JANUARY 2023

Voice for Walcha's **Group Submission** to the Winterbourne Wind EIS

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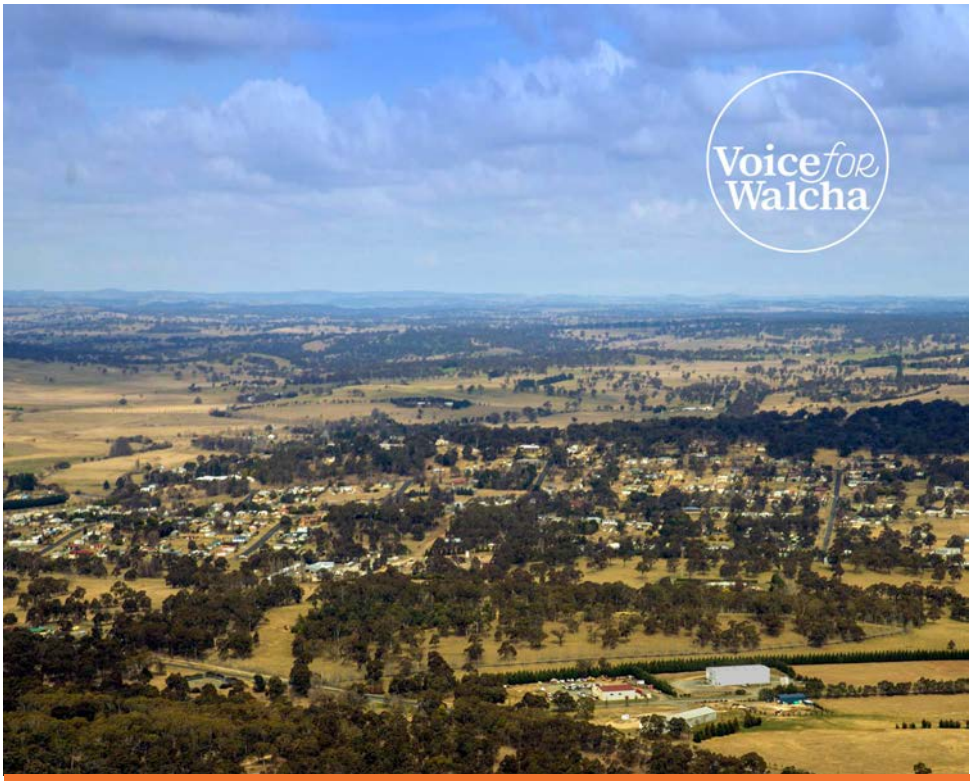

Executive Summary

This Submission tables on behalf of the Community the Voice for Walcha's (VfW) **Group Objection** to the Winterbourne Wind Farm Project (WWF). The full reasons for the Community Objection are set out in the eleven (11) sub-submissions attached hereunder.

The objective of this Executive Summary is to provide important context supporting the Objection rationale to;

- Provide a short overview as to the grounds for objection set out in the Sub-Submissions; and
- Convey on behalf of the Community their expectations as to what presents as just and equitable outcomes in the ongoing assessment process.

Context of course is everything - in the Project at hand it attempts to draw together analysis – often complex and introducing serious issues facing a community. Issues which will test the fabric, the understanding and ultimately the resilience of the Community. It shouldn't be underestimated that the prevailing psychology in the Walcha Community is that this Project and those that follow – could present as the turning points, between either Walcha continuing to grow as a progressive agricultural economy contributing to Australia's national and export objectives or an industrial waste land – a 'host-baby sitter' for concrete and carbon fibre' purely for profit objectives.

Threshold Objections

The Sub-Submissions hereunder promote detailed consideration in each of its 11 assessments outlining 2 shortcomings – firstly, failure to achieve compliance and/or secondly, excessive and unacceptable impacts. Some of which are critical. Each attempt is to substantiate **why consent should be withheld** for the Project. Much of the basis for this conclusion is derived from the following threshold technical conclusions reached by VfW;

a) The considerable project Impacts and the mitigation offered don't confirm as ecologically sustainable development in accordance with the Objectives of the NSW Environmental Planning and Assessment Act 1979.

b) The Project impacts on the UNESCO Gondwana Rainforest and Wilderness Area and the rich biodiversity do not justify approval by the Federal Minister of the Environment pursuant to the Environment Protection Biodiversity Conservation Act 1999.

c) The Proponents presentation of the EIS is **unacceptably deficient in project detail -it presents with numerous errors and misleading information.** It's content and technical detail is clearly not in compliance with the EPA Act 1979 and Schedule 2 of the EPA Regulations. Nor does it reflect the standards espoused by the State Significant Development Guidelines July 2021 and the Preparing an Environmental Impact Statement Guidelines -July 2021.

VfW maintain four considerations arise in respect to this deficiency;

1	Obvious questions as to **procedural fairness** arise for the Community and others who were severely impaired in their opportunity to assess the merits of the Project through this EIS.
2	The Proponents obvious failure to give serious consideration to analysis 'of any feasible alternatives 'to carrying out the proposed WWF development activity…' in accordance with the SEAR and Schedule 2 of the EPA Regulations.
3	The failure in preparing the EIS to ensure the requisite high standards, including the potential proffering of misleading information, as specified by the Clause 3 of the EPA Regulation and the July 2021 Guidelines. This **questions the integrity of REAP Certification** as to 'completeness, accuracy, quality and clarity 'of the information, submitted with the EIS and signed off by the Developer's REAP; and
4	The VfW must be clear the EIS in its entirety **should be rejected** as fundamentally flawed and clearly not a project which draws any support from a public interest perspective.

Background to Voice for Walcha

VfW is an incorporated community entity – it draws its enablement as a '***voice***' from its active engagement with the Walcha Community.

Over the last 18 months, VfW have held 3 community meetings/forums, with in excess of 200+ people showing up to each event. Each time the proponent has been invited to attend – on all 3 occasions they have been a no show.

This community has volunteered over 1000+ hours of time reading, digesting, and communicating our findings back to the local community. Through this we believe over 1000+ people in the community are aware of what we are doing, with over 80% of these supportive of our objections.

So please be assured from the drop-in centre, street stalls, community forums, community surveys, print and electronic media .. the ***Voice for Walcha has listened - it has advised - and it has represented the Community.***

Context to Objections

The context relevant for this Executive Summary can be extracted by way of a brief 4 x 'Ps' analysis - the ***Principle*** – the ***People*** – the ***Process*** – the ***Project***;

1. The **Principle** – the project proposition contemplates several principles of note;

   - ***'Positioning profit before people'*** in a rural regional context induces a very low tolerance. This is a common conclusion whichever way you contemplate this project. The Community is not gullible – it appreciates the economic nirvana on promise is a political illusion, barely salvageable beyond the construction period. It is frivolous in this context to play, as a point convenience, the '*saving the planet card'*. There are 1001 ways to demonstrate to this commitment. It becomes even more amoral when the Project 'throws under the bus' the rights and obligations to First Nations People and the preservation of endangered biodiversity and wilderness assets; and

   - '***You can't give effect to economic transitions, particularly energy, without solid strategic land use planning***'. The energy transition requisites for prominent deployment of renewable energy infrastructure in rural -regional Australia. **Yet there is an absolute dearth of strategic land use planning.** It is patently obvious the WWF's size and its placement next door to the UNESCO Gondwana Heritage asset was a lamentable planning ambition of some proportions. This should have been subject to scrutiny at the scoping stage.

2. The **People –** Walcha presents a successful community with a strong social order -people grow up there and stay – people leave, and many come back – and new residents are attracted to the town. Walcha is an educated community and is very successful in its agricultural pursuits – fine wool, lamb and beef being its obvious contributions. As such it gets climate change and the need to decarbonise energy supply through renewable energy. However, if Walcha and similar rural communities are expected to do the heavy lifting for the urban classes then it reserves the right to have a strong say in what energy infrastructure goes where and when. If the ambition is **social licence** – than there is a reasonable expectation as to '*meaningful consultation'* and *project acceptance*. This requisites transparency of process from originators such as Walcha Energy and more respectful inclusive development practices from the Developer. It would appear both were unfortunately in short supply.

3. The **Process** – The Community are concerned that the State Significant Development Planning Pathway has deteriorated into a pro-development 'tick the box' – planning by process. Unfortunately influenced by political judgement. The Community feels isolated by a 'city centric' Government struggling to give more than 'lip service' to the meaning of social licence. The Community instincts are such that it perceives the developer is comfortable or even perhaps smug in a feeling that the system is weighted in their favour. All they need to do is 'tick the requisite boxes' and consent will eventually materialise.

   VfW would like to debunk this notion by at least holding the Developer to account – the Government could assist in three obvious ways.

   - Firstly, promoting a more robust planning assessment process. This requisite as the Community has done for more independent technical expertise.

   - Secondly, by avoiding denigrating this Community's concerns to the Project as '*just another contribution to the NSW Wind Wars'* – a continuation of all the troubles which beset the Communities on Southern Highlands -Tablelands 2012-2015. In perspective it's one of the largest wind developments proposed for NSW and its contemplating massive infrastructure which has not been deployed anywhere else except Finland in 2023.

   - Thirdly its profiles, against an increasing project pipeline in the Southern New England, inducing a cumulative impact of some magnitude. This outlook needs urgent and independent review.

4. This **Project** – stepped off on the wrong foot – the development rights were secured from profit driven originators – whose site acquisition methodologies were **secretive.** Questionable development supports were facilitated during the 'big drought' when targeted host landowners were in survival mode - attentions diverted trying to keep their agricultural interests alive. Host landowners **were gagged** from disclosure to the wider community. **So, 'transparency lite' and the genesis of a community division.**

From the Developers perspective the acquisition offered the opportunity to meet its core strategy as a turbine salesmen – selling more turbines (120) and securing more O&M servicing contract and potentially for 62 years (options for the life of the Project). Openly there is no intention by the Developer to hold the Project – therefore the development downside – of even a basic accommodation of Traditional Owners, of mitigating biodiversity damage, of minimising turbine noise etc **is obviously of second order** importance to the commercial imperative of moving on and profit maximisation.

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Sub-Submissions - An Overview

The VfW on behalf of the Community have carefully reviewed the EIS Impact Assessment – and it is helpful if we offer in the following schedule a brief overview of the **eleven (11) objections** raised in the Sub-Submissions hereunder.

THE IMPACT	VFW BROAD OBJECTION /S
Part A **Lack of Consultation**	Demonstrably a failed process and a breach of the principles and protocols underpinning **Community Participation** pursuant to the EPA Act and Guidelines. Lack of genuine interest in meaningful engagement – largely 'tick the box ' process and seemingly in conflict with the more modern governance such as the EII Act. Presents with a strong consultation focus on keeping pecuniary host landowners on board. Any analysis of attendance numbers presented by the Developer confirms the absolute paucity of commitment or interest to meaningful consultation with the wider community.
Part B **Cumulative Impact**	The Developer presents a convenient and misleading interpretation as to study area. It deliberately ignored the tsunami of projects surrounding WWF – all in feasibility assessment and well known to the Developer. A more bona fide assessment would reveal what the Developer was hiding from view – **the significant compounding impacts on the Study Area for years to come.**
Part C **Decommissioning**	A clear avoidance of land stewardship responsibilities – no interest or intention on site rehabilitation.
Part D **BDAR**	A lamentable and environmental immoral dismissal of their development responsibility to critically endangered and vulnerable biodiversity species. Obvious serious breaches of all relevant Federal and State laws. Presents as serious compromises to treasured UNESCO sites and Wilderness Sites. **A serious breach of public trust and public interest.**
Part E **Roads and Traffic**	Interpretation of the Traffic Impact Assessment (TIA) presents as **a horror story** as to impact profile – as serious incompetency as to assessment in errors and omissions. The naivety and ignorance of the Impact Assessment offered by Developers beggars' belief for such a serious threat to life and well-being of Community.

Part F **Soils and Water**	The Impact Assessment proposition by the Developer presented as a **'B' grade scoping proposal** reflecting very poor assessment and data. It was virtual impossible to offer meaningful assessment. Gravel and Water resources either ignored or not yet on the Developers to do list. An appalling dereliction of their EIS responsibilities.
Part G **Health**	Aided by expert peer review -it was very disturbing to discover just how reckless and misleading the Developer had been on noise assessment. Effectively by deploying poor monitoring and inefficient manipulation of data, the Developer appears to understate the noise impacts across the Project footprint **by up to 14dB**. Significant – a correct and conservative approach would confirm many Associated and Non Associated residences maybe far more exposed on noise impacts than the feeble and fragile EIS promoted. In addition, the Assessment process remains oblivious to the obvious mental health anguish the 'divide and conquer 'methodology has induced. Please see sub-mission analysis
Part H **ACHAR**	The Aboriginal Cultural Assessment Report was an appalling and disrespectful to the Traditional Owners -the Wolka Dunghatti Bari. The Developer's consultants offered the bare minimalist attempts to engage the Dunghatti – they deployed culturally insulting survey processes and associated methodology. The ACHAR is **so flawed is it rejected by the Dunghatti out of hand**. The Community supports that response 100%.
Part I **Visual Amenity**	The development proposition to install massive 230M 6.2 turbines on rural ridgelines in a rural setting induces obvious images. Try as the Developer may with landscape artistry and other magic they can't be distorted to present as visually inconsequential. The tools of the trade to distort reality are well recognised.
Part J **Socio-Economic**	The SIA on offer failed to a paint rosy picture of social harmony and opportunity from a largely text box academic desktop analysis. It presented as an essay on utopian rural 'la la land '– devoid of reality. It would have been helpful if the social commentator actually visited Walcha. Simarily the Economic analysis tries to paint an illusion that the development will induce a new economic nirvana of jobs and new wealth. It ignored the reality of available skill sets in Walcha – lack of accommodation and the reality fact that construction comes and goes and yes a sugar hit for the pub and the cake shop but then what?
Part K **Hazards and Risks**	The EIS seems simply ignorant of the fundamental point most expert fire experts agree on – wind turbines don't mix with aerial firefighting full stop.

In conclusion the more time the Community spends on reviewing this EIS with all its errors, omissions and misrepresentations, the more obvious its instincts are confirmed. **The Project in reality is a turbine sales and O&M transaction masquerading as a low-cost development proposition**. The ambition of the Developer is to use the convenience of the process 'tick enough boxes' to secure consent and move on leaving the Community left behind holding the industrial legacy.

So, if we are going to embrace an EIS as the cornerstone of the planning systems then let's give it meaning. Let's hold the Developer to account to more professionally discharge their EIS *impact and assessment* responsibilities. In doing so validate **why the Project is supersized** and **why its parked where it is**?

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VfW looks forward to publishing its submission for the Community and others – we would welcome questions and comments. VfW reserves it right to make further comment in the process before DPIE initiate their assessment process.

Thank you for accepting our submission for consideration and comment.

Voice for Walcha

23 January 2023

WINTERBOURNE WIND FARM (WWF)

Part A Community Consultation and Community Benefit Sharing

This Part A presents as the Voice for Walcha's (VfW) **Group Objection Submission** to the Proponents Community Consultation and Community Benefit Sharing Impact Assessments.

Key Community Message

The Developer's profiled approach to **Consultation - Stakeholder Engagement** can at best only be described as miserable, bankrupt, bogus and meaningless. It is clearly a failed process - the consultation you have when you are *not* having consultation.

In the Community's mind it emulates from another shady consultation process initiated from the Project Originators - Mirus Wind come Walcha Energy. A process dominated by a two-party trick - find and gag a landowner with a NDA and divide and conquer a community. Nothing remotely resembling openness and transparency. So why would Vestas change the model - the handover brief from Walcha Energy to Vestas must have been modest - just the 'tick the box' on planning process and avoid making eye contact with the wider Community and of course write us a cheque for our success fee.

The Community are staring down the biggest infrastructure development in its history - the biggest wind development in NSW, deploying the biggest kit (Vestas V162 monster turbines). The Community feel starved for information, impacts and inputs. They feel divided by a developer that doesn't intend to commit long term to the Project or to the Community and intergenerational aspirations nor obligations. This is a Developer that offers minimal information and understanding of a development that the Community will have to live with for potentially 62 years. This is a very poor consultation effort by a Developer that the Community expected more from. At the end of the day what's being presented here is just a turbine transaction masquerading very poorly as project development.

The Community advocated for a more modern, socially responsible interpretation of consultation as established below. What they got was tokenistic fluff - barely tick the box stuff. If the Developer set out to achieve zero social licence then they have done a good job. It has to be rejected as a complete failure.

Basis of Community Objection

1. The Development Process is well short of the obligations to allow for better community participation as set out in the Environmental Planning and Assessment Section 1.3 (j) of the Environmental Planning and Assessment Act 1979.

2. The absolute paucity of consultation on offer from the developer is old school and it falls well short of the objectives prescribed in the more modern policy referenced hereunder;

   - State Significant Development Guidelines - July 2021
   - Undertaking Engagement Guidelines for State Significant Projects - July 2021
   - Aboriginal Cultural Heritage Guidelines
   - Social Impact Assessment Guidelines
   - Preparing an Environmental Impact Guidelines
   - NSW Wind Guidelines 2016
   - Demonstrable Failure to implement **Community Participation Objectives**
   - First Nations Engagement Guidelines - There was no discrete or planned engagement strategy for the Dunghatti Traditional Landowners.
   - The engagement indulgence offered Host Landowners over the wider community including drop-in events negated any opportunity for the community to express their views.

All of the above – induced serious issues of procedural fairness for community – the obvious question – how could they be expected to assess and comment on impacts in the absence of robust genuine consultation?

3. **An interesting point of objection on Governance.** The NSW Government pursuant to its Electricity Infrastructure Investment Act 2020 - prescribes for a strong support for securing social licence from the Community. In fact, for Access Rights and for the granting of LTESA's and LDS the Merit Criteria for bidding projects Merit Criteria 6,7 and 8 all encompass social licence commitments based on genuine and meaningful consultation. Whilst these are obviously for REZ Projects it begs **the obvious question**. How can one arm of energy governance, the modern 2020 architecture the EII Act not be complimented by the other the Planning Act on important questions regarding community engagement and acceptance? This makes no governance sense whether the Development is seeking Access or an LTESA/LEDs.

4. Environmentally its unjust. Morally it reeks of arrogance on the Developers as to their self-belief as to Agency Capture of DPIE's 'tick the box' processes. A smugness that the political planets and prominence of Vestas will prevail over people and their private property rights and their community spirit.

5. We the Community strongly believe the social licence principles prescribed by the EII Act **should lead on this critical question** even if the Developer doesn't seek access rights pursuant to the Roadmap Regime. Surely there can't be two messages from Government on the importance of securing social licence from impacted Communities. From where the Walcha Community sits in this jumbled energy transition - there are two interpretations to what meaning should be emphasized from the notion of 'meaningful consultation'; These being;

   - **Firstly**, there is the '**active connotation of consultation'** which promotes a more modern context for 'consultation'. Where engagement is proactive in the sense of understanding the information needs and interests of a Community like Walcha. Identifying where the gaps are in the Communities understanding? What refinement to consultation methodology might be necessary? For example, in the case of the WWF Project:

     - What might be done to address the concerns emulating from the **Community initiated Survey** hereunder (the Survey Results are at Attachment A): or

     - In the case of a dysfunctional ineffective Developer sponsored CCC process what might be done to improve the information flow, enhance the project education to the broader community.

6. Both are obviously '**proactive**' examples of improving consultation – enhancing engagement outcomes, developing social licence and improved acceptance of Project objectives. These examples of proactive consultation are consistent with the modern Roadmap policy of 2020 and the new Planning Assessment guidelines promulgated in July 2021.

- **Secondly and alternatively** there is the '**passive connotation of consultation**' which relates more to the 'tick the box' process pathway developed from lazy custom and practice from the 1979 Planning Regime. A process which advocates for **minimalism** – on advice an interpretation which promotes "… follow the well-trodden pathway – tick the boxes – and where possible avoid eye contact with the Community. By all means open an office - yes it's a good look - but don't turn the lights on or bother to man it up. Yes, by all means set up a tent next the Snake Oil Salesmen at the Walcha Show – **but as Developers don't deviate from the only show in town** – securing the support of the Host Landowners. Failure to do so might mean you are mistaken as the snake oil salesmen."

7. In the Community's mindset the Developer – whether through ignorance to best practice development or through commercial greed and expediency **has chosen the passive consultative approach. <u>This passage should be rejected it is unacceptable incompetent practice and is procedural unjust and unfair.</u>**

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1.1 SEAR Obvious Omissions and Errors Consultation

DURING THE PREPARATION OF THE EIS, YOU MUST:

- consult with the relevant local, State or Commonwealth Government authorities, service providers, community groups, affected landowners, exploration licence holders, quarry operators and mineral title holders.

COMMUNITY COMMENT

The Developer has offered the Community Group and Affected Landowners – **no meaningful consultation – no genuine community participation.**

DURING THE PREPARATION OF THE EIS, YOU MUST:

- establish a Community Consultative Committee for the project in accordance with the Community Consultative Committee Guidelines for State Significant Projects and consult with the committee during the preparation of the EIS.

COMMUNITY COMMENT

There is no evidence that the CCC achieved any of the requisite communication or education to the Community about the project. On any review it was a failed process – 'tick the box' process orientated in favour of the Development. The membership was poorly constituted, and the agenda inappropriately managed by the developer funded Chairperson it essentially dissolved as a failure. This outlook sent alarm bells to the Community but was obviously ignored by the Developer.

DURING THE PREPARATION OF THE EIS, YOU MUST:

- The EIS must include a description of what consultation was carried out during the preparation of the EIS, identify the issues raised during this consultation, and explain how these issues have been addressed in the EIS.

COMMUNITY COMMENT

In terms of the alleged Developer's accommodation of Community Views P 112, 113 and 114 – Comments Raised and Where Addressed – none of the Developers observations detract from the Community's view as to the substantial impacts of the Project as tabled. Many of the adjustments made are just normal commercially expedient adjustments for revised project siting. The Community now doesn't recognise these adjustments – attempted explanations as anything other another 'tick box' contribution. For example, reducing the height of the WTG to 230M is not an adjustment in favour of a more conducive visual outlook – decisions on shorter or longer blades are a matter of technical assessment as to wind speeds.

EXTRACT FROM THE EIS

5.2 Engagement Conducted

The Developer Maintains *"The Undertaking Engagement Guidelines for State Significant Projects* (DPIE, 2021b) require upfront and ongoing engagement for all State significant projects.

COMMUNITY COMMENT

The requirements of the Undertaking Engagement Guidelines for *State Significant Projects* (DPIE, 2021b) have been disrespected by this Developer almost from the get-go.

As demonstrated by the comment on Alleged Consultation Activities hereunder, the Developer deliberately confuses consultation with the Host Landowners with pecuniary interests with the consultation needs of the wider community. As demonstrated by the Independent Survey**, the developer has had next to no meaningful consultation** with the wider Walcha Community.

On any interpretation of the facts the Developers commitment to the Engagement Guidelines lack bona fides – for example the International Association of Public Participation was tokenistic and demonstrations of failed promises to Consult, Involve, Collaborate and Empower. It was well and truly clear before 31 August 2022 and the Community Survey that the community didn't have sufficient information or knowledge. Hence the need to establish some community intervention through the Voice for Walcha (VfW) to address this clear deficiency.

EXTRACT FROM THE EIS

The Developer maintains "A Stakeholder Engagement Strategy was prepared for the Project in June 2020. Stakeholder and community engagement for the Project is led by ERM communication and engagement specialists who are trained in best practice methodologies under the International Association for Public Participation. **All Project neighbours within 4.55 km of the Project Area** were directly engaged and will continue to be directly engaged through the Project development.

COMMUNITY COMMENT

This is either a gross overstatement or a total misrepresentation – certainly in conflict with the VfW Community Independent Survey.

Some Neighbours had early contact with Walcha Energy, and some had limited contact with Vestas after acquisition and some had none. The bottom line is the suggestion that "**All Project neighbours** within 4.5 km of the project were directly engaged is a careless version of the truth.

Some examples of communications which confirm our concerns as to the misrepresentations made by the Developer. They highlight the duplicity of the Developers communications. There are many more examples:

Comms 1

"We are a good example of the lack of communication. We received a phone call several years ago, which my husband XXXX took, and he raised several questions about wind turbines and their construction. The caller was unable to answer these questions but promised to get back to us with the answers. We never received another call! In fact, we thought that the project was not going ahead in our immediate area until a few months ago! We were never informed that we would be within 3.1km of the nearest turbine! I do not believe that this is adequate communication"

Comms 2

"24/04/20 - Received phone call from Dan Muller, enquired as to thoughts/opinions on project, at that time I had none. Was informed of a very positive mood to the project in the winterbourne community.

07/05/20 - Email from Dan Muller asking for permission for photographers to visit to create photomontage.

22/07/20 - Email from Dan Muller saying montage available for viewing. I went and had a look at the montage at the Walcha Energy office, there were no turbines within at least 5km of our dwelling. Jen Kealey made contact after this time, unsure of exact time. Cannot remember reason for contact.

10/09/21 - First contact from Vestas. Doug Landfear rang offering a neighbour agreement, made no sense to me as we had been led to believe there were no turbines near enough to warrant an agreement. I asked for an updated photomontage and there were 3 turbines within 3.5 kms of our house, our neighbour was a late addition to the project. I rang Doug back voicing my concerns over the turbines near our house and was basically told there was nothing I or he could do about them and if I didn't sign the agreement we would miss out."

Comms 3

"July 2021 - Telephone discussion with Doug Landfear followed up by an email sent by Doug. From the telephone discussion, it sounded as though Doug had not been to our area (Chinnocks Road) as he was really not all that familiar with it. It seemed that the purpose of his call was to ask us to enter in a neighbourhood agreement. The information contained in the email from Doug, included the following (verbatim):

- Currently, the closest proposed turbine location to your residence is the one on John Lockyer's property to the northeast, approximately 1.75km away. The turbine on the boundary of Glen Oak and Wing Valley due north of you is approximately 2.2km away. The closest proposed location to the west is about 2.6km away on Peter Lisle's property.
- I have also included below an image of the modelled noise contours so that you can see the expected noise created by the operational turbines. In the image, the yellow contour represents a predicted noise level of 35-40 dBA. The NSW Dept of Planning has set a limit of 35 dBA to ensure residential amenity (ie so that you can sleep at night). For context, 35 dBA is equivalent to a whisper. As discussed, your dwelling is outside of that 35 dBA contour, so we would not expect that you will have any noise impact from operating turbines at your residence.
- From what I can tell the main visual impact at your residence will be from the turbines to the north, even though they are somewhat farther away than the ones to the east. However it appears there are some trees outside your house which might partially fragment the views to the north and west.
- As discussed, I would be happy to discuss entering into a Neighbour Agreement with you for the project. The agreement would provide for compensation to perhaps offset the visual impact. Please let me know if you would like to discuss this further.
- In terms of property value, there have been a number of studies on this topic. I attach for your information a fact sheet prepared by the Clean Energy Council on this topic, as well as a 2016 study prepared by an independent consultant. This study concluded that wind farms in rural areas are unlikely to have a measurable negative impact on surrounding land values.

Telephone discussion with Jen Kealey (not sure of the date) – mostly about the neighbourhood agreement and the Community fund. She invited us to drop by the Winterbourne Wind office, but we then found out only a

week or so later (or less) that there was an ad in the paper for an open day/s at the Winterbourne Wind office. She didn't allude to this at all. This made us question why.

During our telephone discussion, Doug was quite persistent about the neighbourhood agreement and while I explicitly said to him that I did not want to receive the document, he still persisted with it in his email. At no stage did he advise that there was confidentiality around this, however, I now understand that it was essentially a confidentiality agreement.

He also said that it is likely that as we are at the most eastern end of the wind turbines project, if any are going to not go ahead it would be the ones nearest to us – due to the distance creating a higher cost.

Upon reading the EIS, we have since determined that:

- The nearest proposed turbine will be 1.76km from our home.
- There will be 6 turbines within 3,100m.
- There will be 22 turbines "potentially visible" from our home.

The Dwelling Assessment within the EIS states that the nearest turbine will be 1.76km. It does not make any reference to how close the other 5 turbines that are 'within 3,100m' of our home will be. As you can see from the extracts from the email above, the information we were provided in July 2021 did not include any reference to the 22 turbines that we will be able to see from our home, yet he was wanting us to sign a neighbourhood agreement at that point, and without divulging this information. He did provide a map of the project in his email.

When the people were here taking the photographs, they encouraged us to take them to a high point on our place where we entertain visitors. I haven't seen the photographs they took – as this point is 1,285m altitude there are sweeping views of the areas where the wind turbines will be and I expect more than the 22 that are referred to in the EIS. I have sent Doug Landfear an email this morning asking him to provide the photographs. I received an auto-reply saying that he was on leave. Will see what happens with my request!

Comms 4

Winterbourne Wind EIS - Lack of Community Consultation

My property was purchased in 2016. Conveyancing searches did not identify any reference to any windfarm proposal even though the property is in the middle of the Winterbourne Windfarm area and even though Vestas renegotiated host contracts at that time. My farm has magnificent 180 degree views to the east towards the national park that will be prostituted by multiple wind turbines. Vestas or any of our host neighbours have failed to contact me to discuss the proposal. I should have had this information before I invested in the property. Community consultation has been so poor one of my affected neighbours recently organised a local Winterbourne area meeting in an attempt to convey and discuss our concerns. The meeting resulted in a number of fractured friendships that reflects the overall level of dissatisfaction of the Walcha community. Community consultation has been shrouded in secrecy and inaccuracy that has developed mass mistrust of the information provided by Vestas and any of the hosts who have blindly championed the windfarm cause.

I object to the Winterbourne Windfarm proposal due to the lack of and poor quality of any community consultation.

Comms 5

- We were approached to place some noise monitoring equipment at "The Glen" which we happy to do but have never seen any results from the study
- Twice we have had photographers on our property to construct montages to show the visual effect from residences at "The Glen" and "Ohio North". The only photos we have seen were taken from behind a tree in the "Ohio North" garden.
- In respect to the neighbour agreements I have had 3 meetings with Doug Landfear. The 1st was approx. 18 months ago in which compensation was discussed for residences on our property. The offer was $10,000 per house per year for the duration of the project. The compensation was for "Ohio North", "The Glen" and "Wyohbie". The second offer was $10,000 per house per year for 10 years, this was received shortly after the first meeting as I believe that Vestas thought they would have no problem with me signing the agreement. The 3rd was about 6 months after the 2nd after I wouldn't return their phone calls and I met Doug and Evan

(I think) in the Walcha office in which they had a contract ready for me to sign with the offer of $15,000 per house per year for the duration of the project. They presumed I would sign it on the spot at the meeting. I voiced some concerns and told them I would seek legal advice and they offered me Hugh Pipers services at their cost.

- Other concerns which I raised were the possible decrease in value of our land which they basically brushed aside.
- I consider compensation should be based on Land size and proximity to the towers rather just dwellings affected.
- Some of my close neighbours such as Mick Steep have not even been approached for compensation.
- No consideration has been given for erosion and runoff issues during the construction stage. We have many watercourses which will suffer impact during this stage.
- Richard Finlay-Jones rang me quite a few times pushing for me to sign the neighbour agreement and was forceful. I didn't return his calls and he gave up.

EXTRACT FROM THE EIS

Stakeholder Engagement Strategy

The Developer references the integrity of the "**Stakeholder Engagement Strategy (SEC) was prepared for the Project in June 2020.** Stakeholder and community engagement for the Project is led by ERM communications.

COMMUNITY COMMENT

This is absolute baseless narrative – on any reconciliation of this 'tick the box' **Stake Holder Engagement Strategy 2020.**

- The Developer in their SEC introduces a 'false dawn' in terms of the objectives of its SEC-P 1 establishes a proactive communication and engagement with stakeholders to ensure that their concerns are clearly understood and acted up – The Vestas Office was unmanned and closed from 21st December 2022 to 15th January 2023 as advised by the Project Developer in an email dated 13 December 2022.
- In terms of **Stakeholder Mapping** P4 – Host Landowners were afforded priority treatment – immediate neighbours afforded little respect and engagement – certainly on noise impacts, visual amenity etc, **Indigenous Communities** - Traditional Owners were identified in SEC - yet totally ignored in preparing the ACHAR, the Summervale Community recalls no engagement, contact with the Amaroo LALC was abandoned after 2 attempts. Notifications were lodged in Tamworth Newspapers. Zero community consultation – nothing on economic benefits -and impacts on construction. **This ambition never took place.**
- In terms of Holding Message – Project Ownership changed in early 2021 – with CIP entering into financial arrangements with Copenhagen Infrastructure Partners (CIP). CIP never introduced themselves to the Community and may never have visited the site.
- In terms of the **Risk Management Strategies** P 8 – there was **no early engagement** with residents and community members to provide open and honest information on noise and visual impacts of wind turbines. This is validated by the Independent Survey conducted on 31 August 2022 which confirmed 79.7 % of those surveyed had concerns about the Project.

The issues expressed by people with concerns

We have included the Survey as Attachment A to this Part A Submission

WHAT HAS BEEN LACKING IN THE DEVELOPER'S PROCESS

"**78.4%** of the people responding to the survey indicated that they did not think that the developer, Winterbourne Wind, had provided enough information for them to understand the impact of this project. There were numerous comments from people who said they support renewable energy but took particular objection to the way this project has been implemented.

In the written comments submitted in the surveys, the following issues were the key concerns:

a. The developer, Winterbourne Wind, has not adequately consulted with the community
b. The developer has not been willing to take part in community forums
c. The developer has created serious community disharmony with the negotiation of secret contracts
d. The developer has not provided information when requested, necessitating individual research
e. The developer has not been honest
f. The developer has not provided information to people that has been promised
g. The developer has been remiss with consultations with host neighbours, especially in terms of the noise and visual impact of the proposed turbines
h. The developer has not been forthcoming on details about the transmission lines, their location, and their impact
i. The developer has not provided facts, only 'warm fuzzies'
j. The developer has only released a slow trickle of information rather than providing all the information upfront " [1]

COMMUNITY COMMENT

These issues were obviously of no interest to the Developer – they were seemingly never picked up by the Developer and clearly not a focus for their final drop-in event.

Obviously, Vestas risk mitigation strategy was never needed as there was demonstrable lack of early engagement. The Community Consultative Committee was a clear failed process – yet the Developer didn't deploy alternative channels of communication.

The most telling demonstration of the Developer's lack of interest in deploying risk management strategies was the rejection of the invitation to address the Community at the Walcha Bowling Club event on 31 August 2022. The numbers at the 10-11 December 2021 drop-in at Bowling Club opportunities were poor and a reflection of the Communities growing perception that the Developer had little interest in 'genuine and meaningful' engagement.

[1] Voice of Walcha Community Survey commissioned on 31 August 2022 and published in the Advocate 16 November 2022

EXTRACT FROM THE EIS

5.2.1 Engagement Objectives

The objectives of the Project as contained in the Stakeholder Engagement Strategy were created prior to the *Social Impact Assessment Guideline: For State Significant Projects* (SIA Guidelines) released in July 2021; however, the Stakeholder Engagement Strategy has been adapted to ensure consistency with the community participation objectives contained in the SIA Guidelines.

The key objectives of the Project's consultation and engagement process are to:

- Develop and maintain positive working relationships with Project stakeholders;

  COMMUNITY COMMENT

  The Developers deploys a very narrow interpretation of '**stakeholder**'. Stakeholder is the whole community impacted by the development – not just the pecuniary host landowners.

- Proactively identify, understand and manage issues and concerns raised by stakeholders through effective two-way engagement;

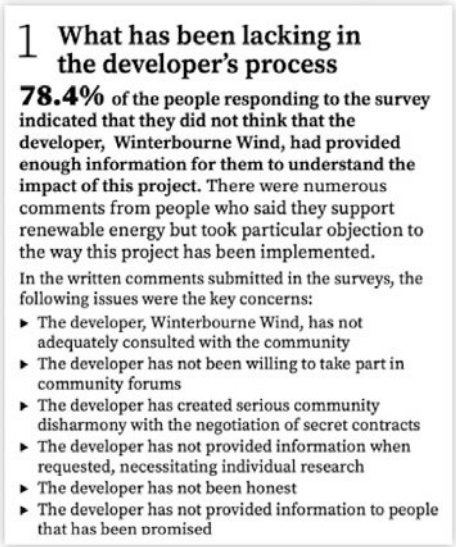
  COMMUNITY COMMENT

  As demonstrated by the two examples above – there is nothing two way in the developer's approach – the Independent Survey confirms this widely held view.

- Ensure stakeholders have access to balanced, objective, timely and up-to-date information about the Project and the planning and environmental assessment process;

  COMMUNITY COMMENT

  See Survey Result 78.4% of people responding to the Survey didn't think the Developer had provided enough information. *Extract from the Survey …*



1 **What has been lacking in the developer's process**

78.4% **of the people responding to the survey indicated that they did not think that the developer, Winterbourne Wind, had provided enough information for them to understand the impact of this project.** There were numerous comments from people who said they support renewable energy but took particular objection to the way this project has been implemented.

In the written comments submitted in the surveys, the following issues were the key concerns:

- The developer, Winterbourne Wind, has not adequately consulted with the community
- The developer has not been willing to take part in community forums
- The developer has created serious community disharmony with the negotiation of secret contracts
- The developer has not provided information when requested, necessitating individual research
- The developer has not been honest
- The developer has not provided information to people that has been promised

- Identify and respond to stakeholder issues and concerns, ensuring there are various mechanisms and multiple opportunities for stakeholders to provide feedback on the Project and to inform the Project design;

  COMMUNITY COMMENT

  The Facebook Page and Website are not tools of choice for all rural people particularly the elderly. Secondly the Developer chose not to man the Walcha office for large periods of time. Messages left on answering machines were regularly not returned. Questions asked on Facebook have gone unanswered. The general feeling was the developer was more absent than not.

- Identify long-term community needs and design initiatives that can lead to well-designed support programs for the long-term benefit of the community;

  COMMUNITY COMMENT

  The developer jettisoned the Neighbour Payments and demonstrated little interest in sharing benefits beyond host landowners and a select gargle of landowners with carried equity.

- Ensure compliance with consultative requirements under the SEARs, *Undertaking Engagement Guidelines for State Significant Projects* (DPIE, 2021) and other relevant planning instruments and guidelines;

  COMMUNITY COMMENT

  Quiet clearly the Developer's objective is to just 'tick the box' and nothing more. Therefore, interest in Community Participation is 'minimal'.

- Develop a social licence to operate; and Community Comment

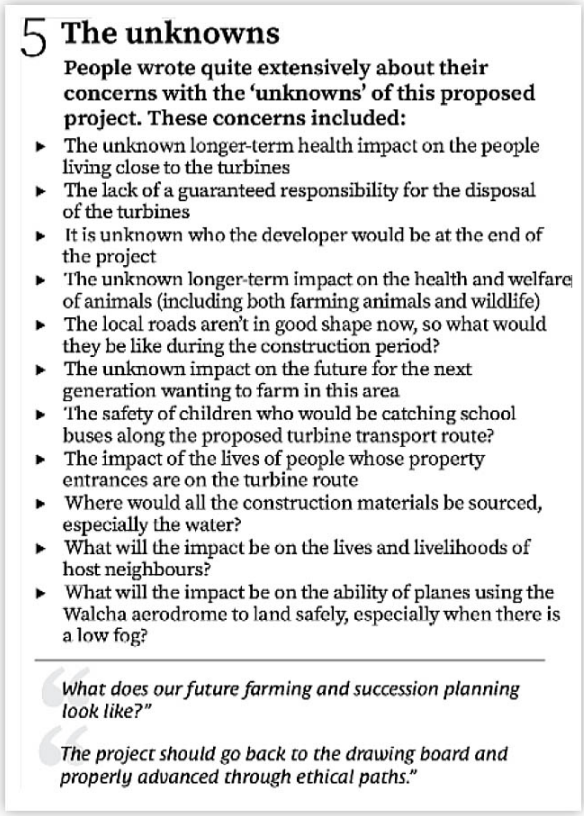
  COMMUNITY COMMENT

  There is none – zero.

