## **C.3.1 AGENCY CONSULTATION**

From: Andrew Scott <andrew.scott@dpi.nsw.gov.au>

**Sent:** Thursday, 30 July 2020 3:51 PM

To: DPI Landuse Ag Mailbox; Amanda Antcliff

Subject:Re: Consultation regarding Hills of Gold Wind Farm - DPI-AgricultureAttachments:DPI Ag comments EIS requirements Hills of Gold Wind farm.pdf

Hi Amanda.

Please find attached recommendations of issues that should be addressed for the Hills of Gold Wind farm. If you have any questions or would like to discuss please contact me on the below details.

Regards, Andrew

Andrew Scott | Agriculture Land Use Planning | New England / Northwest (Barwon) Region |

NSW Department of Primary Industries | Agriculture | Tamworth Agricultural Institute |

4 Marsden Park Road | Calala | NSW 2340 |

M: 0427 245 313 | E: andrew.scott@dpi.nsw.gov.au



Agricultural Land Use Planning information and guidelines are available at: <a href="https://www.dpi.nsw.gov.au/agriculture/lup">https://www.dpi.nsw.gov.au/agriculture/lup</a>

From: DPI Landuse Ag Mailbox <landuse.ag@dpi.nsw.gov.au>

Sent: Thursday, 23 July 2020 9:27 AM

To: Andrew Scott <andrew.scott@dpi.nsw.gov.au>

Cc: DPI Landuse Ag Mailbox <landuse.ag@dpi.nsw.gov.au>

Subject: Fw: Consultation regarding Hills of Gold Wind Farm - DPI-Agriculture

Hi Andy

for your response

thanks

Lilian

Agricultural

### Land Use Planning

**DPI Agriculture | Department of Primary Industries** 

C/- 161 Kite Street | Locked Bag 21 | Orange NSW 2800

T: 02 69381906 | E: landuse.ag@dpi.nsw.gov.au

www.dpi.nsw.gov.au

----- Forwarded message -----

From: Amanda Antcliff < Amanda. Antcliff@erm.com>

Date: Mon, 20 Jul 2020 at 10:31

Subject: Consultation regarding Hills of Gold Wind Farm - DPI-Agriculture To: nsw.agriculture@dpi.nsw.gov.au <nsw.agriculture@dpi.nsw.gov.au>

Cc: Murray Curtis < <a href="Murray.Curtis@erm.com">Murray.Curtis@erm.com</a>>, Jamie Chivers < <a href="mailto:jamie.c@someva.com.au">jamie.c@someva.com.au</a>>, Sandra Agudelo

<<u>Sandra.A@someva.com.au</u>>, Aref Taleb <<u>aref.t@someva.com.au</u>>, Mike Stranger

<mike.s@someva.com.au>

#### Good morning,

Environmental Resources Management Australia Pty Ltd (ERM) write on behalf of Wind Energy Partners Pty Ltd (Applicant) in relation to the proposed development application for a Wind Farm and associated infrastructure near Nundle NSW (the 'Project'). The proposed Project is located along the ridgeline approximately 5km south of Hanging Rock, 8km south east of Nundle and 60km south east of Tamworth, within the Tamworth Regional, Upper Hunter and Liverpool Plains Local Government Areas (LGA).

The proposed layout Figure is attached for your consideration. The project will involve the construction, operation and decommissioning of a wind farm with:

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We are seeking any additional considerations from your agency in relation to the proposed Hills of Gold Wind Farm that we may take into account when preparing the Environmental Impact Statement (EIS). If you do have any considerations you would like to provide, we request that you please provide a response within the next 10 business days for inclusion in our impact assessment.

Should you have any questions, please feel free to contact Amanda Antcliff on 02 4903 5502 or via email at Amanda.Antcliff@erm.com

Yours sincerely,

Amanda Antcliff Principal Environmental Planner Team Leader Capital Project Delivery

#### **ERM**

Level 1 | Watt Street Commercial Centre | 45 Watt Street Newcastle NSW 2300 PO Box 803, Newcastle NSW 2300 | T +61 2 49035502

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#### None

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# Attachment 1: DPI Agriculture EIS Recommendations Hills of Gold Wind Farm (INT20/200404)

