Meeting Venue: Held at the Nundle Memorial Hall

Members Present: Jamie Chivers (Wind Energy Partners); Sandra Agudelo (Wind Energy Partners); Aref Taleb (Wind Energy Partners); Ian Worley; Michael

Chamberlain; Margaret Schofield; Megan Trousdale (Nundle Business Tourism & Marketing Group Representative); John Krsulja (Hills of Gold Preservation Inc Representative); Peter Schofield; Kay Burns (Tamworth Regional Council); Donna Ausling (Liverpool Plains Shire Council); Christine

Robinson (Upper Hunter Shire Council); David Ross (Chair); Debbie Corlet (Secretary).

**Apologies:** Bruce Moore

**Independent Chair:** David Ross

Secretary: Debbie Corlet

| Agen | da Items                                    | Who to Present     |
|------|---|--------------------|
| 1.   | Introductions and Apologies                 | David Ross         |
| 2.   | Declaration of Pecuniary or Other Interests | David Ross and All |
| 3.   | Business Arising from Previous Meeting      | David Ross         |
| 4.   | Previous Minutes                            | David Ross         |
| 5.   | Correspondence                              | All                |
| 6.   | Update on Proposal                          | WEP                |
| 7.   | General Business                            | All                |
| 8.   | Next Meeting                                | All                |

| Agenda Item | Discussion  | Action/By Whom                             |
|-------------|---|--|
|             | Introduction and Apologies  |  |
| 1.          | Meeting commenced at 6:35 pm. David welcomed everyone to the meeting. He advised that Corrine is no longer available for meetings and welcomed Debbie to the role as Secretary. Furthermore, Mike Stranger is no longer working with WEP; Aref, who joined Someva in March 2020, was introduced.  |  |
|             | Declaration of Pecuniary or Other Interests   |  |
| 2.          | David advised that he was paid a fee to chair the meeting as is Debbie for taking the meeting minutes.  |  |
|             | Previous Minutes  |  |
| 3.          | It was agreed by all in attendance at the 5 <sup>th</sup> meeting that the Previous Minutes were true and correct.  |  |
|             | Business Arising from Previous Meeting  |  |
|             | David observed that all actions had been responded to.  | WEP to provide updated public              |
|             | Community Member observed that photo montages were due by the end of July which would include the woolshed.   | photomontages as a                         |
| 4.          | Jamie – it was unclear whether original photos or a photomontage was required. WEP committed to provide updated public photomontages as a priority and private photomontages shortly after but prior to the development application.  | priority and private photomontages shortly |
|             | WEP will continue to consult with residents concerned about the visual changes to the landscape in the leadup to  | after but prior to the                     |
|             | presenting final photo montages as part of the development application, including visual assessments and photographs taken from DAG sheep station residence and woolshed.   | DA   |
|             | taken nom Brid sneep station residence and woolsnea.  | Community member to                        |
|             | A committee member confirmed a response from the Department of Planning Industry and Environment regarding the need for land boundary surveys prior to development application.   | provide a copy to                          |
|             | Correspondence  | David                                      |
| 5.          | An email was received by David from a committee member, seeking that their neighbours be included in the Visual Impact Assessment. Jamie noted that WEP did follow up with the neighbour and had a meeting.   |  |
|             | There had been an email discussion also between Jamie and a committee member regarding the provision of coordinates for the location of the turbines (which is what the committee member was seeking). Community member wanted it noted in the minutes that the provision of the coordinates was declined by Jamie. However, Jamie noted that WEP will be |  |

| Agenda Item | Discussion   | Action/By Whom   |
|-------------|--|--|
|             | providing coordinates as part of the final development application with the context to how these locations have been determined.   |  |
|             | <ol> <li>Finally, there was an email to David from an alternate member seeking clarification of some points; namely:         <ol> <li>Due to Liddell and Bayswater Power Station closing down in years to come that the area would not have access to power unless the community accepted the proposed windfarm</li> <li>That landowners could face the risk of having their property or part of their land compulsory acquired by WEP even if they do not accept or sign the benefit sharing agreement.</li> </ol> </li> <li>Alternate member wanted response communicated to the wider community.</li> </ol>   | Jamie to provide a<br>written response<br>questions regarding                        |
|             | Jamie – confirmed that they do not have any rights for compulsory acquisition. We have gone around consulting for the wind farm – power lines and substations – no one should ever feel threatened. We hope that this can be clearly stamped out.  | Liddell and Bayswater<br>and Compulsory<br>acquisition rights to<br>alternate member |
|             | Jamie – we don't want anyone to feel uncomfortable. We're due for another newsletter soon and we'll make that clear in that as well. We have no compulsory acquisition rights. Liddell doesn't need to be replaced with this (proposal) specifically. It makes sense to have power stations where there is demand. There are a number of regulatory bodies that will make sure that customers will always have access to electricity. This project will benefit from the available capacity on the Liddell to Tamworth 330kV transmission line and avoid the need for significant upgrades to provide lower cost power to meet customer demand.  |  |
|             | Update on Proposal by WEP  |  |
|             | Sandra and Jamie discussed the PowerPoint presentation which has been emailed to all CCC members. Slides discussed:  | WEP to provide the presentation at least 2 days prior to each CCC                    |
| 6.          | Updated Layout Approach – Consultation, Design and Data Collection / Multi-disciplinary Workshop / Updated Design.  Updated Layout Results – Workshop Methodology – turbine location, hardstand, ancillary infrastructure, and road layout to assess opportunities to avoid and / or minimise impact. Benefits of the Workshop / Outcomes – Avoided impact. Civil designs aligned with environmental constraints. Reduced overall footprint. Discussion between all technical consultants.  Outcomes – Relocating and reorienting hardstands and roads. Removing blade storage to reduce hardstand footprint. Removal of 8 turbines. Pre-workshop 78 WTG, post workshop 70 WTG. 19 turbines hardstands reduced to accommodate just in time construction methodology and reduce clearing of vegetation.  Updated Layout – Graph. Jamie pointed out the red dots which indicated where the turbines have been removed. Photo montages are being updated. | meeting  |
|             |  | WEP to talk to Moir about labelling the  |

