligible based on limited data review.

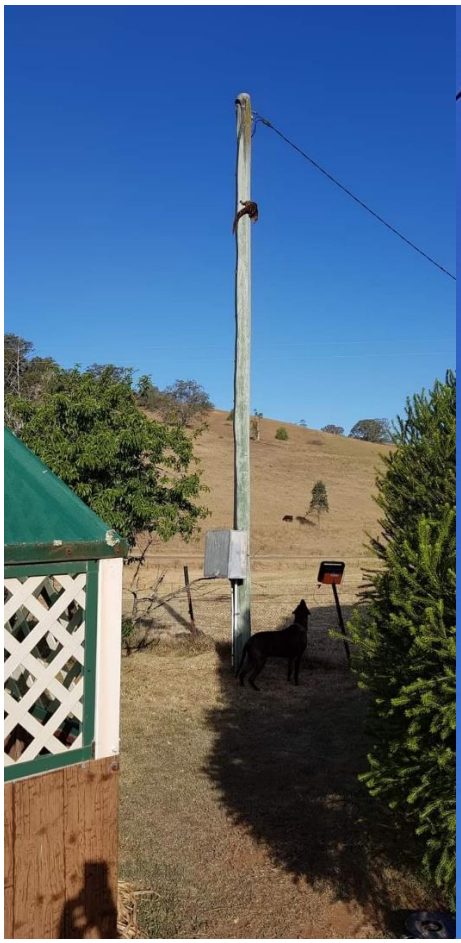
Spotted Tailed Quoll

The area surrounding the BCWF holds a high density of Spotted Tailed Quoll's. These species rely on remnant vegetations corridors. Below are photos taken showing a quoll up a power pole at our property. This is a very rare sighting and shows that there are high densities of quolls in the areas very close to the BCWF. We have also located quoll den sites and a number of individuals using camera traps on our property.

Quolls have been recorded at Mt Owen and the surrounding areas in 16 years of the 23 years of monitoring. It is a common species detected at Mt Owen and surrounding areas. Spotted Tailed Quoll was also detected in 2017 at the Mitchell Hills offset. The sighting is on the boundary of the project and well within the foraging range of an individual quoll.

The EIS does not include any cage trapping, camera trapping using bait or attractant in an attempt the survey quoll populations within the BCWF – This is a concern given the amount of survey effort that was undertaken for the flora component of the BCWF

The Impacts to the Spotted -tail Quoll have been understated in the EIS and BCWF will have landscape level impacts.




Migratory Species

The document does not consider the impact of the location on migratory bird species, and not only listed threatened species. For instance, at this time of year, thousands and thousands of Yellow-faced Honeyeater and other species (Silvereyes, Brown-headed Honeyeaters) migrate from southern areas to northern parts of Australia. There is lots of info about it, Birds Australia is a good reference point, the great Australian bird migration. Wind turbines positioned in the mid- to upper Hunter valley may impact on this migratory route though bird strikes this has not been considered!

Locating turbines on ridgelines can be problematic for migration of native butterflies. Loss and/or degradation of sites used for hill-topping by butterflies is a listed Key Threatening Process under *NSW Biodiversity Conservation Act 2016.* Ecologist working on the biodiversity offsets areas of (Mitchell Hills, Esparanga, Cross Creek, North West, Hillcrest, Condran) have encounter hill-topping by a wide range of butterfly species. This impact has not been adequately addressed in the EIS.

Swift Parrot.

The windfarm will remove vegetation that contains key tree species listed for the swift parrot as per the National Recovery Plan for the species (Saunders and Tzaros 2011). The winfarm will remove a several native vegetation communities within the Development footprint including fragmented eucalypt forest and woodland.

The closest record of the species occur approximately 5 km from the Development Footprint, where two individuals were recorded in 2014 as part of the annual monitoring of the Southeast Offset Area at Mt Owen in June 2014 (Forest Fauna Surveys 2017). This species was also recorded in May 2005 (flock of +20 individuals) and September 2007 (flock of +5 individuals) within the northern section of Ravensworth State Forest (Forest Fauna Surveys 2017).

Key threats for the swift parrot include habitat loss and alteration, climate change, collision mortality and psittacine beak and feather disease (PBFD). The EIS does not account for these Swift Parrot observations in the area immediately to the south 5 km Turbine 22 as a collision risk and through the loss of habitat. The development does not align with the objectives of National Recovery Plan for the Swift Parrot.

Koala

The windfarm will remove vegetation that contains key tree species critical for survival of the Koala. The windfarm will remove a several native vegetation communities within the Development Footprint including fragmented eucalypt forest and woodland.

The bushfires of 2019/20 are believed to have significantly impacted on the combined Koala population of Qld, NSW and the ACT.

Between 10 and <30% of known and likely modelled distribution of this species is within fire affected areas (DAWR, 2020b). The assessment of significance for Koala has not been carried out with an appreciation for the wider impacts that this vulnerable species has been subjected to.

Koalas have also been detected in the Mitchell Hills and Hill Crest offsets. In 2017 it was reported that Koala Scats were discovered in the Michell Hills Offsets. The location of the scats is right on project boundary! Koalas have also been seen on the Hillcrest Offset, which is on the boundary of the project area. See below.

There is also anecdotal evidence that Koalas are present on the Clydesdale and Clendening associated land holder properties. University of Newcastle Studies have also been completed on the Clydesdale property. These sightings have not been considered or included in the EIS.