- Ensure stakeholders are adequately informed and have sufficient understanding of:
  - The justification and need for the Project;
  - The well proven technology proposed as part of the Project;
  - How the Project may affect them and how they can be involved in the approval process;
  - How their views are considered in a meaningful way and used in Project planning, refinement, mitigation measures and monitoring and management frameworks;

  COMMUNITY COMMENT

  The justification for the project has not been explained. The Community feel that the imperative is to sell turbines and secure O&M Contracts. The technology has not been explained which should have been an imperative given this Ventus Platform has not been deployed anywhere except for Finland. There is zero concept in the community's mindset that their views will be considered in a meaningful way. *Extract from the Survey at Attachment A .*



5 The unknowns

People wrote quite extensively about their concerns with the 'unknowns' of this proposed project. These concerns included:

- The unknown longer-term health impact on the people living close to the turbines
- The lack of a guaranteed responsibility for the disposal of the turbines
- It is unknown who the developer would be at the end of the project
- The unknown longer-term impact on the health and welfare of animals (including both farming animals and wildlife)
- The local roads aren't in good shape now, so what would they be like during the construction period?
- The unknown impact on the future for the next generation wanting to farm in this area
- The safety of children who would be catching school buses along the proposed turbine transport route?
- The impact of the lives of people whose property entrances are on the turbine route
- Where would all the construction materials be sourced, especially the water?
- What will the impact be on the lives and livelihoods of host neighbours?
- What will the impact be on the ability of planes using the Walcha aerodrome to land safely, especially when there is a low fog?

"What does our future farming and succession planning look like?"

"The project should go back to the drawing board and properly advanced through ethical paths."

- The benefits of the Project, including local investment and employment, reduced GHG emissions, replacement of aging coal fired generation in the NSW context;
  - How the Project can contribute to the local community;
  - How the Project complies with relevant regulatory requirements and policies; and
  - How the requirements of the SEARs and technical assessment lead to further information to be taken into consideration to remove, reduce and offset impacts and improve social and environmental outcomes while maintaining a viable Project.

> COMMUNITY COMMENT
>
> There is no perception that the project can contribute to the community in any meaningful or sustainable way. Yes a 'sugar fix' in construction – the pub and the bakery but after that nothing.
>
> Vestas maintain a significant number of individual and group meetings and public information events have been conducted since project inception. Some of the more significant community consultation events are summarised in their **Table 5-3** at Page 111 of the EIS. The Voice of Walcha have reviewed the claims as tabled – as with the general conclusion they present as an illusion of consultation clearly not with even the widest interpretation of '**meaningful**'.

. . .

Community Benefits – Shared Benefits Fund

The Community is being asked to traverse 4000 plus page EIS to assess impacts. One of the important elements to assess is getting an understanding of what shared benefits are on offer – how might the Community more broadly get a dividend from this vast project which is being thrust upon them. The Developer's pitch on what this means – is fragmented and misleading to say the least. The WWF website FAQ portrays a description of a *Community Benefit Fund* (CBF) and a *Neighbour Benefit Fund* – this doesn't correlate with the WWF Website where the community benefit is referenced as providing funding to pay neighbours -thus reducing the pool allocated to the Community Benefit Fund.

Contrary to this the EIS at P 95 references another version of a CBF pitched at $1m in year 1 and $750K thereafter and allegedly no neighbour payments – yet the EIS still references such payments. Confusing? To further complicate this landscape the EIS at Appendix R reporting on social impacts references yet another model of "innovative community ownership and revenue sharing model "P 60", turbine hosts, easement owners and project neighbours are invited to become involved in a 5% stake at no cost. The benefits will be shared 50/50 with the broader community."

> COMMUNITY COMMENT
>
> **This is misleading and deliberately so.** Management of this issue by Developer is about as clear as mud. The Community are being asked to assess the impact of the EIS and one of the important issues for them is what's in this for the Community for the Neighbours. This is not good enough Mr Developer very poor communication - disrespectful for the Community.

Summary of Community Consultation

This table confirms the poverty of engagement in terms of numbers reached – it confirms ongoing engagement with hosts – their attendance at open days. It suggests a fabrication as to the actual engagement with the neighbours. It promotes sponsorship at local shows with no assessment as to issues raised. It references a demonstrably failed CCC process – with absolutely no evidence that the community benefited from any explanation or communication.

The alleged consultation activity can be summarised;

- As largely 'tick the box' and in no way 'meaningful' – there is not one shred of evidence that any consultation in any way shaped Vestas's project design or project impact. Given the intention was 'pump and dump development why would it?
- As largely focused on the pecuniary invested host landowners – the focus of consultation barely traversed beyond this closely gagged orbit of financial benefiters.

In terms of social licence, it's been a demonstrable failure

DATE	ALLEGED CONSULTATION ACTIVITY	VOICE OF WALCHA COMMENT
2-Oct-19	Information evening for host landowners	**Not community consultation.** Targeted stakeholder info evening with **pecuniary interest host landowners** representing less than 1% of community. 5% of project is owned by a consortium of host landowners incorporated as Walcha Wind Pty Ltd.
October 2019 - December 2020	Neighbour Consultation: Extensive engagement with project neighbours, including 100 engagements (phone, email, in-person).	**Not extensive is only 100 engagements in 14 months.** Only engaging with those that have a pecuniary interest. Neighbours effected and haven't signed a neighbour agreement have had NIL consultation Reference community survey. Many neighbours have felt bullied and coerced into signing agreements.
28-Nov-19	Landowner visit to Sapphire Wind Farm in Glen Innes, NSW	**Not consultive to the broader community**. Targeted stakeholder activity only involving those with financial interest. 5% of project is owned by a consortium of host landowners incorporated as Walcha Wind Pty Ltd.
11-Dec-19	Information evening for host landowners	**Not community consultation.** Targeted stakeholder info evening with pecuniary interest host landowners representing less than 1% of community. 5% of project is owned by a consortium of host landowners incorporated as Walcha Wind Pty Ltd.
13-14 March 2020	Information booth at the Walcha Show 2020	**Promotion Only**. Handing out caps and Lego wind turbines and sponsoring events is promotion **not meaningful consultation.** Poster boards provide limited information and do not constitute consultation. Unclear how many people engaged. Walcha Show not appropriate for consultation. Apparently survey conducted but results unknown.
1-Nov-20	Proponent opens local Walcha Office	**Sparse availability for the broader community**; Vestas acquired project in mid 2019. It took over 12 months to open a local office. How often was it open? In November 2021 it was manned 2 days per week. It closed during the period of extended public exhibition until 16 January ! Who was in the office? Local person or someone from Vestas, ERM? Project Director Landfear rarely in Walcha - his Managing Director Carless even rarer visit. Alleged Wind Farm owner Copenhagen Infrastructure Partners -has never been to Walcha

January - June 2021	Neighbour Consultation: Extensive engagement with project neighbours, including 131 engagements (phone, email, in-person).	**Not extensive consultation** if 131 contacts made regarding project neighbours over 6 months.
12-13 March 2021	Information booth at the Walcha Show 2021	**Promotion Only**. Handing out caps and Lego wind turbines and sponsoring events is promotion not consultation. Poster boards provide limited information and do not constitute consultation. Unclear how many people engaged. Walcha Show not appropriate for consultation. Apparently survey conducted but results unknown.
18-Mar-21	CCC meeting #1	**Failed process** - no tangible evidence any information was conveyed to the community. Ultimately dissolved through lack of interest. Independent Chair - appointed and paid by Vestas, as was the Minute Taker Jen Kealey - Vestas employee and Deputy Mayor, Doug Landfear - Vestas Project Director. 5 community representatives and 3 Council members. Casper Ozinga - Consultant to Walcha Energy. No objections raised re: conflict of pecuniary interest by committee. 4 present of 11 on CCC have conflict of interest. **Like all similar CCC induced zero social licence**
22-Apr-21	Winterbourne Wind Office Open Day	**Promotional Only**. Poor response 15 people attended.
15-May-21	Winterbourne Wind Stall at Farmer's Market	**Purely promotional**
7-Jun-21	CCC meeting #2	**Failed process** - no tangible evidence any information was conveyed to the community. Ultimately dissolved through lack of interest. Independent Chair - appointed and paid by Vestas, as was the Minute Taker Jen Kealey - Vestas employee and Deputy Mayor, Doug Landfear - Vestas Project Director. 5 community representatives and 3 Council members. Casper Ozinga - Consultant to Walcha Energy. No objections raised re: conflict of pecuniary interest by committee. 4 present of 11 on CCC have conflict of interest. **Like all similar CCC induced zero social licence**
23-Jun-21	Information evening for host landowners	**Not consultation.** Targeted stakeholder info evening with pecuniary interest host landowners representing less than 1% of community. 5% of project is owned by a consortium of host landowners incorporated as Walcha Wind Pty Ltd.
June-December 2021	Neighbour Consultation: Extensive engagement with project neighbours, including 405 engagements (phone, email, in-person).	**Feedback suggest not extensive** - **A solid representation suggests no contact.** Community Engagement Officer resigns May 2021. This position is not replaced. Who is doing the extensive engagement with project neighbours?
6-Sep-21	CCC meeting #3	Conducted by video conference due to COVID restrictions. Independent Chair - appointed and paid by Vestas, We repeat a **Failed process** - **no tangible evidence any information was conveyed to the community.** Ultimately dissolved through lack of interest. Independent Chair - appointed and paid by Vestas, as was the Minute Taker Jen Kealey - Vestas employee and Deputy Mayor, Doug Landfear - Vestas Project Director. 5 community representatives and 3 Council members. Casper Ozinga - Consultant to Walcha Energy. No objections raised re: conflict of pecuniary interest by committee. 4 present of 11 on CCC have conflict of interest. **Like all similar CCC exercises in the New England induced zero social licence.**

1-Nov-21	CCC meeting #4	**The CCC. In death roll** No replacement of resigned positions. Only 1 community representative present. Chair plus 3 Vestas employees. 3 Councillors. **Failed process** - no tangible evidence any information was conveyed to the community. Ultimately dissolved through lack of interest. Independent Chair - appointed and paid by Vestas, **Like all similar CCC induced zero social licence.**
10-11 December 2021	Community Open Days held at Walcha Bowling Club, the proponent staff, technical experts and information displays available to community	68 people registered attendance. Survey conducted with 27 responses. Richard Finlay- Jones responded saying "68 people is a good representation of community" Proponent happy with that number in attendance over 2 days. **Not community consultation.**
January - April 2021	Neighbour Consultation: Extensive engagement with project neighbours, including 64 engagements (phone, email, in-person).	64 engagements is not considered extensive engagement over a quarter.
2-Feb-22	CCC meeting #5	**See above - failed to produce any social licence** Chair plus 3 Vestas employees, 2 councillors and 4 community representatives. 1 new representative appointed.
11-12 March 2022	Winterbourne Wind information booth at the Walcha Show 2022	**Purely Promotion**. Handing out caps and Lego wind turbines and sponsoring events is promotion not consultation. Poster boards provide limited information and do not constitute consultation. Unclear how many people engaged. Walcha Show not appropriate for consultation. Apparently survey conducted but results unknown.
2-May-22	CCC meeting #6	**As a process dead in the water.** Chair plus 2 Vestas employees, 2 councillors and 4 community representatives. 1 ERM and 1 Energy Co and 2 DPI reps in virtual attendance. **Abandoned**

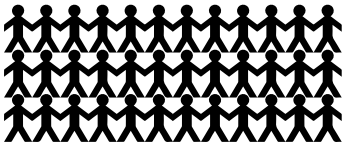
THE WINTERBOURNE WIND FARM SURVEY

The survey results *are in*

As promised, here's a more detailed report on the Winterbourne Wind Farm survey conducted by Voice for Walcha.

523

.. Number of valid surveys returned



79.7%

.. of the 523 survey responses **expressed concerns and objected** to the Winterbourne Wind Farm.

8.8%

... of the survey responses stated they had **no concerns** and supported the plan for this project.

People with concerns > The issues expressed by people with concerns fall into 5 main areas

1 What has been lacking in the developer's process

78.4% of the people responding to the survey indicated that they did not think that the developer, Winterbourne Wind, had provided enough information for them to understand the impact of this project. There were numerous comments from people who said they support renewable energy but took particular objection to the way this project has been implemented.

In the written comments submitted in the surveys, the following issues were the key concerns:

- The developer, Winterbourne Wind, has not adequately consulted with the community
- The developer has not been willing to take part in community forums
- The developer has created serious community disharmony with the negotiation of secret contracts
- The developer has not provided information when requested, necessitating individual research
- The developer has not been honest
- The developer has not provided information to people that has been promised

> *"I am thirteen years old. I will be 43 when any of the turbines and transmission towers are finished with. I will be the generation dealing with the decisions that are made now."*

> *"Winterbourne Wind seem to be very secretive and reluctant to give out full detailed information on this development."*

- The developer has been remiss with consultations with host neighbours, especially in terms of the noise and visual impact of the proposed turbines
- The developer has not been forthcoming on details about the transmission lines, their location, and their impact
- The developer has not provided facts, only 'warm fuzzies'
- The developer has only released a slow trickle of information rather than providing all the information upfront

> *"People in regional areas should not have to bear the costs of climate change for all Australians. We are appalled at the lack of solar energy on existing structures in metropolitan areas, while city dwellers support wind and solar industrial developments in rural backyards where they don't have to look at them. Their backyard happens to be our homes."*

2 What doesn't make sense about this proposed project

A total of 86.2% of survey respondents expressed concerns about the Winterbourne Wind Farm (this % includes people who said they were 'neutral' or 'didn't know enough' but also submitted written comments expressing concern). There were many comments to the effect that there are just too many projects proposed for our area and that the cumulative impact, commencing with the Winterbourne project, will be too much for our community to cope with.

Following are some of the issues mentioned:

- Why construct an industrial site on prime agricultural land?
- Why interfere with essential farming practices (such as being able to fertilise crops from the air)?
- Why not use alternate forms of renewables which are more sustainable and do less damage?
- Why commence a project where the type of renewable chosen could be obsolete before the project is finished?
- Why aren't urban roofs being used as a source of solar power and mini wind turbines?
- Why are a small group of people able to sign contracts which impact on a whole community?
- Why so many large projects proposed, to encircle one small country town?
- Why the secrecy?
- Why is each project being assessed separately by the NSW Planning Department, rather than looking at the cumulative effect?
- Why isn't the whole community consulted with – as the first step in the process
- Why secret negotiations?
- Why threaten a world heritage national park?
- Why endanger the community's ability to fight bushfires?
- Why allow foreign ownership of resources in Australia?

Results continued over >

***Thanks again to everyone** who took the time to send in a survey.*

Voice for Walcha

3 What the community would lose

On analysing the written comments in the surveys, the following were listed as key concerns regarding what the community would lose if the Winterbourne Wind Farm went ahead.

- The loss of confidence about the future of Walcha
- The loss of people from the area as they do not want to live surrounded by wind farms
- The loss of families from Walcha because they cannot afford the rent increases
- The loss of biosecurity
- The loss of the freedom of movement to drive around Walcha, plus to and from other towns
- The loss of tourists – who provide a very substantial input of funds to the town
- The loss of wildlife, especially high-flying birds
- The loss of confidence in emergency services being able to function optimally
- The loss of trees when they are more important than ever
- The loss of the ability for landowners to plan for the future
- The irretrievable loss of rural beauty

"We believe there are much more efficient forms of green energy than wind towers that won't jeopardise the productivity of the land, the bird life, and most importantly pit neighbour against neighbour, brother against brother, and friend against friend."

"The Aboriginal Cultural Heritage Report needs to be redone and proper community consultation needs to happen for the whole community."

"I believe that the community voice isn't being listened to by council and the developers."

"Disappointed that Winterbourne Wind has been so secretive; that it has bullied host landowners and neighbours; that it hasn't been open and made people adequately aware."

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4 What would be degraded / diminished

In terms of what would be degraded or diminished in the Walcha community, following are some of the key issues mentioned in the returned surveys:

- The damage and degradation of the roads during the lengthy construction period, with no guarantee that they will fixed at the end
- The potential damage to physical and mental health of people
- The threat to health of both livestock and wild animals
- The reduction in the quality of life for the people who live here
- A reduction in property values: for host landowners, host neighbours, town dwellers, and any property that has a view of the turbines
- A huge demand made on local infrastructure and resources

"If my property is devalued because of the 70 wind turbines I will see from my house, will I be compensated?"

"Walcha should not be an energy focussed district. It is (was) a pasture wonderland and vital food bowl."

5 The unknowns

People wrote quite extensively about their concerns with the 'unknowns' of this proposed project. These concerns included:

- The unknown longer-term health impact on the people living close to the turbines
- The lack of a guaranteed responsibility for the disposal of the turbines
- It is unknown who the developer would be at the end of the project
- The unknown longer-term impact on the health and welfare of animals (including both farming animals and wildlife)
- The local roads aren't in good shape now, so what would they be like during the construction period?
- The unknown impact on the future for the next generation wanting to farm in this area
- The safety of children who would be catching school buses along the proposed turbine transport route?
- The impact of the lives of people whose property entrances are on the turbine route
- Where would all the construction materials be sourced, especially the water?
- What will the impact be on the lives and livelihoods of host neighbours?
- What will the impact be on the ability of planes using the Walcha aerodrome to land safely, especially when there is a low fog?

"What does our future farming and succession planning look like?"

"The project should go back to the drawing board and properly advanced through ethical paths."

People with no concerns*

8.8% of the 523 survey responses stated they had no concerns and supported the plan for this wind farm.

In terms of those who support the project, the following issues were mentioned in the surveys:

- We need turbines for our source of power
- Positive impact economically
- Financial benefit for town and residents
- Income to support farmers, community & council
- Financial security for host landowners
- Council will not have to amalgamate
- The project will generate employment
- It will "put Walcha on the map"
- "The towers will be outside town and won't interfere with town itself"
- "The wind farm is the business of the people it actually affects, not the people on the other side of town"
- "Winterbourne is ideally located for a project of this nature and scale"
- It will stop the current decline in the community
- "Towers power local communities"

** Important to note, approximately half of the respondents in this category are land hosts who will host turbines for this project or others projects in the future.*

Voice for Walcha > *Drop-in Shop*

The drop-in shop is open to help folk make an online submission to the Environmental Impact Statement. The drop-in shop is open from 8-10am and 1-2pm, Monday to Friday and will also be open this Saturday (19th) from 9am-noon, to coincide with the Farmers Market. The comment period for the EIS is expected to end on Monday 12th December. This is the community's last chance to speak up.

WINTERBOURNE WIND FARM (WWF)

Part B
Response to Cumulative Impact Assessment

This Part B presents as the Voice for Walcha's (VfW) **Group Objection Submission** to the Proponents Cumulative Impact Assessment.

Key Community Message

The Community are staring down the biggest infrastructure development in its history – the biggest wind development in NSW, deploying the biggest kit (V162 monster turbines), a project clearly oversized and in the wrong location.

The major 'big picture' concern for the Communities of the New England (NE) is the potential for over-development of their natural landscape, erosion of their income producing agricultural land, and a devaluation of their land assets. It is unclear at the time of this EIS what the overall installed target is for the NE - is it 8GW as originally declared or is it 10.4 GW as reported in the 2022 ISP. Whatever the target, it is significant and potentially more pronounced in the lower end of the NE. The outlook suggests there is no strategic land use planning for the energy transition – not one in a regional manner – setting the boundaries in spatial and temporal sense – strategically where to place what infrastructure and why. The LEP process and outcomes remains subservient to the SEPP. It is forecast the southern pathways to the New England will present wind solar and batteries, the eastern entrance dominated by solar eg; Metz, Oxley etc and the north by wind farms. The region's landscape is forecast to be changed significantly and for generations, as the New England does the heavy infrastructure lifting for Sydney's failure to plan.

On project forecast – that is projects either approved or in the planning system, projects under various stages of financial or engineering feasibility or projects under consultation for landowner development rights or neighbour agreements, there is within the 70 kms radius of Walcha, **over 520 WTG and 9 million solar panels**. This, by way of example, for Walcha and Uralla **LGAs would clearly suggest** there is **significant potential for cumulative impact** from multiple projects on multiple environmental values;

- Nearby Kentucky (Thunderbolt Hub 1) is the first to table (26 April 2022) for public exhibition its EIS, we can assume based on the Guidelines that it might be incrementally assessed against baseline environmental values, a derivative of a strategic planning process. This is clearly reflected in their detailed EIS tabled in the DPIE Major Projects Portal. However, for reasons alluded to hereunder its **falls well short of the required robust analysis on Cumulative Impact.**
- Together, given obvious geographical proximity, they induce the need for a combined cumulative assessment. This need is exacerbated by the compounding impacts from the 'known knowns' future projects – Ruby Hills 700MW, Topdale 400MW, Salisbury Wind 500MW, Bendemeer Energy Hub 500MW.
- In close proximity to the township of Uralla – already approved and under construction is New England Solar (720 MW). In the planning system and under a SEAR is Salisbury Solar – **together they are forecast at 1400 MW or 7 million solar panels.** The compounding cumulative impacts are a compelling and concerning outlook.

The forecast life of all projects is a minimum of 25-30 plus years – the impacts are multiple – and potential to be compounding – all have the potential to change the New England's character – its economic base, the landscape, the fabric of the cohesive communities, its environmental significance, all of which currently make the New England domestically and internationally unique.

In support of these concerns – **VfW at Attachment A** highlight the frightening cumulative impact which confirms Walcha could present as one of the most heavily industrialised landscapes in Australia.

Basis of the Community Objection - Cumulative Impact Assessment

1. The Developers approach to assessing the Socio-Economic Impacts are inconsistent with the requirements of the Section 1.3 (j) of the Environmental Planning and Assessment Act 1979 . In particular ;
   (a) It's failure to promote the social and economic welfare of the community and a better environment by the proper management, development and conservation of the State's natural and other resources,
   (b) It's failure to facilitate ecologically sustainable development by integrating relevant economic, environmental and social considerations in decision-making about environmental planning and assessment,
   (c) It's failure to promote the orderly and economic use and development of land
2. It's failure to promote strategic -level Cumulative Impact Assessment pursuant to the Walcha LGA Local Strategic Planning Statement 2036,
3. It's failure to observe the priorities of the New England North West Regional Plan 2036,
4. It's failure to comply with the DPIE -State Significant Development Guidelines -July 2021 ; and
5. Its failure to comply with the DPIE Cumulative Impact Assessment Guidelines for SSD -July 2021

THE SEARS REQUIRES …

"an assessment of the likely impacts of all stages of the development (including **cumulative impacts** of the development with existing and proposed developments in the region), taking into consideration any relevant State and Commonwealth legislation, environmental planning instruments, guidelines, policies, plans and industry codes of practice and including the NSW Wind Energy Guideline for State Significant Wind Energy Development (2016);"

1.

COMMUNITY COMMENT

The EIS has not established an appropriate Scoping Platform determination of the relevant study – in terms of what impacts to cumulatively assess. All they have offered is a schedule of projects extracted from the Major Projects Portal – most of which are not in a relevant Study Area. This is not what the Guidelines requested.

The EIS has not taken account of reasonably foreseeable future Projects. **There is no substance.** The Project has not taken into account all the relevant **"what to assess potential cumulative issues.**" These being:

- Agricultural land use and food security
- Agricultural employment and farm succession planning
- On roads and mobility
- On biodiversity and threatened species
- Land asset values
- Noise and dust
- Visual amenity
- Community cohesion
- Mental health
- Bushfire risks
- Water security
- Tourism revenue
- Land and watercourse contamination
- Soil integrity
- Raw material resources

COMMUNITY COMMENT

The paucity of the Developer's lack of response to the Guidelines is demonstrable: **there is no review framework, no analysis of material impacts** on any of these issues as required by the Guidelines , no evidence of expert advice being sought, and there is no cautious approach or suggestion that any matters be referred for further assessment, all of which begs the obvious question: **Is this Tick the Box again?**

2. The EIS's tokenism is again on display in the selection of the 'study area'. They select the whole of New England as a study area when the obvious focus should have been on a study area of just the Southern NE – or as referenced above, the 70kms radius from Walcha. The Community suggests that the most obvious study area was the triangle of **Uralla - Bendameer - Walcha**.

   It is rather deceitful that Vestas leave Ruby Hills out of their assessment. It is trite to say it's not in the Planning System – everyone in Walcha particularly the Hosts are patently aware it's on the cards. This is another 700MW project and presents as an obvious assessment on scale for cumulative impacts on noise, visual impact, and traffic. At odds with the Guidelines the EIS should have offered explanation as to why they chose not to include it. Hard to miss as 'reasonably foreseeable' as the originators are across the street from the Developer's offices in Walcha.

3. The EIS's justifications at P 308 are largely careless fabrications that have been addressed elsewhere in the Communities Response. So, there is little point in trying to integrate the findings of the Developers Cumulative Impact Assessments – quite simply, **there weren't any**.

4. Just to demonstrate how frivolous and disrespectful the Developer is to Cumulative Impacts, the Project has convened five (5) Consultative Committee Meetings (CCC) since March 2021 and the issue of co- ordinating with other RE projects was only raised once on the 18th of March, 2021. In response the Developer confirmed there was no collaboration with other proponents in a competitive development environment. So as demonstrated by the EIS – despite Community Views – Survey Responses - there is little interest by 'proponents' in cumulative effects of their WWF project or the other substantial projects. An assessment may be seen by proponents as purely a procedural hurdle – another 'tick the box' obligation with no practical purpose.

In Conclusion

The Community totally reject this very poor effort. It is flawed in application of the Guidelines, and sets a very poor standard on how to justify a project against significant and compounding impacts.

What's needed urgently is an Independent Review of Cumulative Impact Assessment in the suggested study area. The risks are too high for the Community to support such "tick the box planning" which destroys communities. This will enhance the **effectiveness of the Cumulative Impact Guidelines which the community in principle support.**

More broadly the Community also support the development of;

1. **Strategic Land Use Plan** (SLUP) – REZ LGAs should, in the interests of minimising cumulative impact from multiple projects, advocate for a more strategic land use management plan (SLUP) for the REZ. A plan that contemplates within context of cumulative impact, more prudent spatial and temporal implications for the future of the NE. A plan which compliments the goals and ambitions of the 4 Goals and 24 Directions of the New England Regional Plan 2036. This strategic land use planning should inform and guide the SSD planning pathway in terms of the minimalisation of cumulative impact on Project Scoping – SLUP should be the basis of the LGA's Response to SEAR in terms of the need for projects to contemplate Combined Cumulative Impact Assessment (CCIA); to Collaboration; to include additional impacts of other relevant future projects including not just known projects in the planning system but also known greenfield projects that are subject to focused prospecting and feasibility assessment.
2. **Cumulative Impact Baseline** – The REZ needs a more robust baseline from which to draw not only incremental assessment for single projects but also to draw an outlook for a combined cumulative impact. Such a Baseline is obviously an important reference point for developers but is also a critical tool for the community to understand and assess the extent of impacts and the importance of mitigation strategies. The benefits of developing an agreed cumulative impact baseline are obvious in terms of promoting efficacy for developers, communities and Government. The integrity of the baseline will be enhanced if it drawn from independent expertise.
3. **Cumulative Impacts** – Implementation of the proposed CIA guidelines needs to acknowledge that study areas are dynamic - the geographic and socio-economic features will vary; with the terrain, with the economic profile and with the proximity to the population centres. These features don't stand still – they will vary over time. This will promote need for flexibility in determining respective study areas which will induce different impacts for assessment. For example, the area around Salisbury Plains South of Uralla might be a study area or justification might exist for identifying a bigger area – embracing the triangle Uralla /Bendemeer /Walcha or Ben Lomond /Glencoe in the northern REZ. Refinement of the selection of the study centres needs to be facilitated with the help of independent expertise.
4. **Assessment Metrics** – Assessment processes – cumulative impacts are often not linear - predicting impact and planning mitigation may be complex involving both quantitative and qualitative measurement. The metrics to assist this assessment need to develop from robust methodologies and from existing and new data. This needs to be developed with the help of independent expertise.
5. The early integration of all 4 initiatives into *Scoping* exercises and SEAR communication promotes for a more transparent and effective assessment process of potential cumulative impacts. After the fact – *ex post facto* justification can only hinder the communities' ambitions of the energy transition – economically socially and environmentally. The Government and the Developer should jointly fund the independent expertise so referenced.

The Cumulative Effect

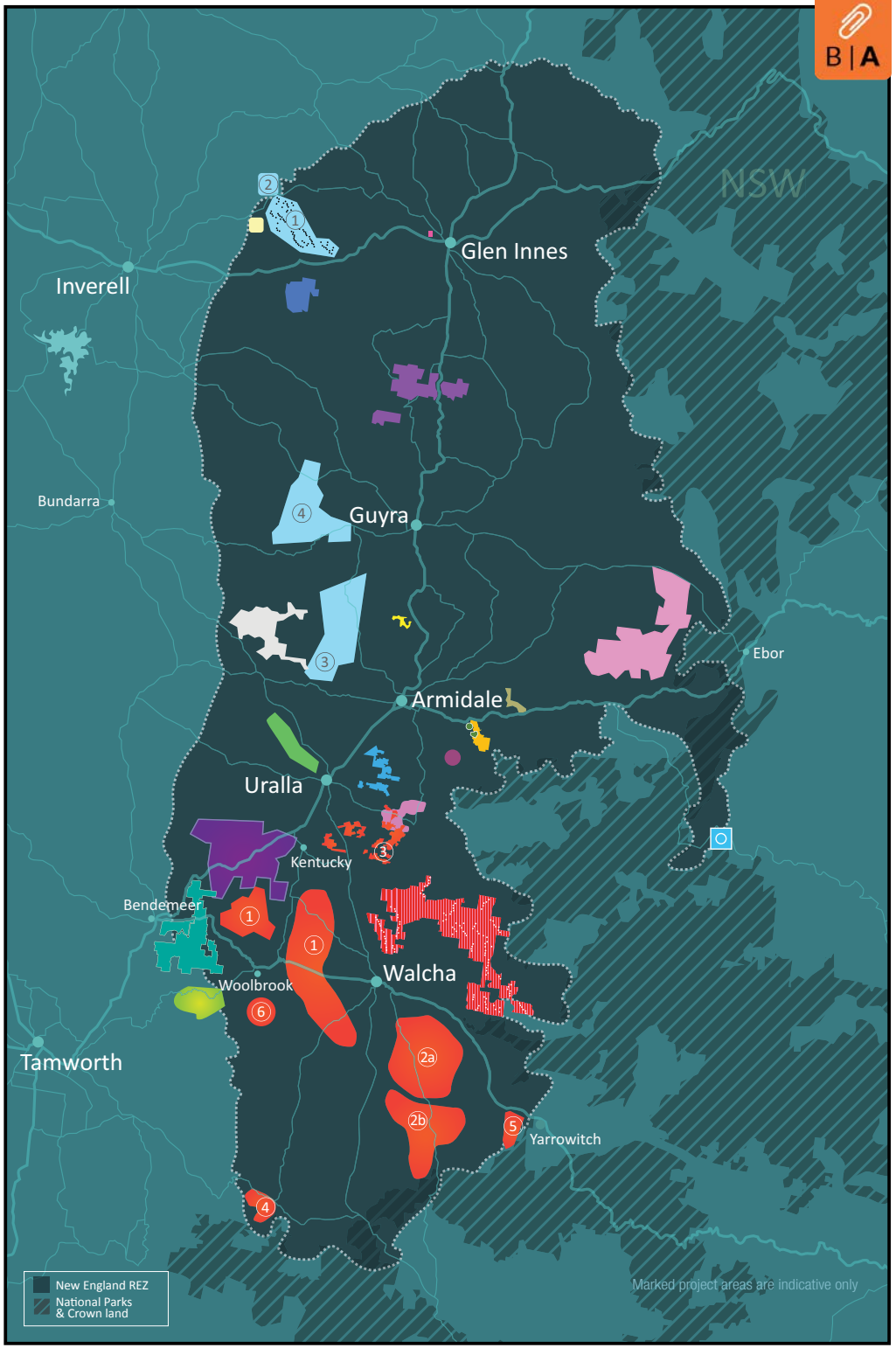
In progress and proposed renewable projects in the New England REZ (Renewable Energy Zone) as at 9 January 2023

DEVELOPER	PROJECT NAME	TYPE	NO. TURBINES/ SOLAR PANELS	MEGA WATTS	SOURCE
Vestas, Copenhagen Infrastructure + WalchaWind *(orginally owned- Walcha Energy)*	**Winterbourne Wind**	Wind	119 *(project up-date 1/8/21)*	700	Planning Portal NSW
Walcha Energy *Note: the renewable energy resource of the Walcha Energy Project is in **excess of 4000MW.** * Source: at Sept 2022 www.walchaenergy.com.au/*	1. **Ruby Hills Wind**	Wind	140	860	• walchaenergy.com.au • Aemo.com.au > NEM Generation Aug 2022 • rubyhillswind.com.au • dungowanpumpedhydro.com • salisburysolar.com.au
	2a. **Brackendale Wind North**	Wind	80	500	
	2b. **Brackendale Wind South**	Wind	30	200	
	3. **Salisbury Solar**	Solar	2.4 Million	700	
	4. **Dungowan Hydro Battery**	Hydro		300x8hr+	
	5. **Tia Windfarm**	Wind	50	300	
	6. **Woolbrook Wind Farm**	Wind	16	100	
Neoen	1. **Thunderbolt Energy Hub**	Wind	?	380	WindMap
	2. **Thunderbolt Energy Hub**	Solar	Est 60	120	
	3. **Thunderbolt Energy Hub**	Battery	Est 70	400	
Cubico	**Salisbury Wind**	Wind	Est 60+	360	Senior Advisor 0467 068 264
ACEN Australia	**New England Solar Farm**	Solar	2.6 Million	720	newenglandsolar.com.au
		Battery		50x1hr	
Unknown	**Woolbrook**	Wind & Solar	? Early Stages	??	Unknown
Metis Energy	**Bendemeer Renewable Energy Hub**	Wind	?	380	bendemeerenergyhub.com.au
		Solar	?	210	
		Battery	?	200x2hrs	
Oxley Solar Farm	**Oxley Solar Farm**	Solar	3.85 Million	215	oxleysolarfarm.com.au
Infrastructure Capital Group	**Rangoon Wind Farm (N/S)^**	Wind	25	130	Planning Portal NSW
		Battery		100x4hrs	
Providence Asset Group	**Solar PV Farm (Guyra)**	Solar		4.5	Planning Portal NSW
CWP	1. **Sapphire Wind Solar Farm ^**	Wind Solar	75	270 180	CWP Renewables
	2. **Sapphire Battery Hub ^**	Battery		30	
	3. **Boorolong Wind Farm**	Wind		270	
	4. **Unknown name**	Wind	?	?	
Goldwind	**White Rock Wind Farm ^**	Wind	119	175	White Rock Wind Farm
EDF Energy	**Yarrowyck Wind**	Wind	?	?	
EDF Energy	**(Limited details)**	Wind	?	?	
FRV	**Metz Solar Farm**	Solar		115	Metz Solar Farm
Enerpac	**Tilbuster Solar Farm ^**	Solar		152	Tilbuster Solar Farm
Canadian Solar	**Sundown Solar Farm ^**	Solar		360	sundownsolarfarm.com.au
Glen Innes Windpower	**Glen Innes Solar Farm ^**	Solar		4.5	gleninnessolar.com.au
Res Group	**Res Solar**	Solar	?	?	
Epuron	**Doughboy Wind Farm**	Wind	50-60	300	Planning Portal NSW
Infinergy (Boralex)	**Olive Grove**	Solar		29.9	olivegrovesolarfarm.com.au
	Stringy Bark	Solar		29.9	infinergy.co.uk

^ Not shown on detailed map (right) to see actual location go to larger map > voiceforwalcha.com
* includes the on sold Winterbourne Wind project and assumes the use of 6.2MW towers
Source: Planning Portal NSW Link, Eco Generation WindMap showing projects in area, Thunderbolt Energy Hub NEOEN booklet, Newtricity project link

If you know of any proposed developments in the New England area that are not as yet listed on this map, please contact us. To learn more or to get involved > **voiceforwalcha.com**

Voice for Walcha



WINTERBOURNE WIND FARM (WWF)

Part C
Response to Decommissioning

This Part B presents as the Voice for Walcha's (VfW) **Group Objection Submission** to the Proponents Decommissioning Responsibilities

Key Community Message

It is perfectly understandable that the Community remains very nervous as to who will decommission, what will be decommissioned and when. The issues have been given very poor policy consideration by the Government and the developers are obviously delighted with the absence of responsibility.

The Aurecon – Decommissioning and Rehabilitation Assessment Report was an interesting read however the forecast costing at or $242k per turbine is clearly well below cost estimates in Europe and the US. Secondly, Aurecon's assumptions are based on unknown salvage values and we remain sceptical as to buoyancy of this opportunity over the life of yet to be constructed wind farm. Thirdly, and most importantly Aurecon assume that it is somehow acceptable that the decommissioning arrangements are delayed to year 15. This gives the community no peace of mind – a surety bond arrangements needs to negotiated with the current developer.

The hosting community are again left at the end of the energy transition queue – potentially left holding the 'restoration baby'. This can't continue, a policy revision needs to be activated now and a robust compliance regime established before any further projects be approved particularly Winterbourne Wind with its massive infrastructure.

Europe is more advanced in its deployment of onshore wind policy and are developing a European Standard. The US already has solid custom and practice in pricing and putting in place upfront security bonds. The Mining Industry has to commit to a financial bond, and there is no reason why the Wind Industry should escape this financial commitment.

Basis of the Community Objection – Decommissioning

1. The Developers **obfuscation to its decommissioning responsibilities** is inconsistent with the requirements of Section 1.3 (j) of the Environmental Planning and Assessment Act 1979. In particular;
   a) It's failure to promote the social and economic welfare of the community and a better environment by the proper management, development and conservation of the State's natural and other resources,
   b) It's failure to facilitate ecologically sustainable development by integrating relevant economic, environmental and social considerations in decision-making about environmental planning and assessment,
   c) It's failure to promote the orderly and economic use and development of land.
2. Specifically, it's a failure to respect the basic moral responsibilities to promote within the community frameworks good land stewardship.
3. It's failure to observe the priorities of the New England North West Regional Plan 2036
4. It's failure to comply with the DPIE -State Significant Development Guidelines -July 2021
5. Its failure to comply with the broad principles of the NSW Plastic Reduction and Circular Economy Act 2021
6. Its failure to comply with the licencing requirements of the POEA Act particularly in respect of management and disposal of the toxic Bisphenol A found in turbine blades along with the switch gear containing SF6.

There is no SEAR requirement for Decommissioning – custom and practice usually provides for the Consent Authority to set the terms and conditions. The Developer at P 92 of the EIS has embraced zero responsibility with a pedestrian description of age-old arrangements which are no longer satisfactory – particularly in the circumstance where the current Developer intends to exit this site sooner rather later – thereby leaving the responsibility in some ongoing game of 'pass the parcel'. The Community is not being offered any comfort as to who and when this responsibility might be delivered. Host Landowners might have some loose references in their documentation, and it is highly likely this is token in its meaning. The Aurecon analysis is based on the 'never never' 15+ years assessment – that is not satisfactory to the Community.

For the purposes of responding to this EIS the Communities concerns and recommendations are tabled hereunder:

1. This original Developer Vestas must be accountable – they must establish clear commitment to Walcha Council who should establish the terms and conditions for decommissioning.
2. These Terms and Conditions – must establish absolute clarity as to full rehabilitation of the project site – above ground infrastructure – roads, earthworks including all below ground footings and cabling.
3. These Terms and Conditions must include the timeframe for this restoration to be commenced and completed.
4. The original developer must pay a financial security bond into trust based on the full cost of restoration and recovery. These costings to be based on estimated of full restoration and resource recovery including inground footings.
5. If the Original developer sells the Asset – Walcha Council reserves the right to review the quantity of the security bond and increase in line with increased rehabilitation costs.

For the purposes of this Winterbourne Development – the Government will initiate an Independent Review of the Full Costs including any offsetting resource recovery from recycling outcomes.

WINTERBOURNE WIND FARM (WWF)

Part D
Response to BDAR

This Part D presents as the Voice for Walcha's (VfW) **Group Objection Submission** to the Proponents Biodiversity Development Assessment Report (BDAR).

Key Community Message

Consistent with Community's core objection themes - the WWF Project is poorly site selected and well oversized for its location. In terms of potential impact to treasured biodiversity and threatened and endangered species, alarm bells should be loud and clear. The project's immediate proximity to the critically important - **UNESCO protected Gondwana Rainforest and Oxley Wild Rivers National Park and its unique Wilderness** induces potentially irreparable damage to the natural environment. Any other developed Country would be appalled at the risk contemplated by this Project. Almost certainly, the proponent's home country Denmark would prohibit the contemplation of such possible destruction to a public asset like a National Park.