Issue and desired outcome	Detail
Site Suitable for development	<ul> <li>Where Land use conflict is identified as a risk a suitable tool to work through is the Landuse Conflict Risk Assessment (LUCRA), in particular relating to separation distances, visual impacts and management of dust and noise from sensitive receptors. A LUCRA is described in the DPI Land Use Conflict Risk Assessment Guide.</li> <li>Maps and photo montages (to scale) showing the operational and infrastructure details including separation distances from sensitive receptors.</li> </ul>
Consideration for impacts to agricultural resources and land	<ul> <li>It appears that very little farmland will be disturbed during the Hills of Gold Wind Farm Project. However where farmland is at risk of a major disturbance, to aid assessment, Describe the current and potential BSAL and Class 1,2 and 3 Agricultural land Classes that will be impacted.</li> <li>Demonstrate that all significant impacts on current and potential agricultural developments, enterprises and resources can be reasonably avoided or adequately mitigated.</li> <li>Detail the expected life span of the proposed development</li> <li>Outline details of potential landuse sharing with agriculture</li> <li>State how the project design has given consideration to minimising impacts on Agricultural land and production. (see Infrastructure Proposals on Rural Land Guideline, Attachment 2)</li> </ul>
Biosecurity Standards met	<ul> <li>Biosecurity risks and management measures relating to the potential for spread of pests, diseases or weeds in the project area are considered, in accordance with the 'general biosecurity duty' under the Biosecurity Act 2015Include</li> <li>Develop a biosecurity response plan to deal with identified risks as well as contingency plans for any failures. Including monitoring and mitigation measures in weed, disease and pest management plans.</li> <li>Details of adequate fencing to control livestock out where necessary.</li> </ul>
Suitable traffic movements	<ul> <li>Consideration of the route for movements needs to be taken into account so that impacts on sensitive receptors are minimised (eg noise, dust, volume of traffic). This should include consideration of Travelling Stock Reserves1 (TSR) and the movement of livestock or farm vehicles along / across the affected roads</li> </ul>
Visual amenity achieved	Amenity impacts are assessed and any necessary response to mitigate visual impacts that may affect the rural character are described and illustrated.
Land stewardship met	<ul> <li>Develop Rehabilitation and Decommissioning/Closure Management Plans that outlines the rehabilitation objectives and strategies. This includes, but is not limited to, describing the design criteria of the final landuse and landform, indicators to be used to guide the return of the land back to agricultural production, along with the expected timeline for the rehabilitation program.</li> <li>Outline monitoring and mitigation measures to be adopted for rehabilitation remedial actions.</li> <li>Any land with a cropping history or land with a capability for cropping (Agricultural Classes 1,2 and 3) cables/pipes to be completely removed to allow greater opportunity for agricultural activities to continue over the top.</li> </ul>
Adequate consultation with	<ul> <li>Consult with the owners / managers of affected and adjoining neighbours and agricultural operations in a timely and appropriate manner about; the proposal, the</li> </ul>

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likely impacts and suitable mitigation measures or compensation.

# Attachment 2: Guidelines and Resources for Assessment

Title	Location
Land Use Conflict Risk Assessment Guide	www.dpi.nsw.gov.au/content/agriculture/resources/lup/development-assessment/lucra
Infrastructure Proposals on Rural Land	http://www.dpi.nsw.gov.au/content/agriculture/resources/lup/development-assessment/infrastructure-proposals

From: Joanne Woodhouse

Sent:Wednesday, 7 October 2020 6:36 PMTo:Murray Curtis; Amanda AntcliffSubject:Fwd: Hills Of Gold Windfarm

FYI

#### Get Outlook for Android

From: Alan Bawden < Alan.Bawden@rfs.nsw.gov.au> Sent: Wednesday, 7 October 2020, 12:58 pm

To: Joanne Woodhouse

Subject: RE: Hills Of Gold Windfarm

#### Thanks for the follow up Joanne

The points below are succinct and reflect the approach to address bush fire risk associated with the development.

#### Regards



#### Alan Bawden

Acting Manager
Planning and Environment Services (North)
NSW RURAL FIRE SERVICE
51 Moonee Street Coffs Harbour
Locked Bag 17 GRANVILLE NSW 2142
p 02 66910400 e pes@rfs.nsw.gov.au

www.rfs.nsw.gov.au www.facebook.com/nswrfs www.twitter.com/nswrfs

PREPARE.ACT.SURVIVE

From: Joanne Woodhouse < Joanne. Woodhouse@erm.com>

Sent: Saturday, 3 October 2020 9:18 PM

To: Alan Bawden <Alan.Bawden@rfs.nsw.gov.au> Cc: Amanda Antcliff <Amanda.Antcliff@erm.com>

Subject: FW: Hills Of Gold Windfarm

#### Hi Alan

Thank you for returning my call on Wednesday. Our discussion was extremely helpful in understanding your position in regards to the results of our flame length calculations.