| Agenda Item | Discussion  |                              |  |  |  |  |
|-------------|---|------------------------------|--|--|--|--|
|             | Community Member asked if individual turbines could be labelled on the photo montages as well to make it visible where all the locations are with the turbines. Jamie will speak with Landscape Consultant to see if the turbines can be labelled on the montages.  | turbines on the<br>montages. |  |  |  |  |
|             | <b>Noise and Vibration Assessment Summary</b> – Sonus, expert in Wind Farm noise assessments, was engaged to do the Noise and Vibration Assessment. Graph on the background noise monitoring. Worst case atmospheric and terrain assumptions taken into consideration.  |                              |  |  |  |  |
|             | Visual Assessment Update – Public Viewing of the preliminary photo montages which have been available in the Nundle Library since 22 June 2020.   |                              |  |  |  |  |
|             | Shadow Flicker Assumptions and Results—Inclusion of worst-case assumptions.  Hazards and Risks — Blade Throw — ERM completed the assessment and background on the literature review timeframes was provided giving context to the amount of data assessed.  Blade Throw Results and Mitigation — Results and Mitigation Measures.   |                              |  |  |  |  |
|             | General Discussion  |                              |  |  |  |  |
|             | A discussion was held on whether the money offered to the community will decrease now that there are less turbines.  Jamie – the numbers will reflect the independent consultation. Full time jobs / flow on jobs / community enhancement / state / local community. Will be presented and summarised at the next CCC meeting in September.  The representatives from each of the three councils observed that their organisations will negotiate a figure with WEP, but no decision has been made as yet. While DPIE may have the final say on the fund and its structure, this would be in consultation with the 3 Councils. David said he may invite the Councils to give an update at some point on their progress. |                              |  |  |  |  |
|             | A community member observed that, as a consequence, they believe that it's premature to talk in the community about spending for things like funding a doctor in Nundle, a retirement village / Hanging Rock facilities / recreation ground etc – it is irresponsible to put these ideas out there. Another Community Member mentioned that there will be a lot of people in favour of this who will be looking for the financial help.   | Discuss CEF at the           |  |  |  |  |
|             | Community Member asked Jamie about the Community Enhancement Workshop when he said that it was suggested a model would be in the DA. When can the community expect to have that knowledge – before or after the DA?  Jamie – There are a number of ideas from the community, but we need to talk to all 3 Councils about voluntary funds under a VPA. We are making a commitment in the DA (money per turbine) but there are rules and guidelines which is why we had the workshop to understand the community interest and how it could best operate.  | October meeting              |  |  |  |  |

| Agenda Item | Discussion  | Action/By Whom  |
|-------------|---|---|
|             | Discussion then turned to the noise impact study. Jamie observed that the Australian guidelines are extremely strict requiring noise to be kept extremely low. The threshold is 35 decibels (equivalent to a whisper) or background noise levels plus 5. Community member mentioned that this could be low, but it might be the pitch of the noise that is the issue.   |   |
|             | Community member asked about cumulative impacts of a number of turbines as well as if the 35 decibels was measured at the turbine. Jamie replied that the 35 decibels must be achieve at the dwelling and the wind farm proposal would have to adhere to the threshold, taking into consideration worst case scenarios such as cumulative noise impacts, worst wind directions.   |   |
|             | Community member asked about the make of the turbines – there is 4.5 megawatts but there was mention of 6.0 megawatts? Where are you at with this? The length of the blade and also the distance between the turbines?  | WED to procent on the   |
|             | Jamie – We can't speak specifically about this yet as it is too early, and it is commercial in confidence. A summary of the technology, trends and components could be offered to the CCC. Jamie said they have a development application to a range of turbines to create an assessment envelope. This provides flexibility to select the most competitive turbine that meets the assessment criteria and regulation. The range of turbines is between 4.5 to 6.6 megawatts. We can talk about this at the first meeting after the DA with regard to the type of turbines, make, size, components, trends in the technology to which the project might consider. At least we are happy to talk to you about this at the first meeting after the DA, given the amount of content we've got to get through in the coming meetings. | WEP to present on the technology update in a meeting after the DA submission. |
|             | Community Member said they were interested in the turbine footings. They'd each have their own footing / engineering. Are you able to let us know about these? Do they drill down 20 metres / turbine footing anchor design? Jamie advised that the different foundation types will be included in the DA – could be 5 metres by 30 metres – anchor down into the rock / foundations. Another community member said they'd like to see how this works if on the slope end and if you cut into the mountain. Jamie said all the concepts for foundation types will be in the DA but that detailed geotechnical studies and turbine selection will determine the final design specific for each turbine footing.  |   |
|             | Jamie advised that the civil engineering company provide a design once you select the turbine and know the structure of the ground. David observed that if the proposal gets approved – the designs will be refined and therefore this CCC will continue to have the opportunity to talk about this issue further.  |   |
|             | Community member noted that this comes back to miscommunication from the landholder in a radio interview. He heard that they are 5 metres deep, but you (WEP) haven't even looked. They are going on the radio and saying that a spokesman from HoGP is a liar – these mistruths need to be dispelled - \$200,000 – does the landholder even know? Do you communicate with the landowners?  |   |