The Proponent's superficial attempts to minimise the Development Site for biodiversity assessment to incorporate only a 100m buffer around the Development Footprint is environmentally immoral. The project's biodiversity threatens a large footprint of existing fauna and their habitats – inducing potential for damaging pollution runoff into the National Park and into the Macleay River Catchment - into the Macleay River - damaging downstream communities' enjoyment and commercial engagement with the river. The WWF will be the largest wind project in NSW deploying the massive 230m high V162 6.2 MW Vestas wind turbines. Visually it will cast an intrusion across this pristine wilderness and undoubtably a noise nuisance to Park visitors and precious fauna. Most obviously NSW National Parks will be negated from deploying aerial bombardment of bush fires – potentially leaving large wilderness areas more exposed. As we witnessed in the terror of the 2019 Bush Fire, aerial bombardment was a key containment measure, salvaging critically important wilderness. **All of this outlook conflicts with the vision the Government has for development adjacent to National Parks and Wildlife's Service Land.**

As we highlight hereunder the Proponent, in a mad dash for profit, approaches the impact assessment with a careless indifference – tabling an incomprehensible, error strewn, incomplete BDAR for Community Assessment. The BDAR Appendices still has "DRAFT" written on it from page 3-18. This another example of how careless indifference has been put into this report. It is apparent that much of the species analysis for the BDAR was done online, with minimal infield survey work. This austerity decision by Vestas clearly compromised the quality of the impact assessment by NGH. Shortcuts are obvious as to the timing and depth of analysis. As referenced hereunder, the Community initiated its own expert analysis with Dr Stephen Debus UNE -world renown natural resources wildlife expert particular on New England. Extracts on his Report can be found embedded in our analysis at 1.1 and 2.1. A copy of his Report is Annexure A. A pertinent and sobering extract from Dr Debus' report is his final paragraph on P4 ***"The Winterbourne wind farm footprint is close enough to Oxley Wild Rivers National Park to suggest the risk of compromising the Park's primary purpose, ie its conservation values, because of the impact of clearing, habitat fragmentation and more 'hard' edge on and near the Park's western boundary, and the risk of increased mortality of protected and threatened fauna using the Park and adjoining lands."*** [1]

[1] Dr Stephen Debus - Comments on the Winterbourne Windfarm Proposal 3 January 2023 P4

The Community is alarmed as should be the Government. This submission confirms the Community's strong threshold recommendation that the Project be rejected entirely - in favour of a more suitable site. In the alternative the NSW Government should call for a public review of the Project and the Project siting – a joint initiative with their Federal counterparts as they upgrade their EPBC Act Governance. Procedural fairness would ensure the Project **is subject to the scrutiny of new Federal Government policy and new governance. This is also the Community's strong recommendation.**

The regulatory and policy basis of the Objections is seven (7) fold as summarised hereunder;

1 **Non-Compliance with the SEAR**

The BDAR does not adequately address the inquiry and requests as **prescribed by the SEAR issued 17 September 2020.** The Communities summary of this omission is set out at 1.1 hereunder.

2 **Lack of procedural fairness for the Community** - The community is hindered in its assessment of the BDAR by its inherent substandard content and presentation. The BDAR was outsourced to NGH consultancy, and we assume any analysis or conclusions offered by ERM are based on their review of the NGH detailed report. We note that REAP declaration by a Mark Davey assumes responsibility for the whole of the EIS including the BDAR contribution from NGH. Our concern introduced hereunder is the BDAR on structure and assessment content is substandard and certainly inconsistent with the Environmental Planning and Assessment Act (EPA Act) and Regulations and with the Departments SSD Guidelines October 2022.

As highlighted hereunder the BDAR in many critical areas requiring community assessment was incomplete, inconsistent, and inaccurate. This Proponent has the unacceptable habit of suggesting mitigation measures - which have not commenced making it impossible for the Community to assess the impacts. In this regard examples are the proposed *Bird and Bat Management Plan* and the *Biodiversity Management Plan*. Further erosion of the procedural fairness. The Community's note addressing **this criticism are set out at 2.1 hereunder**. 2.2 References some of the further information required to make some sensible assessment of the BDAR.

3 The BDAR doesn't comply with **the ecological sustainable development objectives** of the **Environmental Planning and Assessment Act 1979 and Regulations** (Planning Act). In this regard, clearly the WWF Project doesn't promote the requisite *social and economic welfare of the whole Community and a better environment by the proper management, development and conservation of the State natural resources*.

a) Clearly mismanagement of the National Park not only damages the environmental credentials but also has the potential to reduce the economic and social opportunity through reduced tourism to the Walcha Community and for generations to come.

b) Two further examples of non-compliance - There is no evidence pursuant to State Environmental Planning Policy (SEPP) that the Walcha LGA has offered the developer consent by way of a **Koala Habitat Plan**. Nor is there evidence that the BDAR has taken into account places of Aboriginal Heritage. The Park hosts a number of critical secret and secret-sacred sites of significant cultural value to Dunghatti First Nations People.

c) A fundamental theme of the Planning Act is '*community participation'* – and consistently this developer has obfuscated from this responsibility to consult widely with both Indigenous and Non-indigenous communities.

4 The Project recklessly and intrusively builds a significant development on the immediate boundary of this **area of outstanding biodiversity value**. This doesn't align with the purposes (section 1.3) of the NSW Biodiversity Conservation Act 2016 and Regulations 2017 and its principles of ecological sustainable development. Given this responsibility the EIS is derelict in its assessment of potential impact;

a) The BDAR doesn't confirm a commitment to conserve biodiversity values and to maintain the diversity and quality of ecosystems and enhance their capacity to adapt to change and provide for the needs of future generations.

b) The BDAR doesn't demonstrate how the project's impact facilitates for the prudent assessment of the extinction risk of species and ecological communities, and identify key threatening processes, through an independent and rigorous scientific process.

c) The BDAR doesn't demonstrate how the project supports conservation and threat abatement action to slow the rate of biodiversity loss and conserve threatened species and ecological communities in nature.

d) The BDAR doesn't establish for community assessment a satisfactory framework to avoid, minimise and offset the impacts of proposed development and land use change on biodiversity.

5 The Project is in direct contravention of the Management Principles for a Wilderness Area pursuant to **NSW Wilderness Act 1987**. The Development is contrary to these Management Principles in that a wilderness area such as that protected within the Oxley Wild Rivers National Part will be difficult to manage with such a significant development over hanging its boundaries. It will make it difficult, if not impossible in accordance with Section 9;

a) to restore (if applicable) and to protect the unmodified state of the area and its plant and animal communities,

b) to preserve the capacity of the area to evolve in the absence of significant human interference, and

c) to permit opportunities for solitude and appropriate self-reliant recreation (whether of a commercial nature or not).

6 The Project is derelict as to the potential impacts of **Matters of National Environmental Significance (MNES) – the EPBC Act 1999**.

The relevant Matters of National Environmental Significance are: a) Nationally threatened species and ecological communities; b) Migratory species; c) World heritage properties; d) National Heritage places.

a) Nationally threatened species and ecological communities: As advised by the Federal Agency – Department of Agriculture, Water and the Environment, the WWF is a controlled action pursuant to Section 75 of the EPBC Act 1999. As such alarm bells have already been raised with the BDAR confirming likely significant impacts to the following **critically endangered, endangered and vulnerable flora and fauna species:**

i. **Critically endangered** New England Peppermint - Grassy Woodlands ecological community.
ii. **Endangered** quoll Spot - Tailed quoll / Tiger Quoll
iii. **Endangered (12 Feb, 2022)** Koala Communities
iv. **Vulnerable** Narrow - leaved Black - Peppermint
v. **Endangered (5 July, 2022)** Greater Gilder; and
vi. **Endangered** Beadie Grevillea
vii. **Vulnerable** Brush - tailed Rock Wallaby
viii. **Endangered** Narrow leafed Bertya
ix. **Vulnerable** Austral Toadfax
x. **Critically endangered** White Box -Yellow Box - Blakely Red Gum Woodland and Derived Native Grassland

Note, the classification of the Koala and Greater Glider have not been updated to endangered in the EIS.

Note the Glossy Black Cockatoo **(Vulnerable)** is missing from this list of EPBC listed Threatened Ecological Communities and threatened/migratory species (7.5.1 on page 172 of the BDAR)

The BDAR's Assessment of Significance (AoS) highlights 30 odd species;

i. **17** of which are considered to have significant impact.
ii. **3** of these are critically endangered, 5 endangered and 8 vulnerable.
iii. **2** birds listed on the annexes to the China-Australia Migratory Bird Agreement (CAMBA), Japan-Australia Migratory Bird Agreement (JAMBA) and Republic of Korea-Australia Migratory Bird Agreement (ROKAMBA), are listed as migratory species under the EPBC Act – the White-throated needletail (vulnerable) and the Fork-tailed swift.

b) **Migratory Species:** In terms of **Migratory Species**, potential impacts suggest further assessments are warranted on species recognised under international agreements. In particular the White throated needle tail and the Fork-tailed Swift both of which the BDAR concludes a significant impact requiring BAM assessment and credits under the Biodiversity Offset Scheme.

c) World Heritage Properties - Impacts to the World Heritage Gondwana Rainforest.

International observers cannot contemplate how we are even entertaining the idea of this damaging development on such a Heritage Property. The BDAR highlights at Page 179 the abundance of key natural values offered by the diversity of rare plant communities, old growth rainforests - threatened fauna and plant species and endemic invertebrate species. It highlights **12 potential impacts** which on any read suggest real impacts from bushfire, chemical pollution, change in groundwater quality, weed infestation, bird and bat mortality, loss of habitat, noise and vibration impact. All the Developer can suggest "*it has been assessed that no impacts will arise because of measures taken on site to prevent impacts from occurring within the World Heritage Area*." This subjective assurance is completely unacceptable to the Community. As we have alluded to, much of the management of this project risk is yet to be confirmed by the Developer. Secondly, they have already alluded to the fact that they won't be holding the Development in any ownership therefore any ex post facto compliance is meaningless to the Community. The Community needs to assess potential impacts on what they plan to actually execute not on what might come into play in some future planning. This approach is littered throughout the BDAR and is unacceptable

We therefore should draw no comfort from the BDAR's subjective conclusions "… *with regard to potential impacts inside the World Heritage area significant impacts are unlikely…Potential Impacts outside the World Heritage area are also considered unlikely to be significant*...".

The Community believes it would be environmental injustice to ignore the contribution this project makes to the continuing deterioration of our natural environment. It is the Community's strong submission that in the interests of procedural fairness, these significant impacts should be scrutinised under Minister's Tanya Plibersek's proposed new policy and EPBC Governance.

7 The location of the project adjacent to the Oxley Wild Rivers National Park is inappropriate and as such, the Project is inconsistent with the **NSW Guidelines on Developments Adjacent to National Parks and Wildlife Service Lands (August 2020).** It is also inconsistent with the **New England North West Regional Plan 2036** and the **New England North West Regional Plan 2041** and is patently in conflict with the objectives of these.

COMMUNITY COMMENT

How are 230m wind towers built on the borders of one of NSW's most pristine wilderness areas preserving the "*capacity of the area to evolve in the absence of significant human interference*" (Objectives of the NSW Wilderness Act 1987). Clearly the proposed development is inconsistent with the terms and compliance conditions of the **Wildness Protection Agreement** - executed pursuant to the Wilderness Act and given effect to pursuant to the National Parks and Wildlife Act 1974. This is particularly pertinent to ensure preservation and protection of Macleay Gorges Wilderness and the Kunderang Wilderness areas. Both are exposed to visual, noise and project run off.

As highlighted hereunder the Community is patently aware the site selection was mainly driven by host landowners wishing to capitalise on annuity income streams. On any read of the history of this Project – the proximity to the National Park and associated impacts was clearly subservient to development interests.

The aim of 'no net loss' of biodiversity through the implementation of avoidance, mitigation, rehabilitation / restoration and offsetting was not considered when the site of this project adjacent to the Oxley Wild Rivers National Park and UNESCO listed Gondwana World Heritage Area was selected.

This has resulted in biodiversity impacts and risks to the National Park that are not acceptable. These impacts are significant, irreversible, and not compatible with biodiversity offsets. There are many locations that are more appropriate that would avoid the need for biodiversity offsetting.

Biodiversity offsets are not appropriate for critically endangered ecological communities and endangered species. If the aim is for no net loss of biodiversity, the loss of any critically endangered ecological communities, threatened species and serious and Irreversible Impacts (SAII) must be avoided. The concept that these sensitive and critical species can be replaced with biodiversity credits is surely flawed. A project on an appropriate site would not be causing irreversible damage to sensitive species.

. . .

Part 2 of NSW Guidelines on Developments Adjacent to National Parks and Wildlife Service Lands (August 2020) "Issues to be considered when assessing proposals adjacent to NPWS parks".
They are:

2.1	Erosion
2.2	Stormwater Runoff
2.3	Wastewater
2.4	Pests, Weeds and Edge Effects
2.5	Fire and Location of asset protection zones
2.6	Boundary encroachments and access through NPWS lands
2.7	Visual, odour, noise, vibration, air quality and amenity impacts
2.8	Threats to ecological connectivity and groundwater-dependant ecosystems
2.9	Cultural Heritage
2.10	Access to parks

Page 183 of the EIS addresses some of these issues. "*As noted in Table 7-6, there are a range of potential impacts on the World Heritage Area that might arise from actions inside the project area. These include bushfire, chemical pollution, flooding and sediment flow, changes to groundwater and the spread of weeds and pathogens. In most cases, it has been assessed that no impacts will arise because of measures taken on site to prevent impacts occurring within the World Heritage Area. For example, chemicals will be stored according to requirements for hazardous materials, including the use of bunding to contain any spills on the site*".

COMMUNITY COMMENT

The sweeping comment that no impacts will arise is flippant and inappropriately dismissive of such critical issues that may impact the National Park. Over construction, 20-30 years of operation and particularly decommissioning, this is a very bold assumption. What are the measures taken on site to prevent impacts occurring within the **World Heritage Area**? Decommissioning is likely to involve "controlled fell" of the turbines, deconstruction, then the blades will be cut up or crushed on site. How can this not lead to contamination of the site leading into the catchment area of the Apsley and Macleay Rivers.

The following images are from the decommissioning appendix of the EIS.

Figure 24 | Oxy-acetylene cutting preparation of tower base

Figure 25 | Wind turbine blade cutting

Figure 27 | Hydraulic excavator with shear attachment

2.1 Erosion - as noted in our Soils and Water response, the erosion assessment (by RUSLE method) was carried out with the assumption that the project area was "on average" less than 10% grade. This assumption ignores the fact that the "Project Footprint" (being more relevant as this is where the earthworks will be carried out) is covering areas that are demonstrably greater in slope, as the roads lead up to the ridgelines where the turbines will be located. In these areas, the slopes are 10-20% at a minimum, with many roads and turbines located on areas that are 20-33%, with some clearly on slopes steeper than 33%, as noted in F4.2 of Appendix P – Soils and Water. This makes the "Moderate" assessed risk of erosion entirely inaccurate. The more accurate erosion risk assessment (by RUSLE method) of "Very High" is explained in our Soils and Water response.

2.5 Fire and Location of asset protection zones has not been considered in the EIS. The EIS discusses the risk of fire spreading from the wind farm into the Oxley Wild Rivers National Park, but it does not discuss the increased risk associated with the inability to control fires that start within the park. This project is proposed to be located adjacent to a strategic fire advantage zone in the Oxley Wild Rivers National Park. The presence of this wind farm would preclude the use of aerial firefighting activities, which limits the ability not only for fighting wildfires, but it also impacts the ability for controlling burns during backburning operations. All the land to the east of the proposed project is category 1 bushfire prone land.

Why is the southern substation being located so close to the boundary of the National Park. It appears to be located less than 500m from the park boundary. **This is 500m from a strategic fire advantage zone. How can this be appropriate location?**

The EIS refers to Goal 1 and Direction 5 in the **New England North West Regional Plan 2036** (page 15 of the EIS). It fails, entirely, to address **Direction 11 of Goal 2, to "*Protect areas of potential high environmental value*"**. This direction is reiterated in the **New England North West Regional Plan**

2041 Objective 12, to "*Protect regional biodiversity and areas of High Environmental Value*". The map of high potential environmental value shows the project footprint lying over land of high potential environmental value. Page 35 of the regional plan states the following actions –

> *"11.1 Focus development to areas of least biodiversity sensitivity and implement the 'avoid, minimise, offset' hierarchy to biodiversity and areas of high environmental value.*
>
> *11.2 Ensure local plans consider areas of high environmental value to avoid potential development impacts.*
>
> *11.3 Encourage the identification of vegetated areas adjacent to aquatic habitats and riparian corridors in local plans."*

The **New England North West Regional Plan 2041 states** "*Avoiding impacts on, and protecting, identified HEV land at the planning proposal stage provides greater certainty and reduces the need for further biodiversity assessment and offsetting at development stage. This can drive more efficient and streamlined development processes.*"

Surely this should preclude the development of an industrial project in this location.

Site location was considered on page 134 of the EIS. "*The project boundary has been carefully chosen to balance the assessed social, environmental, and economic aspects of the Project and enable an outcome which benefits the community, the region, and NSW as a whole. A number of key factors were assessed to determine site suitability, identifying the Project Site as the most desirable option*".

COMMUNITY COMMENT

This is a nonsense conclusion. The WWF Site was only selected by the originators Mirus Wind, with strong private interest and influence from one or two original hosts landowners. Mirus Wind showed careless indifference to the proximity of the National Park.

...

EIS's claims ....

Consistently high wind speeds	COMMUNITY COMMENT **This is a convenient and unacceptable conclusion -** this site would barely have a bankable wind capacity factor if it were not for the availability of low-speed wind technology Vestas V162 6.2MW turbines. There are other projects being planned west of town away from the World Heritage area indicating wind in many areas around Walcha are sufficient for a wind farm.
Connection to the national electricity grid in close proximity to the wind farm site	COMMUNITY COMMENT **This factually and technically is a nonsense -** the ultimate grid connect is some 30 km traversing host landowners and associated landowners to the proposed Uralla Substation. There are many examples of projects closer to Line 85 connection. Therefore, any suggestion that close proximity to the national electricity grid necessitated the co-location of the project adjacent to the World Heritage area is blatant nonsense.
Suitable road access available to the wind farm site.	COMMUNITY COMMENT **This is a ludicrous conclusion–there is 113km of new road needed to be constructed through native habitat as well as extensive widening and upgrading of existing roads.** Again, there are many other alternative sites available with good or better road access.

Large land parcels consisting of low levels of residential development	COMMUNITY COMMENT Land parcels may be large compared to high population density areas such as Sydney but there are many other appropriate sites which would impact significantly lower numbers of residents. Being prime agricultural land, the land parcels are relatively small compared to many other rural areas. **A development of this size just doesn't fit the landscape.**
Willingness for landholders to support wind farm infrastructure	COMMUNITY COMMENT **Landholders who are financially profiting from this project are supporting the infrastructure.** It is unclear whether involved neighbours who have signed neighbour agreements support the project or not. There is no compensation for neighbours who have not signed agreements, so it is likely neighbour agreements were signed, potentially under duress, so some sort of compensation would be received.
Minimisation of impact on local amenity.	COMMUNITY COMMENT **This is a pastoral region, and the visual amenity is going to be significant with a change to an industrial view and numerous night lights in a currently dark sky.** Community services are going to be significantly impacted by the construction of the project. Significant impacts on local attractions such as the World Heritage wilderness area. This is a throw-away line.

The following examples of biodiversity impacts from pages 136-137 of the EIS are not acceptable. They are a result of the project being located in an area of high environmental value adjacent to the national park.

- *New England Peppermint (Eucalyptus nova-anglica) Grassy Woodlands*, the Project would impact on 14.4 ha, which was considered likely to generate a significant impact to the community
- *White Box-Yellow Box-Blakely's Red Gum Grassy Woodland and Derived Native Grassland*, the Project would impact on 20.1 ha, which was considered likely to generate a significant impact to the community
- *Spotted-tail Quoll Dasyurus maculatus*, the Project would result in the loss of up to 426 ha of potential habitat for this species which may lead to a long-term decrease in the local population, reduce the area of occupancy of the local population and interfere with the recovery of this species, therefore a significant residual impact was considered likely
- *Koala Phascolarctos cinereus* the Project would result in the loss of up to 206.73 ha of potential habitat for this species which may lead to a long-term decrease in the local population, reduce the area of occupancy of the local population and interfere with the recovery of this species, therefore a significant residual impact was considered likely
- *Greater Glider Petauroides Volans*, the Project may lead to impacts on this species relating to malnourishment or decreased reproductive output, therefore a significant residual impact was considered likely
- *Narrow-leaved Black Peppermint Eucalyptus nicholii*, the Project would result in the loss of 13 individuals of this species which may lead to a long-term decrease in the local population, reduce the area of occupancy of the local population, and interfere with the recovery of this species, therefore a significant residual impact was considered likely
- *White-throated Needletail*, the risk of direct mortality of individuals from turbine strike is a possible threat. In light of the above, the proposal is considered likely to generate a significant impact to both the White-throated Needletail and the Fork-tailed Swift (from page L-XXII BDAR appendix L)

There are further examples in the EIS of the inappropriateness of the location of this project adjacent to the National Park.

- Page 184 of the BDAR states "*Climate change will continue to induce shifts in the distribution of flora and fauna species. Adams Hosking et al. (2011) identify that current koala distributions, based on their climate envelope, will likely contract eastwards and southwards to many regions where koala populations are declining due to additional threats of high human population densities and ongoing pressures from habitat loss, dog attacks and vehicle collisions. This trend is likely to apply to other native species which reside in the Gondwana Rainforest WHA. Over time, the southern extent of the Gondwana Rainforest WHA (i.e., Oxley Wild Rivers National Park) will have increased importance as a refuge for species that are excluded from their current range by a changing climate*." We need to be protecting the important environmental areas adjacent to the national park, not shrinking them.
- Figure 2-6 on page 17 of the BDAR 6 Biodiversity corridors, riparian areas, National Parks, State Forest and World Heritage Area shows the project is almost exclusively on these biodiversity corridors and riparian areas. Connectivity corridors are a feature of the landscape. These corridors are particularly important as there are limited areas of habitat connecting back into the national park as a result of land clearing in the area. The corridors provided refuge for wildlife during the Black Summer Bushfires of 2019 when much of the adjoining park was burnt. Further fragmentation of these corridors is incremental and further reduces accessible safe areas for wildlife.

1.1 SEAR Obvious Omission and Errors

SEAR - The EIS must assess the impacts of wind turbine strikes on protected animals in accordance with Section 9.2.1.8 of the Biodiversity Assessment Method.

"9.2.1.8 The assessment of the impacts of wind turbine strikes on protected animals must …"=

(a) predict the likelihood of impact on aerial species resident in, or likely to fly over, the project area including but not limited to bat/bird strike and barotrauma.

COMMUNITY COMMENT

Bird surveys are not complete or sufficient as noted by Nature Advisory in Appendix E. There is no collision risk model. There has been a lack of surveys undertaken at night resulting in the omission of birds flying at night. "Daytime surveys of bird utilisation of the windfarm footprint and rotor-swept areas take no account of the fact that waterbirds, particularly waterfowl and shorebirds, as well as some migratory bush birds, often fly at night on migration or when commuting to feeding grounds. Among the shorebirds are intercontinental migrants listed as Migratory under the Commonwealth Environment Protection and Biodiversity Conservation Act, many also increasingly as Vulnerable or worse under federal and state legislation. A typical example regularly using the New England Tablelands lagoons is Latham's (Japanese) Snipe, but the endangered Australian Painted Snipe may also commute between New England lagoons, as do other threatened and/or migratory waterfowl and shorebirds. Local examples of such lagoons include Dangars and Racecourse Lagoons at Uralla, which attract large numbers of waterfowl and shorebirds." [2]

(b) predict the rate of impact per turbine per year for species likely to be affected.

COMMUNITY COMMENT

This has not been done. Given the high concentration of Wedge-tailed Eagles and the turbines being at high-risk impact points, this is a serious omission. There should also be collision impact models for the White-throated Needletail and Glossy Black Cockatoo, EPBC Act listed species that have moderate risk rating as well as other threatened species that may be identified.

[2] Ward, M.S., Simmonds, J.S., Reside, A.E. *et al*. (2019). Lots of loss with little scrutiny: The attrition of habitat critical for threatened species in Australia. *Conservation Science and Practice* 1:e117. https://doi.org/10.1111/csp2.117

(c) *justify predictions of likelihood of impact and rates of impact, with reference to relevant literature and other published sources of information*

COMMUNITY COMMENT

The likelihood of impact is understated for some of the birds. The likelihood of collision for the Glossy Black Cockatoo is recorded as unlikely despite the bird being known to be present in the area and at risk of turbine strike. This would raise the risk level for the glossy black cockatoo to high. **The risk for the wedge-tailed eagles is almost certain.** Given the particularly high concentration of wedge-tailed eagles and their known risk of collision with turbines, as well as the location of turbines in high risk locations, surely the likelihood is certain. This would raise the risk matrix from moderate to high. The published references that are provided are limited and on multiple occasions the source is "Nature Advisory, unpublished data".

(d) *predict the consequences of impacts for the persistence of bioregional populations, with reference to relevant literature and other published sources of information.*

COMMUNITY COMMENT

The consequences of impacts for the Little Eagle are recorded as moderate. Given the species has shown 50% decline in numbers in NSW and has a low recruitment rate, **surely the consequences are higher than moderate.** The consequence criteria (referred to in table 4) for the White-throated Needletail is recorded as moderate. Given these are a vulnerable species that fly in large flocks, is the consequence really going to be moderate, or is it going to be high or severe? This would mean that the risk to the White-throated needletail is high or severe.

(e) *predict the cumulative impacts of the project together with existing wind farms on aerial species mortality and provide justification for these predictions.*

COMMUNITY COMMENT

Wind projects that are in development contemplation or in the planning system **have not been considered** in any of the cumulative impacts.

(f) *predict and map the likely zone of disturbance around wind turbines for aerial species resident in, or likely to fly over, the project area, with reference to relevant literature and other published sources of information.*

COMMUNITY COMMENT

Alienation and Barrier Effect are discussed in the BDAR section 7.3.2, however it is hard to know what numbers are relevant. There is no mapping of the zone of disturbance.

(g) *map significant landscape and habitat features within the zone of disturbance for species likely to be affected, including but not limited to hollow bearing trees and important habitat for migratory species*

COMMUNITY COMMENT

Nature Advisory have recommended allocasuarina mapping which has not been done. (Appendix E). The mapping of hollow bearing trees has not been done.

(h) *predict the likelihood and describe the nature of indirect impacts on aerial species resident in, or likely to fly over, the project area including but not limited to barriers to migratory pathways and breeding, feeding and resting resources.*

COMMUNITY COMMENT

The loss of habitat for birds has not been considered in the EIS. Likewise, there has been no discussion on the impact of increased fragmentation on aerial species. This includes habitat for threatened woodland birds.

(i) *for migratory species, predict the impact of avoidance behaviour relative to migration distances and the availability of suitable habitat for breeding, feeding and resting over the migration route, with reference to relevant literature and other sources of published information.*

COMMUNITY COMMENT

Appendix Q discusses impact on White-throated Needletail (WTNT). Despite the WTNT being recorded within 10km of the wind farm on ebird **(Cornell University Laboratory of Ornithology public domain bird database)** in October 2018, January 2019, February 2019, February 2021 and March 2021, the

conclusion is that "it might still fly over the wind farm". This is based on the failure to detect the bird during just 4 consecutive days of targeted surveys and the BUS, noting that the bird's presence is likely to be inconsistent and unpredictable due to its migratory nature.

(j) *justify predictions of likelihood and nature of impact, with reference to relevant literature and other published sources of information.*

COMMUNITY COMMENT

As above, the reference to relevant **published** literature is limited.

(k) *predict the cumulative impacts of the project together with existing wind farms with respect to movement patterns and use of adjacent habitat and provide justification for these predictions.*

COMMUNITY COMMENT

Cumulative impacts of planned wind farms were not considered.

The BDAR must document the application of the avoid, minimise, and offset framework including assessing all direct, indirect and prescribed impacts in accordance with the Biodiversity Assessment Method.

Biodiversity Assessment Method 2017 8.1

8.1 Avoiding and minimising impacts on native vegetation and habitat during project planning

8.1.1 Locating a project to avoid and minimise impacts on native vegetation and habitat

8.1.1.1 Project location decisions should be informed by knowledge of biodiversity values. The assessment requirements set out in Stage 1 of the BAM may be used to provide an initial desktop assessment of biodiversity values for early consideration in planning the route or location of a project.

8.1.1.2 Final selection of project location may be an iterative process. Location decisions may need to be revisited when all field surveys have been completed.

8.1.1.3 Direct impacts on clearing of native vegetation and habitat can be avoided and minimised by:

(a) *locating the project in areas where there are no biodiversity values.*

COMMUNITY COMMENT

This project has been located adjacent to a World Heritage Wilderness area affecting areas of high environmental value. Have the impacts on native vegetation and habitat or biodiversity values even been considered with initial site selection.

(b) *locating the project in areas where the native vegetation or threatened species habitat is in the poorest condition (i.e. areas that have a lower vegetation integrity score).*

COMMUNITY COMMENT

Project is located in biodiversity corridors with high environmental value.

(c) *locating the project in areas that avoid habitat for species that have a high biodiversity risk weighting or native vegetation that is a critically endangered ecological community (CEEC) or an endangered ecological community (EEC).*

COMMUNITY COMMENT

Project is impacting threatened species and critically endangered ecological communities.

(d) *locating the project such that connectivity enabling movement of species and genetic material between areas of adjacent or nearby habitat is maintained.*

COMMUNITY COMMENT

Project area is impacting on biodiversity corridors important to species particularly following the Black Summer Fires of 2019.

...

2.1 Community Comments on the Integrity of BDAR and its failure to achieve the 'high standard' requisite to the Planning Act Regulation and Guidelines

The biodiversity impact assessment is described in the EIS, the BDAR and the appendices to the BDAR. There are inconsistencies between the different sections of the EIS making the survey methods and impacts very difficult to follow and understand, and in many cases, contradictory. The impact assessments have been based on surveys that in many cases are not complete or suitable for the species, including threatened birds and animals. Conclusions in the EIS and BDAR are often sweeping generalisations that are not reflective of the appendices. The report in total presents as disjointed and incomplete and does not correlate with local expert knowledge. If local knowledge was sought, it may well have resulted in more targeted surveys and a more accurate report.

1. Surveys are incomplete

Reading the EIS, the BDAR and the appendices to the BDAR, it appears surveys and studies that have been carried out to assess the impacts of this wind farm on the animals in the area are not sufficient. The following are examples.

- It is stated on page (x) and (xi) of the BDAR "*During the public exhibition of the Environmental Impact Statement and the subsequent response to agency and community submissions, the following additional surveys will be completed:*
  - *Additional hollow bearing tree surveys to quantify hollow dependent species habitat.*
  - *Additional camera trapping and hair tubes to confirm lack of detection for Eastern Pygmy Possum and Rufous Bettong. Surveys were done as per proposed methodology, however BCS provided feedback after surveys had commenced that additional survey was required.*
  - *Additional Little Eagle surveys to be conducted during breeding season.*

We have no evidence that this is being carried out.

- From the Environmental Assessment Requirements on page (xiii) of the BDAR, page xviii Section *6.1.5 Wind Farm Developments. 2. For the species identified above the assessor must perform a targeted survey…*

  Appendix E Further White-throated Needletail surveys and targeted studies for the Glossy Black Cockatoo and allocasuarina mapping have been recommended by Nature Advisory but have not been done.
- From the same - Section 6.1.5 Wind Farm Developments. *3. The technique, effort and timing of targeted surveys for each species must be documented and justified in the BAR* **– these have not been done.**
- Section 6.1.5 Wind Farm Developments. 4. *Based on the outcomes of the targeted surveys, the assessor must: a. predict and map the habitual flight paths for nomadic and migratory species likely to fly over the proposed development site on the Site Map and Location Map. b. map the likely habitat for resident threatened aerial and raptor species on the Site Map.* **There is no mapping of flight paths for migratory birds. Habitat for Wedge-tailed eagle and Glossy Black Cockatoo is not mapped.**
- Pp xix BDAR 8.3.5 Wind Turbine Strike 1. *Assessment of the impacts of wind turbine strikes on protected animals identified in subsection 6.1.5A must a. predict the (ii) rate and timing of impact per turbine per year for species likely to be affected.*

> COMMUNITY COMMENT
>
> **No collision risk modelling done at all.** This has not been done and is critical if one of the mitigation measures is to shut down turbines during high-risk periods. The BUS has established that there is an exceptionally high concentration of wedge-tailed eagles present in the area and they are present all year. Are turbines going to be shut-off all year?

- Section 8.3.5 1a(iv) (page xx) *"predict the …cumulative impacts of the proposed development alongside existing wind farms, on species mortality, movement patterns and use of adjacent habitat."* **Cumulative impacts have not considered wind-farms that are being planned in the vicinity of the Winterbourne Wind Farm.**
- From Appendix E Bird and Bat Risk Assessment - *"Commonwealth Department of Agriculture, Water and the Environment (DAWE) are now recommending 24 months (two years) of bird utilisation surveys (BUS) to provide baseline data prior to construction commencing to inform a Before-After Control-Impact (BACI) design impact assessment study. The aim of the BUS conducted to-date has been to compile a list of species that may use the proposed wind farm site as a flyway or migration route. Further baseline BUS surveys will generate a greater understanding of the utilisation rate of the site by species of birds and bats. These data will also identify resident raptor species that occur on the site and their seasonal distribution pattern. These resident raptor species may include Little Eagle, Wedge-tailed Eagle and other raptors.* **It appears the surveys carried out to-date are insufficient with only 4 surveys covering 3 seasons.**
- Appendix E of the BDAR, Bird and Bat Risk Assessment, recommends further surveys to be carried out. It appears that the recommended studies have not been completed. *"Further baseline BUS surveys will generate a greater understanding of the utilisation rate of the site by species of birds and bats. These data will also identify resident raptor species that occur on the site and their seasonal distribution pattern."* **Should this have been done before the exhibition of the EIS? How has the Bird and Bat Risk Assessment been carried out without these baseline surveys?**
- Appendix E also recommends further surveys for the White-throated Needletail. "*The surveys to-date have been limited in scope and thus may not have been at a time suitable to detect this species. It is recommended that further targeted surveys are conducted over the summer months for this species of concern*" Again, there is no evidence that these have been completed. This needs to be completed in order to make an informed assessment.
- Further investigations into the Glossy Black Cockatoo are also recommended in Appendix E with mapping of the allocasuarina trees and targeted surveys. (page 14 of Appendix E of the BDAR)
- "*NGH Consultants Pty Ltd engaged Nature Advisory Pty Ltd to implement bird and bat surveys for the Winterbourne Wind Farm*". This is provided in Appendix C- Bird utilisation survey reports. Nature Advisory carried out three of the Bird Utilisation Surveys. A fourth survey was carried out by NGH and this has been hitched on to the end of Appendix C. It is not included in the contents and the pages are unnumbered. It is unclear whether this survey has been included in the BDAR results and discussions. It is a survey carried out in Autumn and there is still no Winter survey. This survey was carried out in March 2022 and again the incorrect RSA (Rotor Sweep Area) values for the turbines were used. The developers knew which turbines were being proposed at this time. The total RSA of the proposed Vestas turbines is over twice the area of the dimensions assumed and used in this survey report.
- The brush-tailed rock wallaby has not been identified in the BDAR despite a local wildlife expert (veterinarian) and local resident being aware of its presence within the project area.
- The Risk Assessment Results outlined on table 6 of Appendix E understates the likelihood of impacts. They are based on incomplete surveys and questionable assumptions.

> COMMUNITY COMMENT
>
> **The risk to birds and bats needs to be measured and understood before the project is approved. How can 'Avoid and minimise' strategies and offsets be calculated if studies are not complete or further surveys are recommended. Shouldn't all surveys be completed before strategies can be developed for mitigation measures?**
>
> It seems that the project developers are relying on an adaptive plan, but it is too late when the turbines are operational to learn that the impact on birds and bats is too high and adaptive measures need to be taken.
>
> It appears very clear that this report has been rushed into public release, prior to the studies being adequately carried out. It is neither possible for the public or planning department to make informed observations and decisions regarding this project, or for the developer to adequately plan for appropriate mitigation measures, until these reports are completed in full.

2. There are Inconsistencies between the EIS, the BDAR and the BDAR appendices

The Biodiversity Assessment Report is very difficult document to navigate. It skips between EIS, the BDAR and the 1000+ pages of the BDAR appendices with inconsistencies between the 3 documents. The 1000+ pages of appendix are not indexed so to navigate to appendices referenced in the EIS or BDAR is very difficult. This points to the poor quality and the rushed nature of the EIS documents, which has perhaps led to these inconsistencies.

There are inconsistencies between the EIS, BDAR and its appendices. Examples include:

- Page 121 of the EIS states *"Field surveys and ground-truthed vegetation mapping confirmed the presence of three Threatened Ecological Communities (TEC) listed under the BC Act and/or the EPBC Act within the Development Footprint and detailed in Table 6-4 and shown in Figure 6-1, Figure 6-2, Figure 6-3 and Figure 6-4."* However, table 1-1 on page (xi) of the BDAR describes **four** TECs (including PCT 567 which is excluded in the above EIS summary). This PCT is included in the figures F6-2, 6-3 and 6-4 of the EIS. It is a significant area that has been excluded. It takes the area of threatened ecological communities in the EIS from 58.1ha to 187 hectares (by adding the 4 areas in the BDAR). This is very misleading to readers of the EIS.
- The area of PCT (Plant Community Type) 567 (TEC) *Broad leaved Stringybark – Yellow box shrub/grass open forest* is said to be 128.9 hectares in table 1-1 on page (xi) of the BDAR but in table 6.2 on page 148 of the BDAR the area is said to be 8.19ha (5.55ha+2.64ha).
- The area of PCT 534, *New England Peppermint Grassy Woodland* (EPBC critically endangered) is said to be 14.4ha, but in appendix L (EPBC Assessment of significant impact) of the BDAR on page LIII, it says the area is 1.42ha.
- 6.1.3.7 Matters of National Environmental Significance on page 132 of the EIS fails to list the Glossy Black Cockatoo as an EPBC Act threatened species despite it being described as such in the BDAR.
- 6.1.4.6 Matters of National Environmental Significance on page 141 of the EIS says "Appendix G identified the potential for a significant impact to the following MNES:" The threatened species included are the koala, the spotted tailed quoll, narrow-leaved black peppermint and Bluegrass. It does not include the Greater glider or White-throated Needletail which are included in 7.5.1 of the BDAR *"EPBC listed threatened Ecological Communities and threatened/migratory species."*

3. There are generalisations and conclusions in the EIS and BDAR that are not consistent with or reflective of the details in the Appendices

- Page (xi) of the BDAR says "*The key biodiversity impact for this project is the potential to have ongoing population impacts on birds or bats that are either excluded or injured by operational turbines. Extensive bird and bat utilisation data and risk assessment modelling has been undertaken to ensure that turbine placements minimise potential impacts. A Bird and Bat Adaptive Management Plan will be prepared to identify specific adaptive mitigation measures in the case that impacts are greater than predicted. Wind sector management (operationally shutting down certain turbines) is one method that can be used to limit impacts during higher risk periods*.". However, in Appendix E of the BDAR, Nature Advisory recommended that further surveys were required to generate a greater understanding of the utilisation rate of the site by species of birds and bats**. There has been no collision modelling. The risk to at least 3 bird species is moderate. What measures have been taken to minimise potential impacts as stated? What are the predicted impacts? What mitigation measures will be taken if impacts are greater than predicted? All turbines are placed in high-risk areas on ridges adjacent to steep topography. Placement of turbines along the ridgelines adjacent to the National Park is not minimising potential impacts to birds.** As stated on page 139 of the BDAR "*Whilst it is challenging to accurately classify all turbines with a risk level on the basis of preconstruction survey data, higher risk turbines are typically located in areas where bird and bat collisions are considered more likely to occur, due to proximity to: • Steep topography: gully heads, ridge lines, deep valleys and escarpments. These areas can concentrate migrating birds along relatively narrow pathways. They also provide updraughts utilised by swifts, swallows, martins, gulls and raptors. However, turbines are rarely located in areas with complex topography or in lower elevations due to the potential yield loss through turbulence and low*

elevation. • Wetlands: marsh, pond, lake, stream, and/or river. Higher concentrations of birds and bats would be encountered near water sources. Water bodies may also provide staging areas for migrating waterbirds. However, turbines are rarely located in lower elevation wetland areas and this is not considered a concern for Winterbourne Wind Farm. • Dense vegetation areas: woodland, forest, tree lines, tree clusters supporting habitat resources such as hollow-bearing trees. Narrow flight corridors usually occur through gaps between habitat patches."