I just wanted to send a quick email to confirm the main points of our discussion as follows:

- 1. The Tamworth Regional Council Bushfire Prone Land mapping identifies the Project Area as bushfire prone land and compliance with Planning for Bushfire Protection (PBP) 2019 and Standards for Asset Protection have been considered.
- 2. The Project Area is located along the upper ridgeline. These ridgelines and plateaus are flanked by very steep rugged terrain, and a mixture of cleared farmland and dry sclerophyll forests within the adjacent National Parks. This is noted to be an existing hazard and is not directly influenced by the proposed wind farm development.
- 3. The NPWS and NSW RFS used the ridgeline as a containment line and were able to back burn in advance of the fire front last season. This action successfully stopped the Pages Creek Road Fire and reinforces that this ridgeline is strategically important in terms of ongoing bushfire mitigation and co-ordinated access arrangements. The Project will aim to upgrade the existing access as well as provide additional water supply points along the ridgeline. This will continue to be managed as a SFAZ.
- 4. The risk that wind farm itself will cause a fire is minimal.
- 5. While the Planning for Bushfire Protection (PBP) Guidelines (NSW RFS 2019) specifies an asset protection zone of 10 m for windfarm assets, given the steep slopes and existing fire history within the adjacent National Parks estates, flame length modelling has also been undertaken (as per Method 2 calculations within Appendix B of AS3959) and as requested in the RFS agency comments attached to the SEARs.
- 6. This assessment identifies that a number of the turbines as well as part of the access road and transmission line have the potential for direct flame contact. Based on our discussions, the turbines are not considered a key risk in terms of either ignition or spreading fire across the landscape. We therefore need to identify those turbines at risk of direct flame contact and then provide mitigation measures including non-combustible steel construction, remote operation of all WTGs with the ability to shut-down individual or all WTGs if required and an area of defendable space around the base of each turbine.
- 7. Based on our discussions yesterday, as the turbines do not present a significant risk, firefighting efforts would be concentrated on defending those assets that could contribute to widespread fire. Key assets that have the potential to influence the spread of fire such as the switching station, substation, BESS and O&M buildings are to be located outside of the flame zone.
- 8. In the event that a fire does breach any containment lines and threatens the windfarm assets, it is possible that the windfarm infrastructure will sustain direct flame contact and that fire fighting will require aerial support. Again you were able to confirm that firefighting efforts would be concentrated on defending those assets that could contribute to widespread fire and the provision of a defendable space around the switching station, substation, BESS and O&M buildings must be provided.
- 9. Preparation of the Bushfire Emergency Management and Operations Plan will also be a key recommendation.

Thankyou again for your time and I look forward to receiving any additional comment or advice as the assessment progresses.

Regards,

#### Joanne Woodhouse

Principal Consultant

#### **ERM**

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From: Amanda Antcliff

Sent:Monday, 20 July 2020 10:32 AMTo:water.enquiries@dpi.nsw.gov.au

Cc: Murray Curtis; Jamie Chivers; Sandra Agudelo; Aref Taleb; Mike Stranger

Subject: Consultation regarding Hills of Gold Wind Farm - Office of Water

Attachments: HoG WF-compressed.pdf

#### Good morning,

Environmental Resources Management Australia Pty Ltd (ERM) write on behalf of Wind Energy Partners Pty Ltd (Applicant) in relation to the proposed development application for a Wind Farm and associated infrastructure near Nundle NSW (the 'Project'). The proposed Project is located along the ridgeline approximately 5km south of Hanging Rock, 8km south east of Nundle and 60km south east of Tamworth, within the Tamworth Regional, Upper Hunter and Liverpool Plains Local Government Areas (LGA).

The proposed layout Figure is attached for your consideration. The project will involve the construction, operation and decommissioning of a wind farm with:

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Stakeholder engagement is a key requirement for the project. The Applicant is seeking to proactively engage with relevant government, non-government and community stakeholders. Your agency has been identified as a key project stakeholder for the Project.