| Agenda Item | Discussion  | Action/By Whom  |
|-------------|---|---|
|             | Community member — So initially it was 97 turbines and now it is down to 70 — are you going to compensate by bigger generators (remuneration by your company) does that affect the compensation? You'll be making the same but with less turbines at a set price — so the net income is coming down for the landholders? You are cutting by 30%. Jamie discussed that it was a benchmark and there was an offer made to the community and that yes, the turbines have been reduced as we try to avoid impact but to please be patient whilst we work through these impact studies — it takes time. This was discussed at the workshop and some suggestions were made for a \$/MW. You shouldn't assume that less turbines means the project economics stays the same. We would prefer to have more turbines given fixed costs associated with the project. However if the community are interested in the CEF being a \$/MW we can discuss with our investors and reconsider as part of the development application. Generally a \$ per turbine is an easier concept to understand. |   |
|             | Community member said a contract was \$2,500 per turbine and that it is over 25 years but then the landholder said it was 35 years – so 70 years in total? Jamie said that the amount of \$2,500 per turbine is paid for the duration of the project which could be as long as 35 years.  | WEP to advertise when<br>the Visual Assessment<br>updated public  |
|             | Community member asked that when the Visual Assessment is available at the hall if WEP could advertise this as people don't know as it's not advertised anywhere. Jamie confirmed he can place it on the website and put it in the Newsletter that it'll be set up in the library. Photos need to be closer to the sport and recreation club – both are important locations. Jamie confirmed that Jenkin Street needs to be moved further south of the intersection and up over the rise. This was confirmed as being assessed.   | photomontages are at the library  WEP to present on the aviation lights when available including info about shielding / |
|             | Community member asked about the aviation lights and the night sky? Another community member asked if the lights would come on during the day because of fog? Jamie confirmed that they will be including what the night lights will look like – and at dusk as well. We want to see the results, but CASA have to review it first, including issue of fog, and hope that the recommendations hold. We're hoping for examples of others and what night lighting looks like.   | flashing / sensor lights.  WEP to provide example of Australian operating wind farm                                     |
|             | <ul> <li>Jamie discussed the slides around Shadow Flicker Assumptions. Worst case assumptions are:</li> <li>The sun is shining all day, from sunrise to sunset.</li> <li>The rotor plane is always perpendicular to the line from the Wind Turbine Generator to the sun.</li> <li>The Wind Turbine Generator is always operating.</li> <li>Assumes no vegetation covering.</li> </ul>   | using aviation light<br>shields (if possible)   |
|             | Shadow Flicker Requirements – Guidelines allow up to 30 hours per year. Shadow Flicker Results – one dwelling modelled under worst case conditions exceeds the shadow flicker limit by 3 hours. The dwelling is surrounded with vegetation which is expected to reduce the impact along with nature climatic conditions and location perpendicular to prevailing wind direction. 3 dwellings are modelled under worst case conditions to be under the limit with results between 10 and 30 hours. Further consultation will be offered to help residents understand mitigating factors that will likely further reduce  |   |

| Agenda Item | Discussion   | Action/By Whom   |
|-------------|--|--|
|             | worst case modelled results. Further consultation will be undertaken with residents to determine their unique circumstances that are likely to contribute to a reduction in expected shadow flicker hours.   |  |
|             | David briefly summarised what he had heard for the update for confirmation - Updated layout – 70 turbines now. 7 noise loggers in place. Noise guidelines require noise levels remain at background noise plus 5 or 35 decibels – going to put monitoring program in place – during construction and operation. The noise assessment indicates that the noise threshold will be complied with. No blade throw risks have been observed from events occurring between 1981 and 2020. To minimise risk of blade throw, blade design must be in accordance with standards of the International Electrotechnical Commission. Shadow flicker – 1 house just outside and maybe 3 houses that have 10 to 30 hours. Is that correct? Jamie said that summary was correct. David said any further comments or questions with respect to his summary. Members did not seek to provide any further input. |  |
|             | General Business  A member tabled a series of questions associated with respect to observations and recommendations from the National Wind Farm Commissioner, updated this year. In particular:  1. The recommendations that were made with respect to Neighbour Consultation and Agreements.  2. Site selection, particularly site impacts and optimising site locations  This was linked back to Section 3.2, in particular, of the Neighbourhood Benefit Sharing Agreement.   |  |
| 7.          | The member was seeking clarification as to whether the Neighbourhood Agreement was benefit sharing or actually compensation. The member observed that this has significant consequences with respect to the recommendations made by the Wind Farm Commissioner and impacts that could eventuate outside the 5 km radius from dust or road damage. This has implications for benefit sharing not just with residents, but also landowners as well. Should that not be expanded to landowners?  Jamie committed to look at the Agreement and then respond directly with the member.  | WEP – To have a look<br>at this Neighbourhood                  |
|             | The member also raised issues with respect Section 3.2 of the Agreement. Jamie noted that it would be best for such a conversation to be had one-on-one given the member has an interest in the outcome. WEP are happy to sit down and discuss these issues with people and are actively discussing neighbour benefit sharing program agreements.  | Agreement  |
|             | Community Member discussed the Engie / Mitsui media email that was distributed to the CCC on Friday, 21 August 2020 ( <a href="https://www.afr.com/street-talk/oh-l-l-engie-sale-flyer-sent-to-investors-20200129-p53vmv">https://www.afr.com/street-talk/oh-l-l-engie-sale-flyer-sent-to-investors-20200129-p53vmv</a> ). Could Jamie please give an update on where that's up to please. Is the article accurate?  Jamie – confirmed that WEP is still 100% Australian owned and that there has been no transfer of ownership at the time of the CCC. What you read is not an official statement.  | WEP and member to<br>discuss Agreement<br>implications offline |

| Agenda Item | Discussion  | Action/By Whom   |
|-------------|---|--|
|             | Community member said that Engie and a Japanese company Mitsui are partners in International Power, which is seeking investors in Australian Renewable Energy which is looking to fund the Hills of Gold proposal and four other renewable projects. Jamie advised that Engie is a partner on this project providing technical, commercial and financial support. While we hope they make the decision to build the project it would be misleading and pre-emptive to make this statement until the project has progressed further including with the development application and the necessary approvals and internal processes of these businesses.   |  |
|             | Community member – so the project will only get build if Wind Energy Partners sells it? Jamie confirmed he's made it clear in public in the past that a large partner with a strong balance sheet would be required to fund the project should it get its approvals. We are proud to be working with Engie on this project but can't make any statements on their behalf.   |  |
|             | Community member discussed correspondence from 24 June, observing that people were quite distressed by the whole Visual Assessment process experience and very disappointed as appointments were not kept or consultants turning up 1.5 hours late. People had to take time of work to be there. Jamie asked if there is anyone he can speak to – he would be happy to reach out to them.   |  |
|             | Community member expressed concern that an invitation-only meeting was held at the Sport and Recreation Club, hosted by a project-involved landholder and Australian Wind Alliance to discuss the CEF – WEP paid. This potentially undermines the CEF workshop because none of the CCC members who attended the workshop attended the invitation only meeting. Australian Wind Alliance have visited Nundle – have been critical about people raising concerns about the project. Jamie advised that in light of our membership – we did pay for their time up here.  |  |
|             | Community member raised previous discussion about documentary Planet of the Humans and concerns about mountain top removal in relation to wind farm. There was then a debate about the merits of what the documentary stated.   | WEP and member to<br>watch again and<br>discuss further                                  |
|             | Community member said a lot of media has happened over the last couple of months including a letter which was distributed at the post office and then the interview on the radio program. A lot of misinformation that is being distributed to this community. On the radio it was said that the money from WEP was sitting there ready to build. Jamie confirmed he did not say that and that there were a number of comments that pre-empt the results and presentation of the development application being made. Jamie reiterated the importance of respecting the State Significant Development process and that full information could be prepared for people to form views and ask questions during public exhibition. | Member to give a copy<br>of the letter to David<br>who will distribute to<br>CCC members |
|             | Community member went on to talk about concerns generated as a result of the landholder denigrating the efforts of members of Hills of Gold Preservation Inc who fought the first fire in summer in the Nundle area.  |  |