- 6.1.3.6 on page 132 of the EIS "*BUS and raptor surveys were undertaken over 3 years and 3 seasons to determine the potential collision risk of the target species recorded flying at the rotor swept area (RSA) height (40-150 m).*" **Appendix E of the BDAR states that insufficient surveys were carried out. Further surveys need to be carried out in order to develop a collision risk model. The RSA is also incorrect with the correct height being (68-230m). There is nowhere in the BDAR and its appendices that gives an estimate of the number of birds and bats that will be killed and injured by the turbines. This is something we would like to know, and need to know, in order to assess the project properly.**
- Also, from this section of the EIS, "*Four threatened bird species were recorded during BUS, namely Varied Sitella (Daphoenositta chrysoptera), Speckled Warbler (Pyrrholaemus sagittatus), Diamond Firetail (Stagonopleura guttata) and Glossy Black-Cockatoo (Calyptorhynchus lathami). None of these species behave in a manner that puts them at risk of collision with operating WTGs*" However page 169 of the BDAR refers to the glossy black cockatoo and says "*Their behaviour may place them at risk from turbine collisions*" The glossy black cockatoo is a high-flying bird and will be at risk of collision with the turbine blades. This seems to be a blatant error.
- From the same section of the EIS "*The risk associated with WTG collision and indirect effects for the Project, for most assessed bird and bat species, was rated as negligible*". This is ignoring the 3 birds listed as moderate risk in the BDAR – the wedge-tailed eagle, the glossy black cockatoo and the white-throated needletail. This Bird Utilisation summary provided in the EIS is severely understating the impact to birds and is not reflective of the findings outlined in the appendices of the BDAR.
- 6.1.4.2 Significant Impact Assessment – MNES on page 136 of the EIS states that "*White-throated Needletail Hirundapus caudacutus a significant residual impact was considered unlikely*;" Appendix L of the BDAR states "*the risk of direct mortality of individuals from turbine strike is a possible threat. In light of the above, the proposal is considered likely to generate a significant impact to both the White-throated Needletail and the Fork-tailed Swift.*" Community Comment: Again the EIS is understating the findings reported in the appendices of the BDAR.
- BDAR ppxviii Biodiversity Assessment Method Order 2020 Requirement Section 6.1.5 Wind Farm Developments. "*1. For a wind farm development, the assessor must identify a list of protected animals that may use the development site as a flyway or migration route, including: a.resident threatened aerial species b.resident raptor species c.nomadic and migratory species that are likely to fly over the proposed development site.*"

COMMUNITY COMMENT AND OBSERVATIONS

1. **Note we are incorrectly directed to table 1 (instead of table 2) of Bird and Bat Risk Assessment –** table 1 is a summary of turbine number and dimensions for the WWF and is not relevant for this point. It also identifies that the dimensions of the wind turbines used to assess the risk are not correct.
2. **We are also directed to Appendix D instead of Appendix E.**
   The protected birds that were identified that are likely to be affected by blade strike are: Wedge-tailed Eagle, Glossy Black Cockatoo and White-throated Needletail. These birds are discussed in 7.3 of the BDAR with the following notes.
3. White-throated Needletail – 7.3.4 of the BDAR states "*Despite over 2,600 hours of ecological survey effort (section 4.2.5) including targeted searches, White-throated Needletail has not been confirmed within the Development Site. There are however database records within 10km of the site (see Nature Advisory 2022c). Given site habitat conditions and the lack of observations, the site is not considered to provide favourable habitat for foraging and few opportunities for roosting by needletails, however it may occasionally fly over the site.*" **This is misrepresentative of the findings**

in the Appendices. As the BDAR pointed out in appendix E and appendix Q, many of the hours spent on the BUS were outside the seasons the White-throated Needletail was expected to be in the area. This bird was reported within 10km of the proposed wind farm in e-bird in October 2018, January 2019, February 2019, February 2021 and March 2021 including flocks of the birds. The fact that the birds are almost entirely aerial, very rarely landing, makes the lack of habitat less important in this study.

4. Also, in BDAR section 7.3.4 "*The majority of birds observed at impact sites (95.7%) were flying below the RSA height, with only 3.4% of observations within the RSA (40 to 150m). The Wedge-tailed Eagle was the most commonly observed species at RSA.*

Eight raptor species were recorded, comprising 179 individual observations across all BUS periods, of which 57% were at RSA. An additional 98 incidental raptor observations were made by the BUS team outside of formal BUS."

This fails to point out the fact that there is an unusually high concentration of wedge-tailed eagles at the proposed site. The utilisation rate of eagles is estimated to be 0.66 eagles /ha/hr. The range from 10 comparable wind farms is 0.01-0.44 (page 17 appendix C Bird Utilisation Survey Reports)

The dimensions for the turbines that were used to count the number of birds flying at RSA are incorrect with the Max upper RSA being 150m instead of 230m. This is a significant oversight. The percentage of birds flying at RSA is grossly underestimated as a result of this. If the raptors flying above the measured RSA are included in the count, the percentage of raptors flying at RSA would actually be above 80%.

4. The EIS, BDAR and Appendices are confusing and difficult to follow.

Information regarding animal surveys is scattered through the EIS, BAR and appendices (almost 1800 pages) with different conclusions and descriptions in different sections. There are referencing errors with readers being directed to the incorrect tables, figures and appendices as outlined above. Information that is presented in one section of the EIS is different to that presented in other sections, leading to confusion and frustration when trying to understand the impacts of this project on the biodiversity of the region.

The information referring to the Glossy black cockatoo is particularly hard to follow. It is listed on some EPBC Act tables and not others. The targeted survey is included in the BDAR not the appendices with the other bird surveys. Mapping for habitat has been recommended but it does not appear to have been done. However, targeted surveys were reportedly carried out based on habitat. The survey sites for the targeted survey are listed as GPS co-ordinates rather than being located on a map. This means the reader has to plot these co-ordinates on a map to understand the location of the BUS sites. Appendix E does not list the glossy black cockatoo as a candidate for collision risk modelling despite being listed as at moderate risk and being a threatened species.

Conclusion – Quite clearly the BDAR falls well short of the high standard envisaged by the Planning Act and Associated Guidelines. This conclusion confirms the challenges the Community has in understanding and assessing the potential impacts of the Project. It would be procedurally unfair to conclude that the Proponent has complied with the obligation to "be as succinct as possible and easy to understand, reflect community views contain a technically robust assessment of the impacts of the project and to provide a justification and evaluation of the project as a whole, having regard to the economic, environmental and social impacts of the project and the principles of ecologically sustainable development." (DPIE Guidelines on Preparing an EIS) The BDAR is demonstrably wrong and confused in places. The fact that the Proponent relies on future plans doesn't mitigate on the obligation to facilitate a process for impacts to be assessed before consent.

2.2 Request for further information

We would like to see the recommendations outlined on page 13 of appendix E (Bird and Bat Risk Assessment) carried out and recorded so the impacts on birds and bats can be understood before the project can be considered for approval. These recommendations include:

- "development of a stronger information base for the WWF to understand the use of the site by the following key species:
  - White-throated Needletail (temporal and spatial patterns of abundance and activity);
  - Wedge-tailed Eagle (location of breeding sites); and
  - Glossy Black-Cockatoo (location of favoured foraging habitat). The additional consideration of the use of the site by these species will further inform project design and other mitigation measures." Pp15 Appendix E.
- Further surveys be carried out (4 seasons per year over 2 years) and a Before-After Control-Impact design impact assessment study.
- Turbine free buffer areas around raptor nests.
- Further surveys in winter and early spring to locate threatened raptor nests and document flight behaviour.
- Further targeted surveys for the White-throated Needletail involving point-count surveys twice a fortnight from November to April.
- Mapping allocasuarina trees and applying appropriate turbine free buffers from these habitats.
- A Collision Risk Model for species recorded regularly (the wedge-tailed eagle, glossy black cockatoo and white-throated needletail). Note page 14 of appendix E of the BDAR states "In relation to the White-throated Needletail, if this species is recorded during statistically designed utilisation surveys in moderate numbers at the WWF regularly between November and April, this will generate sufficient information for the development of CRM for this species. There is currently insufficient data to complete a CRM for this species. As no other species had a moderate to high risk from the risk assessment a collision risk model is not necessary for any other species. Sufficient data is required to undertake a collision risk model effectively. A CRM is less accurate for species that have low activity levels across the site and is not recommended to be generated in such circumstances." The glossy black cockatoo and the wedge-tailed eagle were also listed as having a moderate risk from the risk assessment. Given the high concentration of wedge-tailed eagles in the area and the high likelihood of impact, we would like to see a collision risk model developed for the wedge-tailed eagle.
- A bird and bat adaptive management plan (draft required to be lodged with EPBC Act assessment documentation). As there appear to be no mitigation measures for the impacts on birds and bats, we would like to know what this plan is going to include.
- An elevated lower RSA height and 120m buffer from RSA of turbines recommended as bat impact mitigation measures.

This bird and bat risk assessment (appendix E) was based on surveys using the wrong turbine dimensions. Table 1 on page 2 of this appendix describes the rotor radius as 55m; max upper RSA (tip) as 150m; hub height as 95m; lower minimum RSA as 40m and total rotor swept area/turbine as 9504m2. The RSA of the turbines being proposed for the Winterbourne Wind Project is over twice the area of the turbines the assessment was carried out on. The height recordings of the birds throughout the survey are also inappropriate for the turbines being proposed for the project. **We would like to see a risk assessment and collision risk model based on the relevant turbine specifications for the project**.

Average collision rates are discussed on page 16 of appendix E of the BDAR. This discussion is based on a separate study with turbines with a rotor-diameter either side of 103m. The rotor-diameter of the proposed Vestas turbines is 162m. How can this data be compared to the Winterbourne Wind Project when there is such a discrepancy in the size of the turbine? How many birds and bats can we expect to be killed from this proposed wind farm, with a rotor sweep area of more than twice the area of the turbines in the quoted study? **We would like to know the expected average collision rates based on the appropriately sized turbine.**

Minimising Impacts – page xi of the BDAR *"The key biodiversity impact for this project is the potential to have ongoing population impacts on birds or bats that are either excluded or injured by operational turbines. Extensive bird and bat utilisation data and risk assessment modelling has been undertaken to ensure that turbine placements minimise potential impacts. A Bird and Bat Adaptive Management Plan will be prepared to identify specific adaptive mitigation measures in the case that impacts are greater than predicted. Wind sector management (operationally shutting down certain turbines) is one method that can be used to limit impacts during higher risk periods."*

COMMUNITY COMMENT

There has been no indication that any consideration was given to the bird and bat utilisation data and there has been no risk assessment modelling. Turbines are placed in high risk areas for birds. What mitigation measures will be taken if impacts are greater than predicted. What are the predicted impacts – there is no indication of number of birds that will be killed per turbine per year in the EIS. Operationally shutting down turbines does not sound practical given the high concentration of wedge-tailed eagles and the presence of them all year.

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COMMENTS ON THE WINTERBOURNE WINDFARM PROPOSAL

I refer to the document Winterbourne Wind Farm Bird Utilisation and Raptor Surveys 2020-2022 (Nature Advisory 2022) that was used to inform the Biodiversity Assessment Report (BDAR, Appendix C) and EIS for the project. A second bird/raptor use survey was conducted in March 2022 (BDAR, Appendix C: ERM 2022).

As background, in December 2022/January 2023 I visited the northern slopes of Blue Mountain in the vicinity of proposed turbine numbers B001 to B003; inspected a 1-km section of roadside woodland on Blue Mountain road between Hazeldene Road and Winterbourne Road within or adjacent to the windfarm footprint; and made slow reconnaissance drives on sections of Hazeldene Road, Winterbourne Road, Bark Hut Road, Old Brookmount Road, Moona Plains Road, Rowleys Creek Road and Chinnocks Road that fall within the footprint.

The BDAR raptor surveys, being conducted in March/April, October and January, were not conducted at the optimal time for detecting nesting Little Eagles (a listed Vulnerable species in NSW), which are most active and vocal at nest sites during the nest-building phase in early August to early September. In October half the adult breeding population (i.e. females) is closely attending nests rather than flying; in January only successful nests or territories might be detected on the basis of active, vocal juveniles (with about 30% of nests having failed before then); and by March or April juveniles have dispersed from the local population (Debus *et al.* 2007a; Debus 2017a; Larkin *et al.* 2020). Little Eagle nests are known from near the windfarm footprint, e.g. at Eastlake on Hillview Road (successful nest in 2021, i.e. NOT displaced by the Sea-Eagles there) and at Petali on Thunderbolts Way. Given the BUS record of a Little Eagle at Moona Plains, Little Eagles are possible throughout the footprint area, and I observed potential nesting and foraging habitat in the better woodland patches on lower ground in and near the footprint. More diligent survey for nesting Little Eagles, at the most appropriate time of year, is desirable, as recommended by the BDAR.

Wedge-tailed Eagle breeding density around Armidale is of the order 60 square km or less per pair, or between 4 and 7 km between neighbouring active nests (Debus *et al.* 2007b; Debus 2017a). My recent reconnaissance of the windfarm footprint and project area suggests that eagle densities are higher towards the gorge rims, with the

likelihood of nest sites in secluded, wooded gullies running off, for instance, the northern slopes of Blue Mountain (based on observation of display behaviour above a suitable gully) and other wooded hills in the footprint. Indeed the BUS and raptor surveys conceded higher numbers of Wedge-tailed Eagles in the Winterbourne footprint than known for other windfarms elsewhere, but did not detect breeding activity or nests, other than indicative carrying of nesting material. The lack of detection of nests or breeding is probably because surveys were conducted in October, when indicative flight behaviour is minimal, and in January when juveniles are already mobile, and because specific nest searches were not conducted. Surveys in autumn detected peak numbers of eagles, when juveniles are independent and dispersing, and using the updrafts on ridges and gorge rims to assist their movements. Nevertheless, most BUS points were not located close enough to the gorge rims to detect the maximal numbers of eagles likely to be present in the footprint, and thus the risk to eagles was probably underestimated (BDAR Appendix E, collision risk assessment). Together with a risk assessment for a revised rotor-swept area (RSA) based on 6-Mw (not 2-Mw) turbines (see below), it is apparent that all figures for eagle numbers, movements through the RSA and collision risk should be recalculated, and searches for Wedge-tailed Eagle nests conducted at the appropriate time of year. Claiming 'negligible' impact on Wedge-tailed Eagles (EIS and BDAR) may be premature

My reconnaissance on roads through the project area detected Wedge-tailed Eagle pairs with fledged juveniles on Winterbourne Road between Blue Mountain Road and Old Brookmount Road, and on Old Brookmount Road approaching the windfarm footprint, and I observed multiple Wedge-tailed Eagles from most roads within the project area or footprint, including Hazeldene Road, Bark Hut Road, Moona Plains Road and Chinnocks Road. Applying estimated densities (as above), there would be at least three or four breeding pairs within the 22,000-ha project area plus offspring, immature birds and a large population of mobile eagles attracted by the topography and the updrafts at the gorge rims. It is apparent from my work and surveys throughout NSW and in other states that the New England Tablelands are a hotspot for breeding Wedge-tailed Eagles and Little Eagles.

A further issue for collision risk, particularly for raptors, is that the Winterbourne BDAR risk assessment was based on 2-Mw turbines of rotor-swept area (RSA) up to 150 m above ground. However, the newer, larger 6-Mw turbines likely to be installed in new windfarms have a much larger rotor-swept area to 230 m above ground. Thus, many of the raptor records in the Winterbourne BDAR and appendices, discounted as being above the RSA, may in fact be within the RSA and therefore incur a higher collision risk, if 6-Mw turbines are installed. Given that painting one blade (of the three) black on turbines significantly reduces the incidence of raptor collisions by making the moving turbines more visible, mandating such a strategy would seem desirable but there is no discussion of its inclusion in mitigation strategies. Likewise the 'smart' camera systems overseas that recognise eagle silhouettes and shut down a turbine if an eagle approaches within 1 km.

For other Australian windfarms (in Tasmania) it was claimed that eagle breeding success at and away from windfarms was similar, but that study was flawed, with breeding productivity lower at than away from windfarms (Debus 2017b). More

rigorous studies with better sample sizes and design find lower eagle breeding productivity at windfarms than away from windfarms, and the driving factor is turbine mortality of breeding adults (e.g. Balotari-Chiebao *et al.* 2016). For long-lived, slowly reproducing species such as large eagles, adult mortality is a key factor in population dynamics, and local windfarm mortalities potentially create a continental-scale population sink (Katzner *et al.* 2016). In Australia, this may particularly be the case with cumulative impacts, such as potentially arise from the multiple windfarms proposed for the tablelands adjoining the Winterbourne proposal, although each windfarm proposal is assessed separately on a case-by-case basis. Furthermore, limited carcass surveys beneath a small sample of turbines underestimate the eagle collision rate, being only a proportion or index of the total toll, because of the number of injured eagles escaping and dying off site, as well as failure to find all carcasses on site (Mooney 2012). Wedge-tailed Eagle mortalities are known for other New England windfarms, and the BDAR concedes that Little Eagles are occasional mortalities at windfarms elsewhere.

Another raptor that deserves greater attention with respect to windfarm collision risk is the Brown Falcon, recorded by the BDAR in the Winterbourne footprint. Unfortunately, news was received too late for inclusion in a major review of Australian falcons (Debus 2022) that this species suffers catastrophic collision mortality at onshore Tasmanian windfarms, which intercept its trans-Bass Strait migrations to Victoria. Such recent mortality is in the hundreds (Mooney 2022) – I heard a verbal quote of 500 – which may partly explain the recorded 80% decline in its limited island population in Tasmania (Debus 2022). As Mooney noted, there is no official concern because the falcon is not listed as threatened, but that level of impact is how a species becomes threatened; an 80% decline would qualify it for Endangered status in Tasmania. In NSW, the Brown Falcon declined by about 50% in the 20 years to 2006 (Debus 2022); if the decline is continuing, and mortality from burgeoning windfarms increases, it would qualify for at least Vulnerable status, 50% being the threshold for Endangered.

Daytime surveys of bird utilisation of the windfarm footprint and rotor-swept areas take no account of the fact that waterbirds, particularly waterfowl and shorebirds, as well as some migratory bush birds, often fly at night on migration or when commuting to feeding grounds. Among the shorebirds are intercontinental migrants listed as Migratory under the Commonwealth *Environment Protection and Biodiversity Conservation Act*, many also increasingly as Vulnerable or worse under federal and state legislation. A typical example regularly using the New England Tablelands lagoons is Latham's (Japanese) Snipe, but the endangered Australian Painted Snipe may also commute between New England lagoons, as do other threatened and/or migratory waterfowl and shorebirds. Local examples of such lagoons include Dangars and Racecourse Lagoons at Uralla, which attract large numbers of waterfowl and shorebirds.

At least some woodland patches within or adjacent to the footprint are valuable remnants supporting a diversity of eucalypt species and birds. A typical example is the roadside patch on Blue Mountain Road between Hazeldene Road and Winterbourne Road. As well as elements of the Critically Endangered Ecological Community Yellow Box-Blakely's Red Gum grassy woodland, it contains elements of

the Endangered Ecological Communities Ribbon Gum-Mountain Gum-Snow Gum grassy woodland, and New England Peppermint on basalts or sediments, and some trees appear to be the rare eucalypt Bendemeer White Gum *Eucalyptus elliptica* (requiring verification by a botanist). Such patches could be lost to the widening of roads for traffic and transport associated with construction of turbines and other infrastructure. Some of these trees are crucial habitat (hollow-bearing) trees for fauna, and hundreds of years old, antedating European colonisation. Furthermore, patches such as the Blue Mountain Road corridor (contiguous with nearby hillside woodland) and others are inhabited by threatened woodland birds such as the Glossy Black-Cockatoo, Little Lorikeet, Varied Sittella, Speckled Warbler, Dusky Woodswallow, Scarlet Robin and Diamond Firetail, all recorded by the BUS reports and all susceptible to habitat loss. Increase road traffic on widened, higher-speed roads could also increase the risk of road kill for some of these species that feed on or near the ground, notably the last four, as well as the above-mentioned raptor species that feed on road killed animals, a 'resource' likely to increase (i.e. rabbit, hare and kangaroo/ wallaby road carrion). Prey and carcasses beneath turbines may also attract scavenging raptors.

The project area is characterised by the EIS/BDAR as already cleared and fragmented habitat, implying low habitat value. However, even small patches can have high conservation value (Debus *et al.* 2006). Further habitat clearing and fragmentation for the turbines and other infrastructure (roads, powerlines) will be incremental, worsening the problem for threatened and other declining woodland birds and other fauna, including increasing the impact of Noisy Miners which competitively exclude other birds from small and linear fragments. This at a time when other work on the tablelands is trying to reverse the problem by habitat restoration and re-connection. Ancillary works for the turbines will also increase the risk of bird (notably raptor) collisions with and electrocutions on powerlines and pylons or poles.

The Winterbourne windfarm footprint is close enough to Oxley Wild Rivers National Park to suggest the risk of compromising the Park's primary purpose, i.e. its conservation values, because of the impact of clearing, habitat fragmentation and more 'hard' edge on and near the Park's western boundary, and the risk of increased mortality of protected and threatened fauna using the Park and adjoining lands.

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Dr Stephen Debus

3 January 2023

WINTERBOURNE WIND FARM (WWF)

Part E
Response to Traffic and Transport

This Part E presents as the Voice for Walcha's (VfW) **Group Objection Submission** to the Proponents Traffic and Transport Report.

Key Community Message

Any assessment of the road and traffic impact of this project leads to the demonstrable conclusion that the rollout of the REZ Zones is a total calamity – gobsmackingly ludicrous and totally devoid of any logical infrastructure planning. The New England Highway is basically the one arterial network servicing the Northern Tablelands. As a result of this wind farm project it will remain almost permanently clogged. New infrastructure suggested for the by-passing of Muswellbrook, and new corridors from the West are nothing but nonsense, will costs billions of taxpayer dollars and take 5-10 years to adequately construct.

Even a small amount of serious strategic planning at Scoping Stage would have concluded in favour of alternative sites. This was ignored by the Developer and obviously by the Government. The development proposition just does not fit – it is oversized and poorly located, resulting in serious safety concerns as well as financial and social impacts that are not acceptable to the community. There are concerns for the safety of local road users, travellers, school children and buses, cyclists and pedestrians, as a result of the volume of traffic on the roads, particularly heavy vehicles. The location of the project in the north-eastern area of the council, necessitates all traffic to travel through the town, directly past playing fields, the community hall, showground, businesses, homes and the Walcha pre-school. It will severely affect traffic on the Oxley Highway and Thunderbolts Way, the main arteries running into and out of town.

One of the communities' main concerns is how this increase in traffic volume is going to affect the safety of local and visiting road users. The estimated daily volume of heavy vehicles on the Oxley Hwy and Thunderbolts Way is going to increase from approximately 100 to 250. These roads are mountainous with no overtaking lanes and few areas where heavy vehicles can be safely overtaken. There is a real concern that this will result in a serious road incident.

School buses will be using the roads leading to the project site and within the project area. There is a real concern for the **safety of school children and buses** that will be affected by the increase in traffic on Oxley Highway and particularly northeast of town. The daily volume of heavy vehicles on Winterbourne Rd will be increasing from 14 to 350. Children often walk or ride bikes to their bus stop and wait on the side of the road, often unaccompanied. Local commuters are very aware of the children on the roads and are very cautious at these times. I don't think truck drivers, not local to the area, who have their mind on the job and the time, will be nearly as conscious of the risk to children. This is exacerbated by the fact that buses are likely to be delayed, meaning children will be waiting for unknown periods for the bus to arrive. It is made even more dangerous by the fact that there will likely be a line-up of vehicles behind the slow-moving traffic, looking for overtaking opportunities. The buses that are frequently stopping and starting are also at risk with the number of heavy vehicles on the road. Giving bus drivers CB radios to communicate with the project traffic is not a solution. Unless project traffic is stopped completely during the times the buses and children are on the road,

the risk is unacceptable. Who is going to be accountable for this and accept the responsibility if there is an accident?

The large number of heavy vehicles that will be travelling on the Oxley Hwy and Thunderbolts Way as a result of the project add unacceptable risks for the Walcha community. Tamworth and Armidale are our major regional towns, and Walcha residents travel to these centres for work, business, health, sport, and leisure. These roads are vital arteries for the town of Walcha. The impact of the OSOM vehicles that will be travelling on the Oxley Hwy for at least ten months escalates these dangers. Have emergency vehicles, school buses, and children waiting on the side of the been considered? Lives will be put at risk because ambulances will not be able to get to the hospital in the shortest period of time.

There are unacceptable economic and social impacts of the traffic pressure created by the project, aside from the risks already outlined. Agriculture is one of the main industries in town. Livestock businesses rely on trucking livestock as efficiently as possible for welfare and financial reasons. A B-double of cattle travelling to a feedlot could lose $6000 due to delays in transport. We have trucking businesses located in town. Any increase in travel time for trucks is a significant cost to these businesses. We have couriers who travel between Walcha and Tamworth and Armidale that will be severely impacted. These are only a few examples.

There are also social impacts resulting from the inability of Walcha residents to travel freely around our region. It affects social interaction, the ability to travel for sport and leisure and pleasure. It affects the communities' resilience and mental health.

As this will be covered in more detail in the **Submission on Cumulative Impact**s – the compounding effects of the tsunami of projects can't be ignored. Traffic and road danger will be endured for 5-8 years – making living in Walcha and other Southern New England Communities impossible. It will destroy the environmental ,economic and social fabric for thousands of people raising families and conducting important rural and agricultural commerce.

- The Road and Traffic outlook for this project is contrary to the principles of ecological sustainable development which underpin the Environmental Planning and Assessment Act 1979
- The Road and Traffic outlook for this project might induce development contrary to the State Environment and Planning (Transport and Infrastructure) Policy 2021 Part 6.4 Impact of the Development on Traffic
- The diminish access to public roads and the induced danger is clearly in conflict with the provisions of the NSW Roads Act 1993
- The potential for death or serious injury induces potential contemplation of serious driving offences pursuant to the NSW Crimes Act 1900
- The RTA Guide to Traffic Generating Development -Transport NSW

The Community strongly request that this project be rejected as a result of safety risks that are unacceptable and a road network that does not have the capacity for the project traffic without serious implications to the community of Walcha.

1.1 SEAR Obvious Omission and Errors

Traffic and Transport

THE EIS MUST …

- assess the construction, operational and decommissioning traffic impacts of the development on the local and State road network (including New England Highway, Oxley Highway, Thunderbolts Way and all local roads proposed to be used);
- provide details of the peak and average traffic volumes (both light and heavy vehicles) and transport and haulage routes during construction, operation and decommissioning, including traffic associated with sourcing raw materials (water, sand and gravel);

The Community is at considerable disadvantage in trying to assess the impacts for development processes which have clearly not been communicated.

The developers have been derelict in their response to include traffic associated with sourcing raw materials for the Project.

The developers have not ascertained where the raw materials are going to be sourced from.

As reported in Appendix D of the Traffic Impact Assessment – Calculated Total Traffic Volumes

- 5000 heavy vehicle movements required for water cartage (50% of water requirement)
- 4375 heavy vehicle movements required for aggregate cartage
- 3438 heavy vehicle movements required for sand cartage
- 1250 heavy vehicle movements required for cement cartage
- 4688 heavy vehicle movements required for pavement material (30%) of requirement.
- 3438 heavy vehicle movements required for cable trench sand.

Total of these movements is 22189 heavy vehicle movements or 83% of total heavy vehicle movements. The source of these raw materials is not known.

How can a traffic impact assessment be developed if the origin of 83% of vehicle movements is unknown.

The proponents do not know if the water and gravel they are hoping to source from within the project area are available. If they are not available, which is reasonably likely, there will be a further

- 5000 heavy vehicle movements for water cartage and
- 10938 heavy vehicle movements for pavement material cartage.

This number of heavy vehicles will increase the total number of heavy vehicles by 16000 heavy vehicle movements or 60%.

How can a traffic impact assessment be developed if heavy vehicle movements could vary by 60%.

As described in the community response to Appendix P Soils and Water, the community believe the estimates of the volumes of raw materials may be totally understated. This will have the effect of again increasing the number of heavy vehicle movements.

THE EIS MUST …

- assess the potential traffic impacts of the project on road network function including intersection performance, site access arrangements, site access and haulage routes, and road safety, including school bus routes and school zones;

The preparation of this Traffic Impact Assessment and the justification and conclusions reached are based almost entirely on level of service based on peak hour traffic volumes and intersection assessment. It has failed to take into account the local conditions where there are limited overtaking areas, large speed differentials between heavy and light vehicles and mountainous terrain. Impacts to traffic based purely on level of service from peak traffic volumes and intersection analysis is not appropriate on our state and local rural roads. As described in the Guide to Traffic Management Part 12, page 47: *"Rural roads - Aspects that may require consideration include the effect of additional traffic and access treatments on:*

- *overtaking opportunities*
- *speed differentials and reduction in LOS where significant heavy vehicle movements occur*
- *inadequate sight lines due to crests, curves or dips (may be critical for safe heavy vehicle operations)*
- *dust nuisance and visibility impediment from unsealed shoulders*
- *noise for adjoining properties."*

The Developer has failed to consider these critical safety issues on the local and state road network in the traffic impact assessment. The community would need to see the Level of Service of the roads reassessed taking these factors into account.

"Concept of Level of Service" is described in Appendix H of the Traffic Impact Assessment. Table 22 sets out two-way hourly road capacities for two-lane roads for different levels of service. It is based on vehicles per hour with percentage of heavy vehicles of 0%, 5%, 10% and 15%. In the case of the project traffic for the Winterbourne Wind Farm, heavy vehicles are likely to contribute approximately 50% of vehicles per hour. **This dramatically changes the assumptions used in the assessment and therefore the conclusions that roads will maintain "level of service A." This higher percentage of heavy vehicles is particularly significant given the winding, undulating and narrow nature of the roads.**

Traffic impact was also assessed by an analysis of the intersection of Thunderbolts Way with Jamieson St using the SIDRA computer modelling program. It was concluded that *"Given the intersection accommodates the highest level of traffic of all the intersections used by construction vehicles within the vicinity of the Project, it is concluded that the intersections of the local roads northeast of Walcha are all expected to continue to operate with a good level of service." Page 192 EIS.*

The fallacy of this assessment is using a wide and high functioning intersection as the basis to determine functionality of all intersections east of this intersection. This 'control' intersection is vastly different to other intersections being rated. This leads to erroneous assumptions. The intersection described is within the town boundaries where the speed limit is 50km/h. Thunderbolts Way and Jamieson are paved roads and are 12m wide. The line of sight is excellent.

By contrast, the intersections of the local roads northeast of Walcha are on roads with a speed limit of 100km/h. The roads are narrow, winding and undulating with blind corners and crests. Many of the roads are unpaved. Some of the intersections do not meet the minimum line of sight requirements.

There is no way a comparison can be made about the performance of all the intersections of the roads northeast of Walcha based on the performance of the intersection of Thunderbolts Way and Jamieson Street.

Further to this, page 4-5 of the Guide to Traffic Generating Developments says *"Developers should consider the following points when designing developments near rural roads:*

- *as intersections are less frequent in rural areas, they are less of a determinant of rural road capacity.*
- *the need for overtaking opportunities on two-lane roads is greater, as the level of service is determined by average travel speeds and the percentage of time spent delayed."*

This intersection analysis is not appropriate to assess the traffic impacts east of Walcha.

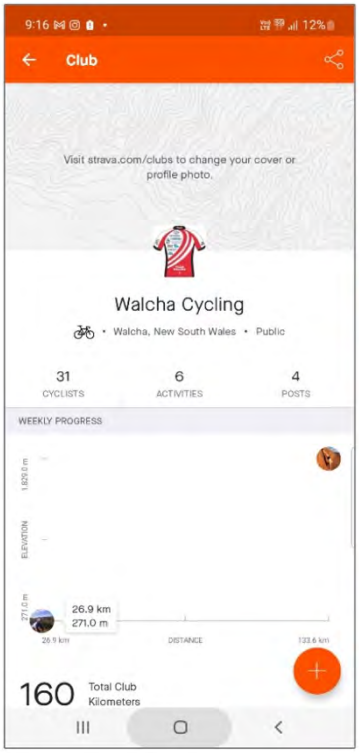
Impact on Safety - The RTA Guide to Traffic Generating Development (as recommended by Transport NSW) recommends that "Where the accident history of a proposed transport route is presented, accident details (such as the type of conflict and vehicle involved) must be provided. Accident numbers alone are not sufficient for safety appraisal."

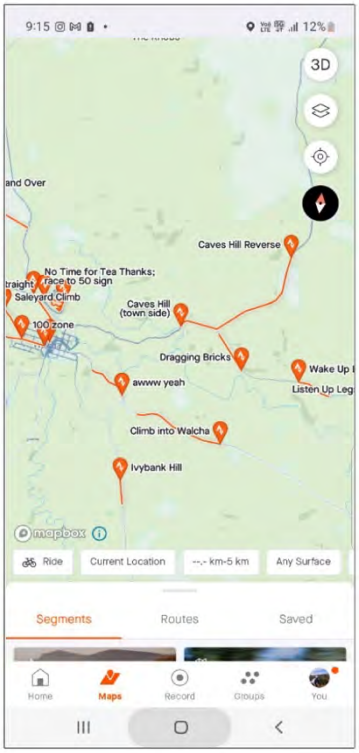
The accident history has been provided but there are no details of vehicles involved. Given the high number of heavy vehicles that will be on the road as a result of the project, this omission is significant. How many of the accidents involved heavy vehicles?

Road safety has not been assessed. The Oxley Hwy and Thunderbolts Way are important roads for Walcha residents and travellers being the only access to our major centres – Tamworth and Armidale and are the main arterial roads to the north and west. There are limited areas where vehicles can be overtaken, particularly heavy vehicles. In the presence of multiple truck, cars accumulate, causing frustration and dangerous decisions to be made. This has not been considered when assessing the impact, the project traffic is going to have on road safety.

School Bus Routes - Only 1 of the 2 bus routes has been included in the EIS. The Emu Creek bus route has not been provided in the EIS. This lack of care when considering what must be one of the major safety risks is alarming. The Community would like to see all bus-stops marked with highly visible signs.

The developers have failed to recognise that the roads approaching and within the project area are popular with cyclists and pedestrians. This is addressed on page 18 of the Traffic Impact Assessment. *"4.7 Walking and Cycling Footpaths are typically provided on both sides of all roads within the Walcha township. Excluding these facilities there are no pedestrian or cyclist facilities provided within the surrounding area nor in the vicinity of the Project Boundary."* Currently, the roads northeast of Walcha are relatively safe despite the winding hilly roads because of the relatively low traffic volumes. They are also great for cycling, with their challenging hills and spectacular views. Evidence of the popularity of these roads for cyclists is in the international cycling platform, Strava identifying the area in heat maps, and identifying the 31 local riders.





There are also frequent pedestrians on the Emu Creek Rd between Walcha and the Summervale Indigenous Village where the project traffic will add 558 vehicles to the road each day (including 288 heavy vehicles).

Vestas have identified that the peak evening traffic at the intersection of Jamieson St and Thunderbolts Way will be 5.30pm-6.30pm. This will endanger pedestrians. This is adjacent to the Walcha showground where indoor hockey is played on Wednesday evenings involving many school children. Touch football is played on Thursday evenings at the John Oxley fields with many children and adults riding bikes and walking out to the fields. There is also regular soccer and rugby training at the John Oxley fields. **All these activities occur during these peak traffic conditions. The heavy vehicle traffic in this area is totally incompatible with these activities and represents a real risk to safety and a danger to our community.**

THE EIS MUST …

- assess the capacity of the existing road network to accommodate the type and volume of traffic generated by the project (including over-mass / over-dimensional traffic haulage routes from port) during construction, operation and decommissioning.

The capacity of the road network has not been assessed fully. Appendix A of the TIA, Route Study from Newcastle to Winterbourne Windfarm, outlines the following bridges are yet to be assessed for overmass transport – Goonoo Goonoo Creek Bridge, Reedy Creek Floodway, Peel River Bridge, Piallamore Anabranch Bridge, Cockburn River Bridge, Surveyors Creek Bridge on Oxley Hwy at Walcha Road, Ohio Creek Bridge, Emu Creek Bridge, Winterbourne Creek Bridge. "Additionally, once the loads turn off the New England Highway all structures that require the loads to travel over them, will need to be assessed for axle loads." (Appendix A page 127). Also "This route would need to be assessed to handle a loaded height of up to 6.0 metres. It is likely that there are wires that will need to be permanently lifted." (Appendix A) **Clearly the capacity of the existing roadwork has not been fully assessed.**

The Developer's traffic impact assessment has been based on the road dimensions, NOT the road pavement load capacity. The capacity of roads has been based on peak hour traffic volumes and intersection assessment. **This does not take into consideration the long-term impacts of a large volume of heavy vehicles on the road.**

THE EIS MUST …

- an assessment of the likely transport impacts to the site access and haulage routes, site access point, any rail safety issues, any Crown Land, particularly in relation to the capacity and conditions of the roads; and
- provide details of measures to mitigate and / or manage potential impacts including a schedule of all required road upgrades (including resulting from over mass / over dimensional traffic haulage routes), road maintenance contributions, and any other traffic control measures, developed in consultation with the relevant road authority

A representative traffic impact assessment can not be provided unless the fundamental information is known. This obviously needs to include the source of raw materials. Mitigation measures can not be considered until there is an appropriate TIA.

TRAFFIC NSW…

In addition to the SEARs, Transport for NSW has requested the following:

- In order to provide the detail required to assess the proposal, TfNSW requests that a Traffic Impact Assessment (TIA) be prepared by suitably qualified person/s in accordance with the Austroads Guide to Traffic Management Part 12, the complementary TfNSW Supplement and RTA Guide to Traffic Generating Developments. The TIA should include, but not necessarily be limited to, an assessment of the considerations outlined in Attachment A."

Section 4 of the Guide to Traffic Generating Developments – Interpretation of Traffic Impacts lists the 4 ways traffic can have an impact that need to be addressed. 1. Impact on traffic efficiency, 2. Impact on amenity, 3. Impact on safety, 4. Impact on road pavement life.

1. Impact on traffic efficiency – the overreliance of the EIS to rely on level of service and not consider other factors important on rural roads has already been discussed.
2. Impact on amenity has not been considered in this traffic impact assessment. Tamworth and Armidale are the major centres for work, health, business, retail, recreation. **This assessment has failed to recognize the impost the traffic is going to have on the local residents of Walcha who travel regularly on the Oxley Hwy and Thunderbolts Way.**

   > **How will emergency vehicles be able to get to critical situations.** How long will it take our ambulances to get to Tamworth hospital in emergencies?
   >
   > **We have many businesses that rely on expedient travel times on the road.** There are trucking businesses and couriers based in Walcha who rely on efficient travel times.
   >
   > The movement of livestock to and from properties in the area is **reliant on direct undelayed travel.**

3. Safety of commuters on the state and regional roads has not been addressed in the EIS despite the number of heavy vehicles on increasing by approximately 150% - 2500% due to project traffic.
4. Impact on road pavement. There has been no consideration of impact on road pavement in the EIS.

Page 8-6 of the Guide to Traffic Generating Developments lists some of the impacts that should be considered. *"The following lists some of the impacts a development may have on existing road conditions:*

- the expected rate of pavement deterioration, assessed in conjunction with the expected number of heavy vehicle movements (expressed as Equivalent Standard Axles - ESA).
- the reduction in pavement life which may be expected.
- the cost to the community to repair the resulting pavement damage, and maintain the pavement in an acceptable condition.
- the capacity of existing bridge structures and the additional maintenance costs attributable to the development."

Also from Page 55 Guide to Traffic Management Part 12 *"6.3 Infrastructure and Pavement Impact Assessment. Some projects, because of their size, location or the types of vehicles involved, will have a direct impact on the road pavement – and possibly bridges and culverts – in the area near the development. Examples include quarries (where the vehicles accessing the development are large and heavy) and developments that generate volumes of traffic, which exceed the earlier design volume for the road pavement, in terms of the number of equivalent standard axles (ESAs). In these cases, an assessment of the development's impacts on the road pavement will be required."*

These impacts have not been covered in the EIS. Unless this is addressed, the cost of a decrease in the life of the roads is going to be a cost that is borne by the community. The community would like to see an assessment of the development's impacts on the road pavement. The road upgrades, particularly work on bridges and crossings are going to cause major disruptions to local traffic. The ongoing roadworks as a result of the heavy vehicle impacts on the roads is going to be significant an a major imposition on the community.