We have previously sought to engage with your agency regarding water access. We are seeking any additional considerations from your agency in relation to the proposed Hills of Gold Wind Farm that we may take into account when preparing the Environmental Impact Statement (EIS). If you do have any considerations you would like to provide, we request that you please provide a response within the next 10 business days for inclusion in our impact assessment.

Should you have any questions, please feel free to contact Amanda Antcliff on 02 4903 5502 or via email at Amanda.Antcliff@erm.com

Yours sincerely,

#### Amanda Antcliff

Principal Environmental Planner Team Leader Capital Project Delivery

#### **ERM**

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E amanda.antcliff@erm.com | W www.erm.com

From: Amanda Antcliff

Sent: Friday, 28 August 2020 12:58 PM

To: Landuse.enquiries@dpie.nsw.gov.au; liz.rogers@industry.nsw.gov.au
Cc: Jamie Chivers; Sandra Agudelo; Aref Taleb; Lachlan Giles; Murray Curtis

**Subject:** Hills of Gold Wind Farm

Attachments: Consultation regarding Hills of Gold Wind Farm - Office of Water; HoG WF-

compressed.pdf

Hi Liz,

I write in relation to the proposed Hills of Gold Wind Farm near Nundle NSW. I have previously sent the attached email to <a href="mailto:water.enquiries@dpi.nsw.gov.au">water.enquiries@dpi.nsw.gov.au</a> and to date have not received a response. We are keen to engage with DPIE-Water regarding the EIS currently in preparation.

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Yours sincerely, Amanda

Amanda Antcliff

Principal Environmental Planner Team Leader Capital Project Delivery

#### FRM

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From: Amanda Antcliff

**Sent:** Monday, 20 July 2020 10:30 AM

To: info@epa.nsw.gov.au

Cc: Murray Curtis; Jamie Chivers; Sandra Agudelo; Aref Taleb; Mike Stranger

**Subject:** Consultation regarding Hills of Gold Wind Farm - EPA

Attachments: HoG WF-compressed.pdf

#### Good morning,

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Yours sincerely,

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Principal Environmental Planner Team Leader Capital Project Delivery

#### **ERM**

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From: Rebecca Scrivener < Rebecca.Scrivener@epa.nsw.gov.au> on behalf of EPA RSD

Armidale Mailbox < Armidale@epa.nsw.gov.au>

Sent: Friday, 4 September 2020 4:34 PM

To: Amanda Antcliff

**Subject:** RE: Hills of Gold Wind Farm - EPA Consultation

Hi Amanda,

Thanks for your email and phone call.

As discussed, the EPA has provided SEARS for this proposal previously in November 2018. Our requirements and issues to be addressed in the environmental impact assessment have not changed.

If you wish to discuss anything further, please contact me on the numbers below or via email to armidale@epa.nsw.gov.au.

Regards,

#### Rebecca Scrivener

Acting, Manager Regulatory Operations NSW Environment Protection Authority +61 2 6773 7010; mob: 0407 437 884

<u>armidale@epa.nsw.gov.au</u> <u>www.epa.nsw.gov.au</u> <u>@EPA\_NSW</u>

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I acknowledge the Aboriginal nations of the New England, North West Region as the traditional custodians of the lands upon which I live and work, and

From: Amanda Antcliff < Amanda. Antcliff@erm.com>

Sent: Friday, 28 August 2020 1:00 PM

To: EPA RSD Armidale Mailbox < Armidale@epa.nsw.gov.au>

**Cc:** Jamie Chivers <jamie.c@someva.com.au>; Sandra Agudelo <Sandra.A@someva.com.au>; Aref Taleb <aref.t@someva.com.au>; Murray Curtis <Murray.Curtis@erm.com>; Lachlan Giles <Lachlan.Giles@erm.com>

Subject: Hills of Gold Wind Farm

#### Good afternoon,

I write in relation to the proposed Hills of Gold Wind Farm near Nundle NSW. I have previously sent the attached email to <u>info@epa.nsw.gov.au</u> and to date have not received a response. We are keen to engage with the EPA regarding the EIS currently in preparation.

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Yours sincerely, Amanda

Amanda Antcliff

Principal Environmental Planner
Team Leader Capital Project Delivery
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From: David Ward <david.ward@dpi.nsw.gov.au>

**Sent:** Monday, 27 July 2020 9:50 AM

To: Amanda Antcliff

**Subject:** RE: Consultation regarding Hills of Gold Wind Farm - DPI-Fisheries

Hi Amanda.