| Agenda Item | Discussion  | Action/By Whom |
|-------------|---|----------------|
|             | Jamie – I would certainly apologise for what that caused – I don't know the facts. He reiterated that offers have been made and he would again offer to talk to Hills of Gold Preservation Inc as well as the Nundle Business Tourism and Marketing Group about their concerns.   |                |
|             | Community Member suggested that there should be a public meeting before the DA and the EIS is lodged and available online as there are so many people who don't have access to computers – big hall and people can ask questions of yourself and government. Another community member disagreed that a public meeting would be of any value or achieve anything. There was also a question as to whether there would be a CCC meeting once the DA was lodged.  Jamie – I hope we are demonstrating in the lead up to the DA and we will continue to consult – we will host numerous community sessions and have someone come in and talk – in the lead up. So, people have time to read and then come back and ask questions / raise concerns. This is best done when people have an opportunity to read the facts being submitted and come to community information day prepared with their questions. If people were uncomfortable coming to a community information day we will offer one-on-one visits. |                |
|             | David noted that for a number of proposals DPIE hold information sessions when an EIS goes out on exhibition. They do not have the proponent present. They will talk to the community about what they are seeing as the key issues. About how to make a submission on the proposal and answer a lot of questions. May be issues because of COVID restrictions at present.   |                |
|             | David said that under the CCC Guidelines, he has a requirement to do an Annual Report for any type of construction or operational projects so there's a clear way forward. Question for each of you, as we are talking through the EIS over the next few months, are you happy to talk about the "where to – from here" – later this year or early next year. What do you want to get out of the next 12 months should the approval go through etc, so I'll hold off until I get your input later in the year? Everyone accepted this idea.   |                |
|             | Next Meeting  |                |
| 8.          | Next meeting is scheduled for Tuesday, 22 September.  |                |
|             | Meeting closed 9.13 pm.   |                |

| Page No | Action No | Description  | Date Raised    |
|---------|-----------|--|----------------|
|         | 1         | DR to attach the previous minutes with the upcoming meeting agenda. (ongoing)  | 6 May 2020     |
| 2       | 2         | WEP to provide updated public photomontages as a priority and private photomontages shortly after but prior to the development application | 24 August 2020 |
| 2       | 3         | Community member to provide a copy to David  | 24 August 2020 |
| 3       | 4         | Jamie to provide a written response questions regarding Liddell and Bayswater and Compulsory acquisition rights to alternate member        | 24 August 2020 |
| 3       | 5         | WEP to provide the presentation at least 2 days prior to each CCC meeting  | 24 August 2020 |
| 4       | 6         | WEP to talk to Moir about labelling the turbines on the montages.  | 24 August 2020 |
| 4       | 7         | Discuss CEF at the October meeting   | 24 August 2020 |
| 6       | 8         | WEP to present on the technology update in a meeting after the DA submission.  | 24 August 2020 |
| 6       | 9         | WEP to advertise when the Visual Assessment updated public photomontages are at the library  |                |
| 6       | 10        | WEP to present on the aviation lights when available including info about shielding / flashing / sensor lights.                            | 24 August 2020 |
| 6       | 11        | WEP to provide example of Australian operating wind farm using aviation light shields (if possible)  | 24 August 2020 |
| 7       | 12        | WEP – To have a look at this Neighbourhood Agreement   | 24 August 2020 |
| 7       | 13        | WEP and member to discuss Agreement implications offline.  |                |
| 8       | 14        | WEP to read the document and confirm back at the next CCC what is actually factual   |                |
| 8       | 15        | WEP and member to watch again and discuss further  |                |
| 8       | 16        | .6 Member to give a copy of the letter to David who will distribute to CCC members   |                |



# Agenda



- 1. Introduction and apologies
- 2. Declaration of pecuniary or other interests
- 3. Previous minutes
- 4. Business arising from previous meeting
- 5. Correspondence
- 6. Update on proposal
  - a. Updated Layout
  - b. Noise
  - c. Shadow Flicker
  - d. Public Viewpoints for Final Photomontages
  - e. Blade Throw
- 7. General Business
  - a. Annual reporting
- 8. Next meeting

# 4. Business arising from previous meeting



| Action<br>No | Description   | Date<br>Raised | WEP Response  |
|--------------|---|----------------|---|
| 1            | DR to attach the previous minutes with the upcoming meeting agenda.                                       | 6 May<br>2020  | N/A   |
| 2            | WEP to provide more montage locations on an ongoing basis.  | 6 May<br>2020  | Updated photomontages from public viewpoints will presented to the September CCC.  Shadow flicker results will be presented in this meeting as per  |
| 3            | WEP to create a map of 5 km radius and upload to their website.   | 6 May<br>2020  | the agenda.  Map uploaded and posted to Hills of Gold website on 15 <sup>th</sup> May 2020 (available for download here: <a href="https://www.hillsofgoldenergy.com/news-and-updates">https://www.hillsofgoldenergy.com/news-and-updates</a> )  |
| 4            | WEP to provide wool shed landing photo.   | 6 May<br>2020  | Moir Landscape Architecture are progressing with creating photomontages along with landscape character assessments, photographic surveys and visual assessments from private residences.  |
|              |   |                | We will be continuing to consult with residents concerned about the visual changes to the landscape in the leadup to presenting final photomontages as part of the development application. This will include the visual assessments and photographs taken from DAG sheep station residence and woolshed. |
| 5            | Community member to provide WEP with family's contact details so WEP can make an appointment to see them. | 6 May<br>2020  | We understand that this was provided by Megan Trousdale to Jamie Chivers in the email dated 9 <sup>th</sup> June 2020, wherein the contact details of the various families interested in the visual assessments from private property's was provided.   |