From page 54 Guide to Traffic Management Part 12 *"An independent road safety audit This should be undertaken where the risks to the public are significant, specifically where:*

- *roads surrounding the development have existing road safety issues*
- *the development is large and complex with high levels of activity by all road users (e.g. residential subdivisions and industrial subdivisions of more than 20 lots; shopping centres (new and expanding) with more than 50 car parking spaces)*
- *large-scale rural projects such as mines or quarries which significantly change the type and behaviour of traffic in the area of the development and its approach routes*
- *there is significant use by pedestrians or cyclists, or both*
- *the development directly abuts an arterial road/traffic route (i.e. the volumes of traffic and traffic speeds are higher)."*

Given the potential this project has to impact road safety, the community request an independent road safety audit.

TRAFFIC NSW…

In Attachment A, Traffic NSW have also requested

- The total impact of existing and proposed development on the road network with consideration for a 10 year horizon. This should include; -
  - Identify Annual Average Daily Traffic (AADT) volumes with percentage heavy vehicles along the transport route/s and diagrammatically demonstrate AM and PM peak hour movements at key intersections.
  - Background traffic data from published sources and/or recent survey data. The source of data and any assumptions are to be clearly explained and justified, including the growth rate applied to the future horizon.

As recommended in the guide to traffic generating Developments, page 8-2, background traffic data should be established using published information or conducting a traffic study. Table 6-28 from the EIS - Local Road Traffic Volumes has traffic volume and heavy vehicle percentage of local roads estimated by council. Despite requesting the information, the correspondence showing council's estimates was not provided by the developer. After our enquiries, we have learnt that the council is unaware of the origin of these figures also.

The number of vehicles and the percentage of heavy vehicles are both considered extremely high and unlikely, by current council staff and locals. Considering the project has been in planning for many years, a traffic study would have been appropriated to ascertain these numbers.

TRAFFIC NSW…

- The volume and distribution of proposed trips to be generated by the construction, operational and decommission phases of the development. This should identify the maximum daily and hourly demands generated by the development, particularly where they coincide with the network peak hour.

A 10 year horizon has not been considered and would highlight the long term damage to the roads that will be caused.

THE EIS MUST …

- For offsite sources of materials such as quarries or water sources, inclusion of any proposed material transport activities should form part of the TIA.

From page 89 of the EIS;

"Use of materials sourced onsite will need to be confirmed through geotechnical testing prior to works commencing. Otherwise gravel, along with aggregate and sand for concrete batching and cable laying, will be sourced externally from existing operating quarries. Existing operating quarries in the Project locality (less than 100 km from site entries) and their material resources are shown in Table 3-10."

Again, this highlights the lack of knowledge of where raw materials are going to be sourced from. In reality, the quarries that are described in table 3-10 are all over 100km travelling distance from the project site and up to 185km away (not less than 100km as described).

THE EIS MUST …

- Strategic (2D) design drawings of any/all proposed road works and the site access demonstrating scope, estimated cost and constructability of works required to mitigate the impacts of the development on road safety, traffic efficiency and the integrity of transport infrastructure. Works must be appropriately designed for the existing posted speed limit.

The capacity of many bridges and structures has not been assessed.

How can road works be planned, or design drawings prepared with this lack of background knowledge?

. . .

2.1 Community Comments on the Integrity of the EIA

Assessment of traffic impacts during construction are based on unsubstantiated figures. Sources of raw materials which make up 83% of the heavy vehicle movements have not been ascertained. Likewise, it is not known where the 400 staff members will be living. Based on this, the developers have had to make an estimate on whether traffic will be coming from the north on Thunderbolts Way or the west on the Oxley Hwy.

Page 41 of the Traffic Impact Assessment outlines these estimates;

"The following provides a breakdown of the access distribution for each of the construction vehicle classifications outlined within Table 9: " Light Vehicles: It is estimated that 30% of staff will be drawn from the Tamworth area and 20% will be located near Walcha. These vehicles will access the Project from the west/south. It is anticipated that 40% of staff will be drawn from the Armidale area and 10% will be drawn from the Uralla area and will travel from the north. " MRV/HRV: These vehicles will predominantly be water trucks and vehicles transporting materials such as concrete and steel supplies which will be sourced within the surrounding area. The traffic movements have been assumed to be distributed with 60% from the west and 40% from the north. " Truck and Dog/AV/B-Double: The majority of plant and larger raw materials (such as quarry material) will be transported via Newcastle and Tamworth from the west/south. It has been assumed that 70% will be transported from the west/south and 30% from the north."

Despite having made these predictions, the numbers used in the Project Traffic Volumes (Figure 9) have split the traffic going along Thunderbolts Way and Oxley Hwy 50:50 each way, which does not correlate with the information above. This lack of consistency is to be expected if the source of materials is yet to be established and continues to be the source of many erroneous assumptions.

Guide to Traffic Generating Developments page 4-1 "*Safety is a concern affecting all roads. Safety is arguably the most important, although its assessment does not lend itself to quantitative review.*" The focus of the Traffic Impact Assessment has been on quantitative assessments of level of service. It has failed to address aspects that require consideration on rural roads that were highlighted in the Guide to Traffic Management Part 12. These issues include overtaking opportunities, speed differentials where significant heavy vehicle movements occur, inadequate sight lines due to crests, curves or dips (critical for safe heavy vehicle operation), dust nuisance and visibility impediment from unsealed shoulders. These are significant safety issues that have been ignored. Examples of significant aspects related to these issues are:

- Between Bendemeer and Walcha, there are no overtaking lanes and only 3 sections of road where it may be safe for cars to overtake heavy vehicles. These are not long stretches and will not allow for multiple vehicles to overtake. The build-up of traffic behind the heavy vehicles and the high number of vehicles travelling in the opposite direction creates a very dangerous situation where drivers may be tempted to take risks in order to overtake trucks. There is a similar risk on Thunderbolts Way between Walcha and Uralla. Both these roads are major arteries for Walcha residents and travellers.

- The speed differential between cars and heavy vehicles travelling on the Oxley Hwy and Thunderbolts Way is significant. The time taken for a loaded cattle truck to travel from Bendemeer to Walcha is 55-60 minutes. It will obviously be much longer for the OSOM vehicles - we have been told that it will be a 2 hour trip. A car travels this section of road in 30 minutes.
- There are very few overtaking opportunities on the roads north east of Walcha.
- Inadequate sight lines due to crests, curves and dips are a particular risk on the roads north east of Walcha approaching the project site. These roads are often not wide enough to pass another vehicle without putting one wheel off the road. Cars tend to travel in the centre of these roads where the pavement is safest. The increase in traffic on these normally quiet roads is going to make this particularly dangerous given the inadequate sight lines. This will also put structural pressure on the edges of roads, that were not designed for high traffic volumes, or for the large concentration of heavy vehicles.
- Sight Distance Assessment (page 56 EIS) It is noted that several accesses do not satisfy minimum sight distances requirements. In the interest of safety, any of the mitigation measures that are being suggested that do not result in recommended sight distances being achieved should not be acceptable to Vestas or the planning department.
- A new access road has been built on Moona Plains Rd opposite Rowleys Creek Rd. It is access number 17 on figure 15. The description of this intersection is described on page 59 of the Traffic Impact Assessment.

  "Access 17: The sight distance to the east does not meet the requirements of the Austroads Guideline. The access is located opposite the intersection of Rowleys Creek Road with Moona Plains Road which is currently operating in a safe manner given there are no existing crashes recorded at the intersection. Given the low traffic volumes at the intersection, it is expected that the intersection will continue to operate in a safe manner and the available sight distance is acceptable. It is noted that the vegetation to the west of the access on the northern side of Moona Plains Road should be maintained at a low height to ensure suitable sight distances are maintained."

  This statement must be challenged, given that the project is almost doubling the traffic on this road and the access road leads to a batching plant. Not only is the access on a blind corner, it is also on the crest of a hill. **For the safety of local travellers, why wouldn't this new road be built with safe access?**
- Dust from unsealed shoulders and roads as well as glare are real safety hazards on these roads, especially on roads that will be carrying much higher volumes of heavy vehicles than they were designed for.

A common theme in this EIS is for generalisations and conclusions to be drawn that are not consistent with the appendices. There are also statements that are careless and misleading. Examples of these are -

- Page 18 of the traffic impact assessment describes the school bus service.

  "Oxley Explorer and Moona Bus provide school bus services on the local road network within the vicinity of the Project. Oxley Explorer have advised the following with regards to the local roads within the vicinity of the site: ', … all of the roads* noted are utilised by bus services between the hours of 6.50am and 9am and 2.50pm and 5pm Monday to Friday with the exception of school holidays.'
  * the roads referred to include the roads discussed within Section 4.2 of this report. Moona Bus have provided the bus route and associated times the bus is anticipated at each bus stop. The school bus is expected to be operating on the local road network from 8:00am to 8:35am and from 3:05pm to 3:40pm."

  The EIS describes the bus service on page 185;

  "Public Transport / School Bus: Oxley Explorer and Moona Bus provide school bus services on the local road network within the vicinity of the Project. The school bus is expected to be operating on the local road network from 8:00 am to 8:35 am and from 3:05 pm to 3:40 pm."

  This is hardly a reflection of the true situation. The developer has been advised that the buses run for 4 hours and 10 minutes per day, then represented this in the TIA of the EIS as 1 hour and 10 minutes.

- Page 192 of the EIS states "All roads within the vicinity of the Project Area are rated to accommodate B-double vehicles. The TIA also considers that the roads, with the inclusion of the proposed upgrades identified, are suitable to accommodate the proposed traffic volumes"

  There is nowhere in the Traffic Impact Assessment that indicates the capacity of the pavement has been assessed. Note also that the capacity of all bridges and crossings has not been assessed.

- EIS Summary page Sviii

  "the proposed transport route for the Project will not require any heavy vehicle movements through the centre of Walcha."

  This is misleading as the route does not travel on our main street but it does travel through Walcha, travelling along approximately 2 km of 50km/hr zone. This is not a by-pass.

- Appendix J page 12

  "Within the Walcha township the roads have a sealed carriageway width of approximately 12m, accommodating two-way vehicle movement, and typically has a speed limit of 80km/hr which reduces to 50km/hr near the township. Further, northeast of the township the speed limit increases to 100km/hr."

  All roads within the Walcha township have a speed limit of 50km/h or less. As the road leaves town onto Emu Creek Rd, the speed limit is 80km/h as it is a high pedestrian area. It increases to 100km/h east of Summervale village, 5km east of the Jamieson St. and Oxley Hwy intersection. This is careless and downplays the fact the route passes directly through Walcha. This route is not a bypass around the town of Walcha, through a heavily occupied residential portion of the town.

- Page 26 of Appendix J Table 6 - Assessment of Vulnerable Road Users Along the Access Route. Vestas have failed to identify Walcha Pre-school in this study despite it being at the intersection of Thunderbolts Way and Jamieson St where the study to assess intersection performance was carried out. All project traffic will travel directly past the Walcha pre-school, and it has not been identified.

  This same table identifies Moonbi Public School. It states that

  "Most students are expected to be driven to the school and are not anticipated to cross New England Highway".

  There is a pedestrian crossing with a stop/go traffic controller because students cross the road at this point to get to school. This assumption is careless and dangerous. OSOM vehicles will be passing this school crossing during the peak school time. Vestas have not considered this important enough to even respond to the problem.

WINTERBOURNE WIND FARM (WWF)

Part F
Response to the Soils and Water Impacts

This Part F presents as the Voice for Walcha's (VfW) **Group Objection Submission** to the Proponents Soils and Water Report.

Key Community Message

The community is concerned with the lack of certainty and the error ridden nature of the EIS. The document reads as a '**scoping report**', dominated by thought bubbles - ideas and commitments to "make plans" (in the case of erosion control) if the EIS is successful. Obviously, this consistent approach doesn't allow the Community to assess the impacts - again our repeated message that this is procedurally unfair. This is not the expectation of an EIS, being developed over a 4-year period for a multi-billion-dollar project. The community has not been able to judge a large portion of the EIS, as it does not have adequate details. Where there are details, we have consistently pointed out errors.

If the project was to proceed, we would be entrusting the developer to accurately carry out all mitigation measures, in order to prevent environmental and ecological damage to one of the most valued natural resources in Australia, recognised as the Gondwana World Heritage Rainforest area. If a developer cannot put together an EIS of an expected standard, it is totally inappropriate to entrust a development organisation to ensure that these mitigations are carried out in full.

The project is in the wrong place, placing an enormous risk of contamination, erosion and ecological damage on the Gondwana World Heritage Rainforests, incorporating the Oxley Wild Rivers National Park. This unique and valuable natural asset is not only adjacent, but immediately downstream. There has been little in the way of planning to prevent uncontrolled runoff of sediment, and contamination from the site. It should not be a consideration that such a risk be contemplated - to save the world with renewable energy development, only to destroy a World listed Heritage area, is nonsense. There are many alternate locations for such a project that will not put this valuable natural asset at risk.

It is difficult to assess land and soil use capability as there are still conflicting policy positions on Renewable Energy and Agriculture. The NSW Government has not released the NSW Agricultural Commissioner - Review of Renewable Energy and Agriculture. This will hopefully put better definition around soil including BSAL classification.

Some Fundamental Omissions from this EIS:

- Unknown or unspecified quantities of water and gravel?
- Unspecified water supply arrangements – where is the detail and evidence of supply agreements?
- Water is a precious resource to every community, but particularly one that raises livestock, and relies on the availability and security of this resource.
- Gravel supply sources unknown? What are the transport impacts?
- Erodibility study carried out with the assumption that all slopes are <10%. This is highly erroneous, as shown on map
- The Development use of high quality BSAL land which should be dedicated to agricultural production.

Basis of the Objections is as summarised hereunder;

1. The Project is virtually impossible to impact assess for the Community – it is erroneous, it is totally and probably deliberately deficient in key detail.
2. This EIS is totally inadequate in its identification of impacts to fragile water sources and precious soil in and around the proposed development site. It is inconsistent with the principles of ESD prescribed by the Environmental Planning and Assessment Act 1979.
3. The assumptions and conclusions offered by the Developer are inconsistent with the provisions of the NSW Water Act 2014.
4. The forecast pollution management impacts are not consistent with Section 45 of the NSW Protection of the Environment Operations Act 1997 (POEO Act).
5. The project induces unacceptable impacts on the UNESCO Gondwana Rainforest which are brazenly inconsistent with the provisions of the Federal EPBC Act 1999.

...

1.1 SEAR Obvious Omission and Errors

SEAR's Requirements Water and Soils Page 6 of the SEAR's

THE EIS MUST …

- "Quantify water demand, identify water sources (surface and groundwater), including any licensing requirements, and determine whether an adequate and secure water supply is available for the development;
- Assess potential impacts on the quantity and quality of surface and groundwater resources, including impacts on other water users and watercourses;
- Where the project involves works within 40 metres of the high bank of any river, lake or wetlands (collectively waterfront land), identify likely impacts to the waterfront land, and how the activities are to be designed and implemented in accordance with the *DPI Guidelines for Controlled Activities on Waterfront Land* (2018) and (if necessary) *Why Do Fish Need to Cross the Road? Fish Passage Requirements for Waterway Crossings* (DPI 2003); and *Policy & Guidelines for Fish Habitat Conservation & Management* (DPI, 2013)); and
- Describe the measures to minimise surface and groundwater impacts, including how works on steep gradient land or erodible soil types would be managed and any contingency requirements to address residual impacts.
- Provide details of the peak and average traffic volumes (both light and heavy vehicles) and transport and haulage routes during construction, operation and decommissioning, including traffic associated with sourcing raw materials (water, sand and gravel);"

COMMUNITY COMMENT

The EIS asks more questions than it answers. The developer has not given any clarity about sources of water, gravel or sand. There have been Developer assumptions extracted from the Roads and Traffic EIS such as;

- 50% of water will be imported into the project area. (From where?, council supply, existing dams?)
- 50% of water will be sourced from within the project area (From where, ground water, harvested, existing dams?)

COMMUNITY COMMENT

The developer has made 4 "suggestions" that anyone could have made a guess at, for their source of water supply for the project.

Page 304 of the EIS states;

- "The project has identified four secure options for supply water during the Project's construction period have been identified and include:
- Surface water collection from existing (or new) dams;
- Groundwater pumping from bores;
- Water abstraction from a nearby permanent water source; and
- Tanking water to site from Council supply (including treated wastewater) or other local Water Access Licence (WAL) owners."

Later in the document, page 306, these sources are re-worded to;

"The Project has four viable options available to obtain an adequate and source water supply, being:

- Council water supply (or treated wastewater), in agreement with the relevant Council(s);
- Extraction of water collected from existing (or new) dams using landowner harvestable rights or from an existing nearby landowner bore, in agreement to use their allocation;
- Extraction from one or more new groundwater bores, which will require WAL(s) in consultation with Water NSW; and
- Extraction from a large private dam located approximately 20 km to the north of the Project Area, which will require a WAL in consultation with Water NSW and the licence holder.

These have not been prospected, or verified, in any way. In fact, the source of water from the council has been publicly and repeatedly refuted by the Walcha Mayor. The other sources have been made with little thought or regard to the local water resources, and those that rely on them. The EIS further inquiries:

- 30% of pavement material will be sourced from outside the project area (from where? Many of the sources that were given on page 124 of the EIS, as unconfirmed possibilities, were described as being within 100km of the closest entry point to the project boundary. Many are in fact well over 100km from the closest point of entry, as the following table shows;
- Page 124 of the EIS gives total truck movements, given some assumptions about the source of the materials. The locations for the sourcing of materials has been plucked out of the air, with no prospecting or research about likely availability of resources from within, or from outside the project area.

Quarry site	Accurate distance to closest site entry point.	Direction of movement
Sheridans Hard Rock Quarry Cornells Road, Hernani	**185km**	Uralla Road
Boral Concrete Armidale 28 Drew Street, Armidale	86.1km	Uralla Road
Highland Quarry 7096 Guyra Ebor Rd, Guyra	**129km**	Uralla Road
Scanlons Concrete and Quarry Products 2 Crawford Street, Tamworth	**112km**	Oxley Highway
Namoi Valley Quarry 5483 Oxley Highway, Carroll	**162km**	Oxley Highway
Ward Bros Sand and Gravel Supplies Killara, Kentucky	57km – but do they exist?	Uralla Road
Brooklyn Quarry Walcha Road, Walcha.	42km – through Walcha township.	Oxley Highway

- 110,000T of sand will be imported, but with no indication from where this sand will come, except one of these quarries coming into Walcha from the North or the West.

With sources being un-prospected, unclear and unknown, there is no way of creating accurate traffic assessments and haulage routes. This task has not been carried out.

Further reference to Section 6.8 and Appendix P the EIS:

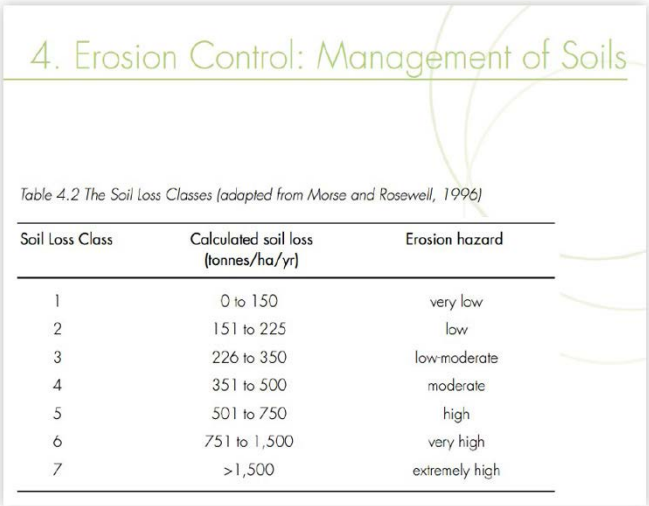
- "assess potential impacts on the quantity and quality of surface and groundwater resources, including impacts on other water users and watercourses;
- where the project involves works within 40 metres of the high bank of any river, lake or wetlands (collectively waterfront land), identify likely impacts to the waterfront land, and how the activities are to be designed and implemented in accordance with the DPI Guidelines for Controlled Activities on Waterfront Land (2018) and (if necessary) Why Do Fish Need to Cross the Road? Fish Passage Requirements for Waterway Crossings (DPI 2003); and Policy & Guidelines for Fish Habitat Conservation & Management (DPI, 2013); and
- describe the measures to minimise surface and groundwater impacts, including how works on steep gradient land or erodible soil types would be managed and any contingency requirements to address residual impacts."

COMMUNITY COMMENT

The measures to mitigate **are not described**, and the assessment of erodibility has been carried out with erroneous assumptions. It is of concern that little or no effort has been made to outline the plan to prevent this loss of soil into the waterways, through a detailed Erosion and Sediment Control Plan (ESCP). It seems the extent of the developer's efforts in this area is to let us know that they will formulate this plan, post approval, as noted on page 43, "The identified risks can be managed through implementation of appropriate preventative and management measures. These would be outlined in the Project Soil and Water Management Plan supplemented by a progressive ESCP prepared post-approval." **The lack of an ESCP at this point must be considered inadequate.**

COMMUNITY COMMENT

Erroneous assumptions are used for the assessment of Erodibility. The method for estimating soil loss, has been adopted from Landcom (2004), using the RUSLE revised universal soil loss equation Using the RUSLE, using this worst-case scenario the predicted annual soil loss is 355 tonnes/hectare/year under the combination of 80 m slope length and 10 % gradient. This is Soil Loss Class 4 (351 to 500 tonnes/ha/yr) which is rated moderate (refer Table 4.2 in Landcom 2004).



4. Erosion Control: Management of Soils

Table 4.2 The Soil Loss Classes (adapted from Morse and Rosewell, 1996)

Soil Loss Class	Calculated soil loss (tonnes/ha/yr)	Erosion hazard
1	0 to 150	very low
2	151 to 225	low
3	226 to 350	low-moderate
4	351 to 500	moderate
5	501 to 750	high
6	751 to 1,500	very high
7	>1,500	extremely high

Figure 1 Table 4.2 The Soil Loss Classes (adapted from Morse and Rosewell, 1996) from Landcom (2004) Managing Urban Stormwater: Soils and Construction Volume 1 Fourth Edition

The table above shows that the assessed erosion hazard of "Moderate" is midway down the scale.

The erodibility assessment was carried out using erroneous input data, most pertinent is the fact that it assumes a slope of <10% across the entire Project Area.

COMMUNITY COMMENT

Why has the developer used Project Area for this assessment. The Project Area is not relevant for erosion assessment, rather, it is the Project Footprint. That is, the area that is going to be disturbed, and prone to erosion.

Slope analysis is shown on page 26 of Appendix P, F4.2. On this chart, it is shown that the majority of the Project Area is shaded blue, indicating a slope of <10%. However, it is clear to see the area where the bulk of the turbines and the roads will be constructed, that the slope is greater than 10%.

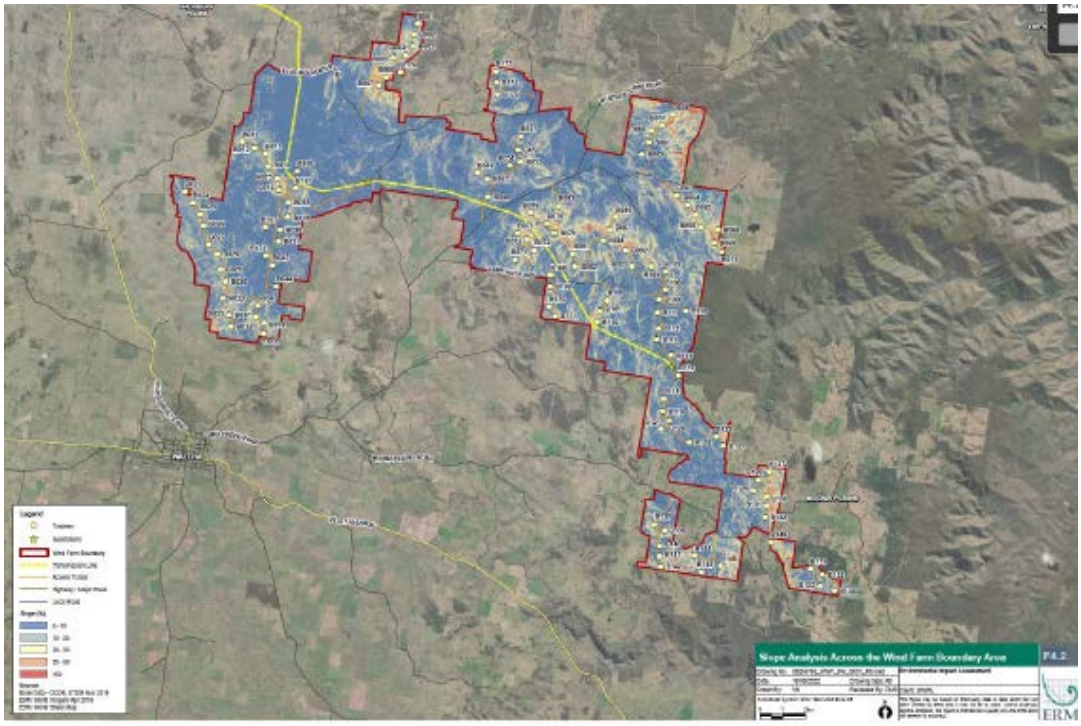


Figure 2 Slope Analysis across the project

While most of the Project Area is blue (<10% slope), by contrast, the area under most of the turbines is grey/blue, or yellow, indicating slopes of 10-20%, or 20-33%. For some turbines, and roads connecting them, they are clearly on areas shaded orange, indicating slope of 33%-50%.

Indeed, on page 294 of the EIS, it states

"A slope analysis conducted to inform the project design confirmed that most of the Project Area consists of slopes of less than 10% (refer Figure 6-34). The Development Footprint (including turbine locations) tends to follow higher areas of the site which have steeper sided slopes."

Universal (U), as it is describing the "Project Area", rather than the "Project Footprint", that is, the area that will be disturbed. This statement is important, because the erodibility assessment was based on the presumption that the area can be summarised as being of a slope no greater than 10%.

- The method of calculating and assessing the erosion hazard is outlined in 4.3.3 in the Appendix P Soils and Water Assessment, page 42. Here, it states;
  - "construction sites within the Project Area generally present a moderate erosion hazard considering factors such as climate, soils and landform. A quantitative estimation of the sites erosion hazard was undertaken using the Revised Universal Soil Loss Equation (RUSLE) as described in Section 5.2 and provided in Appendix A;"
  - Page 44 of the Appendix P discusses the Erosion Hazard Assessment. This outlines the assumptions that have been made, and states;

  "The overall erosion hazard has been assessed as moderate. This is a consequence of favourable climatic conditions (low rainfall erosivity) and the lower slope gradient where disturbance will generally occur on slopes under 10%, which limit the generation of high velocity, erosive run-off. Localised areas of greater erosion hazard will exist, for example where steeper slopes occur (e.g. road batters and areas of concentrated water flow, such as along watercourses and table drains."

The assessment uses the assumption that the slopes, relevant to road and WTG construction, are "under 10%". This is an erroneous and highly misleading statement, as demonstrated in the Slope Analysis map above. As noted previously, the "project footprint" as opposed to the "project area" is the relevant study area for this assessment, as this is where the surface disturbance will be occurring.

Page 61 of Appendix P, describes the RUSLE formula as;

> The RUSLE equation is represented by:
> A = R K LS P C
> where,
> A = computed soil loss (tonnes/ha/yr)
> R = rainfall erosivity factor
> K = soil erodibility factor
> LS = slope length/gradient factor
> P = erosion control practice factor
> C = ground cover and management factor.

We recognise that mathematically, there is a linear relationship between the factor LS, (slope length/gradient factor) and the solution A (computed soil loss in tonnes/Ha/yr).

Page 61 of Appendix P describes the thinking behind the selection of the LS factor;

"The Project Area has variable gradients including some areas with slopes up to about 15 % (and in some areas higher), but in the turbine locations is commonly only gently sloping with gradients less than 10%. Slope lengths in disturbed areas would be typically less than 80 m. Under the combination of 80 m slope length and 10 % gradient the LS Factor is 2.81. On gentler slopes the combination of 80 m slope length and 5 % gradient the LS Factor is 1.19. On steeper slopes it is assumed that slope lengths would be kept shorter using appropriate stormwater controls. However, a more conservative assumption of is used with 80 m slope length and 15 % gradient the LS Factor is 5.065."

Having established that many turbines, and the roads connecting them are shown to be on slope greater than 20%, the adoption of a "conservative" assumption of 15% is unusual. This "conservative assumption" would give a LS factor of 5.065.

Even more strange then, that the assessment uses a LS factor of 2.81 in their calculations, as shown on page 63.

More accurately, if a slope of 20% is used, with a slope length of 80m, a LS factor of 7.32 (minimum) is adopted, as shown from table A1, from Landcom (2004).

Table A1 LS-factors on construction sites using the RUSLE

Slope ratio	Slope gradient (%)	Slope length (m)															
		5	10	20	30	40	50	60	70	80	90	100	150	200	250	300
100:1	1	0.09	0.11	0.13	0.15	0.16	0.17	0.18	0.19	0.19	0.20	0.20	0.23	0.24	0.26	0.27
50:1	2	0.14	0.18	0.24	0.28	0.31	0.34	0.36	0.39	0.41	0.43	0.44	0.52	0.58	0.64	0.69
33.3:1	3	0.17	0.24	0.34	0.41	0.47	0.52	0.57	0.61	0.65	0.69	0.72	0.87	1.00	1.11	1.22
25:1	4	0.21	0.30	0.44	0.54	0.63	0.71	0.78	0.85	0.91	0.97	1.03	1.26	1.47	1.65	1.82
20:1	5	0.24	0.36	0.54	0.68	0.80	0.91	1.01	1.10	1.19	1.27	1.35	1.70	2.00	2.28	2.53
16.6:1	6	0.28	0.42	0.64	0.81	0.97	1.11	1.24	1.36	1.47	1.58	1.68	2.14	2.54	2.91	3.25
12.5:1	8	0.34	0.53	0.83	1.08	1.31	1.51	1.70	1.88	2.05	2.21	2.37	3.07	3.70	4.28	4.82
10:1	10	0.42	0.68	1.09	1.44	1.75	2.04	2.31	2.56	2.81	3.04	3.27	4.06	4.94	5.75	6.52
8.3:1	12	0.52	0.85	1.39	1.85	2.27	2.66	3.02	3.37	3.70	4.02	4.33	5.77	7.07	8.28	9.42
7.1:1	14	0.62	1.02	1.69	2.26	2.79	3.28	3.74	4.18	4.61	5.02	5.42	7.27	8.95	10.52	12.01
6.3:1	16	0.71	1.19	1.98	2.67	3.31	3.90	4.46	5.00	5.52	6.02	6.51	8.78	10.86	12.81	14.65
5.5:1	18	0.80	1.35	2.27	3.07	3.82	4.51	5.17	5.81	6.42	7.02	7.59	10.30	12.78		
5:1	20	0.89	1.50	2.55	3.47	4.32	5.12	5.88	6.61	7.32	8.01	8.68	11.92	14.84		
4:1	25	1.09	1.88	3.23	4.43	5.54	6.59	7.60	8.57	9.51	10.43	11.32				
3.3:1	30	1.28	2.23	3.86	5.32	6.69	7.99	9.23	10.43	11.60	12.74	13.85				
2.5:1	40	1.61	2.83	4.98	6.92	8.74	10.48	12.15	13.77							
2:1	50	1.88	3.33	5.89	8.22	10.42	12.52	14.55								

Figure 3 Table A1, from Landcom (2004) page 262

In summary;

LS factor used in the calculations in Appendix P = 2.81
LS factor described as "being used" = 5.065
LS factor accurately describing 20%/80m slopes = 7.32

We assert that their LS factor is understated, by a factor of 2.6
This being the case, the calculated quantity of soil loss/Ha/year is 2.6 x 355 = 923 T / Ha / year

Based on Table 4.2 The Soil Loss Classes (adapted from Morse and Rosewell, 1996) from Landcom (2004) Managing Urban Stormwater: Soils and Construction Volume 1 Fourth Edition, shown earlier, a RUSLE result of 923 T / Ha / yr elevates the erosion risk from the assessed "Moderate" to "Very High".

This error in assumption of LS value is not a vague error, it is clearly a misrepresentation, and has serious consequences for the ecology of the Wilderness area adjacent to, and downstream of, the project footprint.

> COMMUNITY COMMENT
> What are the implications of this, for localised erosion, contamination of waterways, and impacts on local fauna and flora in the adjacent World Heritage Wilderness areas where these waterways run into?

This project is in the wrong place, and should not proceed, given the calculated risk of this damaging outcome.

1.2 EPBC Act 1999 Requirements

Specific Risks - (from page 11 of the SEAR's)

Potential impacts to the values of a World Heritage Property and National Heritage Place. These potential impacts include:

- the project area is part of the catchment for several watercourses that run into, and through, the World Heritage property. Increased soil runoff has the potential to impact habitat for aquatic species important to the World Heritage values of the property, including frogs, turtles and fish.

1.3 Biodiversity and Conservation requirements

Water and Soils (from page 14 of the SEAR's)

The EIS must map the following features relevant to water and soils including:

- Acid sulphate soils (Class 1, 2, 3 or 4 on the Acid Sulphate Soil Planning Map).
- Rivers, streams, wetlands, estuaries (as described in s4.2 of the Biodiversity Assessment Method).
- Wetlands as described in s4.2 of the Biodiversity Assessment Method.
- Groundwater.
- Groundwater dependent ecosystems.
- Proposed intake and discharge locations.

The EIS must describe background conditions for any water resource likely to be affected by the Winterbourne Wind Farm, including:

- Existing surface and groundwater.
- Hydrology, including volume, frequency and quality of discharges at proposed intake and discharge locations.

- Water Quality Objectives (as endorsed by the NSW Government http://www.environment.nsw.go.au/ieo/index.htm) including groundwater as appropriate that represent the community's uses and values for the receiving waters.
- Indicators and trigger values/criteria for the environmental values identified at (C i.e. previously) in accordance with the ANZECC (2000) Guidelines for Fresh and Marine Water Quality and/or local objectives, criteria or targets endorsed by the NSW Government.

COMMUNITY COMMENT

It is widely understood that ground water is a crucial resource for the operation of many grazing businesses in the area, and the use of such a commodity is treated with great respect. When a bore is used for stock water, it is a controlled flow, ie. The water is pumped to fill a tank, then the pump is shut off (usually automatically with the use of float valves or timers). A property running 500 cows for example, might have bore water as an available resource, but this will be used in conjunction with harvested dam water and perhaps running streams and so on. Typically, cattle on this type of property might utilise 40L/day per head, 50% of this sourced from a bore on the property. This equates to 20kL per day, even though a typical flow of 1L/sec can yield 86kL/day. This allows for the underground water to settle and does not stress the aquifer system.

What the developer is suggesting, in section 3.2.1. Groundwater Pumping, on page 22 of Appendix P, is that they will be using new or existing bores, expecting to pump from these 24 hours /day. This operation will have a dramatic effect on surrounding ground water supplies and have a direct impact on the primary industry in the area, that relies on this source of water as a supplementary source for livestock water supplies. This is a direct threat to the wellbeing of the local community and economy, as well as the health of the natural landscape.

1.4 National Parks and Wildlife Estate

The EIS further inquiries Park Operations (page 18 of the SEAR's) *"The EIS must demonstrate how the Winterbourne Wind Farm proposal can maintain safe access to water for emergency services including NPWS and contractors*.

COMMUNITY COMMENT

The presence of WTG's on the ridges on the edge of the Gorge prevents access for aerial water bombing of the National Park and Gondwana Rainforest Area in the case of bush fires, as the water source (surface dams and Walcha Aerodrome) is on the Western side of the Project Area, and the National Park and Gondwana rainforest area is on the Eastern side of the Project Area.

Given that commercial aviation operators in the area are referring to the zone around WTG's as a no-fly zone, in the event of low cloud or smoke, this presents a clear risk to access to water, for these contractors.

1.5 NSW EPA Requirements

The EIS inquiries from page 19 of the SEAR's *"The EA must address the requirements of Section 45 of the Protection of the Environment Operations Act 1997* (POEO Act) by determining the extent of each impact and providing sufficient information to enable the EPA to determine appropriate conditions, limits and monitoring requirements for an Environment Protection Licence (EPL).Water and Soils including site water balance and sediment and erosion controls during construction and operation phases.

COMMUNITY COMMENT

As we highlight above in points 1.1 and 1.4 this is not adequately dealt with. This has been addressed in previous points 1.1 and 1.4.

1.6 Waste, chemicals and hazardous materials

In respect to Waste, chemicals and hazardous materials and radiation the SEAR at from page 20 inquiries *"The EA must outline contingency plans for any event that may result in environmental harm, such as excessive stockpiling of material, or dirty water volumes exceeding the storage capacity available onsite.*

COMMUNITY COMMENT

This has not been adequately dealt with. Areas of concern for us include, leading edge erosion, and the shedding of plastics that are known (after questioning of the developer) to contain residue Bisphenol A. Research into leading edge erosion of blades, by Vestas and others, indicates that leading edge erosion is a very significant issue.

An article titled "Leading Edge erosion and pollution from wind turbine blades" Asbjørn Solberg, Bård-Einar Rimereit and Jan Erik Weinbach estimates emissions of microplastics and possible toxic combines from wind turbines based on the report "Rain Erosion Maps for Wind Turbines Based on Geographical Locations: A Case Study in Ireland and Britain" University of Strathclyde, 2021. The authors of this article estimate that the estimated annual emission of microplastics of approximately 62kg per year per turbine. This is based on a turbine that is a significantly smaller than the ones being proposed by Vestas but the rainfall in the example is higher than the rainfall of the project area. However, the Winterbourne area is prone to cold temperatures, creating sleet, hail, snow and ice particles in the air, that would be arguably more erosive than raindrops.

If this figure is used (and it would have to be considered very conservative), the emissions of microplastics for the Winterbourne wind project would be 7378 kg per year or 147 tonnes of microplastics over 20 years.

The prevailing winds for the area for May to December are west to north west, so most of this pollution would end up in the air and waterways of the Oxley Wild Rivers National Park and Gondwana World Heritage Wilderness area. What impact is this going to have on the sensitive, fragile environment we have committed to preserve.

At the end of project life, we are concerned about the further shedding of plastics from disused turbines into the environment, both through the burial of these blades in landfill, and the breaking up of the blades into transportable parts. The chopping of the blades will either be carried out with excavator mounted crushing devices, leaving splinters and dust, or by circular saw, as suggested in the Appendix S Decommissioning and Rehabilitation, on page 32. This process of using a circular saw leaves an enormous amount of microplastic parts, that are highly toxic, on the ground, ready to wash into the waterways, and into the World Heritage listed Gondwana Rainforests, adjacent to the project.

Figure 4 Decommissioning, and the shedding of residue Bisphenonyl A into the environment, from page 32 of Appendix S, Decommissioning and Rehabilitation

Note: Please refer to Part G for further comments on health affects from hazardous materials.

1.7 The POEO Act

The POEO Act the SEAR requests;

- The EA must demonstrate how the proposed development will meet the requirements of section 120.
- The EA must include a water balance for the development including water requirements (quantity, quality and source(s)) and proposed storm and wastewater disposal, including type, volumes, proposed treatment and management methods and re-use options.

> COMMUNITY COMMENT
>
> The EIS shows an inaccurate quantity, conflicting statements relating to quality, and undefined sources. There has been an error with the suggested quantity of water required. The quantity of water required for concrete batching is stated in the table as 6ML. We know that the footings will require 600 – 900 cu.m. of concrete (page 96 of the EIS document). If we use the guide in the Appendix P – Soils and Water, page 20, of 700cu.m per foundation, across 119 turbines, there is a requirement of 83,300 cu.m of concrete. Typically, concrete requires 150 - 200L of water per cu.m of concrete. For 80mm slump (high strength mix) a water content of 150L per cubic meter is typical. Reference: The Boral book of Concrete, page 11. This equates to 12.5ML of water – not 6ML. How is this figure so different? This is high quality water that is required for batching, and the error is likely to have a significant effect on how much water is carted into the site.

The possible source of this confusion is where the developer referred to a water cement ration of 0.4 to one. This is a ratio used in the industry, but it is by weight, NOT by volume. They have used this ratio to calculate the amount of water in ML (volume) as a ratio of the cement in the mix (which is expressed as a cement:sand:aggregate ratio of 1:2:3, but this ratio is by volume). This has led to an error in the quantity of water calculated for concrete batching.