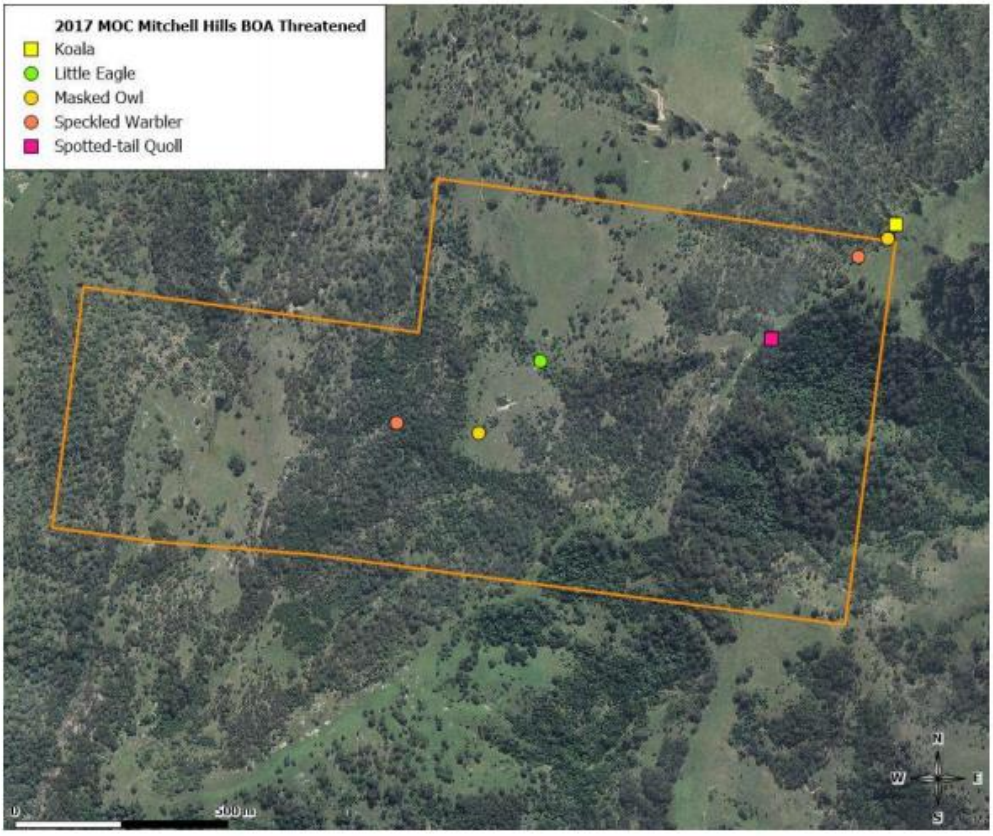


Figure 10 Location of Threatened Fauna recorded, Mitchell Hills BOA.

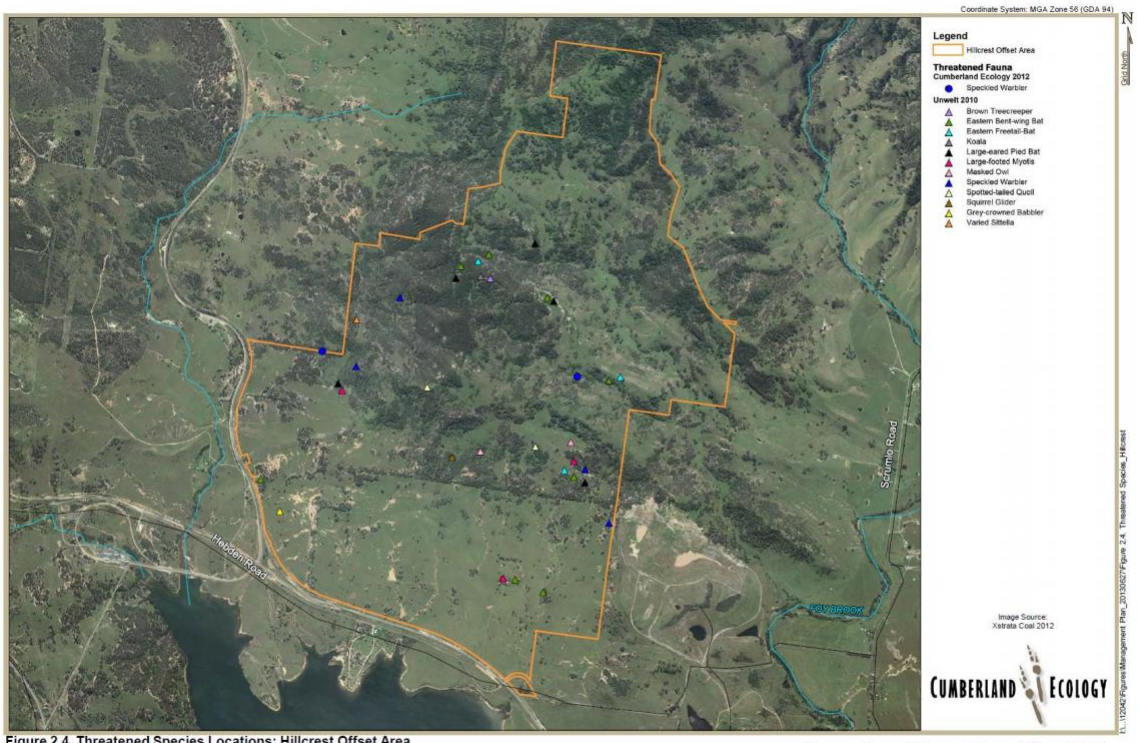


Figure 2.4. Threatened Species Locations: Hillcrest Offset Area

The EIS does not account for these Koala observations in the area immediately to the south West and East of the project area. The area directly adjacent BCWF (Barrington Tops) has been identified as an ARK for Koala no acknowledgement of this in the EIS.

There is no justification to remove the species from the assessment given the number of recorded sighting near the project area.

Phascolarctos cinereus	Koala (breeding) ***	Hunter, Upper Hunter, Tomalla, Ellerston	1583, 1604, 1606, 1603	High	No	Microhabitats within the subject land are degraded, such that the species is unlikely to utilise the habitat. Subject land occurs in a highly cleared agricultural landscape with limited occurrence of preferred food trees.

In contrast, the Brush-tailed Phascogale has been retained as present within the subject area. Due to it being found in adjacent biodiversity offset areas.