# 4. Business arising from previous meeting



| 6  | WEP to consider Scottish Natural Heritage Guidelines as per community requests.               | 6 May<br>2020 | Supplementary information was provided to the CCC by Jamie Chivers on 9 <sup>th</sup> June 2020, in response to the email from Megan Trousdale titled "Preliminary Photomontages Proposed Hills of Gold Wind Farm". The response provided answers to the individual requests for information on the camera make and model, date and time of photograph, how the preliminary photomontages should be viewed, the poor quality of the images, amongst other concerns raised.  Subsequent field visits undertaken by Moir Landscape Architecture to update certain locations as requested. |
|----|---|---------------|---|
| 7  | WEP to respond to "Mountain Top Removal" impacts once member provides explanation in writing. | 6 May<br>2020 | Answers provided via email from Jamie Chivers to the CCC on Wednesday 24 <sup>th</sup> June.  |
| 8  | WEP to reply to 11 questions tabled.  | 6 May<br>2020 | Responses to 11 questions provided to HOGPI and CCC via email on 18 <sup>th</sup> May 2020  |
| 9  | Community member to discuss survey with DPIE.   | 6 May<br>2020 | Response from Community Member required.  |
| 10 | WEP to discuss survey with ERM and respond.   | 6 May<br>2020 | ERM confirmed that no cadastral surveys are required prior to lodging a development application.  A correction is required to the current Final Draft minutes for the May CCC meeting, wherein the minutes record that a land survey will be completed following construction (page 7). This is incorrect. It was noted in the meeting that the land surveys are completed prior to construction, to ensure project infrastructure is only constructed on land wherein the proponent has the rights to, under an agreement with a landowner.  |
| 11 | David to discuss with WEP about the next meeting.   | 6 May<br>2020 | Discussions have been held and further details on scheduled CCC meetings will be forthcoming.   |

# 6. Project Update

Aviation

**Updated Layout** 



| Noise and Vibration Assessment                | Complete |
|---|----------|
| Shadow Flicker Assessment                     | Complete |
| Hazards and Risks – Blade Throw               | Complete |
| Hazards and Risks – Electromagnetic Frequency | Complete |
|   |          |

In Consultation

Complete

# **Updated Layout Approach**



## Consultation, Design and Data Collection

- Neighbour Consultation from neighbour benefit sharing program discussions
- Feedback from Photomontages
- Civil design input, biodiversity mapping input, noise constraint input, heritage survey input

## Multi-disciplinary Workshop

- Experts in civil design, turbine siting, biodiversity and community knowledge used to reduce impacts
- Actions identified to be taken to avoid impact in some locations and minimise in others.

## **Updated Design**

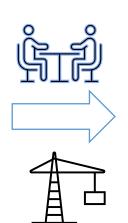
- Updated layout finalised over multiple iterations
- Consultation with key environmental agencies
- Key actions taken documented for submission in the development application to present impacts of changes made

# **Updated Layout Results**



## **Workshop Methodology**

 The process involved discussing every turbine location, hardstand, ancillary infrastructure and road layout to assess opportunities to avoid and/or minimize impact.



## Benefits of the workshop

Avoided Impact

Civil designs aligned with environmental constraints

Reduced overall footprint

Discussion between all technical consultants

## **Outcomes**

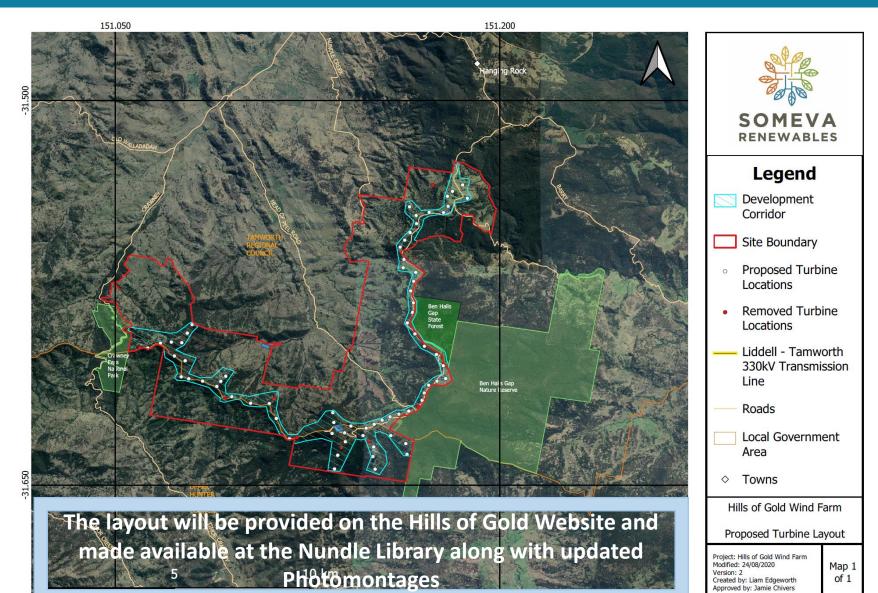
- Relocating and reorienting hardstands and roads
- Removing blade storage to reduce hardstand footprint
- Removal of 8 turbines
- Pre workshop 78 WTG, post workshop 70 WTG
- 19 turbines hardstands reduced to accommodate just in time construction methodology and reduce clearing of vegetation





# **Updated Layout**





# **Noise and Vibration Assessment - Summary**





Sonus has been engaged to do the Noise and Vibration assessment. They are experts in Wind Farm noise assessments, working in the sector since 2002

### Wind Farm Experience

- Taralga (NSW)
- Brown Hill Range
- Badgingarra (WA)
- Willogoleche (SA)
- Nilgen (WA)
- The Bluff Range
- Yaloak Estate (Vic)
- raidak Estate (VIC)
- North Brown Hill (SA)
- Naroghid (Vic)
- Mt Bryan (SA)
- Ararat (Vic)
- Hallett Hill (SA)
- Woolsthorpe (Vic)

- Starfish Hill (SA)
- Kemmiss Hill (SA)
- Troubridge Point (SA)
- Waitpinga (SA)
- Snowtown II (SA)
- Barunga (SA)
- Clements Gap (SA)
- Nalpa (SA)
- Canunda (SA)
- Carmody's Hill (SA)
- Wattle Point (SA)
- Barn Hill (SA)
- Vincent North (SA)

#### **Overview of Guidelines**

- NSW Wind Energy Noise Bulletin 2016
- Operational Guidelines require project maintain noise levels to 35DbA or background + 5DBA whichever is greater or 45DBA under agreement with residents
- These guidelines are the strictest in Australia and amongst the world.