To calculate the water quantity, we need the weight of each component, per cubic meter. Thus;

Component	specific weight (kg/cu.m)
Water	1000 kg/cu.m
Cement	1440 kg/cu.m
Sand	1800 kg/cu.m
Aggregate	1600 – 2200, use 1800 kg/cu.m
Concrete	2400 kg/cu.m

1. The potable content of the water requirements in table 3-1, page 15 of the EIS, suggests that concrete batching water supply does not need to be potable. This is contradicted by mainstream engineering principles and guidelines, that suggest the use of potable water is necessary.

   To support our assertion, on page 21 of the EIS, one of the "key components of the project" is "External water supply for use in concrete batching and construction activities;"- indicating that local surface water or bore water will not be sufficient.

   Furthermore, on page 124 of the EIS, "Because high quality water is required for concrete production, water for this purpose will likely be sourced offsite and transported to the batching plant via water tanker trucks".

2. Page 304 of the EIS states;

   "The project has identified four secure options for supply water during the Project's construction period have been identified and include:

   - Surface water collection from existing (or new) dams;
   - Groundwater pumping from bores;
   - Water abstraction from a nearby permanent water source; and
   - Tanking water to site from Council supply (including treated wastewater) or other local Water Access Licence (WAL) owners."

Later in the document, page 306, these sources are re-worded to;

"The Project has four viable options available to obtain an adequate and source water supply, being:

- Council water supply (or treated wastewater), in agreement with the relevant Council(s);
- Extraction of water collected from existing (or new) dams using landowner harvestable rights or from an existing nearby landowner bore, in agreement to use their allocation;
- Extraction from one or more new groundwater bores, which will require WAL(s) in consultation with WaterNSW; and
- Extraction from a large private dam located approximately 20 km to the north of the Project Area, which will require a WAL in consultation with Water NSW and the licence holder.

In both instances, these are entirely un-prospected and un-researched sources. In the case of water from the Walcha Council, this source has been publicly denied by the Mayor of Walcha as being totally refused. Harvesting from local ground water, or bores, would be highly unlikely and detrimental to local livestock operators, as there are severe local repercussions for loss of water for livestock in the area. There is one large private dam in the north-eastern part of the project area that has been noted in conversation with the developer as a source, and may be targeted, but it is unlicensed, and presumably unable to supply water to an industrial project. If this storage dam (approximately 150ML) is not licensed, is this legal to be used as a source of water supply?

Without any certainty of supply sources, the developer has not demonstrated where this water will be sourced. In reality, the scale of supply outstrips the local (sustainable) availability.

- If the proposed development intends to discharge waters to the environment, the EA must demonstrate how the discharge(s) will be managed in terms of water quantity, quality and frequency of discharge and include an impact assessment of the discharge on the receiving environment. This should include:
  - Description of the proposal including position of any intakes and discharges, volumes, water quality and frequency of all water discharges.
  - Description of the receiving waters including upstream and downstream water quality as well as any other water users.
  - Demonstration that all practical options to avoid discharge have been implemented and environmental impact minimised where discharge is necessary.
- The developer has failed to address the matter of erosion run-off, preferring to leave this planning to "post approval".
- As noted on page 43, "The identified risks can be managed through implementation of appropriate preventative and management measures. These would be outlined in the Project Soil and Water Management Plan supplemented by a progressive ESCP prepared post-approval."
- The lack of an ESCP at this point must be considered inadequate.
- The EA must refer to Water Quality Objectives for the receiving waters and indicators and associated trigger values or criteria for the identified environmental values of the receiving environment. This information should be sourced from the ANZECC (2000) Guidelines for Fresh and Marine Water Quality (http://www.environment.gov.au/water/policy-programs/nwqms/).
- The EA must describe how stormwater will be managed in all phases of the project, including details of how stormwater and runoff will be managed to minimise pollution. Information should include measures to be implemented to minimise erosion, leachate and sediment mobilisation at the site. The EA should consider the guidelines Managing urban stormwater: soils and construction, vol. 1 (Landcom 2004) and vol. 2 (A. Installation of services; C. Unsealed roads; D. Main Roads; E. Mines and quarries) (DECC, 2008).
- The EA must describe any water quality monitoring programs to be carried out at the project site. Water quality monitoring should be undertaken in accordance with the Approved Methods for the Sampling and Analysis of Water Pollutant in NSW.

> COMMUNITY COMMENT
>
> As far as we can determine, the report has outlined the Macleay River Catchment Water Quality Objectives, and their awareness of the sensitivity of The World and National Heritage listed Gondwana Rainforests of Australia, immediately downstream of the project.

All that the developer seems to have committed to, is to produce a plan. From page 41, at the end of section 4.2.3, Appendix P states;

Suitable measures can be effectively implemented to appropriately mitigate impacts associated with the sensitive locations in the adjacent National Park. Measures are to be included in the progressive Erosion Sediment Control Plan (ESCP) to either;

- direct disturbed runoff away from the catchment areas that flow directly to the National Park, or
- process runoff through additional sediment controls (e.g., sumps and/or sediment basins) and discharge at a low, non-erosive velocity.

This is not a plan, this is the avoidance of responsibility, and is totally unacceptable when dealing with the potential of contaminating and destroying parts of such a national treasure.

The first part of their one paragraph solution is totally impractical, as all water flows east, into the National Park and downstream. Are they suggesting that they will collect all runoff, and pump into trucks, to cart 50km away to the other side of the Great Dividing Range?

The second solution does not deal with toxins and contaminants, and only deals with erosion if the structures are setup properly, monitored and maintained. This is a difficult assumption to accept.

> COMMUNITY COMMENT
>
> It is not good enough to pass this planning obligation to the next owner of the project. This is the EIS, and these activities should be planned properly to achieve acceptance.

Soil Management and Agriculture

In respect to Soil Management the SEAR requests " Describe the current and potential BSAL and Class 1,2 and 3 Agricultural land Classes that will be impacted across the proposed development site. EIS, Section 6.8 and Appendix P.

BSAL Land is mapped in the Project Area, involving 327.7 Ha, but importantly, 22.5 Ha is directly impacted by works, being under the Project Footprint (p30 of Appendix P) by WTG's B138, B139, B140, B141 and B142 (shown on F4.3, Appendix P).

From page 298 of the EIS;

> **Biophysical Strategic Agricultural Land (BSAL)**
>
> The NSW Government introduced a range of measures designed to deliver greater protection to agricultural land from the impacts of developments. These measures included the safeguarding of 2.8 million hectares of Biophysical Strategic Agricultural Land (BSAL) across the state, as well as designating Critical Industry Clusters. BSAL is land identified with high quality soil and water resources capable of sustaining high levels of productivity, which is critical to sustaining the state's agricultural industry.

> COMMUNITY COMMENT
>
> Community Comment It is a flagrant disregard of vital food producing resources, and careful placement of turbines in this high value area should have avoided this BSAL area.
>
> The community would like to see the high value agricultural BSAL land protected, and would want to see the removal of these turbines, B138, B139, B140, B141 and B142.

1.8 DPIE – Water and Natural Resources Access Regulator Requirements

1.8.1 Soil and Water (Page 23 of the SEAR's)

- The identification of an adequate and secure water supply for the life of the project. This includes confirmation that water can be sourced from an appropriately authorised and reliable supply. This is also to include an assessment of the current market depth where water entitlement is required to be purchased.
- A detailed and consolidated site water balance.
- Assessment of impacts on surface and ground water sources (both quality and quantity), related infrastructure, adjacent licensed water users, basic landholder rights, watercourses, riparian land, and groundwater dependent ecosystems, and measures proposed to reduce and mitigate these impacts.
- Proposed surface and groundwater monitoring activities and methodologies.
- Consideration of relevant legislation, policies and guidelines, including the NSW Aquifer Interference Policy (2012), the Guidelines for Controlled Activities on Waterfront Land (2018) and the relevant Water Sharing Plans (available at *https://www.industry.nsw.gov.au/water*).

The inadequacy of this has been dealt with in previous sections.

WINTERBOURNE WIND FARM (WWF)

Part G
Response to Health Impact Assessment

This Part G presents as the Voice for Walcha's (VfW) **Group Objection Submission** to the Proponents Health Impact Assessments.

Key Community Message

The Noise Assessment of the EIS has a familiar DNA to other impacts the Developer offers for assessment - it presents as a Scoping Study rather than a Development Proposal which can't be properly assessed. It is procedurally unfair for the Community to have its capacity to properly assess impacts which are 'fluid' impaired. This approach is far too prominent in this EIS to be isolated and unintended. The Developer advises that the turbine layout, wind turbine model, ancillary infrastructure might all be changed. It's 'tick the box' - some desperate attempt to create an illusion that they have met the requirements of SEAR. As the Noise Guidelines require the EIS must include 'completed technical studies including an accurate noise impact assessment, … with the requirements of the Noise Assessment Bulletin.'

It is the Community's belief that the EIS has shown reckless and contemptuous disregard for the health of the wider Walcha Community. This development mindset is a consistent outcome from the 'tick the box' arrogant methodology the Developer has deployed across all the issues in their error laden EIS. In each and every impact element the Developer has deployed either a bare minimum compliance or has distorted reporting in an attempt to conjure up compliance. The Community maintains, the 'pump and dump - turbine salesman' development focus induces significant risk to the health of the Community.

The underlying thesis to the Developer's noise assessment has been relatively simple two trick proposition - find all the 'tools' - data - interpretations and consultants to give effect to the following formula;

- Build optimism into your background noise assessment - select from the 'tools' anything and everything that artificially inflates background noise. Give yourself a high bar for your compliance ie; background noise +5dB; and:
- Build pessimism into your site predictions so that you underestimate noise impact in the surrounding community and thereby ensure compliance < 35dB across the residences in project.

On the Community's Peer Review (Les Huson and Associates) at Attachment A, we confirm the probability that erroneous application of the background noise assessment in 1. suggests that the site by site EIS predictions in 2. are understated by up to 14dB. The cumulative reasons for this conclusion are robustly articulated in Attachment A.

What this means from the EIS is that many residential sites in the project footprint have understated noise predictions. Exposures which if done according to correct compliance procedure will confirm non-compliance. This is a serious situation given the high numbers of exposed residences.

The only conclusion opened to the Community is essentially the EIS Noise Impact Assessment is serious flawed and should be rejected as is the current turbine configuration. The Developer suggests at P150 of the EIS that the noise modelling on offer is intended to offer a conservative approach as required by the Guidelines. Clearly on analysis the Community alleges it doesn't. This calls into question the REAP Declaration by ERM as to whether the EIS 'contains information that is false and misleading'.

The Community are concerned about multiple risks - these are introduced immediately hereunder - many are self-evident concerns - some such as Blade Flicker, EMF, Bisphenol A and SF6, require application of the Precautionary Principle. One issue of considerable importance is the assessment of Mental Health impacts for the Community. This important issue cannot be ignored and it is addressed at P 4 hereunder.

Basis of the Community Objection - Health Impact Assessment

1. The Developers approach to assessing the Socio-Economic Impacts are inconsistent with the requirements of the Section 1.3 (j) of the Environmental Planning and Assessment Act 1979. In particular;
    a) It's failure to promote the social and economic welfare of the community and a better environment by the proper management, development and conservation of the State's natural and other resources,
    b) It's failure to facilitate ecologically sustainable development by integrating relevant economic, environmental and social considerations in decision-making about environmental planning and assessment,
    c) It's failure to promote the orderly and economic use and development of land.
2. Specifically, it's a demonstrably failure of compliance the NSW Wind Energy -Development Bulletin-Noise Assessment Guidelines 2016
3. Specifically, by way of 2 above it is a demonstrable compliance failure with the South Australia Wind Farms Environmental Noise Guidelines 2009
4. It's failure to observe the priorities of the New England North West Regional Plan 2036
5. It's failure to comply with the DPIE -State Significant Development Guidelines -July 2021 ; and
6. Its failure to comply with the DPIE Engaging Communities Guidelines for SSD -July 2021
7. It's a failure to comply with the EPA's NSW Noise Policy for Industry (EPA, 2017);
8. It is failure to comply with the NSW EPA Noise Policy for Industry 2017
9. It's a failure to comply NSW Construction Noise Guideline 2009
10. It's failure to comply with the Air Quality requirements of the Protection of the Environment Operations (Clean Air) Regulation 2021
11. It's a failure to consider, document and take 'precautionary principle action' on any health issues having regard to the latest advice of the National Health and Medical Research Council, and identify potential hazards and risks associated with **electric and magnetic fields (EMF)** and demonstrate the application of the principles of prudent avoidance;
12. It's failure to consider the **mental health** of the wider Walcha community through by avoiding the responsibilities on the incumbent Developer to pursue appropriate compliance with the *Undertaking Engagement Guidelines for State Significant Projects -DPIE July 2021* and the *Social Impact Assessment Guidelines July DPIE 2021.*
13. It's failure to consider the public interest on noise on the visitors to Oxley Wild Rivers National Park pursuant to its compliance requirements of the NSW Guidelines on Developments Adjacent to National Parks and Wildlife Service Lands 2020 and the NSW Wilderness Act 1987
14. Its failure to promote Animal Health for farm animals and for wild animals pursuant to Federal and State Biodiversity Protection Regimes.

SEAR's Requirements – Noise and Vibration

THE EIS MUST …

- "assess wind turbine noise in accordance with the *NSW Wind Energy: Noise Assessment Bulletin* (EPA/DPE, 2016);
- Assess noise generated by ancillary infrastructure in accordance with the *NSW Noise Policy for Industry* (EPA, 2017);
- Assess construction noise under the *Interim Construction Noise Guideline* (DECC, 2009);
- Assess traffic noise under the *NSW Road Noise Policy* (DECCW, 2011); and
- Assess vibration under the *Assessing Vibration: A Technical Guideline* (DECC, 2006); and
- Assess the noise impacts on amenity / recreational use of the Oxley Wild Rivers National Park (including walking tracks, campgrounds and lookouts) considering the *NSW Noise Policy for Industry* (EPA, 2017)"

COMMUNITY COMMENT

The Community relies on the robust technical and compliance findings of the Peer Review Attachment A – it does not intend to repeat in this submission all the conclusions - they are fully supported. Based on this finding the EIS does not dispose anywhere adequately with the SEAR requests. In terms of wind farm Noise, the NSW Noise Bulletin in step with the South Australian (SA) framework forms the regulatory noise standard and assessment methodology. Its requisites;

1. The tabling of an 'accurate noise assessment' as pointed out from the Attachment A Peer Review – the Developers submission for assessment -is far from accurate. Its DNA is a convenient collage of data and measurements designed to distort compliance including AS IEC-61672. The Developers meters loggers Rion Class 2 are not the tool of choice if you seek the accuracy of a lower limit measurement instrument as per the SA prescription. Conveniently for the developer the effect of this equipment is to artificially elevate background noise.
2. That noise measurement are not influenced by high wind speeds across monitoring microphones. It's evident they were -the data should be dismissed as contributor to inaccuracy.
3. The EIS does not provide examples of Negotiated Agreements with Host or Other Associated – it is required to do so. VfW requests that arrangements be made to exchange an agreed cross-section of such agreements either directly to VfW or to the NSW EPA for review.
4. Tonal audibility tests have not been provided in the EIS – this failure erodes the Community protection objectives of the Planning Process.
5. The accuracy of sound measurements for background noise is constrained by the side effects undisclosed by the Developer – topography – for the reliance, contrary to SA Guidelines, on 'soft-ground' data assessment. The impact of this calculation is clearly demonstrated in the table at P 6 of the Peer Review and confirms the unfair bias that might be induced from the application of the CONCAWE model. This on 'hardground' calculations as required by SA Compliance might reduce the background noise by up to 10dB.

As reported by the Peer Review …*"It is worth noting that any revised noise model could show other dwellings within a 35 dB(A) noise contour that would also benefit from a background noise survey. A preliminary layout was used to identify the background survey locations in the NVA."*

So, this PEER Review raises sufficient serious doubt as to the accuracy of the Developer's noise outlook – should the assessment exercise be conducted in accordance with the agreed compliance – **the correct result might well result in a 'predicted level' correction of 14 dB**. This contemplation in the context of the **predictions** on offer in the EIS presents a very concerning picture of non-compliance across the Associated and Non - Associated residences in the Project.

The Developer's dereliction or deception as to assessment and prediction of noise applies equally to the National Park – the potential intrusion to visitor's quiet enjoyment of wilderness is threaten by excessive wind turbine noise. This noise outlook also potentially threatens biodiversity bird and bat populations and other mammal inhabitants -a precautionary principle approach should be contemplated.

Based on clear compliance requirements and the increasing litigious focus on loss of noise amenity (see Uren V Bald Hills Wind Farm Pty Ltd (2022) VSC 145) proceeding ahead with this Development, which is clearly underpinned by flawed noise assessment and associated predictions, induces significant risk to the Developer and to the Consent Authority. The Community strongly believes there is little alternative – **but to reject outright the entirety of the Noise and Vibration Impact Assessment as flawed**. The Developer must be instructed to **redo the Impact Assessment** and do it in accordance with Compliance. Where necessary reconfigure and resize the project site.

Mental Health

The EIS has ignored the impact this Development has extracted on the mental well-being of the Community. Walcha Energy through secretive agreements has created disharmony in the Community. The Developer in acquiring the development rights has done nothing to repair this outcome. Its tardy and disrespectful minimalist approach to Community Consultation has entrenched the community division even more. This disrespect traverses both Indigenous and non-indigenous communities. The traditional custodians of the Walcha land the Dunghatti Bari Nation have been treated very poorly and disrespectfully as represented in an appalling and flawed Developer's ACHAR. A response which devalues their identity and further disempowers and dislocates them from their Country.

Both Communities feel the impact of the Developer's failure to consult and their ongoing penchant for 'tick the box' planning processes has devalued their rights to '**place**' in Walcha. The Developer and the city-centric Government seemingly don't understand the physical and psychological effect of '**place**'. Walcha is a small town – and a small LGA – on or around 3000 people. People are drawn to the town as inhabitants or people have grown up and stayed. For both groups - Walcha the '**place**' provides a ballast that tips their decision to remain and be part of the community. So, for Communities like Walcha - you understand that '**place**' fills a large section in their hearts and minds. If you understand that - you understand their projections – their stances – their opinions. Unfortunately, none of these understandings were of curiosity to the Developer – no meaningful consultation was offered – empowerment was denied.

Walcha is a community that has a strong established order and the Project threatens this equilibrium. The cohesion that has made Walcha what it is - will reduce - this will have impacts in terms of social health, community and individual health and mental health. Inducing increased socio-economic discrepancies between individuals and divisions amongst social networks. The ongoing mental health effect is the perception of loss of personal control, apathy and breakdown of social connection. The Developers get this – its rule 1 in their playbook – a divided community is a developer's 'rails run' to Consent. Isolate a **minority** in the community and provide them with **financial resilience** and ignore the reduction in **social resilience in the majority**.

This mental health challenge is aided and abetted by the fact that the Planning System - its Institutions - its Macquarie Street Politicians - induce a form of *geographic narcissism* a notion that devalues rural knowledge and promotes urban perception as definitive and more valuable than rural experience. The EIS doesn't countenance the potential for mental health impost – nor does it contemplate why the numbers of directly effected neighbours have declined a neighbourhood agreement and payment. It seems to have missed the point for most it's not about the money - it's about the maintenance of cohesion and the existing established order Walcha offers. Unfortunately for some other residents, it's about saving the economy of Walcha without demonstrating in what way the economy of Walcha needs saving.

Bisphenol A

The EIS has ignored the impact of Bisphenol A (BPA) and its potential affects this toxic product has on the well-being of the Community and surrounding areas around. The Developer has confirmed that the blades are made of Bisphenol A (BPA), however in requests for further information claim that BPA is completely consumed in the manufacturing of epoxy resins and therefore would not be leached into the environment.

From our research this is not the case for two reasons:

1. In large scale manufacturing processes, it is virtually impossible to mix BPA and relevant monomers to a level of perfection that will not result in waste monomer and BPA being left over. In this case the materials will, over time, "bloom" to the surface escaping into the environment.
2. Epoxy resins manufactured using BPA DO Hydro that is the chemical breakdown into two or more chemical components by reacting with water. Whilst the chemical reaction with will occur at increased levels under high temperatures, it still occurs at room temperature.

This latter point is extremely important as it provides the basis upon which BPA eroded from the leading edge of a turbine blade, can expose humans and other organisms to the serious health effects of BPA. In the case of wind turbines, this exposure will potentially be far greater than drinking from a plastic container. Think of the potentially tonnes of leached toxic material from 119 wind turbines over multi decades with exposure increasing as blades age. This is called "leading edge erosion" and it estimated that each turbine will shed 62kg of blade material each year.[1] Over the life of the Winterbourne Wind project this will be 147 tonnes of toxic microplastics released into the air over Walcha and its waterways.

[1] Leading Edge erosion and pollution from wind turbine blades"
Asbjørn Solberg, Bård-Einar Rimereit and Jan Erik Weinbach – as referenced in Part F

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Consultant Scientists in Acoustics

Voice for Walcha

(by email to: us@voiceforwalcha.com)
Our Reference: L451/Let1/WLH

17 January 2023

Re: Winterbourne Wind Farm Noise Assessment – Peer Review

L Huson & Associates Pty Ltd has been commissioned by the Voice for Walcha to peer review the Winterbourne Wind Farm Noise and Vibration Assessment (NVA), report reference S6207C14 dated October 2022 that was prepared by Sonus Pty Ltd. The NVA is included in the Environmental Impact Statement (EIS) dated 27 October 2022 as Appendix H that was prepared by Environmental Resources Management Australia Pty Ltd. Section 6.2 of the EIS summarises the NVA.

This peer review considers the assessment of predicted operational wind farm noise and compliance with the NSW Secretary's Environmental Assessment Requirements (SEAR) in this regard for the EIS.

In the absence of a peer review being included in the EIS then this independent peer review of the noise assessment reports within the EIS may be considered in lieu.

The SEAR lists the following that are relevant to this review that must be included in the EIS:

- an assessment of the likely impacts of the development on the environment, focusing on the specific issues identified below, including:
  - a description of the existing environment likely to be affected by the development using sufficient baseline data;
  - an assessment of the likely impacts of all stages of the development (including cumulative impacts of the development with existing and proposed developments in the region), taking into consideration any relevant State and Commonwealth legislation, environmental planning instruments, guidelines, policies, plans and industry codes of practice and including the NSW Wind Energy Guideline for State Significant Wind Energy Development (2016);
  - a description of the measures that would be implemented to avoid, mitigate and/or offset residual impacts of the development and the likely effectiveness of these measures, including details of consultation with any affected non- associated landowners in relation to the development of mitigation measures, and any negotiated agreements with these landowners; and
  - a description of the measures that would be implemented to monitor and report on the environmental performance of the development, including adaptive management strategies and contingency measures to address residual impacts

In particular, for **Noise and Vibration** – the EIS must:

- assess wind turbine noise in accordance with the NSW Wind Energy: Noise Assessment Bulletin (EPA/DPE, 2016);
- assess noise generated by ancillary infrastructure in accordance with the NSW Noise Policy for Industry (EPA, 2017);

- assess construction noise under the Interim Construction Noise Guideline (DECC, 2009);
- assess traffic noise under the NSW Road Noise Policy (DECCW, 2011); and
- assess vibration under the Assessing Vibration: A Technical Guideline (DECC, 2006); and
- assess the noise impacts on amenity / recreational use of the Oxley Wild Rivers National Park (including walking tracks, campgrounds and lookouts) considering the NSW Noise Policy for Industry (EPA, 2017).

The NSW Wind Energy Guideline for State Significant Wind Energy Development (2016) refers to the guideline Bulletin (EPA/DPE, 2016);, as follows:

> 'To ensure an adequate assessment of potential noise impacts, the Department has developed a Noise Assessment Bulletin' and notes that the EIS must include 'completed technical studies, including an accurate noise impact assessment for relevant dwellings undertaken consistent with the requirements of the Noise Assessment Bulletin'.

The Noise Bulletin (EPA/DPE, 2016), in turn, refers to a South Australia EPA Guideline, as follows:

> 'The NSW Government has adopted the 2009 South Australian document *Wind farms – environmental noise guidelines* (SA 2009). SA 2009 will form the basis of the regulatory noise standard and assessment methodology that will apply when SSD wind energy proponents are assessed and determined in NSW. Adopting SA 2009 will facilitate increased regulatory consistency between states and result in consistent standards applying to significant areas of Australia with high quality accessible wind resources.'

The SA 2009 guideline had an update in November 2021, yet the document has retained the same ISBN number, and the original guideline has been withdrawn. The most recent SA 2009 of November 2021 was issued before the NVA was prepared by Sonus, dated October 2022 and the EIS dated October 2022 that should have reflected the requirements of the updated SA 2009.

In summary, an accurate noise impact assessment in accordance with the Noise Bulletin is required for an EIS and detail is required of any negotiated agreements. SA 2009 is the regulatory noise standard and assessment methodology that will apply when SSD wind energy proponents are assessed and determined in NSW. SA 2009 has a section dealing with negotiated agreements with wind farm developers and notes that:

> 'The criteria have been developed to minimise the impact on the amenity of premises that do not have an agreement with wind farm developers. Notwithstanding this, the EPA cannot ignore noise impacts on the basis that an agreement has been made between the developer and the landowner. Developers cannot absolve themselves of their obligations under the EP Act by entering into an agreement with a landowner.
>
> If it can be demonstrated that a development is having an 'adverse effect on an amenity value of an area that … unreasonably interferes with the enjoyment of the area', then appropriate action can be taken under the EP Act.'

In a recent decision of the Victorian Supreme Court in *Uren v Bald Hills Wind Farm Pty Ltd* [2022] VSC 145 (**Uren**) it was found that noise nuisance (unreasonable interference) could still apply even if a wind farm development complied with noise limits imposed through the planning process.

Negotiated Agreements

I have been unable to find any example of negotiated agreements for noise in the EIS that would inform the consideration of adequate noise protection for associated/involved landowners.

The EIS does not explain how any adverse noise impacts have been addressed in the agreements or if there is adequate protection from, for example, adverse health effects that can be caused by noise.

The EIS relies upon the NVA, October 2022 referenced as report S62407C14 prepared by Sonus Pty Ltd in regard to negotiated agreements variously, as follows:

> **Definition**
> "Involved dwelling Any dwelling where the landowner has reached a financial or in kind agreement in relation to the wind farm (except where the agreement excludes noise impacts)."
>
> **NVA section 3.3**
> "The noise criteria at involved dwellings have not been specified and therefore this report provides predicted noise levels at the involved residences, but does not consider objective criteria."
>
> **NVA section 4.1**
> "Preference was given to dwellings with the highest predicted noise levels in each direction of the wind farm and without agreement at the time of the monitoring, subject to permission being granted by the landowner to place equipment."

Section 3.2.2 of the EIS lists Associated/Involved dwelling owners that have entered into an agreement in relation to the proposed wind farm development.

Negotiated agreements that are in place could be supplied to the EPA for consideration. Confidentiality considerations should not prevent proper evaluation because the names of property owners can be redacted.

Completeness of the proposed development

Section 11 of the NVA advises that the turbine layout, wind turbine model, ancillary infrastructure may all be changed.

The NVA and EIS is effectively outlining a preliminary development that may meet the requirements of the SEAR. The EIS appears in reality to be a scoping study rather than an accurate noise impact assessment.

It is inconsistent for an EIS, that *must* include 'completed technical studies, including an accurate noise impact assessment for relevant dwellings undertaken consistent with the requirements of the Noise Assessment Bulletin', to state that the wind turbine layout, the turbine type, the consideration of other matters such as tonality, low frequency noise and sound power levels can all change and are issues that will be considered *after* approval of the EIS.

Candidate Wind Turbine

The planning assessment process adds a 5 dB penalty to noise model predictions if there are tonal emissions from the wind turbine type proposed. However, the Bulletin only consider particular 10-minute intervals within a compliance survey period that are weighted by the 5 dB penalty. This approach to noise compliance testing for tonal penalty is much less stringent than the approach intended at the planning stage.

Tonal audibility test results have not been provided in the EIS. The lack of tonal audibility test results effectively undermines the community protection objectives within the planning process. It is not possible to infer tonality from one-third octave manufacturer's specification.

The manufacturer must provide test results in accordance with IEC61400-11 to assess the potential for tones from the candidate wind turbine.

If such test data is not forthcoming then as a precaution it would be appropriate to add the 5 dB penalty weighting to noise model predictions that is required in SA 2009.

No detail has been provided on how the specifications were derived. If the specifications relate only to aerodynamic noise calculations, then nacelle sound sources that are primarily the cause of observed tones in practice will not have been included.

A particular wind turbine candidate has been named in the NVA. A total sound power level of 104.8 dB(A) has been assumed for a wind turbine that would comply with the dimensional constraints in the EIS. However, other wind turbines in the Vestas EnVentus platform range also meet the dimensional limit of a maximum tip height of 250m. With a hub height of 150m suggested in the NVA this would allow a rotor diameter up to 200m.

The Vestas EnVentus platform consists of a V150, V162 and V172 that have rotor diameters of 150m, 162m and 172m respectively. The V162-6.2MW wind turbine has been suggested as a candidate in the NVA. The V162-6.2MW wind turbine has a quoted sound power maximum of 104.8 dB(A) but all of the other wind turbines in the EnVentus range have higher sound power levels with the V172-7.2MW wind turbine having a quoted maximum sound power of 106.9 dB(A). This is 2.1 dB higher than the sound power used for a noise model input in the NVA.

If Winterbourne Wind wish to confirm that the V162-6.2MW wind turbine will be used then there would be no reason to assume that the sound power values used by Sonus in their noise model should be higher to reflect that from the V172.

Furthermore, the V162-6.2MW wind turbine does not have a published tower height option of 150m, as assumed in the NVA. However, the V172-7.2MW wind turbine does have a tower height option of 150m (hub height). https://nozebra.ipapercms.dk/Vestas/Communication/Productbrochure/enventus/enventus-platform-brochure/

The sound power levels used in noise predictions are based upon manufacturer's specifications rather than independent test results. Neither tonal audibility nor test uncertainty results have been offered for the candidate turbine.

SA 2009 states that "Noise propagation model and parameters as recommended in section 4.3 of the Institute of Acoustics *A Good Practice Guide to the Application of ETSU-R-97 for the Assessment and Rating of Wind Turbine Noise* (May 2013) may be utilised as an alternative to the above input parameters". This section 4.3 only refers to alternative parameters that could be used in an ISO9613-2 noise model and not CONCAWE that is used in the NVA. However, section 4.3 does advise on the consideration of appropriate sound power to use in any noise model where IEC61400-11 test results are unavailable. It is recommended that if only manufacturer's specifications are available that an uncertainty of 2 dB should be added to the sound power levels before use in a noise model prediction.

Without any commitment by Winterbourne Wind that the installed wind turbine will be the V162-6.2MW then the sound power levels used in the NVA should reflect the largest wind turbine option that could be

installed by Vestas (106.9 dB(A)) plus an uncertainty value of +2dB. The total sound power level that should have been used in the NVA is therefore 108.9 dB(A), rather than 104.8 dB(A).

It is well understood that site effects can alter sound power levels from a wind turbine. IEC61400-11 test measurements are taken in optimal controlled conditions requiring minimal inflow turbulence to the rotor due to increased noise caused by inflow turbulence. This requirement is found in IEC61400-11.

IEC61400-11 test results invariably show an increase in sound power with increasing wind speed up to a point where rated electrical power generation is achieved. Under the test conditions of IEC61400-11 the sound power results plateau and do not increase further. However, site effects can alter this plateau and sound power levels can continue to increase above the rated electrical power of the wind turbine.

Proximity considerations of wind turbines to each other, locations near ridges and general topography are considered to be 'site effects' that can increase noise emissions above those measured using IEC61400-11. No consideration has been given to site effects so any noise model using sound power levels for a single wind turbine should be considered to be optimistic rather than conservative.

A description of site effects has been provided by an engineer from the wind turbine manufacturer Suzlon that is attached to this review as Appendix A.

CONCAWE Noise Model

SA 2009 accepts the use of the CONCAWE noise model. With the recent update to SA 2009 the required minimum range of wind farm predictions now covers the octave band frequencies from 31.5Hz to 4,000Hz rather than the previous 63Hz to 4,000Hz. Unfortunately, CONCAWE is an empirical noise model with verified propagation data covering only 63Hz to 4,000Hz octave bands. Similarly, the ISO9613-2 noise model, that is also acceptable for use in SA 2009, also has a lower octave band limit of 63 Hz.

Considering these limitations of CONCAWE and ISO9613-2 it is probably a typographic error in the updated SA 2009 that changed the lower frequency noise model requirement from 63 Hz to 31.5 Hz.

A worked example calculation from CONCAWE is shown below:

DESCRIPTION			dB(A)	Octave Band Centre Frequency, Hz						
				63	125	250	500	1k	2k	4k
Plant Sound Power Level		L_W	118	127	123	120	113	111	112	108
Directivity	(Omnidirectional source)	D		0	0	0	0	0	0	0
Geometrical Spreading	(d = 500 m)	K_1		65	65	65	65	65	65	65
Atmospheric Attenuation	(Temperature = 10 deg C, Humidity = 75%)	K_2		0	0	0	1	2	3	10
Ground Effects	(Figure 1)	K_3		0	5.5	11	8	4.5	2.5	1.5
Meteorological Correction	(Vector wind speed + 2 m/s Pasquill Stability Factor D, Category 5)	K_4		−1	−2.5	−3.5	−4	−4.5	−3	−4
Source Height Correction	(Source at 1.5m)	K_5		0	0	0	0	0	0	0
Barrier Attenuation	(3m high wall, 10m from source)	K_6		5	6	7	10	11	14	17
		ΣK		69	74	79.5	80	78	81.5	89.5
		L_P	40	58	49	40.5	33	33	30.5	18.5

Worked Example 1 Referred to in Section 5.3

The calculation starts with the sound power of a sound source (L_W), considers the directivity of the sound source, if any, and then applies propagation attenuation values K1, K2, K3, K4,K5 and K6 that have been determined from empirically determined formulae. The K6 barrier attenuation correction accounts for physical barriers or in-plant screening within a factory, for example. The K6 propagation correction is **not** to be applied for topographical features (CONCAWE section 5.1.6).

The CONCAWE noise model can be implemented in a spreadsheet to calculate sound pressure levels at dwelling locations surrounding a wind farm and I have done this for the Winterbourne Wind Farm at a number or sample dwellings (SR109, SR240 and SR272) as a check against the predictions in the NVA.

Two sets of calculation have been done, one where there is 100% soft ground (G=100%), as used in the NVA and with hard ground (G=0%) as required in the SA2009 guidelines for a conservative modelling approach.

The following table compares the results using CONCAWE with a spreadsheet implementing the model formulae (LHA) compared to results produced by Sonus using a SoundPlan implementation of CONCAWE. Sound power levels from the NVA at 11m/s hub height wind speed have been used together with wind turbine coordinates presented in Table 1 of the NVA.

Dwelling ID	Sonus using G=100% dB(A)	LHA using G=100% dB(A)	LHA using G=0% dB(A)
SR109	34	36.6	44
SR240	37	39.4	46.5
SR272	35	37	44.4

Predicted sound levels in the NVA are rounded to integer values and when comparing the results, it shows that the SoundPlan implementation of CONCAWE for 100% soft ground is approximately 2 dB lower than a strict implementation of CONCAWE. A clue to this discrepancy is that the NVA states that topographic barrier attenuation has been limited in the SoundPlan implementation of CONCAWE to a maximum of 2 dB.

CONCAWE *requires* that the K6 attenuation term for barrier attenuation must not be applied for topographic features and it might be that SoundPlan has incorrectly applied the K6 attenuation term.

Another interesting result arises from the use of hard ground (G=0%), as required in SA 2009, compared to 100% soft ground (G=100%) used in the NVA. The use of hard ground increases the predicted sound level by some 7dB.

A paper presented by the author of SoundPlan (Berndt, A. "Uncertainties in Environmental Noise Modeling". Proc. ACOUSTICS 2004, Gold Coast, Australia) explains that most of the propagation noise models used today were designed decades ago when hand calculations were the norm (eg. CONCAWE, 1981). The paper explains that interpretation is often required in the computer implementation of a number of standards such as ISO9613-2 and CONCAWE. It is therefore understandable that strict calculations using a standard can produce different results to a computer-based implementation. The SoundPlan manual explains that the software has made some assumptions to extend its implementation of CONCAWE down to 31.5Hz. Strictly, CONCAWE is limited to 63Hz as there are no empirical equations for any other octave band below 63Hz so this modification should be considered inconsistent with CONCAWE.

Other ill-defined modifications to standards can be found in software implementations. For example, CONCAWE explains that sound propagation across a valley or from a hill can increase sound propagated to a dwelling (receiver) by up to 3 dB: "When propagation is to a receiver located on a hillside, or across a valley floor, the value of K5 should be reduced by up to 3 dB to account for multiple reflections from the hillside". How SoundPlan has or has not implemented this aspect of CONCAWE is unknown but there are cases where dwellings are located below sound sources (wind turbines) that are on a hillside surrounding the Winterbourne Wind Farm.

The calculations provided for the three dwellings in the table above by LHA have not accounted for this 'valley effect' that, if applied, could increase the predicted sound level at the chosen three dwellings by up to an additional 3 dB.

In summary, if a strict application of CONCAWE is implemented using hard ground, as required by SA 2009, then the sound levels predicted by Sonus in the NVA are approximately 10 dB too low. This assumes that the correct sound power was used for input to the noise models. However, as discussed above, a possible wind turbine candidate could be the V172-7.2MW wind turbine and with a correction for uncertainty of +2dB the sound power compared to that used in the NVA would be some 4 dB higher and overall predicted levels in the NVA would be a total of 14 dB too low.

For cases where the 'valley effect' applies the NVA predictions at surrounding dwellings are between 14dB and 17dB too low.

Predicting dB(C) using CONCAWE - Low frequency noise

Low frequency noise predictions of dB(C) levels should be re-calculated with the correct ground absorption factor required in SA 2009 of G=0. However, both ISO9613-2 and CONCAWE do not calculate sound levels below the 63 Hz octave band so these models should not be used to predict dB(C) sound levels in the community.

A noise model that can predict dB(C) sound levels is found in section 1.4 of the Danish Statutory Order on Noise from Windfarms no. 1284, that calculates sound propagation in one-third octave bands from 10 Hz to 160 Hz. These calculations can then complement the missing octave bands below 63 Hz when using CONCAWE or ISO9613-2.

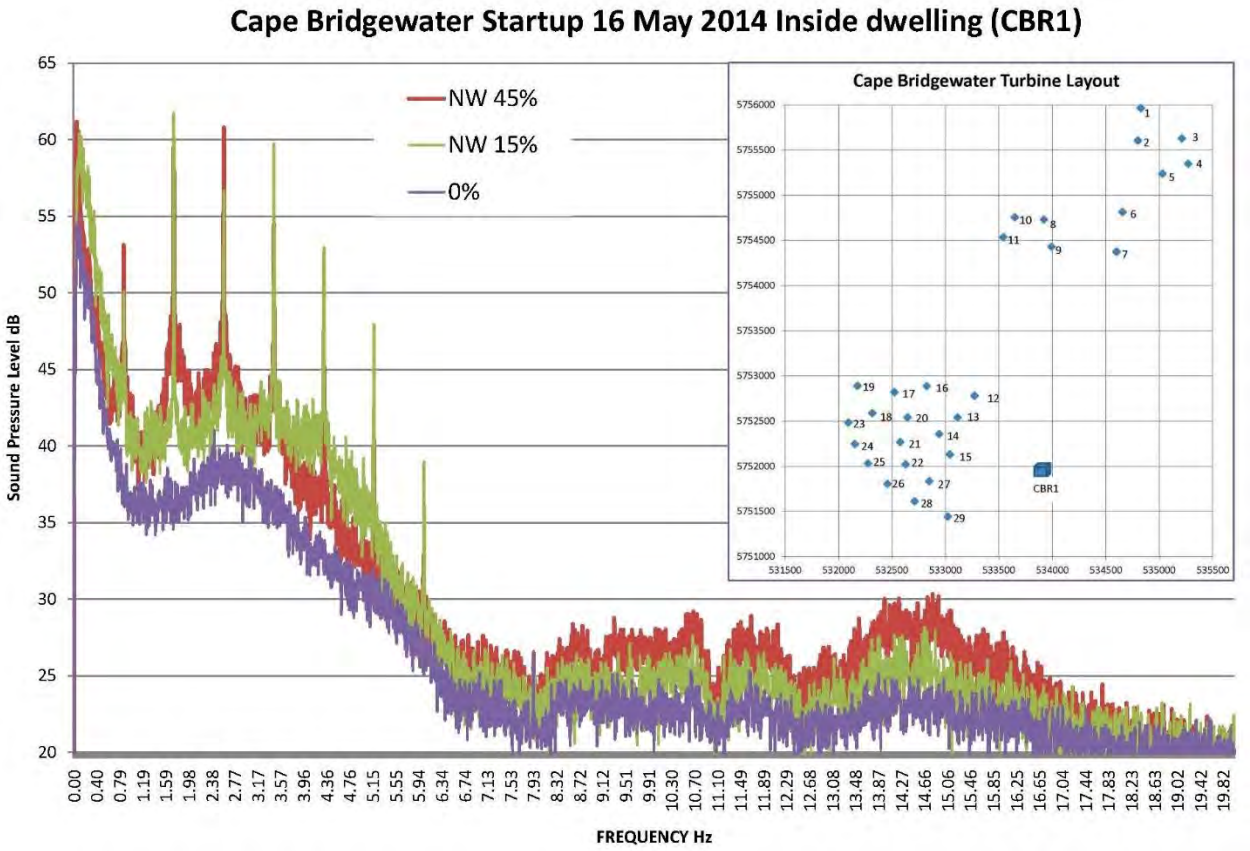
Infrasound

The SA2009 guideline mentions infrasound but considers wind farm generated infrasound to be of no concern. Unfortunately, the references used to prepare the SA2009 guideline (updated in 2021) only considered out of date information up to 2015. For example, the NHMRC reference in SA2009 is dated 2015 but after that time the NHMRC commissioned an extensive study into the health effects caused by infrasound from wind turbines to the value of $3,300,000, awarded to the University of NSW and Flinders University. This research is ongoing and one of the published papers in 2019 by researchers at Flinders University (Nguyen, D. P., Hansen, K. et al. Wind farm infrasound detectability and its effects on the perception of wind farm noise amplitude modulation, Acoustics 2019) stated in its conclusions that: "Overall these preliminary results suggest that WF noise complaints could potentially be governed to some degree by the presence of infrasound" and that " We found that self-reported noise sensitive individuals can detect the presence of low-level infrasound (48 ± 2 dB(G)) above chance."