Table 18 Species credit species assessed as present within the subject land

Scientific Name	Common Name	Biodiversity Risk Weighting	Presence
Chalinolobus dwyeri	Large-eared Pied Bat***	3	Present within subject land, as determined by positive call identification on ultrasonic detectors
Phascogale tapoatafa	Brush-tailed Phascogale	2	Assumed present based on presence of suitable habitat and occurrence of this species in adjacent biodiversity offset areas

*** *Species also listed under EPBC Act*

Why have other species not been assessed as present in the area when monitoring records clearly show they occur in adjacent areas surrounding the BCWF.

The development does not align with the objectives of National Recovery Plan for the Koala.

Blade Strike

There is no justification on how the RSA flight height for each bird/bat species is determined and what research papers are used to determine the flight height categorisation for each bird species. There are no references on how the bird flight height categorisation methodology was developed. Is this categorisation something the author has come up with? This is taken from a standard? Peer review from a recognised ornithologist/ Bat expert? A OEH/DPIE EPBC approved methodology?

There is no reference to any peer reviewed document to justify the bird flight height for each species risk assessed. The impacts are once again being downplayed be categorising species that fly at lower heights therefore the risk comes out as negligible. The blades also turn faster on the larger turbines. This does not appear to be considered.

The bird flight height for each species must be justified by peer reviewed research and the categorisation reviewed by an independent ornithologist approved by DPIE or OEH before the risk assessment is competed.

Why has the grey headed- Flying fox not been included in the blade strike and barotrauma section? As stated above there has been recent sighting in the area immediately adjacent to the project area and they have not been included in the assessment.

Below is an extract from the Mitchell Hills Monitoring report showing the observation of a little eagle.

3.5.4 Amphibians

Amphibian activity was concentrated around a stock dam located in the western portion of the BOA, although calls of 2 species were recorded adjacent to the Dry Rainforest pocket on the eastern boundary of the offset. The western dam supported emergent aquatic vegetation to 1.0 m in height and expanse of open water. Frog species recorded at this water body comprised mostly pond species. Six frog species in total were recorded at Mitchell Hills, including Common Eastern Froglet, Bleating Tree Frog, Eastern Dwarf Tree Frog, Broad-palmed Frog, Peron's Tree Frog and Whistling Tree Frog. Due to the steep terrain at the Mitchell Hills BOA, a number of ephemeral creeks are present, which would have flowing water during rainfall events. It is also likely that a number of ponds would form after any rainfall events and provide temporary ponds for frogs. However, no surface water was present in any of these ephemeral drainage lines during fieldwork in 2017, due to below average rainfall experienced for the locality.

3.5.5 Threatened Fauna

Five threatened fauna species were recorded at Mitchell Hills BOA during surveys in 2017, and an additional 6 species in the adjoining Hillcrest BOA. A summary of the threatened fauna species recorded at Mitchell Hills BOA is listed below in **Table 9**.

Table 9. Threatened species recorded in Mitchell Hills BOA.

Common Name	Scientific Name	Number	Methodology
Little Eagle	*Hieraaetus morphnoides*	1	observed
Masked Owl	*Tyto novaehollandiae*	2	Nocturnal bird census
Speckled Warbler	*Chthonicola sagittata*	6	Observed, bird census
Koala	*Phascolarctos cinereus*	Scats	observed
Spotted-tail Quoll	*Dasyurus maculatus*	4	Camera
Additional Threatened Fauna Recorded in neighbouring Hillcrest 2010 ecological assessment			
Brown Treecreeper	*Climacteris picumnus*	No details	Hillcrest BOA
Grey-crowned Babbler	*Pomatostomus temporalis*	"	Hillcrest BOA
Varied Sittella	*Daphoenositta chrysoptera*	"	Hillcrest BOA
Squirrel Glider	*Petaurus norfolcensis*	"	Hillcrest BOA
Large-eared Pied Bat	*Chalinolobus dwyeri*	"	Hillcrest BOA
Large-footed Myotis	*Myotis adversus*	"	Hillcrest BOA

The Little Eagle was observed flying overhead, whilst the Masked Owl was detected by vocalisation response to calls of the species being broadcast at selected sites in Mitchell Hills. The Speckled Warbler is widespread across the offset. Scats of Koala and dieback in the crown of many Forest Red Gum *Eucalytpus tereticornis* trees was observed on the upper slopes of Mitchell Hills BOA during fieldwork. Koala have been observed in the neighbouring Hillcrest BOA by Ravensworth Operations staff and baseline ecological surveys for the offset. The Spotted-tail Quoll was detected by remote camera monitoring in the Dry Rainforest on the eastern side of the BOA.

The locations of threatened fauna recorded at Mitchell Hills BOA is presented below in **Figure 10**.

The little Eagle was also observed in the Area directly adjacent the proposed development. No Blade Strike assessment has been completed for the Little Eagle, which would have similar risk category to the Wedge Tailed Eagle.

It must be assumed that all bird and bat species fly within the RSA unless there is peer reviewed journal that reference a lower flight height.

The consequence criteria is laughable. The numbers need to be quantified, how often is occasional? How will a loss or reduction in numbers on a local or regional population be measured?

Low: Repeated loss of small number of individuals... What is the definition of repeated? Once an hour once a day once a year? How many is a small number <5 <50 <100?

Table 38: Consequence Criteria for Risk Event to occur

Negligible	Low	Moderate	High	Severe
Occasional individuals lost - no reduction in local or regional population viability	Repeated loss of small numbers of individuals but no significant reduction in local or regional population viability	Moderate loss in numbers of individuals leading to reduction in localised or regional population viability for 1-5 years	Major loss in numbers of individuals leading to reduction in regional or state population viability for 5-10 years	Extreme loss in numbers of individuals leading to reduction in regional and state population viability for a period of at least 10 years

Barotrauma

The document includes the Barotrauma and Blade strike in the same section of the EIS. They are two separate issues and the controls need to be managed differently. Blade strike is fauna impacting the blade and barotrauma is the pressure change as the blades spin and create vortex, which ruptures the internal organs of microbats and birds.