Thank you for your request for consultation.

I not that the SEARs already refer to *Why do Fish Need to Cross the Road? Fish Passage Requirements for Waterway Crossings* (DPI, 2003). It is important that fish passage is maintained in any waterways where access tracks, underground cabling, etc crosses Key Fish Habitat. i.e. Third order (Strahler Stream Order) streams or larger.

Cheers David

David Ward | Fisheries Manager
DPI Fisheries - Aquatic Environment
Department of Primary Industries
4 Marsden Park Road | Calala NSW 2340
T: +61 2 6763 1255 | M: +61 (0) 0429 908 856

E: david.ward@dpi.nsw.gov.au
W: www.dpi.nsw.gov.au

From: dean.hayes@dpi.nsw.gov.au <dean.hayes@dpi.nsw.gov.au> On Behalf Of Fisheries Info

Sent: Monday, 20 July 2020 10:37 AM

To: DPI AHP Central Mailbox <ahp.central@dpi.nsw.gov.au>

Subject: Fwd: Consultation regarding Hills of Gold Wind Farm - DPI-Fisheries

----- Forwarded message ------

From: Amanda Antcliff < Amanda. Antcliff@erm.com>

Date: Mon, 20 Jul 2020 at 10:31

Subject: Consultation regarding Hills of Gold Wind Farm - DPI-Fisheries

To: information-advisory@dpi.nsw.gov.au <information-advisory@dpi.nsw.gov.au>

Cc: Murray Curtis < <a href="mailto:Murray.Curtis@erm.com">Murray.Curtis@erm.com</a>, Jamie Chivers < <a href="mailto:jamie.c@someva.com.au">jamie.c@someva.com.au</a>, Sandra Agudelo < <a href="mailto:Sandra.A@someva.com.au">Sandra.A@someva.com.au</a>, Aref Taleb < <a href="mailto:aref.t@someva.com.au">aref.t@someva.com.au</a>, Mike Stranger < <a href="mailto:mike.s@someva.com.au">mike.s@someva.com.au</a>>

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Stakeholder engagement is a key requirement for the project. The Applicant is seeking to proactively engage with relevant government, non-government and community stakeholders. Your agency has been identified as a key project stakeholder for the Project.

We are seeking any additional considerations from your agency in relation to the proposed Hills of Gold Wind Farm that we may take into account when preparing the Environmental Impact Statement (EIS). If you do have any considerations you would like to provide, we request that you please provide a response within the next 10 business days for inclusion in our impact assessment.

Should you have any questions, please feel free to contact Amanda Antcliff on 02 4903 5502 or via email at Amanda.Antcliff@erm.com

Yours sincerely,

Amanda Antcliff

Principal Environmental Planner

Team Leader Capital Project Delivery

**ERM** 

Level 1 | Watt Street Commercial Centre | 45 Watt Street Newcastle NSW 2300

PO Box 803, Newcastle NSW 2300

T +61 2 49035502

E amanda.antcliff@erm.com | W www.erm.com



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From: Scott Mallyon < Scott.Mallyon@fcnsw.com.au>

Sent: Wednesday, 29 July 2020 10:30 AM

To: Amanda Antcliff

**Subject:** RE: Hills of Gold Wind Farm Consultation - Forestry Corporation

Hi Amanda

Thanks for taking the time to fill me in on the project.

My contact details are below. Please forward them on to the relevant people

Regards Scott

#### SCOTT MALLYON

Forestry Corporation of NSW Maher Street, Wauchope, NSW, 2446

M: 0447 744 436 | E: scott.mallyon@fcnsw.com.au |

W: www.forestrycorporation.com.au

From: Amanda Antcliff < Amanda. Antcliff@erm.com>

Sent: Wednesday, 29 July 2020 7:02 AM

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Principal Environmental Planner Team Leader Capital Project Delivery

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From: Scott Mallyon <Scott.Mallyon@fcnsw.com.au>
Sent: Wednesday, 21 October 2020 12:54 PM

To: Amanda Antcliff

Cc: Joanne Woodhouse; Murray Curtis; Sandra Agudelo; jamie.c@someva.com.au

Subject: RE: Hills of Gold Wind Farm Consultation - Forestry Corporation

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#### Hi Amanda

There are several instances where Forestry Corporation of NSW (FCNSW) are referred to under a number of our old names (NSW Forestry, State Forests). For the sake of accuracy, it is probably worth correcting our name so that it reflects the current title

Essentially we agree with the intent. The access road they will build and maintain between the forest and Crawney Rd will increase initial attack capability.