### **Examples of Noise**

#### 20-35DBA

- •Quite Rural Area
- Rustling leaves
- Whisper

#### 40DBA

- Library
- Distant Bird Calls
- Refrigerator

#### 50DBA

- •Insects
- Ouiet suburb
- Rainfa

#### 60DBA

- •Normal conversation
- •Electric Shaver
- •Quiet Office

# **Noise and Vibration Assessment - Summary**



## **Scope of Assessment**

- Background Noise Assessment 5 loggers recorded data over 6 weeks
- Following community consultation an additional 2 loggers were deployed for a total of 7 loggers
- Loggers used were Class 1 instruments allowing noise as low as 20DBA to be recorded
- Noise and Vibration Assessment of:
  - Construction Activities
  - Wind Turbine Operation
  - Traffic
  - Ancillary Infrastructure including batteries, substation and the switching station.
- Mitigation measures and recommendations

#### **Typical Monitoring Setup**

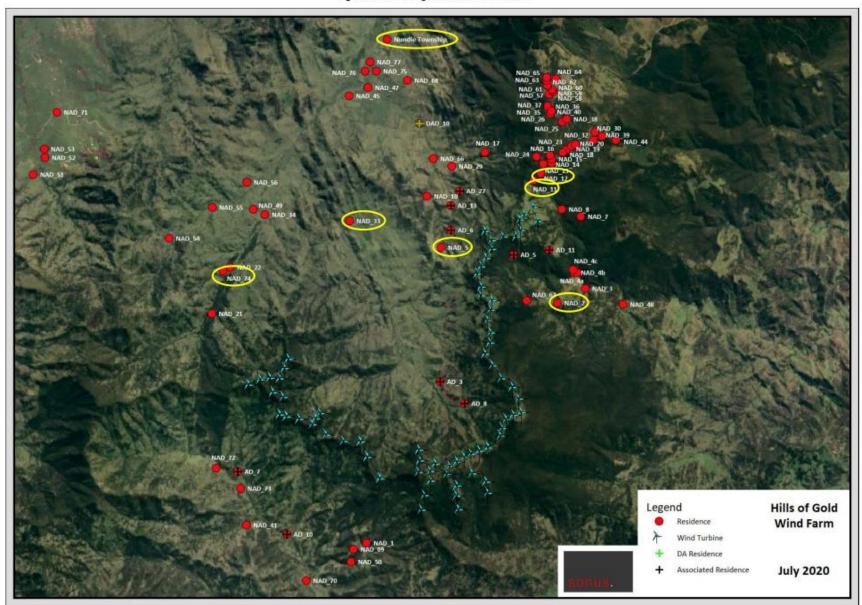


- Recorded in 10 min intervals
- Calibrated at the beginning and end of monitoring period
- Recording device established about 1.5m from ground level with wind shield of 150mm thick
- Correlated wind speeds to met masts recording wind data across the site

# Noise and Vibration – Background Noise Monitoring



Figure 1: Monitoring Locations Aerial Photo.



# **Noise and Vibration – Worst Case Assumptions**



The predictions of environmental noise from the project utilise the CONCAWE noise propagation model and SoundPLAN noise modelling software.

The sound propagation model considers the following influences:

- sound power levels of a representative wind turbine, construction activities, substation and switching station;
- the locations of noise sources;
- separation distances between noise sources and residences;
- local topography;
- influence of the ground;
- air absorption; and,
- meteorological conditions.

The assessment has been based on the following input conditions:

- weather category 6 associated with "worst-case" i.e. highest noise level conditions (Weather Category 1 provides the weather conditions associated with the "lowest" propagation of noise)
- provides wind direction from all noise sources to the particular residence under consideration, even in circumstances where sources are located in opposite directions from the residence (representing the absolute worst-case noise propagation from the wind);
- acoustically soft ground (pastoral land).

## **Noise and Vibration – Results**



## Background Noise Levels at Monitoring Locations (dB(A)) correlated to wind speed

| Management Location  | Wind Speed (m/s) at 150m |    |    |    |    |    |    |    |    |    |
|----------------------|--------------------------|----|----|----|----|----|----|----|----|----|
| Measurement Location | 3                        | 4  | 5  | 6  | 7  | 8  | 9  | 10 | 11 | 12 |
| NAD 2                | 21                       | 22 | 22 | 23 | 23 | 24 | 24 | 25 | 25 | 26 |
| NAD 5                | 22                       | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 30 | 31 |
| NAD 11               | 23                       | 24 | 25 | 26 | 27 | 28 | 29 | 31 | 34 | 37 |
| NAD 12               | 20                       | 21 | 22 | 23 | 25 | 27 | 29 | 31 | 33 | 35 |
| NAD 33               | 24                       | 25 | 25 | 25 | 25 | 25 | 26 | 26 | 26 | 26 |
| NAD 74               | 24                       | 25 | 26 | 26 | 26 | 25 | 25 | 25 | 25 | 25 |
| Nundle               | 26                       | 26 | 26 | 27 | 27 | 26 | 26 | 26 | 26 | 25 |

The report concludes the project can meet noise limits "under conditions most conducive to noise propagation at all residences" and recommends noise compliance is demonstrated through a noise monitoring program with consultation during the construction phase.