The barotrauma study quoted in the Document Baerwald, D'Amours, Klug, & Barclay, 2008 was for small turbines with much slower blade speed. The Barotrauma is likely to be much higher on these much larger 220m High Turbines as the blades are much larger, which therefore increases the pressure differential, as a result increasing the trauma levels for all microbat and potentially bird species. The EIS has not cited any updated studies or research that refer to 220m turbines. The rapid pressure reductions caused by the much larger turbines will be devastating for all microbats and avian species that fly in close proximity to the blades.

“Barotrauma helps explain the high fatality rates of bats at some wind energy facilities. Even if echolocation allows bats to detect and avoid turbine blades, they may be incapacitated or killed by internal injuries caused by rapid pressure reductions they cannot detect” Baerwald, D'Amours, Klug, & Barclay, 2008.

Given the very low survey effort, the impacts to all Microbat and Avian species are unquantifiable based on the EIS data, therefore on this risk to threatened and endangered species the project should be refused development approval. The document does not reference any contemporary research that demonstrates the justification for a negligible impact to threatened microbats or avian species.

Over Head Powerlines and Monitoring Towers

No assessment on the avian and microbat strike or impacts of at-risk species on the introduction of 16 km of overhead powerlines. The height of the towers (45m) and spaced

every 200-300m. This also must be considered on the impacts to the Grey headed Flying Fox.

No assessment on the avian and microbat strike or impacts of at-risk species on the installation of the wind monitoring towers. The height of the towers are within the at risk flying height for a number of avian and bat species.

Biodiversity Impact Summary

The document is very limited in scope, has conducted minimal survey effort, has missed important migratory windows for fauna, has generalised likelihood of occurrence for many threatened and protected species, and is very poorly researched for threatened species. The bibliography is appalling, despite multitude of EIS's conducted in the general area (every mine and offset has multiple studies both short and long term). Similarly, Wind Turbines located to south of Davis Creek in northern study area are near Mt Royal / Barrington Tops National Park, no reference to any of these studies.

The information presented above clearly demonstrates that the area surrounding the BCWF is rich in biodiversity and these remnant vegetation on the mountain tops are "ecological island" that are significant remnants given the surrounding land use and history of extensive land clearing. These areas have been protected from clearing as they are steep and unusable until now. These areas must be protected from industrialisation of the landscape.

The dataset collected from Mt Owen and surrounding biodiversity offset areas over the past 23 years, clearly show that a large number of species are missing from the EIS Fauna impact assessment. It appears that this whole dataset has been ignored to downplay the impacts on threatened species at a landscape level.

The 2019 Mt Owen Glendell Operations (MGO) Offsets Fauna monitoring Report Clearly shows that the area surrounding the BCWF contain a large number of threatened species.

Overall, the fauna monitoring for the Mount Owen Complex, undertaken over the period 1996 – 2019, has recorded a total of:

- 168 native and 2 introduced bird species,
- 41 native and 10 introduced mammal species,
- 26 reptiles, and
- 16 frog species.

Table 13. Threatened Fauna Species recorded in Mt Owen Mine Complex 1994 to 2019.

Common Name	EPBC	BC Act	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Swift Parrot	E	E										√		√							√					
Green & Golden Bell Frog	E	CE	√	√		√						?														
Little Eagle		V	√	√		√		√																		
White-bellied Sea Eagle		V				√	√		√		√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√
Little Lorikeet		V	√	√	√	√	√	√	√	√	√	√	√	√	√	√			√			√	√	√		√
Powerful Owl		V									√	√	√	√												
Masked Owl		V		√		√		√	√	√	√	√	√		√	√		√		√	√					
Brown Treecreeper		V	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√		√
Speckled Warbler		V	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√
Black-chinned Honeyeater		V	√	√						√	√															
Scarlet Robin		V		√														√								
Flame Robin		V				√	√																			
Hooded Robin		V	√	√	√	√	√	√	√	√	√	√	√	√	√	√			√	√		√				
Grey-crowned Babbler		V	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√
Varied Sittella		V		√	√	√	√		√	√	√	√	√	√	√											√
Dusky Woodswallow		V	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√		√	
Diamond Firetail		V	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√		√							
Spotted-tail Quoll	V	V					√	√	√	√	√		√	√	√	√	√	√	√	√	√			√		√
Brush-tailed Phascogale		V																√					√	√		√
Koala ? (Possible – scat collected)		V	Po																							
Squirrel Glider		V	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√		√		√
New Holland Mouse	V									√	√	√	√	√									√			
Grey-headed Flying-fox	V	V		√			√				√		√	√			√						√			
Yellow-bellied Sheathtail-bat		V												√		√	√		√	√						
East-coast Freetail-bat		V	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√		√
Large-eared Pied Bat (Possible - call)	V	V				Po		Po					Po		Po						Po	Po				
Eastern Bentwing-bat		V	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√		√	√	√	√	√			√
Little Bentwing-bat (Possible - call)		V						Po							Po	√										√
Large-footed Myotis		V				√		√				√		√	?	?						√				
Greater Broad-nosed Bat		V					√	√	√		√				?	?	√		√	√						

All species found in the Mt Owen dataset, must be assumed to be within the BCWF area.

The survey effort has been that poor that no reptile or amphibian Survey was even undertaken! The author just state that the habitat is degraded, and they will not present. This is not good enough!
Epuron will blame drought for the lack for survey effort, but there was above average rainfall recorded in 2020 and 2021.

Amphibian Survey for the presence of the Green & Gold Bell Frog must be undertaken. This species has been found in the past at Mt Owen and it is possible that it will exist in the steep areas and natural springs with the project area.
The impact to threatened species within the BCWF cannot be dismissed based on lack of survey effort. No Reptile Survey undertaken for the presence of the Border Thick-Tailed Gecko.