The finding that infrasound at levels of 48 +/- 2 dB(G) can be observed by individuals is in stark contrast to the older research referenced in SA2009 which suggest that a conservative human perception threshold of 85 dB(G) might be appropriate to account for variations in sensitivity of human hearing.

The following chart from Huson(2015)[1] was obtained from a wind farm start-up to different percentage electrical generating levels of the wind farm (eg. NW 15% means 15% electrical generation in NW wind).

It is clear that infrasound below 6 Hz increases by over 20 dB after the wind farm starts to operate. The suggestions in section 2.6 of the updated SA 2009 regarding comparative studies are misplaced. The issue of adverse health effects from wind farm generated infrasound remains contentious.



Construction and Ancillary Equipment noise predictions

The NVA explains that CONCAWE was used to predict construction noise and ancillary equipment noise impacts.

The sound power data used in the NVA are plausible but the limitations on the accuracy of CONCAWE described above can also be applied to construction and ancillary equipment noise predictions.

The NVA predicts that construction noise can be problematic for some non-associated residents but fails to assess the impact upon associated residents, despite a proposed batching plant intended to be located next to an associated dwelling.

Uncertainty

Uncertainty of predicted noise impacts associated with the detailed design changes that may occur in the EIS have not been provided. For example, there has been no consideration in the EIS for different candidate WTG, layout, site effects, possible tonality and low frequency noise or noise model uncertainty.

[1] Huson, W.L. "Stationary wind turbine infrasound emissions and propagation loss measurements" 6th International Conference on Wind Turbine Noise, Glasgow 2015

A full assessment of the effect of all detailed design changes that may be considered by the proponent should be addressed in the EIS. This is a requirement from Section 5.1(9) of SA 2009.

An EIS must address all of these possible changes before any EIS is evaluated by the responsible authorities. If the changes suggested are not considered in the EIS, perhaps with a sensitivity analysis of the possible changes, then the EIS is deficient and incomplete.

Noise compliance testing after commissioning is proposed in the NVA to ensure that target noise limits will be met. If such testing shows an exceedance of target noise limits then the NVA suggests that an operating strategy will be prepared in which particular wind turbines could be operated in noise reduction mode.

The objective behind an EIS using the SA 2009 guideline is to provide a conservative impact assessment that should assure compliance with target noise limits. The SA 2009 states that: "A conservative approach should be used for predicting wind farm noise …".

Contractual obligations between a wind farm owner/operator and the wind turbine supplier are often useful in ensuring compliance with noise limits and ensuring adherence to maximum sound power outputs from installed wind turbines. Unfortunately, in the case where the supplier of the wind turbines is also the owner of the wind farm such a contingency option will not be available. Furthermore, contractual obligations such as these are outside the remit of the planning authority.

A conservative noise prediction for all aspects of the construction and operation of the Winterbourne Wind Farm should ensure that only rare unintended mechanical failures, maintenance problems or poor construction activity scheduling will be the only cases where non-compliance with target noise limits occur.

Detailed review of EIS Appendix H (Sonus NVA Report)

Background Noise Measurements

Accurate determination of background noise levels is fundamental to setting target noise limits that the developed wind farm must meet.

Wind Speed

The wind speed measurements must comply with the uncertainty requirements of SA 2009 at hub height and the uncertainty associated with the derived wind speed to hub height calculated by Winterbourne Wind from the four met masts should be included in the EIS.

Background noise measurements must be correlated to wind speed across the wind farm site. SA 2009 notes that wind speed measurement locations must be determined, as follows:

> **Measurement location**
> The same location should be used for measuring wind speed and direction for all of the following procedures:
> • background noise measurements,
> • noise predictions,
> • compliance checking.

> Therefore the wind speed measurement location at the wind farm site should not:
> • be significantly affected by the operation of the WTGs in their final location,
> • provide lower wind speed results than other locations on the wind farm site, where those locations will house WTGs that affect the noise level at a relevant receiver.
>
> For large or topographically diverse wind farm sites, the suitability of the wind speed measurement location may need to be confirmed as part of the development assessment process.

The four temporary met masts used in the Background analysis report are next to the location of proposed wind turbines. The nearest wind turbine to the four met masts are as follows: Walcha Mast, 346m; Mast 1, 267m; Mast 2, 157m and Mast 3, 64m. Wind speed data from these locations are unsuitable for background measurement purposes since the location will subsequently be affected by operation of the proposed nearby wind turbines. An alternative temporary mast location should have been chosen that will not be subject to influence from any future turbine.

As the Winterbourne wind farm is large and topographically diverse, the suitability of just four temporary met masts for use in Background data reporting should have been justified in the EIS. The EIS, pages 52 to 55, show the locations of the installed wind speed met masts and the location of future permanent met masts. The distance between the nearest proposed permanent met mast to the nearest installed met Mast 3 is approximately 2.4 km.

The EIS/NVA should explain how wind speed for compliance checking is to be collected after the temporary installed met masts are removed.

Windflow modelling across the wind farm could have been included in the EIS to support the use of the four met masts for the analysis of background survey data. For example, if the nearest met mast to a background survey location is not representative of the hub height wind speed expected across the nearest wind turbines to the background survey location, then an additional uncertainty is introduced into the analysis of background data.

SA 2009 states:

> Evidence that the wind speed and direction sensor is certified for the accurate determination of wind parameters is to be supplied as a part of the application. Accuracy of the wind speed measurements should be ±0.5 m/s, and wind direction measurements ±3º or better.

The location for the met mast supplying data used in the NVA needs to be checked and evidence supplied regarding the accuracy of the measurements, including the uncertainty in the method used to determine hub height wind speeds.

Clarification is required about the suitability of locating the four met masts given the proximity of wind turbines that shows probable adverse turbulence influence on the met mast shown in EIS figures.

Explanation is also required that the met mast locations meet the SA 2009 requirement that ‘the wind speed measurement location at the wind farm site should not .. provide lower wind speed results than other locations on the wind farm site, where those locations will house WTGs that affect the noise level at a relevant receiver.’ Windflow analysis results such as those described in Appendix A could assist in this regard.

Background analysis has been limited to 12 m/s but SA 2009 requires background data to cover all wind speeds in which the turbines can operate, which is from cut-in to cut-out (for Vestas candidate wind turbines this is 3m/s to 25 m/s at hub height).

Background measurement equipment

SA 2009 states:

> *Equipment*
> Background noise levels should be collected for continuous 10-minute intervals using sound level meters or loggers of at least Class 2 certification in accordance with Standard AS IEC−61672. The lower limit of the instrument measurement range must be chosen to provide accurate measurements which might be limited by the noise floor of the data acquisition device.

Sonus used Rion Class 2 sound level meter loggers. The type of sound level meter used and the corresponding serial numbers or calibration details are not provided in the NVA although Sonus have regularly use Rion NL-21 sound level meters fitted with UC-52 microphones for other similar projects.

The *measurement range* over which the sound level meters comply with AS IEC-61672 is not stated in the NVA but Rion specifies the measurement range of the NL-21 to be a minimum of 28 dB(A). The lower measurement level compliant with AS IEC-61672 is generally 10 dB above the noise floor of the sound level meter and microphone combination. Sonus state that the noise floor of the sound level meters is less than 20 dB(A).

Rion state that the noise floor of the sound level meter, without microphone, is "22 dB(A) or less (typically 19 dB(A))". However, the NL-21 is normally fitted with a UC-52 microphone that Rion state has an inherent noise level of 24 dB(A). This would suggest that the measurement range providing accurate results in compliance with AS IEC61672 is above 34 dB, although Sonus have not specified the actual lower measurement range of the sound level meter and microphone combination that complies with AS IEC61672.

The effect of this equipment limitation is that if the Background sound levels are shown to be below, say, 28 dBA then the reported measurements will be artificially elevated and the corresponding target noise limits will be too high[2].

Many measurements (estimate >30%) fall below 28 dBA in the results presented for Background measurements in Appendix E of the NVA.

The NVA reports Background data in scatter charts with data analysis taking the form of a least squares trend line through all of the data points. This was the method used in SA 2009 before it was updated in November 2021. The recent SA 2009 now requires integer wind speed bin analysis of all recorded data. Bin analysis is much more powerful analysis procedure than simple trend line analysis.

Only 24 -hour data is provided. Since the target noise limits are intended to protect sleep it would be appropriate to include additional night time only data charts. Night time only data should be used to set night time target noise limits.

When the base line target noise limit is 35 dBA, or Background plus 5 dB, it is important to recognise that measurement equipment must remain accurate to AS IEC-61672 Class limits below 28 dBA. If poor low level accuracy equipment is used then it would be appropriate to adjust the average integer bin sound level determination lower to compensate and provide a note in any reported sound levels below the measurement range that those measurement levels will be overestimated.

[2] Huson, W.L.: "Constraints imposed by and limitations of IEC 61672 for the measurement of wind farm sound emissions." 6th International Conference on Wind Turbine Noise, Glasgow 2015

To meet the requirement of SA 2009 that 'The lower limit of the instrument measurement range must be chosen to provide accurate measurements which might be limited by the noise floor of the data acquisition device', then the Sonus Background noise measurements should be reviewed considering limited low sound level accuracies.

Sound level loggers capable of achieving measured results compliant with AS IEC-61672 accuracy limits are readily available down to < 23 dBA. A typical sound level meter from Larson Davis states in its manual (my emphasis in bold type):

> The measurement ranges over which the Model 831 meets the standards, which depend upon the selected frequency weighting, as shown in 'Performance Specifications" on page A-4. Measurements which include levels outside this range should not be considered accurate. An overload indication will appear when levels above the range appear.
> **However, the user should take care not to rely on measurements whose levels are below the lower limit of the specified range.**

Local wind speed at logger locations

SA 2009 states:

> As part of the development application, developers should confirm that the reported noise levels are not influenced by high wind speed across the microphone, particularly where wind speeds at the noise measurement position are expected to exceed 5 m/s (a high wind speed for the purposes of noise level measurement conditions).

The NVA notes that local wind speed at the noise measurement position was taken at only three of the seven locations surveyed. It is not reasonable to assume that measured wind speeds local to the three measurement locations are representative of the other four remote measurement locations. Thus, any data removed when wind the speed exceeds 5 m/s at the three measure locations may not be appropriate to trigger data removal from the other measurement locations.

Overall, the background survey data provided in the NVA is deficient and background surveys should be repeated using improved equipment that can measure lower sound levels that remain compliant with IEC61672 accuracy limits.

It is worth noting that any revised noise model could show other dwellings within a 35 dB(A) noise contour that would also benefit from a background noise survey. A preliminary layout was used to identify the background survey locations in the NVA.

Representative noise data

SA 2009 states:

> A community may be concerned that measurements undertaken as described in the guidelines may not be representative of noise impacts during other periods throughout the year. The compliance checking procedure may be required to be repeated where a valid concern exists to cover such shortcomings. The developer must collect representative noise data as best possible. Non-compliance may result in one or more WTGs being stopped or de-rated under certain conditions in order to meet the guidelines.

The EIS has not provided information to demonstrate that background noise data is representative of other times of the year. Only background data for Summer has been provided.

Noise model predictions

SA 2009 states:

> Noise Model
> A conservative approach should be used for predicting wind farm noise by calculating noise levels in octave bands from at least 31.5 - 4,000Hz to determine an overall predicted level and using the following inputs:
> - atmospheric conditions at 10ºC and 80% humidity,
> - weather category 6 (if CONCAWE method is utilised),
> - hard ground (zero ground factor).

The EIS has not used all of these input parameters. In a recent decision of the Victorian Supreme Court (**Uren**) relating to wind turbine noise the expert representing the wind farm (Mr Turnbull of Sonus Pty Ltd) incorrectly interpreted "the method for assessing wind farm noise prescribed" and the interpretation was accordingly not accepted by Judge Richards. It would be inappropriate for the NVA noise model to use input parameters other than those required in the SA 2009 guidelines.

Noise models produce sound pressure level output predictions based upon sound power levels (SWL) input to the noise model and various factors that address sound propagation from each sound source (WTG at hub height) to receiver dwellings. SA 2009 requires a ground factor, G, to represent hard ground.

Sound predictions can also be penalised if dB(C) predicted levels exceed 60 dB(C) or if tones are observed in measured test data from IEC61400-11 tests.

Tonality

No predictive correction penalty has been applied to the SWL of the candidate WTG for tonality. However, recent Vestas installations of their WTGs has demonstrated tonal noise emissions, as measured by Sonus at the Salt Creek Wind Farm for the Vestas V126 3.6MW turbines using the 1/3 octave band assessment method used in this NVA, that were not considered in earlier predictions for development approval of the Salt Creek Wind Farm.

The tones were identified in hub height wind speeds between 3 m/s and 7 m/s which are below the minimum wind speed of rated power. The Vestas V126 and V162 share the same proven underlying mechanical platform development. The Vestas website:
https://www.vestas.com/en/products/enventus-platform/v162-6-2-mw
describes the sound power level for the V162 6.2 MW turbine as:
"With a standard Sound Power Level of 104.8dB(A) and up to 30 percent higher energy production than the V150-4.2 MW™, the V162-6.2 MW™ establishes a new benchmark in competitiveness."

If tonality has been demonstrated to be a problem below rated power output of Vestas WTGs then it would be appropriate to insist on a proper IEC61400-11 test report to be provided with this application for any candidate wind turbine from Vestas.

If tonality is demonstrated just below the wind speed of rated electrical power then a 5 dB penalty would be applicable to predicted sound levels that would lead to potential noise limit contraventions.

If an IEC61400-11 test is unavailable for the proposed WTG then an alternative that has such a test should be offered as candidate. It is not uncommon for a WTG manufacturer to offer predicted SWL data rather than measured SWL data but in such circumstances it would be appropriate to add some additional

measure of uncertainty in the predictions. The total uncertainty should include a 5 dB possible penalty to the predicted sound levels.

The Vestas V162-6.2MW WTG has yet to be installed at any wind farm. The first installation is due to commence in the second quarter of 2022 in Finland:
https://www.globalenergyworld.com/news/sustainable-energy/2021/07/02/vestas-wins-192-mw-order-finland-increases-rating-v16260-mw-enventus-turbine-62-mw

Without an IEC61400-11 test report it is not possible to evaluate tonality or provide confidence to predicted sound power levels.

From the Bulletin:

SA 2009 requires that development applications for wind energy projects report the following:

> "To help determine whether there is tonality, the method and results of testing (such as in accordance with IEC 61400−11) carried out on the proposed WTG model to determine the presence of tonality should also be specified in the development application."

Summary

General

The NVA states on page 25 that:
"To ensure the project achieves the noise criteria, it is recommended that a pre-construction noise assessment be made based on the final turbine selection, layout and turbine specific sound power levels which are guaranteed by the manufacturer for the project. In addition, operational noise monitoring will be carried out following commissioning of the Project to verify compliance with the noise criteria."

The EIS has not considered the effect of different layouts or details for other potential wind turbine candidates. With more credible noise modelling it is expected that a revised layout would be required to meet the SEAR.

If the development is approved then any layout change or alternative wind turbine choice must not result in an increased noise exposure to the surrounding Community.

An EIS should address all of these possible changes before any EIS is evaluated. If the changes suggested are not considered in the NVA then the EIS is deficient and should be considered incomplete.

Technical consideration of the cumulative effect of other nearby wind farm developments should be reviewed with a revised EIS using corrected CONCAWE input parameters rather than those incorrectly applied in the NVA.

Background Noise Measurements

For the reasons identified and detailed in this review there are concerns over wind speed measurements used in the Background noise scatter charts and the accuracy of sound level measurements close to the instrument noise floor (poor sound level meter low level performance and corrections required for wind speed measurements). Derived target noise limits are artificially elevated due to the inclusion of data below the lower measurement range of the instruments down to the noise floor.

Some, if not all of the Background sound level surveys need to be repeated so that there is a wind speed measurement near to each microphone location.

The wind speed measurements representing wind across the proposed wind farm should be located where there is no potential influence from subsequently constructed wind turbines that can cause errors due to wind turbine wake effects during compliance testing.

The wind speed measurements must comply with the uncertainty requirements of SA 2009 at hub height and the uncertainty should be included in the EIS.

The location of the wind met masts used to provide data in the EIS needs to be verified as to the appropriateness for each of the Background measurement locations.

The EIS has not provided information to demonstrate that background noise data is representative of other times of the year.

Noise Model

The deficiencies of the CONCAWE noise model input parameters used in the EIS have been detailed.

The deficiencies relate to unverified sound power levels, choice of a wind turbine from the range available that has the lowest sound power specification and the incorrect application of the Ground Effect term recommended in SA 2009 for the CONCAWE noise model.

The NVA significantly underestimates the noise impact in the community surrounding the proposed wind farm by at least 14 dB. This underestimation of community sound levels does not include site effects that can further increase actual sound levels, or the possibility of including a penalty for tonality if test results show that tones are present for the actual turbine used.

The noise models (including the predicted impact upon the Oxley Wild Rivers National Park) should be re-calculated with the correct 'hard ground' term G set to 0% and with less optimistic wind turbine sound power levels.

In addition, a sensitivity analysis is required of any alternative layout and different candidate wind turbine generator (WTG) using test results rather than manufacturer's specifications. If no test results are provided that show lack of tonal audibility then it may be necessary to apply a 5 dB penalty to predicted sound levels as a precaution.

The predicted dB(C) levels should also be reviewed together with possible tonal qualities of the candidate WTG. Predicted dB(C) levels should be recalculated using test results and a suitable noise model that can be used below the 63 Hz octave band limit of CONCAWE.

The EIS should confirm the availability of the candidate WTGs and provide full IEC61400-11 test results.

The EIS currently shows a margin of compliance at dwelling SR240 of only 2 dB, SR109 of 3 dB, SR262 of 4 dB and 5 dB for many others. With the correct input parameters to CONCAWE it is highly likely that non-compliance will be demonstrated for many dwellings. If this situation arises then a revised layout will be required.

SA 2009 Section 5.1 (9) requires 'an indication of accuracy of the wind farm noise prediction.' This has not been provided.

Vestas are designing the layout, providing the wind turbines and will operate the Winterbourne Wind Farm.

It should be possible for Vestas to confirm the choice of wind turbine for this application and provide test results for the wind turbines they design and build. Currently, the EIS for this application is non-committal on a wind turbine choice or layout which does not provide confidence that the proposal will meet the requirements of the SEAR.

Negotiated Agreements

Evidence of any negotiated agreement for dwellings/residents should be provided to show how any adverse noise issues from construction activities and wind farm operations have been addressed to protect health.

For L Huson & Associates Pty Ltd,

W Les Huson BSc(Hons) MSc CPhys MInstP MIoA MAAS

Appendix A

Source: (http://www.wwindea.org/technology/ch02/en/2_4_1.html)

Siting of Wind Farms: Basic Aspects

When searching the internet for the definition of the word "layout" I came across following:

Layout in word processing and desktop publishing refers to the arrangement of text and graphics. The layout of a document can determine which points are emphasised and whether the document is aesthetically pleasing. While no computer program can substitute for a professional layout artist, a powerful desktop publishing tool can make it easier to lay out professional looking documents (source: www.webopedia.com)

In principle the same is valid for wind farm planning: The term layout in wind industry is used for choosing optimal locations for wind turbines. Tools like flow models help to identify the best positions, but cannot replace the engineer making the final decision by balancing interests.

So what is that engineering experience, what factors influence the decision?

Jessica Rautenstrauch, wind energy consultant from Anemos, Germany, at work. © Paul Langrock (www.unendlich-viel-energie.de)

Wind resource

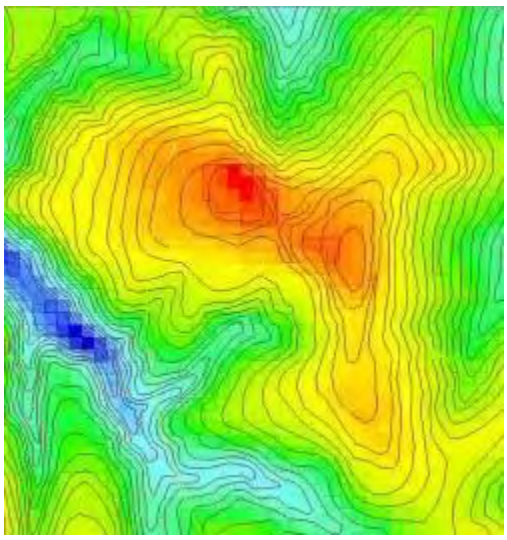
The wind resource is the most obvious factor to concentrate on when choosing a wind turbine location. We have a wide range of options to determine the wind resource of the site. The quality of the tools varies significantly and so does their price.

Common sense is a good starting point. Nature itself helps to guide us to suitable sites. Flagging of trees – permanent flagging and not the temporary bending in the wind – shows us the prevailing wind direction and is a good indicator for the strength of the wind.

However because of the uncertainty involved, using common sense as the only tool is of course insufficient. For any bankable estimate of the energy yield on-site wind speed measurements are required. The number of measurement masts required for a specific site depends next to the size of the project mainly on the complexity of the terrain. The measurement height should be minimum 2/3 of the expected future hub height. An increase in measurement height beyond this leads to a reduction of the uncertainty in the energy estimate. The measurement period must be one year or more to avoid any seasonal bias. Since the wind speed varies also inter-annually typically up to +/-12% a long-term correction is highly recommended.

The measured wind regime is extrapolated across the site to derive a resource map of the site using different flow models /4, 5/. A wind map like the one in Graph 1 can then be used to identify the windiest locations.

However additionally technical constraints should be taken into account when developing a layout /3/. A number of site specific wind load parameters can be extracted from the wind speed measurement. They are used to optimize the technical suitability of the chosen layout and the wind turbine type for the site specific wind regime.



Graph 1: Example Wind Resource Map. The colours denote the energy content of the wind, red high and blue low energy content.

Technical restrictions

Wind turbines are designed for specific conditions. During the construction and design phase assumptions are made about the wind climate that the wind turbines will be exposed to. In rough terms: For very complex sites with high wind speeds “heavy-duty” versions of wind turbines are available, which are sturdier but also more costly. Low wind speed sites in flat terrain do not put so high demands on the on the wind turbine structure, hence the construction can be more light-weight and hence cheaper. The different turbines have been classified by the IEC, class 1 being the highest wind speed class. The following table is a simplified summary of the IEC classification /1/.

IEC class	I	II	III	IV
V_{ave} (m/s) annual average wind speed at hub height	10	8.5	7.5	5
V_{ref} (m/s) 50-year maximum 10-minute wind speed	50	42.5	37.5	30

Table 1: IEC classes

But not only the wind speed but also other parameters play a role and have to be checked, when developing a layout for a specific turbine.
One of the most important parameters is the turbulence intensity. Turbulence intensity quantifies how much the wind varies typically within 10 minutes. Because the fatigue loads of a number of major components in a wind turbine are mainly caused by turbulence, the knowledge of how turbulent a site is of crucial importance.

We have to distinguish between two different sources of turbulence. Turbulence is generated by terrain features – which is referred to as ambient turbulence intensity - as well as by neighbouring wind turbines – which referred to as induced turbulence (Figure 1). Sources of ambient turbulence are for example forests, hills, cliffs or thermal effects. Thus ambient turbulence can be reduced by avoiding critical terrain features. But the wake-induced turbulence has far more impact than the ambient turbulence intensity /2/. Decreasing the spacing increases the turbulence induced by the wakes of neighbouring wind turbines meaning that there are limits to how close you can space the turbines. As a general rule the distance between wind turbines in prevailing wind direction should be a minimum of the equivalent of five rotor diameters. The spacing inside a row perpendicular to the main wind direction should be a minimum of three rotor diameters.

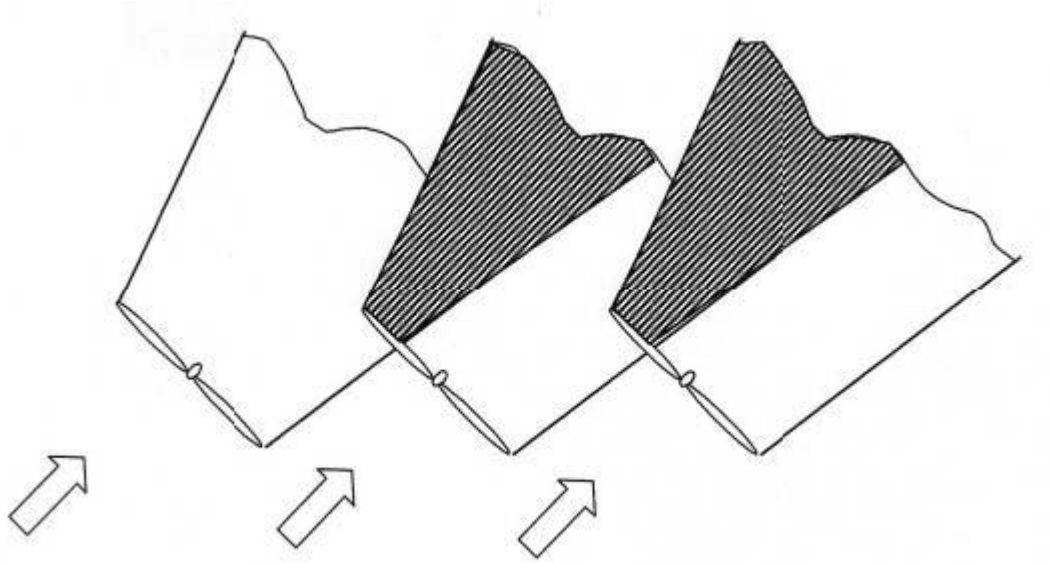


Figure 1: Shadowing in wind farm

If a layout is too close the resulting fatigue loads might be too high. In order to then ensure the lifetime of the main components wind sector management might have to be applied, meaning that some wind turbines might have to be switched off when they are operating in the wake of the neighbouring wind turbine.
Another parameter which has to be checked when developing a layout is the flow inclination, velocity tilt or in-flow angle. When wind turbines are to be placed on steep slopes or cliffs the wind might hit the rotor not perpendicular but at an angle. This angle is related to the terrain slope. With increasing height above ground level the effect of the terrain slope is normally reduced such that the terrain slope is only of indicative use to estimate the velocity tilt. A large in-flow angle will not only reduce the energy production but will also lead to an increased level of fatigue of some of the mayor components.

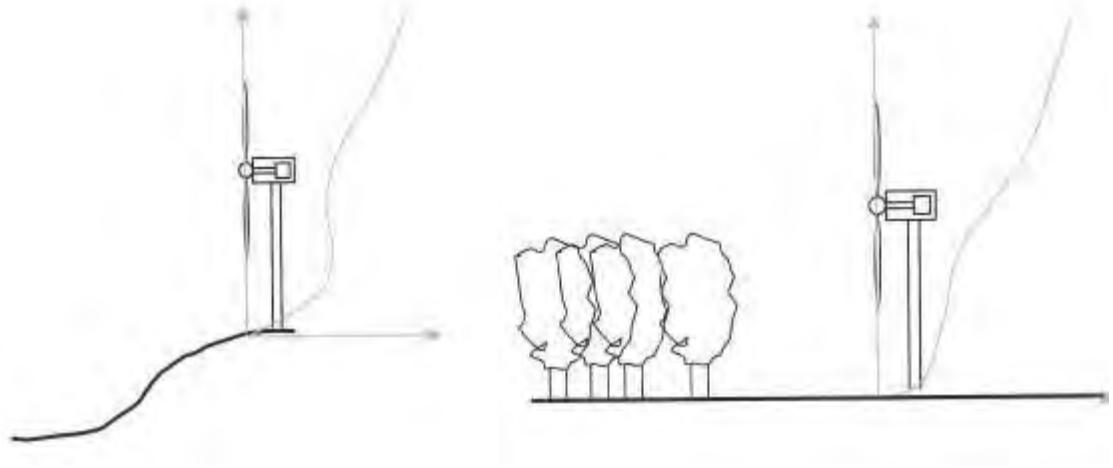


Figure 2: Distorted wind profile at steep slope (left) and behind a forest (right)

Furthermore a steep slope might cause a negative gradient across some parts of the rotor (Figure 2).

Normally the wind speed increases with increasing height. In flat terrain the wind speed increases logarithmically with height. In complex terrain the wind profile is not a simple increase and additionally a separation of the flow might occur, leading to heavily increased turbulence. The resulting wind speed gradients across the rotor lead to high fatigue loads particularly on the yaw system.

Obstacles like forest can have a similar effect on the wind profile and should be thus avoided.

Planning constraints

Next to the wind resource and technical considerations a good layout should also take planning constraints into account. The visual impact is of course the most obvious. A layout that follows the shape of the terrain rather than straight rows of wind turbines appears to be less intrusive. Noise is another important parameter to take into account. Next to noise also the impact due to flicker at the nearest inhabited houses should be estimated. The accepted levels vary from country to country.

Electro-magnetic interference can cause problems. Hence placing wind turbines in a transmission corridor should be avoided.

Some areas on site might have to be excluded from development due to other factors related to fauna, flora and archaeology.

Jessica Rautenstrauch, wind energy consultant from Anemos, Germany, at work. © Paul Langrock (www.unendlich-viel-energie.de)

Summary

A large number of parameters have to be taken into account when developing a layout. Some work can be done using tools, but in the end the balance between financial, technical and planning constraints can be best done by an experiences engineer.

Literature

/1/ IEC 61400-1, Ed.2 – Wind Turbine Generator Systems – Part 1: Safety Requirements, FDIS 998 /2/ S. Frandsen, St.; L. Thøgersen, L.;: Integrated Fatigue Loading for Wind Turbines in Wind Farms by Combining Ambient Turbulence and Wakes; Wind Engineering, Vol. 23 No. 6, 1999 /3/ K. Kaiser, W. Langreder: Site Specific Wind Parameter and their Effect on Mechanical Loads, Proceedings EWEC, Copenhagen, 2001 /4/ E.rik L. Petersen, N. G. Mortensen, L. Landberg, J. Højstrup and H. Frank: (, Wind Power Meteorology Part I: Climate and Turbulence, Wind Energy, 1, 25-45 (1998), Risø-I-1206, 1997 /5/ E. L. Petersen, N. G. Mortensen, L. Landberg, J. Højstrup and H. Frank: Wind Power Meteorology Part II: Siting and Models, Wind Energy, 1, 55-72 (1998)

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WINTERBOURNE WIND FARM (WWF)

Part H
Response to Aboriginal Cultural Heritage Assessment Report

This Part H presents as the Voice for Walcha's (VfW) **Group Objection Submission** to the Proponents ACHAR Responsibilities.

Key Community Message

The Voice for Walcha confirms its total support for the Submission made Wolka Dunghutti Barri First Nations people. Whilst we can offer our supporting observations as to the ACHAR process - it would be culturally inappropriate for VfW to communicate on their behalf. Secondly, we respect and support the observations, conclusion offered by Heritage NSW as to the obvious process failings of the Developer and their Consultants.

The VfW as does the Community of Walcha respect the *Wolka Dunghatti Barri First Nations people* as the traditional owners of the land. We found the Developers disregard in not engaging them an absolute disrespect for their Cultural custodianship of the land. It is well documented and signposted in the town of Walcha as to who they are and what they represent.

The offence this disrespect engendered is best set out in Dunghatti communication sent to the Developers on 17 October 2022 – this is **Attachment A** to this sub-submission.

The Traditional Owners also highlight the consistency of some of the profound failings common to the Developer's approach to the EIS;

- The total avoidance and interest in facilitating meaningful genuine consultation with the community, whether with the Indigenous Community or the Non-Indigenous Community.
- The 'pump and dump' race to the grid connection time frame the Developer has deployed has left an EIS in woeful shape unfinished and error laden. This is most evident in the ACHAR. The consultant admitting to the Dunghutti people the ACHAR prepared for the EIS is only in draft and that following the EIS process a further and amended report will be prepared. This is consistent with other reports prepared in the EIS.

For the reasons established by the Wolka Dunghatti Barri First Nations people, the VfW submit that the ACHAR is fundamentally flawed. We acknowledge that the Developers Consultants put a lot of work into the ACHAR but if you don't get the fundamentals right – particularly consultation then it can be culturally unacceptable and a wasted effort.

Basis of the Community Objection – ACHAR

- There is a failure to comply with the consultation requirements of Clause 80c of the National Parks and Wildlife Act 1974
- There is breach of the Guide to Investigating, Assessing and Reporting on Aboriginal Cultural Heritage in NSW (OEH, 2011)
- The Developers approach demonstrated disregard for the compliance Code of Practice for the Archaeological Investigation of Aboriginal Objects in NSW (DECCW, 2010);
- The lack of Consultation is inconsistent with the;
  - Community Participation Requirements of the Environmental Planning and Assessment Act 1979
  - Contemplated First Nations Guidelines pursuant to the Electricity Infrastructure Investment Act 2020 and Regulations

SEAR's Requirements – Heritage

THE EIS MUST …

- "assess the impact to Aboriginal cultural heritage items (archaeological and cultural) in accordance with the *Guide to Investigating, Assessing and Reporting on Aboriginal Cultural Heritage in NSW* (OEH, 2011) and the *Code of Practice for the Archaeological Investigation of Aboriginal Objects in NSW* (DECCW, 2010);
- provide evidence of consultation with Aboriginal communities in determining and assessing impacts, developing options and selecting options and mitigation measures (including the final proposed measures), having regard to the *Aboriginal Cultural Heritage Consultation Requirements for Proponents* (DECCW, 2010); and assess the impact to historic heritage having regard to the *NSW Heritage Manual"*.

COMMUNITY COMMENT

It is obvious on any read of the views of the Dunghutti people that the ACHAR doesn't reflect anywhere near satisfaction of the consultation obligations. They make feeble attempts to secure contact with the AMAROO Land Council twice in one day – they ignore COVID lock down particularly for Indigenous Communities. They place advertisements in Tamworth Newspapers rather than the free local Apsley Advocate and the Walcha News that was operating at the time – there is no evidence they engaged with the Summervale Community despite their obvious sensitivity to traffic disruption, noise and blade flicker given their proximity to the project.

The Report certainly has not taken into consideration their connections to land and places, nor their shared beliefs, customs, values and stories. The first nations people have not been adequately addressed in the social baseline of the Walcha community. There have been no community consultations and stakeholder meetings that have included specific consultations with the local aboriginal people or their organisations. This is very concerning given that culturally appropriate consultations with Aboriginal people is considered best practice in SIA methodology. For the developer to not consult with the local Dunghutti people on any meaningful level and for the ACHAR prepared to refer to the Dunghutti only 2 times in 215 pages shows them great disrespect.

As prescribed by the Aboriginal Cultural Heritage Consultation Requirements for Proponents (DECCW, 2010);

Community Consultation '**must be an open and honest two-way communication process between the proponent and Aboriginal people who have cultural heritage knowledge relevant to a proposed project area.'**

3.2 The objective of consultation

The objective of community consultation is to ensure that Aboriginal people have the opportunity to improve assessment outcomes by:

- *providing relevant information about the cultural significance and values of the Aboriginal object(s) and/or place(s)*
- *influencing the design of the method to assess cultural and scientific significance of Aboriginal object(s) and/or place(s)*
- *actively contributing to the development of cultural heritage management options and recommendations for any Aboriginal object(s) and/or place(s) within the proposed project area*
- *commenting on draft assessment reports before they are submitted by the proponent to DECCW.*

It's clear from Attachment A that Wolka Dunghatti are the traditional owners and they were never really pursued for consultation and involvement in the Cultural and Archaeological Surveys. As prescribed by the Aboriginal Cultural Heritage Consultation Requirements for Proponents (DECCW, 2010);

" 3.3.1 Who can provide this information?

Aboriginal people who can provide the information outlined in 3.3 above are, based on Aboriginal lore and custom, the traditional owners or custodians of the land that is the subject of the proposed project. Traditional owners or custodians with appropriate cultural heritage knowledge to inform decision making who seek to register their interest as an Aboriginal party are those people who:

- *continue to maintain a deep respect for their ancestral belief system, traditional lore and custom*
- *recognise their responsibilities and obligations to protect and conserve their culture and heritage and care for their traditional lands or Country*
- *have the trust of their community, knowledge and understanding of their culture, and permission to speak about it.*

It is acknowledged that Aboriginal people who, through a historical presence in a particular area, may have developed cultural knowledge relevant to the Aboriginal objects and/or places based on knowledge passed down to them by Aboriginal people with a traditional connection to Country. DECCW respects the rights of Aboriginal people with a historical connection to Country to, with their permission, act on behalf of Aboriginal people with a traditional connection to Country. DECCW acknowledges that in some cases it will only be Aboriginal people with a historical connection to an area who have the knowledge to inform the assessment of cultural significance of certain objects/places; e.g. on Aboriginal reserves and missions. "

In terms of the archaeological surveys 3 problems are identified;

- It is flawed on methodology and rushed – no evidence of compliance with the Code of Practice – no evidence of robust artefact recording – culturally modified trees;
- Nor as required by the Code of Practice did they source a required specialist to conduct the Surveys;
- There is no evidence they secured the right permits for the Surveys.

Conclusions

The Wolka Dunghutti First Nations people have sent correspondence to the Developer of Winterbourne Wind, together with the writer of the Heritage Report, OzArk Environment and Heritage, outlining the issues they have with the report in terms of assessment and more importantly with the lack of correct community consultation. We support the Dunghutti people in their request for the ACHAR being disregarded and redone in its entirety, as it is fundamentally flawed, beginning with meaningful consultation with local First Nations people.

Shannon Green-Griffen (on behalf of the Wolka Dunghutti First Nations peoples)
evajermane@hotmail.com
0411 985 244

Monday, 17 October 2022

ATTN:

OzArk Environment & Heritage 145 Wingewarra Street (PO Box 2069) DUBBO NSW 2830	WinterbourneWind Pty Ltd Level 4/312 St Kilda Road SOUTHBANK VIC 3006
Ben Churcher ben@ozarkehm.com.au	Doug Landfear, Project Director – PROPONENT dglla@vestas.com

RE: OZARK ENVIRONMENT & HERITAGE AND WINTERBOURNEWIND PTY LTD'S COMPLETE DISREGARD AND disrespect OF THE LIVING ABORIGINAL COMMUNITY THAT RESIDE IN THE PROJECT AREA - THE DUNGHUTTI/THUNGHUTTI FIRST NATIONS PEOPLES OF WALCHA – EVIDENT IN THE ABORIGINAL CULTURAL HERITAGE & HISTORIC HERITAGE ASSESSMENT REPORT.