# Visual Assessment Update





MOIR landscape architecture are experts at conducting visual impact assessments. With over 10 years' experience doing visual impact assessments for wind farms

### Wind Farm Experience

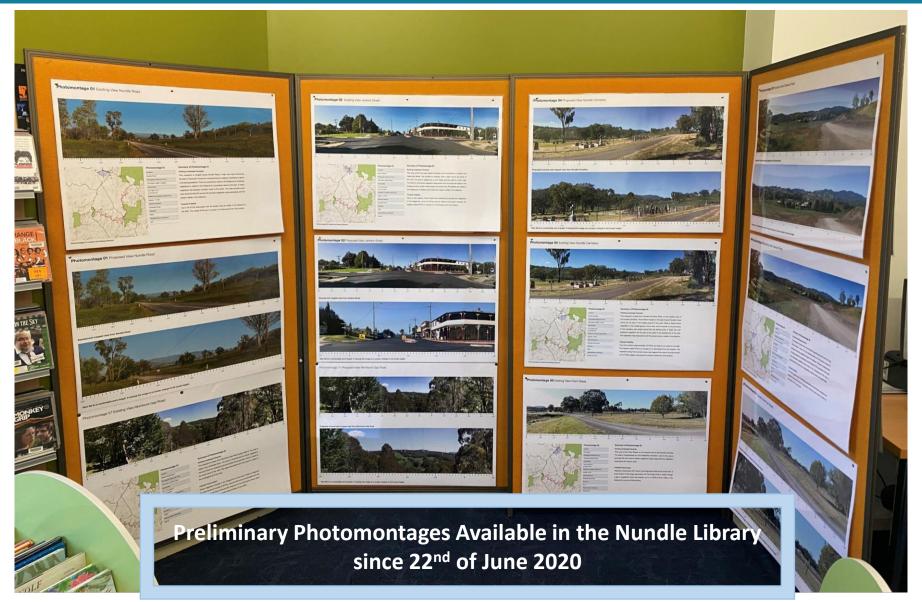
- Uungula Wind Farm (NSW)
- · Cherry Tree Wind Farm (Vic)
- Crudine Ridge Wind Farm (NSW)
- Lakeland Wind Farm (QLD)

## Update following release of preliminary photomontages

- Additional consultation was undertaken following preparation of preliminary photomontages
- Visits to local residences to undertake visual impact assessment
- Updated public viewpoint photomontages locations following feedback from the CCC
- Responses to questions around photomontage methodology provided to the community
- Requests to provide shadow flicker results from nearby residents
- Reduced layout from 78 to 70 turbines reducing visual impact to concerned nearby residents
- Public Photomontages are being updated based on feedback from the CCC and the updated layout
- Once updated these will be re-printed and shared in the Nundle Library and on the Hills of Gold Website

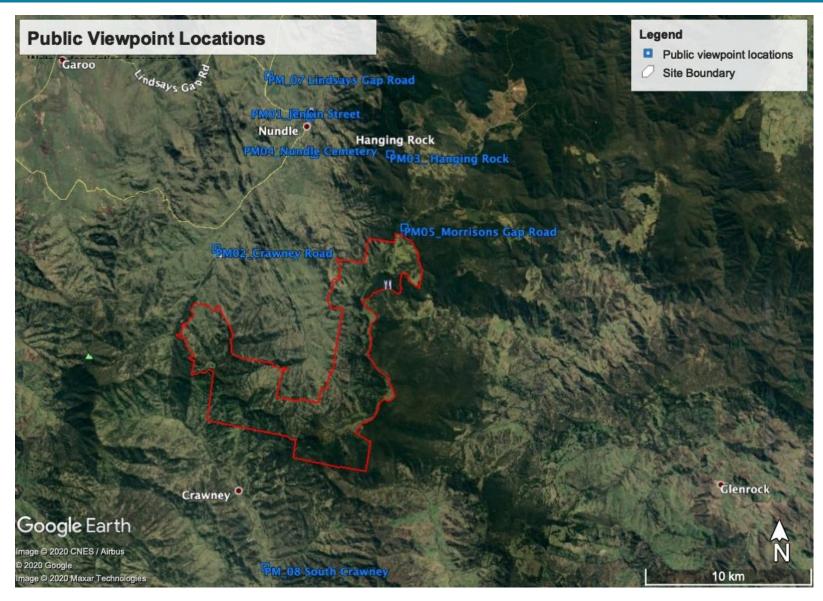
# **Visual Assessment Update – Public Viewing**





# **Visual Assessment Update – Public Viewpoints**





# **Shadow Flicker Assumptions**



## **Shadow Flicker - Worst Case Assumptions**



The sun is shining all day, from sunrise to sunset



The rotor plane is always perpendicular to the line from the Wind

Turbine Generator to the sun



The Wind Turbine Generator is always operating



Assumes no vegetation covering

## **Shadow Flicker Results**



## **Shadow Flicker Requirements**

Guidelines allow up to 30 hours per year

## **Shadow Flicker Results**

One dwelling modelled under worst case conditions exceeds the shadow flicker limit by 3 hours

The dwelling is surrounded with vegetation which is expected to reduce the impact along with nature climatic conditions and location perpendicular to prevailing wind direction.

3 Dwellings are modelled under worst case conditions to be under the limit but above 10 hours. Further consultation will be offered to help residents understand mitigating factors that will likely further reduce worst case modelled results.

Further consultation will be undertaken with residents to determine their unique circumstances that are likely to contribute to a reduction in expected shadow flicker hours

## **Hazards and Risks – Blade Throw**





ERM are a global organisation, with decades of experience working on wind farms in Australia.

## Wind Farm Experience

- Mount Mercer (Vic)
- Ryan Corner (Vic)
- Waubra (Vic )
- · Mortlake (Vic)
- Oaklands Hill (Vic)
- Crowlands (Vic)
- Newfield (Vic)
- Nirranda South (Vic)
- Dollar (Vic)
- Portland
   Wind Energy Facility
   (Vic)
- Yaloak Estate (Vic)
- Macarthur (Vic)
- Bald Hills (Vic)

- Dundonnell (Vic)
- Coopers Gap (Qld)
- Cherry Tree (Vic)
- Cathedral Rocks (SA)
- Stockyard Hill (Vic)
- Lal Lal (Vic)
- Ararat (Vic)
- · Sidonia Hills (Vic)
- Hawkesdale (Vic)

The Secretary's Environmental Assessment Requirements (SEARs) and the NSW Governments Wind Energy Guideline (2016) require that the risk of blade throw at a wind farm be considered and appropriately mitigated.