No Aquatic Survey completed for the Southern Purple- Spotted Gudgeon, which has potential to occur in Bowmans creek

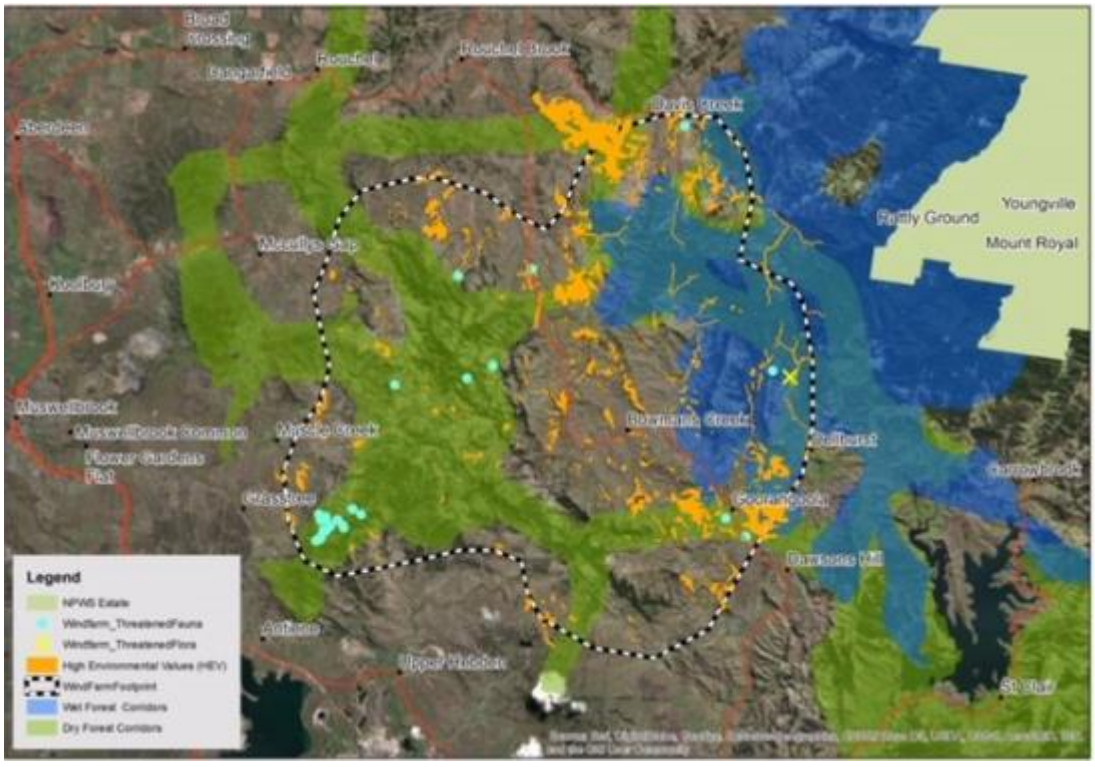
The threatened species impact also needs to include the impacts from blasting that has not been considered.

The area within the Windfarm footprint has high ecological value. The BCWF sites with in both the Wet and Dry forest corridor.

Threatened Fauna (blue dots on map)
Border Thick-tailed Gecko, Count = 1
Brown Treecreeper (eastern subspecies), Count = 2

Brush-tailed Phascogale, Count = 3
Diamond Firetail, Count = 2
Dusky Woodswallow, Count = 2
Eastern Bentwing-bat, Count = 3
Glossy Black-Cockatoo, Count = 1
Koala, Count = 2
Large-eared Pied Bat, Count = 1
Little Lorikeet, Count = 1
Masked Owl, Count = 1
Speckled Warbler, Count = 4
Spotted-tailed Quoll, Count = 18
Varied Sittella, Count = 1

Threatened Flora (yellow x on map)
Rhodamnia rubuscens



7.6 ABORIGINAL CULTURAL HERITAGE 187

No consideration or mention of the Notice of an application for the preservation and protection of a specified area described as the “Ravensworth Estate’ and including

Bowmans Creek and Glennies Creek, in the Hunter Valley. “The Ravensworth Estate” includes the proposed easement for the powerlines and subdivision.

Australian Government
Department of Agriculture, Water and the Environment

Aboriginal and Torres Strait Islander Heritage Protection Act 1984 (Cth)

Notice of an application for the preservation and protection of a specified area described as ‘Ravensworth Estate’, and including Bowmans Creek and Glennies Creek, in the Hunter Valley, New South Wales

Invitation to make representations

I, Daniel Leo, hereby give notice as follows:

The Minister for the Environment, responsible for the *Aboriginal and Torres Strait Islander Heritage Protection Act 1984* (Cth) (the **Act**), has received an application made under section 10 of the Act. The Minister has appointed me to provide a report to her under section 10(1)(c) of the Act.

The Applicant

The application is made by Mr Robert Lester and Mr Scott Franks as representatives of the Plains Clan of the Wonnarua People (the **Applicant**). Mr Lester is the Chairperson of the Plains Clan of the Wonnarua People Aboriginal Corporation.

The purpose of the application

The Applicant seeks the long-term preservation and protection of an area specified in their application. Section 10 of the Act confers power on the Minister to make a declaration to preserve and protect an area where she is satisfied that it is a 'significant Aboriginal area' under threat of injury or desecration. A 'significant Aboriginal area' is defined by section 3 of the Act as an area of land or waters that is "of particular significance to Aboriginal people in accordance with Aboriginal tradition". 'Aboriginal tradition' is defined as the "body of traditions, observances, customs and beliefs of Aboriginals generally or of a particular community or group of Aboriginals, and includes any such traditions, observances, customs or beliefs relating to particular persons, areas, objects or relationships".

Matters the report is required to address

The Minister will consider my report under section 10 of the Act in relation to the area specified for preservation and protection before deciding whether to make a declaration. Under section 10(4) of the Act, my report is required to deal with the following eight matters:

(a) the particular significance of the area to Aboriginal people;
(b) the nature and extent of the threat of injury to, or desecration of, the area;
(c) the extent of the area that should be protected;
(d) the prohibitions and restrictions to be made with respect to the area;
(e) the effects the making of a declaration may have on the proprietary or pecuniary interests of persons other than the [Applicant];
(f) the duration of any declaration;
(g) the extent to which the area is or may be protected by or under a law of a State or Territory, and the effectiveness of any remedies available under any such law; and
(h) such other matters (if any) as are prescribed.