It should be noted that FCNSW would respond to bushfires around the Windfarm if the Nundle / Hanging Rock Plantation was under threat. We would also try and save hanging Rock Village as it's in between as well and some FCNSW staff live there.

#### Regards Scott

SCOTT MALLYON

Manager, Forest Occupancy and Materials Forestry Corporation of NSW Maher Street, Wauchope, NSW, 2446

M: 0447 744 436 | E: scott.mallyon@fcnsw.com.au |

W: www.forestrycorporation.com.au

From: Amanda Antcliff < Amanda. Antcliff@erm.com >

Sent: Tuesday, 20 October 2020 2:58 PM

To: Scott Mallyon < Scott.Mallyon@fcnsw.com.au>

Cc: Joanne Woodhouse < Joanne. Woodhouse@erm.com>; Murray Curtis < Murray. Curtis@erm.com>; Sandra Agudelo

 $<\!\!sandra.a@someva.com.au\!\!>; jamie.c@someva.com.au$ 

Subject: RE: Hills of Gold Wind Farm Consultation - Forestry Corporation

#### Hi Scott,

Further to previous discussions regarding the proposed Hills of Gold Wind Farm, please find below a link to the draft Bushfire Assessment report.

https://theermgroup-

my.sharepoint.com/:f:/g/personal/amanda\_antcliff\_erm\_com/Evs4u\_YRMhZlu1j1ldgPIMEB5SUUOYbzViyzM4HzNcG2lg ?e=Zf0Qzq

We welcome any comments on the draft assessment by no later than 30 October 2020 so we can incorporate as required into the final document for submission with the EIS.

Please send any comments to either myself or Joanne Woodhouse (cc'd).

#### Regards Amanda

Amanda Antcliff

Principal Environmental Planner Team Leader Capital Project Delivery

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From: Hamish Slade <a href="mailto:shade@lpsc.nsw.gov.au">hamish Slade <a hr

Monday, 10 August 2020 4:09 PM Sent:

To: Amanda Antcliff

RE: Consultation regarding Hills of Gold Wind Farm - Liverpool Plains Council Subject:

Attachments: 141.pdf

#### Good Afternoon,

Please see attached Councils correspondence in regards to the abovementioned. I will also send the original copy in the mail for yourself.

Should you require anything else in regards to this matter please don't hesitate to contact me at the details below.

Kind Regards,

#### Hamish Slade

Trainee Town Planner | hamish.slade@lpsc.nsw.gov.au

#### **Liverpool Plains Shire Council**

PO Box 152 | Quirindi | NSW | 2343

T 02 6746 1755 | F 02 6746 3255





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From: Amanda Antcliff < Amanda. Antcliff@erm.com>

Sent: Monday, 20 July 2020 10:30 AM

To: Liverpool Plains Shire Council <LPSC@lpsc.nsw.gov.au>; Donna Ausling <Donna.Ausling@lpsc.nsw.gov.au> Cc: Murray Curtis < Murray.Curtis@erm.com>; Jamie Chivers < jamie.c@someva.com.au>; Sandra Agudelo <Sandra.A@someva.com.au>; Aref Taleb <aref.t@someva.com.au>; Mike Stranger <mike.s@someva.com.au>

Subject: Consultation regarding Hills of Gold Wind Farm - Liverpool Plains Council

#### Good morning,

Environmental Resources Management Australia Pty Ltd (ERM) write on behalf of Wind Energy Partners Pty Ltd (Applicant) in relation to the proposed development application for a Wind Farm and associated infrastructure near Nundle NSW (the 'Project'). The proposed Project is located along the ridgeline approximately 5km south of Hanging Rock, 8km south east of Nundle and 60km south east of Tamworth, within the Tamworth Regional, Upper Hunter and Liverpool Plains Local Government Areas (LGA).

The proposed layout Figure is attached for your consideration. The project will involve the construction, operation and decommissioning of a wind farm with:

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- Internal access tracks will be designed and maintained as all-weather access tracks; and
- Ancillary infrastructure including road upgrades, underground and overhead electricity cabling, substation and a switching station and grid connection to the 330 kV Liddell to Tamworth transmission line.