### What is Blade Throw?

Blade throw describes the rare phenomenon of a structural failure in a turbine blade during operation resulting in parts or all of the blade becoming ejected from the turbine structure into the surrounding area.

Literature Review

Literature reviews have been completed on wind farms globally from 1981 to present

# **Blade Throw Results and Mitigation**



## **Results**

- The maximum throw distance for an entire blade and blade fragment were 150 metres and 500 metres respectively.
- There are no dwellings within this distance.
- Probability of events are included in the report.
- The report concludes that the risk of damage through a blade throw event at the Hills of Gold Wind Farm can be considered to be negligible.

## **Mitigation Measures**



The International Electrotechnical Commission (IEC) is the accepted standard as Australia and New Zealand don't have wind turbine blade design standards.

IEC 61400-23 Wind turbine generator systems – Part 23: Full-scale structural testing of rotor blades

IEC 61400-1:2005 Wind turbines Part 1: Design requirements:

IEC WT 01:2001 System for Conformity
Testing and Certification of Wind Turbines
— Rules and procedures

# 7. General Business



**David Ross - Annual Reporting** 

# 8. Next Meeting – September 22nd 2020



| 1. Social and Economic       |
|------------------------------|
|                              |
| 2. Aviation                  |
|                              |
| 3. Telecommunications        |
|                              |
| 4. Electromagnetic Frequency |



Attachment A: Ian Worley tabled document with National Wind Farm Commissioner links and Neighbour Benefit Sharing Program questions

Attachment B: Email to CCC by alternate member

Attachment C: Megan Trousdale - Questions arising from Media 24/8/20

## **Material Tabled for August 2020 CCC Meeting**

I would like to table a couple of documents for discussion and actions at the CCC on 24/8/2020

The first are sections from the National Wind Commissioners Observations and Recommendations (updated 2020)

The first is Neighbour Consultation and Agreements. Paying particular attention to the recommendations.

https://www.nwfc.gov.au/observations-and-recommendations/chapter-2-neighbour-consultation-agreements

The other section of this document is the Site Selection. Paying particular attention to the Site Impacts and Optimising Site Locations.

https://www.nwfc.gov.au/observations-and-recommendations/site-selection

The second document I would like to table is the Neighbour Agreement. I would like it to be noted and discussion to occur around bringing it in line with the recommendations in the first point, particularly the fact the agreement is essentially aimed at people with residences or who are residents of the area and it is not currently being offered to landholders.

I understand that CCC meeting will be held tomorrow and would like for the following to be tabled as I have had discussion with several community members regarding the following points:

It has come to my attention that some community members have been led to believe that there will be no electricity available if we do not support the wind farm development in Nundle/Hanging Rock due to the future closure of Liddell and Bayswater coal fire power stations.

There is also another belief that landholders will have their property or part of their land compulsorily acquired for access and/or power lines for the Hills of Gold Wind Farm project even if landholders do not accept or sign the benefit sharing agreement / compensation.

Would you please table the above points for Wind Energy Partners to clarify, as this is creating concerns and anxiety amongst our community members. Please note that due to a vast number of community members who cannot or are unable to access the internet, please ensure that these points of clarification are communicated via a mail drop to all residents and landholders in Nundle/Hanging Rock community.

### Questions arising from media 24/8/20

Submitted by Megan Trousdale

Nundle Business Tourism and Marketing Group Inc representative

- 1. Will 50/50 income split apply to all immediate neighbours of the proposed Hills of Gold Wind Farm, or just supporting neighbours?
- **2.** What is the foundation construction proposed for the Hills of Gold Wind Farm turbines?
- **3.** How will the proposed project area landscape be modified for wind turbine foundation construction?
- 4. How many wind turbines will be constructed on modified sloping hillside?
- **5.** What is the total area of wind farm associated infrastructure proposed in the transport corridor, project area, and transmission route?
- **6.** What is the area of vegetation clearing required to accommodate transport, project area, and transmission line infrastructure?
- 7. How many residences and DA approvals are within 10km of proposed wind turbines?
- **8.** Has there been a solution for local landholders approved by the Aerial Application Association of Australia?
- **9.** How will residents of Nundle, Hanging Rock, Crawney, and Timor benefit from the wind turbine income potentially provided to project involved neighbouring absentee landholders who live in the Hunter Valley, New England and Sydney?
- **10.** Will the potential ultimate owner of proposed Hills of Gold Wind Farm benefit from Renewable Energy Certificates?
- 11. Is it responsible at this stage of the proposal to state a starting Community Enhancement Fund of \$200,000 per year when the Community Enhancement Fund and Voluntary Planning Agreement with Tamworth/Liverpool Plains and Upper Hunter councils has not been finalised, a DA/EIS has not been lodged, and the number of turbines is likely to decrease further due to environmental impacts?
- 12. Is it responsible for WEP's representatives to offer enticements to the community when the CEF/Voluntary Planning Agreement with council and number of turbines/proposal has not been determined?
- **13.** Is it possible for each idea mentioned to be achieved with grants, not wind farm compensation?
- **14.** Does Nundle/Hanging Rock have the population to research, seek quotes, apply for, project manage and report on all these suggestions?

- **15.** Why hasn't the proposed Hills of Gold Wind Farm jobs estimate decreased as turbine numbers have reduced, regardless of MW remaining the same?
- **16.** Please provide a summary of the 34 estimated ongoing jobs and where they will be located (Nundle/Hanging Rock or remote)?
- **17.** If the projected Hills of Gold Wind Farm construction and ongoing jobs eventuate where will employees/contractors live?
- **18.** If Hills of Gold Wind Farm employees cannot, or do not want to, rent or buy in Nundle/Hanging Rock how will they add to the pre-school, public school, or bowling club numbers as promised?
- **19.** Does WEP endorse the comment, "If you do not like the wind farm, don't look up to the ridge."
- **20.** What is in place to protect the community from the eventual wind farm owner being liquidated?
- **21.** How will wind turbine components be disposed of following decommissioning?
- **22.** Will the eventual wind farm owner have the financial capacity to fund the proposal from determination to decommissioning?
- 23. If approved and sold, is there potential for the wind farm to sold multiple times?