The Specified Area

The Applicant specified the area depicted in the map forming Figure 1 below as the area for which preservation and protection is sought (the **Specified Area**). The Applicant described the Specified Area as "including Ravensworth Estate, [and] the original properties of the early colonisers James Bowman, Capt. Robert Lethbridge, James Glennie". The Specified Area is located between Singleton and Muswellbrook in the Hunter Valley. The Specified Area includes portions of Bowmans Creek and Glennies Creek. The Specified Area does not include those parts of the New England Highway, Glennies Creek Road, and Hebden Road, that fall within its outer boundary. More detailed mapping can be provided to persons wishing to make representations.

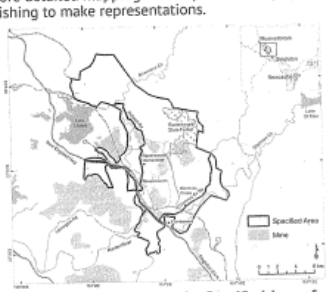


Figure 1: Map showing the Specified Area of Ravensworth Estate, Bowmans Creek and Glennies Creek, NSW

Claimed nature of particular significance

The Applicant claims that the Specified Area is of particular significance in accordance with Aboriginal tradition for the following reasons:

- "represents an area where the conflicts occurred during the early colonisation of the Hunter Valley", including how it "contains a landscape of an open massacre of the Wonnarua people";
- "represents [an] area where ceremonies were carried out by the Wonnarua people" and is thus "sacred to our people", including "several places" used for rituals associated with "bora" (male initiation) ceremonies or with "women's business ceremonies";
- "it is a spiritual place to us that must be protected so we can pass on to our children (future generations) for an understanding of our people's practices of the past";
- there is an "obligation... to preserve for future generations the story line that flows through the river, creeks and tributaries of the whole area", including how "forefathers... followed the creek lines and carried out ceremonial rituals along the route";
- "the area is part of a transit route";
- along Bowmans Creek there are "two fish traps" and a "women's birthing place";
- "Our people have used the area for thousands of years", including recently by "members of the [native title] claimant group", and, "As such , this is one of the few places in Wonnarua Country that can demonstrate ongoing occupation and use by a hunter-gatherer society";
- "to ensure that our cultural and heritage values are protected"; and
- "We have a responsibility [to] do all we can, to stop the never ending destruction, of our Country" by "uncontrolled agricultural and coal mining practices". As such, the "area contains a landscape of ongoing conflict".

Claimed threat of injury or desecration

The Applicant claims that the Specified Area is under threat from "underground and open cut coal mining activities" plus "associated works including creek diversions that will have a major impact in altering the natural landform".

Invitation to make representations

Interested persons (or parties) are invited to furnish representations in connection with my report to:

Daniel Leo
Director, Leo Anthropological Service Pty Ltd
PO Box 39, Suffolk Park, New South Wales, 2481
Ph: 0487 266 622
Email: danleo@mail.com

Interested parties are urged to **contact me** as soon as possible to be provided with further information about the submission process.

Representations must be made in writing by **5pm NSW time on Thursday 5 November 2020** or within such further period as may be allowed. **Do not send your representations directly to the Minister.**

Representations received by the due date will subsequently be provided to the Applicant and to all interested parties who submitted a representation, and thereafter the Applicant and such interested parties will be afforded an additional period of two weeks to make **final comments** in writing.

If you wish to claim confidentiality over any part of your submission, please identify why you are claiming confidentiality and how you wish confidentiality to apply. Representations, final comments, plus all correspondence received and sent by me, will be provided to the Minister for the Environment, along with my report. Representations, final comments and correspondence, even those subject to confidentiality, may be disclosed where it is authorised or required by law, to meet procedural fairness requirements, and in response to a request by a House or Committee of the Parliament of the Commonwealth.