An effect of colonisation is that Dunghutti/Thunghutti has been spelt in many ways. To account for this, we assert that all alternative spellings of Dunghutti/Thunghutti are implicitly embraced by our community and alternate spellings may be used in, but not limited to, all forms of correspondence, mapping, marketing and promotional materials and publications.

These alternatives include, but are not limited to:

Dunghutti	*Dang-geti*	*Danggadi*	*Thunghutti*
Thangatti	*Dangadi*	*Tangetti*	*Boorkutti*
Thunggutti	*Dhanggati*	*Dha-gadi*	*Dhangatty*
Thangatty	*Yuungai*	*Burugardi*	*Nulla Nulla*
Djaingadi	*Dangetti*	*Thangetti*	*Dangati*
Yunggai	*Burgadi*	*Ameru Himberrong*	*Conderang*
Dainggadi	*Dhangadi*	*Amberu*	*Yung*
Dhanghetti	*Thangatty*	*Tang-gette*	*Jang*

An effect of colonisation is the destruction of Aboriginal culture and heritage. Which is why there are now laws, acts, regulations, codes of practice, codes of conducts, requirements, guidelines, statements etc on how to effectively ensure that further destruction does not happen.

OzArk Environment & Heritage, and in turn WinterbourneWind Pty Ltd, have not abided by the instruments listed in their own **Aboriginal Cultural Heritage & Historic Heritage Assessment Report.**

As stated above, I write on behalf of the living Aboriginal community that live on Country in Walcha.

Your actions have shown disregard for local knowledge holders, custodians, and community and by doing so, you have discounted us, and you are now furthering and enabling the destruction and theft of our cultural heritage and knowledge.

I do not personally represent each individual community member's hurt, pain, anger, or sorrow in your actions, but I have been nominated, with trust, to be the contact person for which future correspondence is to be sent to, so that is correctly distributed to the whole Walcha Aboriginal community.

We have recently, Friday October 14 October 2022, been made privy to the Aboriginal Cultural Heritage & Historic Heritage Assessment Report that was compiled by Ben Churcher from OzArk.

Page iii of this document is an acknowledgement.

> *OzArk acknowledge the traditional custodians of the area on which this assessment took place and pay respect to their beliefs, cultural heritage, and continuing connection with the land. We also acknowledge and pay respect to the post-contact experiences of Aboriginal people with attachment to the area and to the Elders, past and present, as the next generation of role models and vessels for memories, traditions, culture and hopes of local Aboriginal people.*

OzArk & WinterbourneWind have made, what can only be described as feeble and superficial attempts at determining the traditional custodians of the area ***on which the assessment took place*** and taking the proper actions to ensure correct community consultations were carried out.

There is a WinterbourneWind office in the same building as Jobs Australia at 2w Fitzroy Street Walcha. A simple walk around the corner, across the pedestrian crossing and up the block, almost directly across the road from the Walcha Shire Council, sits the Amaroo Local Aboriginal Land Council (LALC) at 36n Derby Street Walcha. Google maps shows the distance between the two buildings as 190 metres.

There are three things that sit here.

1. A bushtucker garden, that has a large sign erected that reads:

   Traditional land of the Dunghutti Wutu Mob (Wutu is Daingaddi for Mob)

2. The Amaroo LALC Building that has:
   - 'yawayi' above the door (Yawayi is Daingaddi for hello),
   - Dunghutti Dhanang Barri (Welcome Dunghutti Country in Daingaddi)
   - a mural of a praying mantis facing toward the street (the praying mantis is the totem of our people), and
   - a sign for the entrance to the Dunghutti Language Centre.

3. Our Aboriginal café, titled Nyininhambu Barri (Our Place) – also in Daingaddi.

A google search of Amaroo Local Aboriginal Land Council will bring up numerous items, photos, videos, and news articles that also acknowledge the traditional custodians as the Dunghutti people.

Next to these buildings and the bushtucker garden is the town library, where you could have gotten books such as

- Baal Belbora: The End of the Dancing. The Massacre of a Peaceful People.
  Geoffrey Blomfield
  1988
- Tales at Old Ingelbah
  Donald Jamieson
  1987
- Ingelba and the Five Black Matriarchs
  Patsy Cohen & Margaret Somerville
  1990.

All of which, detail that Walcha is in fact Dunghutti Country, and the language spoken here was always Daingaddi. All these publications outdate the reference on page 170: Clayton-Dixon 2019, Surviving New England: A History of Aboriginal Resistance and Resilience through the first forty years of the Colonial Apocalypse.

We acknowledge that you had contacted the Amaroo LALC for involvement in the consultation process, however, as Colin Ahoy from Nunawanna Aboriginal Corporation, stated to you via email on 09.07.2020 *"…Aboriginal Land Council does not represent the whole …. Nation"*

This brings me to the *Aboriginal Cultural Heritage Consultation Requirements for Proponents* (ACHCRs) – referenced in the Abbreviates and Glossary oh page iv of the report generated by OzArk for the proponent WinterbourneWind Pty Ltd.

I am going to list some key points of the ACHCRs that are of great concern to the Dunghutti peoples of Walcha.

- **Glossary, page vi: *Cultural Knowledge***
  The last two words of this definition state: 'living communities.'

  I, again, reiterate that the area on which the assessment took place on is **Walcha**, and therefore, every exhaustive attempt should have been made to contact living community members in the assessment area.

- **Glossary, page vi: *Registered Aboriginal Parties***
  Traditional Aboriginal lore did not require Elders, knowledge holders, custodians, or community members to register their interest to be consulted.

This is another effect of colonisation and the displacement of Aboriginal peoples; and while we do understand that there are now a different set of procedures and protocols that operate alongside our own, you need to understand that not every Aboriginal person has the same education, comprehension or understanding of these 'new' laws or that they even exist.

We, as the Dunghutti people of Walcha, will always have an interest in being consulted, and not because we have registered to be consulted – because we are here and have lived on country, we still live on country, we belong to this country: Dunghutti Barri.

There are a lot of people who claim that they are 'from Walcha' or have ties to Walcha. This may be correct in some form but being a descendant of someone who lived here over 40 years ago and never actually have lived here personally or been involved in local business is much different to us.

Ben Churcher said to Colin Ahoy on 10.07.2020 *"… OZArk were very surprised at how few names were on the stakeholder lists."* This should have been indicative of the lack of knowledge amongst the Aboriginal community. Colin Ahoy stated in previous correspondence, dated 09.07.2020 *"Often when working with local Aboriginal communities, organisations such as the one you are working for, do not always understand the complex issues at play. Therefore, finding the right people to communicate back to the community Elders is crucial."*

- **Page 2: Consultation guiding principles**
  There are three bullet points that start with 'MUST'. Aboriginal people:
  - ***must*** have an active role in any Aboriginal cultural heritage planning process
  - ***must*** have early input into the assessment of the cultural significance of their heritage and its management so they can fulfil their obligations towards their heritage
  - ***must*** control the way in which cultural knowledge and other information relating specifically to their heritage is used, as this may be an integral aspect of its heritage value.

  Very clear. Very concise.

  The second paragraph of the section clarifies even further that might harm this heritage. *'…uncertainty about Aboriginal cultural heritage values at a site should not be used to justify activities that might harm this heritage.'*

  Nearly every action you have taken **will** harm our heritage. From consulting primarily with people who claim to be from the Anaiwan Nation to making recommendations of salvaging *'through a collection of the surface artefact following the [relevant procedure].'*

You are attributing this cultural knowledge and heritage to the wrong nation. You are consulting with the wrong people. You are sharing our cultural heritage and cultural knowledge with the wrong people.

The grey accent box directly below – the first bullet point reads: '*effective consultation requires a commitment by all parties to work in the spirit of cooperation, mutual understanding and respect.'*

You have not done this.

- **Page 2: Intended Outcomes**
  We draw your attention to ALL bullet points.

- **Page 3: Relevant Legislation**
  2.2.4 Aboriginal Lands Rights Act 1983

  Bullet point (a): Take action to protect the culture and heritage of Aboriginal persons in the council's area, subject to any other law and bullet point (b): promote awareness in the community of the culture and heritage of Aboriginal persons in the council's area.

  The site on which the assessment took place sits in Amaroo LALC's boundary area.

  The ALRA also lists Aboriginal people *before* members. Therefore, OzArk and WinterbourneWind should have too. As stated before, every attempt should have been made to at least follow the very guidelines that you set out in your own report.

- **Page 6: Understanding Community Consultations**
  First paragraph: WAS NOT DONE.

- **Page 10: Consultation Stages**
  4.1 Stage 1 – Notification of project proposal and registration of interest

  4.1.2: '*Proponents are responsible for ascertaining … from reasonable sources of information, the names of Aboriginal people who may hold cultural knowledge relevant to determining the significance of Aboriginal objects and/or places.'*

  This does not limit the sources of the information to the items listed from (a) – (g).

  This places the onus directly on the proponent (WinterborneWind Pty Ltd) to ascertain the names of the Aboriginal peoples mentioned above.

- **Page 10: Consultation Stages**
  4.1 Stage 1 – Notification of project proposal and registration of interest

4.1.3 '*The proponent must also place a notice in the local newspaper circulating in the general location of the proposed project area explaining the project and its exact location.'*

Walcha has two **local** news publications. The Walcha News and The Apsley Advocate.

The Walcha News now operates via a Facebook page and a website.

The Apsley Advocate is a free publication that is delivered to **every household** in the Walcha area. Its office is located just up the road from the WinterbourneWind office at The Walcha Telecottage. The address is 32 Fitzroy Street Walcha. Google maps puts the walking distance between the two buildings at 100 metres.
They also have a website.

You chose to advertise in the Daily Leader. Which, as was brought to your attention by Colin Ahoy from Nunawanna Aboriginal Corporation on 09.07.2020, that this is a publication that primarily services the Tamworth district.

Ben Churcher's response to Colin in a phone call/email on 10.07.2020 was that *'…OzArk followed the consultation guidelines.'*

How can you honestly state that you have followed the guidelines when you ignored the two news publications in the area in which the assessment took place.

If this was done, the Walcha Dunghutti peoples would have had the chance the register as RAPs.

Given that you have made so many allowances for people from Armidale to be involved in this project, we demand you to make the exact same allowances, including remuneration, for the living knowledge holders, Elders and community members of the Walcha community: The Dunghutti People.

I could go on, but I feel as proper notification did not occur, the rest is self-explanatory and depicts gross acts of disregard and disrespect of our people.

OzArk and WinterbourneWind have discounted, disregarded, and disrespected us entirely in every stage of your 'consultation process', including redacting parts of correspondence in Appendix 1, page 177.

We compel you to correct this wrong immediately.

Regards,
The Dunghutti People of Walcha.

Shannon Green-Griffen

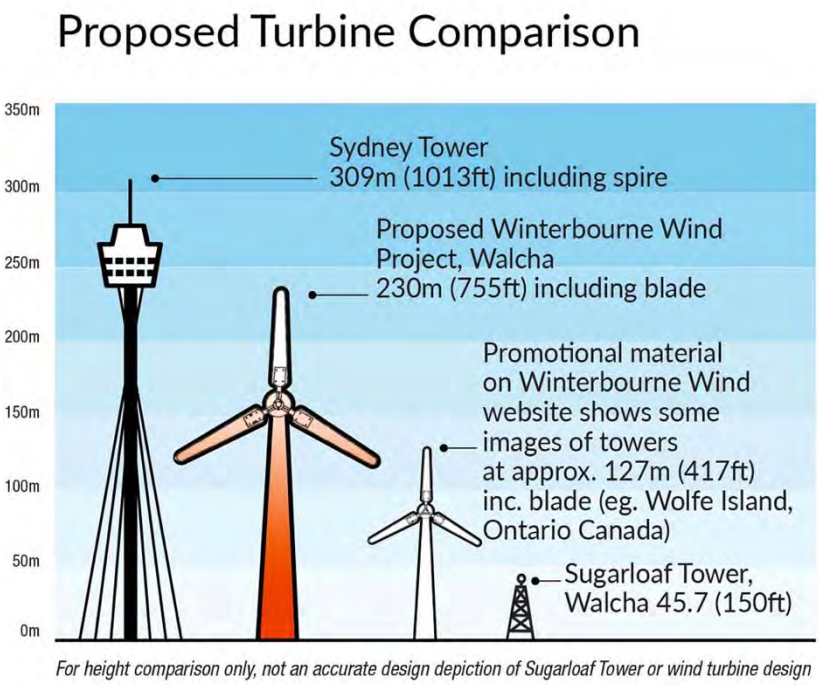
WINTERBOURNE WIND FARM (WWF)

Part I
Response to Landscape and Visuals Assessment

This Part I presents as the Voice for Walcha's (VfW) **Group Objection Submission** to the proponents Landscape and Visuals Assessment.

Key Community Message

The Community outlook on the Visual Impact Assessment remains one of heightened sceptics – this is drawn from its review of other important elements of the EIS which have shown convenient disregard for balance and objectivity particularly when comes to interpretation of technical data. It seems incredulous that infrastructure of this size would not induce a significant visual imposition on the Walcha Landscape. With respect, the Community does not accept the conclusion drawn from the Zones of Visual Influence and the interpretations on offer from the photomontages and wireframes. On developments such as this they often confirm as 'fake news'. What we say is mandatory is Moir's Assessment **should be peer reviewed** before any credibility is afforded its conclusion. Consistent with the Community's mantra – **Wrong Place, Wrong Size, Wrong Developer.**



Basis of the Community Objection - Health Impact Assessment

1. The Developers indifference **to loss of visual amenity from this project** is inconsistent with the requirements of the Section 1.3 (j) of the **Environmental Planning and Assessment Act 1979** . In particular;
    a) It's **failure to promote through preservation of the visual integrity of the Oxley Wild Rivers National Park** and a better environment by the proper management, development and conservation of the State's natural and other resources,
    b) It's failure to facilitate ecologically sustainable development by integrating relevant economic, environmental and social considerations in decision-making about environmental planning and assessment,
    c) It's failure to ensure compliance with the **Wind Energy Visual Bulletin 2016** in promotion the orderly and economic use and development of land,
2. It's failure to observe the priorities of the New England North West Regional Plan 2036,
3. It's failure to comply with the DPIE -State Significant Development Guidelines -July 2021,
4. Its failure to comply with the NSW Guidelines on Developments Adjacent to National Parks and Wildlife Service Lands 2020.

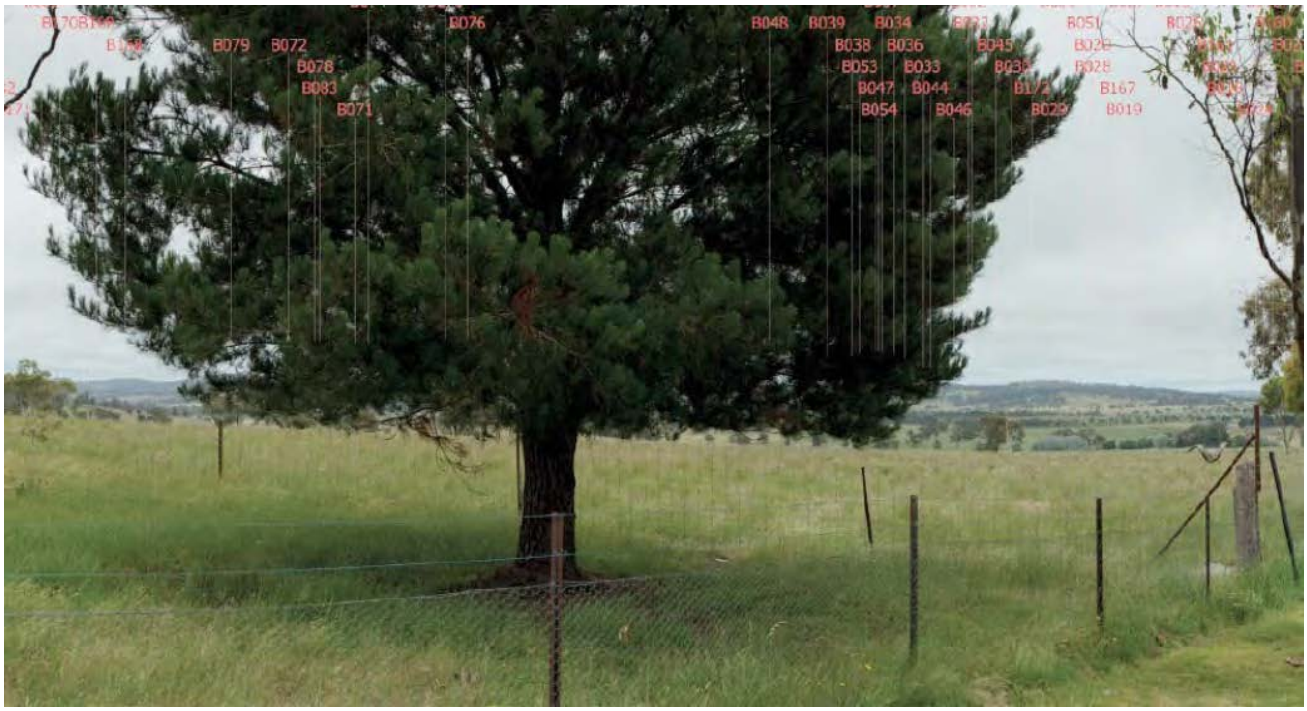
SEAR's Requirements – Landscape and Visual

THE EIS MUST …

- "include a detailed assessment of the visual impacts of all components of the project (including turbines, transmission lines, substations, and any other ancillary infrastructure and (if required) night lighting) in accordance with the *NSW Wind Energy: Visual Assessment Bulletin* (DPE, 2016), including detailed consideration of potential visual impacts on local residences and the amenity values of the Oxley Wild Rivers National Park, Gondwana Rainforest of Australia World Heritage Area and areas of declared wilderness under the NSW *Wilderness Act 1987*).

The SEARS document requires that photomontages shall be prepared in accordance with the Scottish Natural Heritage Visual Representation of Wind Farms, Version 2.1 December 2014 guidelines, noting they are generally consistent with the Land and Environment Court's Photomontage Policy. The visual assessment needs to include a concise description of the complete methodology used to create any photomontages presented in the visual assessment. This has not been done in the EIS with respect to a number of the photo montages submitted.

- The Scottish document refers to the Zone of Theoretical Influence or (ZTI). It clearly states that when the turbines extent over 150 meters in height the ZTI should be created out to a radius of 45 kilometers. No such images exist in the EIS.
- The Scottish guidelines also highlight the need to create images that help the viewer to fully understand what they will see when the project is completed. It says
    - *Most importantly, **the location chosen must avoid the view of the wind farm being misrepresented by the inclusion of atypical local features, such as a single tree in the foreground**. Where this has mistakenly occurred, the viewpoint location should be revised and the photographs retaken. Conversely, it is also unacceptable to move too far from the most prominent viewpoint in order to avoid typical foreground objects, for example moving into a neighbouring field when the view is intended to be from a road, in order to avoid typical foreground objects, unless these would obscure views to the wind farm. An alternative location may be required.*
- It would appear that over 50% of the images presented in the EIS violate this instruction and it can only assumed that this was inattentionally designed to hide information from the community. The image below is a typical example:



Over 20 turbines are hidden from view in this representation.

The Scottish document also demands that the selection of view points be done with the involvement of the planning authority. This has not been done.

> *"Representing cumulative ZTVs can be difficult when there are large numbers of wind farms involved. A sensible and pragmatic approach is required to focus on the **wind farms with which significant cumulative effects are likely to occur and which are likely to affect decision making**. Reproducing very large numbers of overlapping cumulative ZTVs does little to assist decision making. The selection of ZTVs should therefore be discussed and agreed with the planning authority and consultees at an early stage.*

The document also makes this observation. The preparation of the EIS was not made with any reference to this;

> *"Feedback suggests that members of the public do not feel sufficiently engaged in the viewpoint selection process. Applicants should increase their efforts to engage the public, bearing in mind the need to limit the list of viewpoints to a reasonable number. Alternative methods of illustrating the effects at individual properties (where these are required) should be considered to ensure that all local residents feel informed about the impact from their property. These would be for illustrative purposes only and they would not be assessed within the LVIA.*

COMMUNITY COMMENT

The turbine deployment V162 at 230M appears to be indicative only – it might well change to a 7.2 V172 with 200M blade diameters – this will increase the overall tip height to 250M – however from a visual magnitude perspective it makes minimal difference with tip height at 230M or 250M.

- The simple conclusion from any observation of this project is you can't hide these monster turbines in any landscape particularly certainly not a rural rolling hills agricultural outlook . The turbines are a massive intrusion on the landscape.

The DPIE Wind Energy Visual Assessment Guideline 2016 is hampered in its assessment assistance – its predicated assessment is based on turbines less than 150M high -we are now 230-250M and its now 7 years hence 2023.

- The existing landscape the Developer is trying to deploy these monsters on is rural rolling hills a quintessential agricultural outlook. This landscape will be changed significantly – there is no mitigation can disguise the significant impact.

- The Developer can engage whatever consultants to undertake baseline studies to contemplate whatever technology and visual influence zones – and deploy multiple wind turbine models – the result remains the same – **the magnitude of this technology is to be big and intrusive, a level of visual magnitude which is clearly inconsistent to public interest.**
- Once again the Developer brings **a Scoping Proposal** to the table and not a detailed EIS – as highlighted in some many aspects of the Communities response – the layout – the technology remains largely indicative.
- The many residents impacted by loss of visual amenity have had very little consultation offered by the Developer.
- Walcha's landscape integrity is further compromised by the half-baked approach they offered in the EIS on **Cumulative Impact Assessment**. With Ruby Hills and Thunderbolt Energy Hub, together with Booralong, Biala and Salisbury Wind in advanced feasibility the landscape is clearly compromised cumulatively.
- The Walcha community feels that property values in the area will be affected by the introduction of these huge turbines into the landscape on such a scale. The EIS dismisses this notion suggesting that property values may actually increase. It does not provide any evidence that property values will not decrease and certainly does not suggest any way of offsetting this loss.
- The Developer can't escape either in just WWF or cumulatively, the blade glint and blade flicker will be significant and a potential health hazard right throughout the project footprint. The evidence offered by Moir largely confirms this fear on the preliminary layout offered by the Developer.
- The Community are largely dismissive of the photomontages as a convenient distortion which advances the Developers interest. The multitude of turbines adjacent to Thunderbolts Way is unacceptable and intrusive.
- The dismissive conclusions offered as to low visual impact from the Green Gully track and the World Heritage Area are convenient distortions. This pristine wilderness will be impacted whether filtered or fragmented in sight. Together with noise nuisance these public assets will be damaged goods.

Conclusions

The Community strongly believe that the Moir Assessment has not been carried out in accordance with the SEARS document and for this reason does not inform the community of the full visual impact. It should be repeated following the guidelines and should then be Independently Peer Reviewed - the Impacts identified appear to be conveniently pro-development distorted. In this regard the potential for **serious impacts on the National Park and the WHA-Gondwana Rainforest** appear to be clearly understated by the assessment offered.

WINTERBOURNE WIND FARM (WWF)

Part J
Response to Socio-Economic Impacts

This Part J presents as the Voice for Walcha's (VfW) **Group Objection Submission** to the Proponents Socio-Economic Impact Assessments.

Key Community Message

The Community are staring down the biggest infrastructure development in its history – the biggest wind development in NSW, deploying the biggest kit in the Vestas V162 monster turbines, a project that is clearly oversized and in the wrong location.

Walcha has a very stable socio-economic history and remains one of the most prosperous rural communities in Australia, dominating in lamb, beef and fine wool production. It presents very solid Community Governance through the Walcha LGA and remains very proud of its community spirit. This project casts an unfortunate and unnecessary shadow across its socio-economic future and its ability to maintain a stable and progressive intergenerational outlook.

It doesn't need;

- Disingenuous academic textbook socio-economic assessments.
- Error-laden developer-friendly EIS profiles which are designed to mislead and manipulate the facts.
- Its stable socio-economic wellbeing dictated to by urban landscape narcissists.

The Socio-Economic assessments in this Developers EIS are nothing but nonsense – a tick the box exercise which offers no creditability, further confirmation that the whole EIS should be rejected. It is somewhat ironic that ERM use a shutterstock image of the turbines at Taralga as its cover page for the Social Impact Assessment, since Taralga Wind Farm induced one of the most toxic socio-economic chemistries in the history of wind farm development in Australia. The town of Taralga still remains a divided community today.

Basis of the Community Objection - Socio Economic Assessment

1. The Developer's approach to assessing the Socio-Economic Impacts is inconsistent with the requirements of the Section 1.3 (j) of the Environmental Planning and Assessment Act 1979. In particular;

    a) Its failure to promote the social and economic welfare of the community and a better environment by the proper management, development, and conservation of the State's natural and other resources,

b) Its failure to facilitate ecologically sustainable development by integrating relevant economic, environmental and social considerations in decision-making about environmental planning and assessment,

2. The Developer's Assessment - supported by independent two **largely academic desktop** Social Impact Assessments. It is not, as required by DPIE's guidelines, '**evidenced based**.' It is devoid of 'any meaningful on the ground consultation' with the wider community, **it relies on the paucity of host landowner engagement erroneously proffered by the Developer as 'consultation'**. There is no statement of facts as to when consultations took place and with whom - no reference as to numbers of stakeholders consulted.
3. The Developer's Social Impact Assessment was error laden and orientated to misinformation and falsehoods. **Academic assertions rather than factual conclusions**. For example, despite the requirements of the REAP declaration regarding ' false or misleading' information;
    - The EIS maintained references to Project Neighbours and Public Benefit Funds misleading and false.
    - The project is situated within the traditional lands of the Anaiwan People - false anthropological conclusion.
    - The project will contribute to the New England REZ - false the project is not seeking access or an LTESA pursuant to REZ law or Policy.
    - Increased local employment opportunities - misleading there is no actual evidence of how this presents or when this presents.
    - The project has an innovative community ownership plan -false such arrangement does not exist.
4. The Developer's Social Impact Assessment conflicts with the Wind Guidelines 2016." By this stage in the design process, the project should be defined to an extent whereby a proponent is able to justify the location and placement of turbines including how they have balanced the relevant social, economic and environmental impacts." As highlighted in this Response and all other VfW EIS responses - the Proponent doesn't try to socially validate any impact elements of the project - they remain unassessed because they have been deliberately not tabled. **This 'subject to future management and planning approach' as we have pointed out lacks procedural fairness. The Community cannot assess many potential impacts.**
5. The Developer's Impact Assessment doesn't comply with the **DPIE Social Impact Assessment Guideline - July 2021**. As highlighted in analysis hereunder the EIS doesn't, as outlined in the Guidelines Principles (p10), support '**an evidenced based approach'** to the development of a SIA.

...

THE EIS MUST INCLUDE ASSESSMENT OF THE FOLLOWING …

"Social & Economic – the EIS must include an assessment of the social and economic impacts and benefits of the project for the region and the State as a whole, including consideration of any increase in demand for community infrastructure services."

COMMUNITY COMMENT

The EIS presents with a summary of the contributions of two Social Impact Assessment (SIA) from two separate consultancies. As already established in comments made above the Community is appalled that both present with a lack of reality - **largely academic desktop observations**. **They lack an "evidence basis" of actual engagement. They present as 'textbook -desktop studies'. They convey messages from Consultants with no experience in assessing and advising on social impact in such a rural settings. This conclusion is consistent with the only surveyed feedback from the wider community.**

In this regard the Developer takes pride in promoting the lead authorship of the Key ERM Social Impact Report Dr Rene Provis an academic anthropologist at the UNSW. ERM and the Developer obviously bedazzled by anthropological qualifications rather than his actual experience for the task at hand.

- Dr Provis's PhD qualifications suggest as a PhD candidate at the University of New South Wales, Sydney, Australia. Rene's research investigated the effects of informal institutions on perceptions of corruption and morality in the post-Soviet space, from an interdisciplinary, institutional perspective.
- Two of Dr Provis's published papers include;
  - Between Gold and God: Investigating spiritual motivations in conflict over natural resources developments in post socialist Kyrgyzstan. A paper presented at the Australian Association for Communist and Post-Communist Studies, University of Canterbury, NZ 2015.
  - Perceptions of corruptions in post - Soviet Kyrgyzstan - Presented Kyrgyzstan 2012

With all due respect to Dr Provis's eminent qualifications - and obvious interest in ex-Soviet provinces - the exercise at hand required solid insight into significant development into rural society in NSW. All Rene's expertise contributed to be a largely textbook - academic expose of a serious and sensitive experience confronting the rural community of Walcha. It is not evident that Dr Provis even visited Walcha and the Project site. What are his qualifications and experience to assess social impacts of such a major intrusive development in a rural community setting in Australia not in post socialist Kyrgyzstan or Communist Laos?

COMMUNITY COMMENT

Problems associated with the SIA Methodology

The SIA Scoping of Impact issues is drawn from a particularly narrow reservoir of community feedback - **principally the Host Landowners** - any analysis of the consultation process confirms this conclusion. The SIA draws from this well, notwithstanding that the Developer Drop-ins etc were very poorly attended by the wider community;

1. Host Landowners will skew the likely impacts in favour of development – hence their recognition of environmental benefits and diversification of income. This is clearly not an outlook shared across the wider community.
2. The Scoping of Impacts exercise doesn't reflect on the VfW Survey 5 main areas of concern - **It seems so far to be the only credible feedback from the wider community; Just some of these hereunder;**
   - What is the social impact of the EIS not providing the Community with enough information to make a conclusion as to whether to support or not the project proposition?
   - What is the social impact of the 'divide and conquer 'approach of 'gagging the host landowners and neighbours" with secretive contracts?
   - What is the social impact of the developer not being open and transparent and honest on project details? – neighbour benefits – project details – turbine locations - loss of visual amenity - etc.
   - What is the social impact of the Developer deliberately downplaying the significant roads and traffic impact from a disruption, from a safety and from a cost perspective?
   - What is the social impact of misleading the Community on deploying noise modelling designed to present a less than accurate more conservative noise profile.
   - What is the social impact of the Developer deliberately ignoring the real cumulative impact assessment? There was convenient assessment from the Developer - which on any interpretation is trying to mislead the Community as to real impact of all Projects contemplated – not just those in the DPIE Planning Portal.
   - What is the social impact of the Developer avoiding its responsibilities on outlining for Community understanding decommissioning? The Developer offers a cloudy and misleading interpretation as to its responsibility. This has not been assessed and should - it remains a major unaddressed issue.

3. The SIA is trying to elevate the feedback that an interviewee (page 29) was pleased that the area could contribute as to the future energy outlook. (Host Landowner) There is never any doubt that Community has a progressive outlook and appreciate the need to decarbonise the energy profile.
4. The SIA clumsily attempts to leverage off the Ozark Environmental and Heritage - Aboriginal Cultural Heritage Assessment Report (ACHAR). It doesn't seem to appreciate that this ACHAR has been completely discredited – it's flawed-on approach and conclusions as to next steps – The SIA references Anaiwan and 6,000 years. Totally wrong – no engagement and no consultation from the Developer and this has been reported to them. It is a flawed process. The Communities of Walcha – Indigenous and Non-Indigenous – can't assess the social impact profile against this level of Developer incompetence.
5. Both SIA's contributions make the mistake of trying to talk up the social significance of the Community Consultative Committee (CCC) **–** without the realisation that it was an unmitigated failure as a process – it contributed no positive social impact. It was a Developer sponsored slide show. It was abandoned – it offered no insight into what information **–** project education was outflowing to the Community. Similarly, it offered no conduit for inflowing communication or requests for clarification from the Developer.

All of the above – induce serious issues which were ignored or glossed over by the SIA analysis procedural fairness for community – the obvious question – how could this academic contribution be expected to assess and comment on impacts in the absence of robust actual consultation and onsite probity?

COMMUNITY COMMENT

<u>Problems associated with the Economic Impact Assessment.</u>

As to the Economic Impact Assessment the Community is faced with the same frustration how is it supposed to assess the economic impacts -when no tangible economics are on offer from this Developer. The EIS Appendix A to the SIA suggests that estimated impacts, benefits, and opportunities have been identified through literature review, a community consultation report, socio-economic profiling blah blah. What is it this Developer doesn't get – the Community want facts or at least firmed up robust assumptions - they don't want to waste time on SGS's insight based on literature reviews or flawed and deliberately misleading community consultation reports.

1. **Economic Impact - gross value add** – economic modelling suggests during construction $146-180 million in direct value add. And $162 -$195m in each construction year. "There is opportunity to leverage the community ownership model "– What Community ownership model ? There isn't one!!!. Where does the economic modelling take account of the 'net' economic loss associated with the fact the town from a road and traffic perspective will be paralysed - people won't be able to fulfill their normal commerce. Gross value adding is only trying to blue sky the story.
2. **Employment Impact** – Had the Consultant visited the town and its rural setting instead of literature reviews it would have had some appreciation of the rural economy it was attempting to provide insight on. That being Walcha – its hosting 90% of the Project not Uralla at 10%. The Community need insight of the 246 Direct jobs - how many are expected to go to people residing in the Walcha LGA? The same question for the forecast 216 flow on jobs. What are the types of jobs SGS forecast offers insight on? – how can the Community make an assessment on economic impact of jobs if it doesn't know what skills these jobs will require?
3. As to the forecast **65-76 estimated Operational Phase Jobs** associated with the Winterbourne Wind Farm – please elaborate on the roles – skills of this perceived workforce – Do you perceive these positions will be based in Walcha? In answering this question, please provide comparison to similarly configured wind farms in Australia.
4. The conclusions on Tourism are reflective of 'urban landscape narcissism' a nonsense - developing wind farms will be a point of interest for visitors! the Community will be surrounded by them – an industrial waste land of some 2000 turbines in a 70km radius. **Tourism will be wiped out.**

Conclusions

The majority of the economic benefits of the Project will primarily go to the people who do not live in the Walcha township. They will go to the Danish Company, Vestas who own the development and manufacture the turbine components, and will be conducting the ongoing O&M, to their overseas shareholders, investors and financiers, to outside workforce who the Project Director has advised will be a skilled and coordinated workforce living outside of Walcha, and to the NSW Government by way of revenue, (think Biodiversity offsets to the tune of $64 million).

The local economic benefits of the Project will be limited to those local business and local people who may benefit from local contracts and local employment. Economic benefit will also be limited to the original 8 local Directors and Shareholders in WalchaWind Pty Ltd., other host landowners and any neighbour that were invited to sign a neighbour agreement before they were withdrawn. In other words, the economic good from the Project will primarily be distributed to people outside of Walcha, any local benefits will be short-term and only during the construction period, aside from the host landowners who will potentially benefit for the 25 - 30 years of the life of the Wind Farm.

On the other hand, the harms of the Project in terms of social and environmental impacts, will be experienced locally by not only those living closest to the wind turbines but a large majority of the townspeople of Walcha. They will be long-term and extend beyond the life of the construction of the project.

The result is inequity in the distribution of the environmental, social and economic burdens and benefits of the Project within the current generation (intra-generational inequity).

There is also inequity in the distribution between current and future generations. The economic and social benefits of the Project will last only for the life of the Project (less than three decades), but the environmental, social and economic burdens of the Project will endure not only for the life of the Project but some will continue for long after. The visual and noise impact of the Project will continue. The natural scenery and landscape will be altered replaced by an artificial landscape. The social impacts on culture and community will persist, especially for the Dunghutti people whose Country has been disrespected, and this cannot be repaired.

The benefits of the Project are therefore distributed to the current generation but the burdens are distributed to the current as well as future generations (inter-generational inequity).

WINTERBOURNE WIND FARM (WWF)

Part K
Response to Hazards and Transmissions

This Part K presents as the Voice for Walcha's (VfW)
Group Objection Submission to the Proponents
Hazard Management and Transmission Responsibilities

Key Community Message

The Community can't assess the hazards impacts as they have been offered through the EIS's minimal detail – it is assumed that aerial fire-fighting of fires – particularly in the National Park will be impossible with fixed wing aircraft – and highly unlikely for rotary wing options. This leaves the National Park and residences inside the project footprint exposed. The Community has no developed management plan from which to assess the risk of impacts.

The same can be said for the highly combustible BESS system – the EIS is vague on detail as to location and configuration. Until details on its location are available it impossible for the community to assess the hazards and risks.

The Transmission Planning appears not to be subject to a final plan – the Community has requested precautionary principle approach to EMF and has requested that all high voltage transmission be undergrounded including the switching yards at Uralla.

Basis of the Community Objection – Fire Hazards

1. The Community is impaired from assessment of the impacts as to Bush Fire as the Developer is yet to complete their suggested Bushfire Emergency Management and Operational Plan. Secondly, they have not demonstrated compliance with Guidelines - Planning for Bush Fire Protection 2019;

2. The Community is impaired from assessment of the BESS - as its location and configuration in the project area is still to be confirmed. This also impairs impact assessment as to compliance with the Guidelines for Hazard Analysis (2011).

SEAR's Requirements – Hazards and Risks

THE EIS MUST INCLUDE AN ASSESSMENT OF THE FOLLOWING …

- *Bushfire* - identify potential hazards and risks associated with bushfires / use of bushfire prone land, including: - the risks that a wind farm would cause bush fire, potential impacts on Oxley Wild Rivers National Park and identifying measures that may be required to assist fire management in the National Park;
    - any potential impacts on the aerial fighting of bush fires; and
    - demonstrate compliance with *Planning for Bush Fire Protection 2019;*

- *Battery Storage* – include a Preliminary Hazard Analysis (PHA) prepared in accordance with *Hazard Industry Planning Advisory Paper No.6 – Guidelines for Hazard Analysis* (DoP, 2011) and *Multi-Level Risk Assessment* (DoP, 2011), demonstrating that the battery energy storage system is suitably located and minimises risks to neighbouring land uses and on-site substations(s); and

COMMUNITY COMMENT

The obvious impact particularly for the National Park is the lack of access for aerial bombardment by fixed wing aircraft – the tool of choice for the RFS. Secondly there is big question marks as the ability rotary helicopter access to management smaller breakout because of the wind turbines.

As the Bushfires of 2019 confirmed the Oxley Wild Rivers National Park is volatile and combustible and there are a number of properties in the vicinity of the boundary. The Developer has not done any spatial analysis on the number and impact of wildfires in the Project area.

In Table 4 of the stakeholder Engagement section of the Aviation Impact Assessment, the NSW National Parks and Wildlife Service (Oxley Wild Rivers National Park) made comments regarding Fire Operations, Pest Management and Pilot Safety.

> *"Whilst there is acknowledgement of components of these matters there is no outline of how bushfire aviation operations could be managed in this specific area."*
>
> *"Consequences may result in very long-term operational issues, impact NPWS ability to control wildfire on NPWS estate and/or defend NPWS estate from fire encroaching, result in long-term financial impacts due to aircraft inefficiencies (long ferries and the use of alternate water points) and significantly compromise fire crew safety."*

Similarly, Westpac Rescue Helicopter made the following comments regarding Obstacle lighting risk assessment:

> *"Disagree with para 24 (see below). NVG compatible obstruction lights need to be installed to provide operators like us an opportunity to see the WTG/WMT hazards. Seeing an unlit structure in low light conditions may prove extremely difficult, particularly noting our min NVD vis requirements of 5000m and we can fly around at 500' AGL and their towers are going to be up to 750' AGL.*
>
> *Please forward the risk assessment regarding the proposal not to put obstacle lighting on the towers to me at your earliest convenience."*

These actions are yet to be completed and were not incorporated into Aviation Projects recommendations. Overall this report has **many actions yet to be completed** in terms of fire and pilot safety. The Developer has not completed the Bushfire Emergency Management and Operational Plan.

The location of the **Battery Energy Storage System (BESS)** is yet to be finalised – the EIS suggestion is the 'located in the North Substation' – assessment as to how localised this site is from a fire or explosion can't be made with requisite confirmation including water access, technical size configuration and location details. BESS is a relatively nascent industry, many firefighters and other emergency services have little or no experience of this type of hazard, which presents risk of fire, explosion, high voltage and fume toxicity, with the use of water potentially perpetuating the battery fire by additional cell shorting.

Goulburn Wind Turbine Fire January 2023

Transmission

There is no SEAR requirement on Transmission – there is an indication in the EIS that 50k of 330KV single or double high voltage will traverse the site. The EIS is less definitive as to the type of tower and the approximate spacing.

As highlighted in the Health Sub-submission the community is concerned as to health risks to humans and farm animals from EMF. This requisites undergrounding of all high voltage – including the switching yards at Uralla.

Voice for Walcha is a group of interested and passionate members of the Walcha community who value the local environment, the area and the people to such an extent, that we feel it is worth fighting for.

We are conscious of the value of renewable energy, but highly concerned that a small community of 3,000 is being asked to carry the (energy) load for 30% of the state.

Voice for Walcha

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