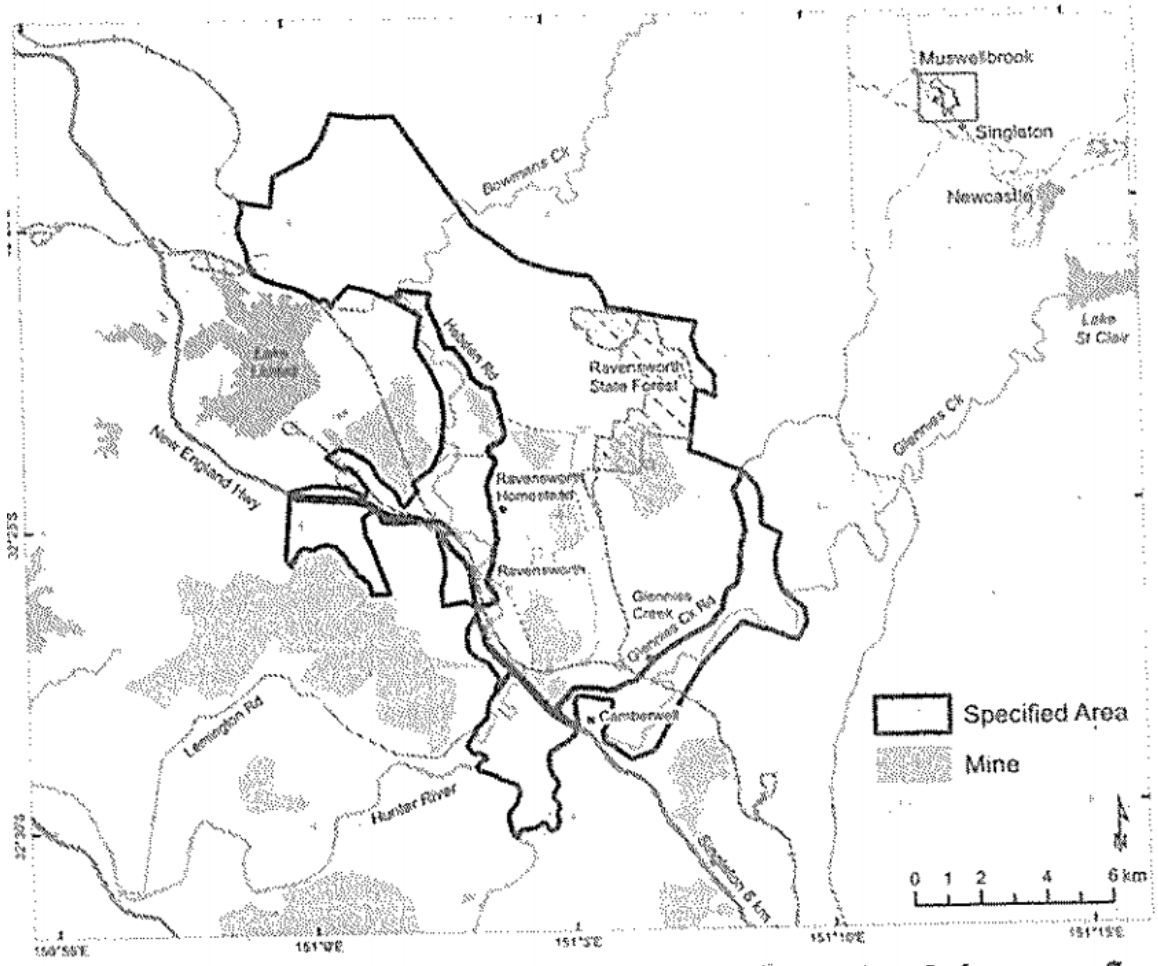


Figure 1: Map showing the Specified Area of Ravensworth Estate, Bowmans Creek and Glennies Creek, NSW

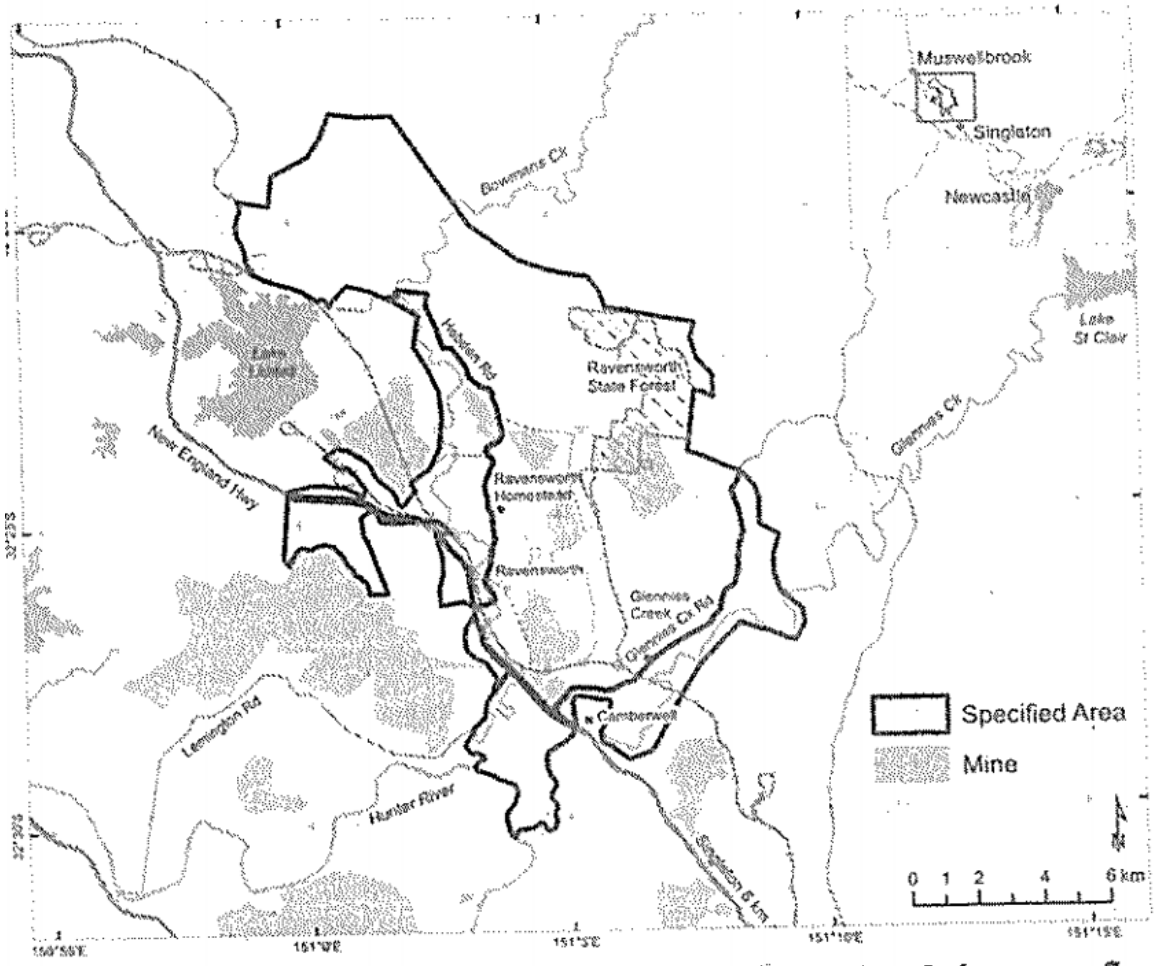


Figure 1: Map showing the Specified Area of Ravensworth Estate, Bowmans Creek and Glennies Creek, NSW

No consideration to the visual impact on the Former Catholic Church at Bowmans Creek, only the road has been considered not the turbines themselves – no photomontage included in the visual impact assessment.

No consideration to the visual impact on the Ravensworth Homestead, this is a significant heritage site in the area and turbines will be visible from its current location.

Comment

The Urbis report is factually incorrect and has been used by all windfarm developments across NSW. See the Detail Submission Completed by Nigel Wood.

In 2020 we made the tough decision to attempted to sell our property. We put a discounted price on the farm in the hope that someone would buy it. We received plenty of interest until the agent disclosed that a windfarm was proposed for the area. Once, this declaration was made potential buyer pull out of inspections and other refused to look at the property as was their concern about living near a windfarm.

Epuron and the wind industry continually state that windfarms do not impact property values..from my experience this is a lie.

Comment - Energy Expenditure

The following comment is wrong as it does not include the energy expenditure from transport

“The proposed WTGs will offset their energy expenditure in less than one year, assuming an average capacity factor for Australian wind farms. This is consistent with Smil’s (2016) conclusion that a well-designed WTG will generate more energy than it embodies in less than a year. The proposed WTGs will have an operational life of approximately 25 years. As such, the energy produced by a WTG over its lifespan will substantially outweigh the energy required for its construction”

“Energy will also be expended during the fabrication, transportation and installation of the WTG components. However, the energy associated with these processes is expected to be less than the embodied energy of the component materials”

There is no calculation provided in the EIS to justify the above claim. Substantial amounts of diesel will be consumed through the transportation of the WTG components from China to Australia; Transport diesel from the Port of Newcastle to the Project; Transport of diesel to the site for the generators to run the buildings and batching plants and crushers; and Transport diesel from all the LV’s and HV making deliveries. The diesel used to deliver water to site has not been calculated. The diesel used by the batching plant and cement trucks have not been calculated. The diesel used by the cranes, excavators, dozers, and graders has

not been calculated. GHG generated during blasting has not been calculated. Carbon storage losses through the clearing of vegetation has not been estimated. Oil consumption from the WTG has also not been included.

It is laughable that a renewables “green energy” company would publish such a poor greenhouse and life cycle assessment and energy accounting.

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7.14 AIR QUALITY
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Comment

No air quality assessment for material movements from the project is presented including wheel generated dust from the transport of materials around the site.

No air quality assessment for the impacts of blasting and post blast emissions.

7.15 WATER RESOURCES .....
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Comment

Water Quality Impacts to all creeks in the project area. There is no details regarding the management of sediment laden water, that will be generated from the disturbance. No details on the management of the excavated materials from the footings and how this will be managed.

Water that does not need to be of potable quality may be sourced from host landholders' farm dams (as described in **Section 4.4.7**) in consultation with the landholder or from water storages in the region where pumping stations are available (e.g. Glenbawn Dam, Glennies Creek Dam, Liddell Dam, etc.) and transported to the site using road registered water trucks.

Raw water from landholders may be used in accordance with the *Water Management Act 2000* (WM Act) as discussed in **Section 4.4.7**.

The Proponent does not own the land within the Project Boundary and as such, is not entitled to any harvestable rights. However, there are farm dams located within the Project Boundary that may be consistent with the relevant harvestable rights order. The Proponent will enter into agreements with these landowners if it is necessary to use water captured in these farm dams.

Comments on the Water balance

The document describes the use of raw water from farm dams under “harvestable rights” and that no Water Access Licences will be required. This is not correct. Under the Water Management Act 2000 harvestable rights only applies to a “stock and domestic use” and therefore cannot be extracted from farm dams for use as raw water for the project. Water cannot be exported or transferred from a harvestable rights dam across a landholder’s property boundary to another, a water access license is required. Therefore, the water currently held on landholders properties is not available for extraction for use on the project.

Without a water access licence, all water required (95ML) to be used on the project will need to be imported via road registered water trucks. This will require approximately 5,277 Watercart Loads a typical large watercart can carry around 18,000L. This large volume of additional truck movements has not been considered in the Traffic Assessment.

The 6ML of batching wastewater has not been described and how this will be stored and managed to prevent discharge into a non-disturbance area. Due to lack of water available to the project his water must be treated for re-use. There does not appear to be any sediment dams or water storages included in the EIS general arrangements.

The document acknowledges that dust will be an issue as 89ML of water will be required, but there has been on assessment on the air quality impacts and the generation sources breakdown, e.g. Trenching and Excavation for underground services, Wheel Generated dust, dust from blasting, dust from crushing and the break down on how much water will be required for each dust suppression activity.

86,000 Tonnes of Concrete will be required for the 60 Turbines with each footing requiring 1,440t of concrete. A Typical concrete Truck carries 26 or 32 Tonnes/ Load. 2,700 Loads of Concrete is needed, which will be transported around the site.

Table 44
Embodied Energy of Main Wind Turbine Generator Components

Component	Material	Quantity (t)	Embodied Energy of Material (GJ/t)	Embodied Energy of Component (GJ)
Hub	Steel	60	20	1,200
Nacelle	Steel	65	20	1,300
Tower	Steel	542	20	10,840
Blades x 3	Composite	65	170	11,050
Concrete footing	Concrete	1,440	2	2,880
Steel reinforcement bars	Steel	60	20	1,200
Total (per WTG)				**28,470**

The water balance also does not show the water consumption from the rock crushers and full batching plants water consumption.

The lack of water consumption detail in the water balance shows that water availability for dust suppression over 500Ha and across 67km of unsealed roads is a concern given the air quality impacts already experienced across the Hunter Valley.

Water availability will be a risk to the project and that a large number of vehicle movements will be undertaken during construction on internal unsealed dirt roads, therefore all roads must be sealed with bitumen to minimise dust generation due to lack of available water on the site.

Table 46
Construction Phase Indicative Water Balance

Component	Volume (ML)
Inputs	
External water supplies	95*
Outputs	
Concrete batching	6
Dust suppression and road construction	89

** Will be adjusted to match actual demand.*

Comment

Throughout the document the proponent references the study 'Community Attitudes to Renewable Energy in NSW' (OEH,2015) (Community Attitudes Study). This Document is now 6 years old and there has been an exponential growth in wind farms across NSW and Australia. Wind farms are now a major source of land use conflict, and these studies need to be updated.

No community survey based on the final layout has been conducted to assess the community of Muswellbrook, Singleton, McCully's Gap Muscle Creek, Bowmans Creek Hebden, Rouchel communities on their opinions, concerns and attitudes towards the BCWF.

DPIE recently released draft Social Impact Assessment for State Significant developments across NSW in November 2020. Whilst these guidelines are still in draft they should be considered in the EIS to show the proponent has applied industry best practice to the project. There is no reference to the draft social impact assessment guideline within the document.