Stakeholder engagement is a key requirement for the project. The Applicant is seeking to proactively engage with relevant government, non-government and community stakeholders. Your agency has been identified as a key project stakeholder for the Project.

We are seeking any additional considerations from your agency in relation to the proposed Hills of Gold Wind Farm that we may take into account when preparing the Environmental Impact Statement (EIS). If you do have any considerations you would like to provide, we request that you please provide a response within the next 10 business days for inclusion in our impact assessment.

Should you have any questions, please feel free to contact Amanda Antcliff on 02 4903 5502 or via email at Amanda.Antcliff@erm.com

Yours sincerely,

Amanda Antcliff

Principal Environmental Planner Team Leader Capital Project Delivery

#### **ERM**

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Attention: Amanda Antcliff Principal Environmental Planner ERM PO Box 803 **NEWCASTLE NSW 2300** 

DLA:dla 2020/141

Contact: Donna Ausling

10 August 2020

Reference:

Email: amanda.antcliff@erm.com

Dear Amanda.

#### Re: Consultation regarding Hills of Gold Wind Farm

I refer to your e-mail correspondence received on 20 July 2020 regarding the abovementioned matter.

We wish to advise that our main consideration for the Project is traffic impacts. In particular, the impacts of the proposed haulage transport routes on Lindsays Gap Road which sits within the Liverpool Plains Local Government Area.

We note that the Secretary's Environmental Assessment Requirements (SEARS) for the Project (dated 22 November 2018) states that the Environmental Impact Statement must include the following information concerning traffic and transport:

- assess the construction and operational traffic impacts of the development;
- provide details of traffic volumes (both light and heavy vehicles) and transport routes during construction and operation, including traffic associated with sourcing raw materials (water, sand and gravel);
- assess the potential traffic impacts of the project on road network function including intersection performance and site access arrangements and road safety, including school bus routes:
- 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) during construction and operation; and,
- provide details of measures to mitigate and / or manage potential impacts including a schedule of all required road upgrades, road maintenance contributions, and any other traffic control measures, developed in consultation with the relevant road authority.

We believe that the above information will help us to fully assess the potential impacts of the Project.

Council trusts that the above information is of assistance. Should you require any further information, please contact the undersigned on (02) 6746 1755 or e-mail lpsc@lpsc.nsw.gov.au

Yours faithfully.

Donna Ausling

DIRECTOR OF ENVIRONMENTAL & ECONOMIC

DEVELOPMENT SERVICES

**From:** Peter Fotheringham < peter.fotheringham@lls.nsw.gov.au >

Sent: Monday, 31 August 2020 9:41 AM

To: Amanda Antcliff

Cc: Warrick Nairne; Brett Miners; Louise Cassidy

Subject: Fw: Consultation regarding Hills of Gold Wind Farm - Local Land Services

Attachments: HoG WF-compressed.pdf

Hi Amanda

the hills of Gold Wind Farm does not impact on any of the TSR under our control

Thank you for the enquiry

From: LLS Admin Hunter Mailbox <admin.hunter@lls.nsw.gov.au>

Sent: Friday, August 28, 2020 2:26 PM

To: Peter Fotheringham <peter.fotheringham@lls.nsw.gov.au>; Warrick Nairne <warwick.nairne@lls.nsw.gov.au>

Cc: Brett Miners <br/> <br/>brett.miners@lls.nsw.gov.au>

Subject: FW: Consultation regarding Hills of Gold Wind Farm - Local Land Services

Hi,

Can you please check to make sure this development application does not impact on TSR 35075 Crawny middle & bottom.

I know Hunter LLS has no statutory role in development approvals unless it may impact TSR's. Could you also send a response to Amanda Antcliff from below email.

Feel free to contact me if you have any further queries.

# Kind Regards

Louise

Louise Cassidy | Customer Service Officer Emergency Management Support Officer Hunter Local Land Services

816 Tocal Rd PATERSON NSW 2421 M: 0428 936 765 T: 02 4938 4954 E: louise.cassidy@lls.nsw.gov.au

W: http://hunter.lls.nsw.gov.au | www.facebook.com/HunterLLS



#### Please rate our service

Local Land Services is committed to providing excellent customer service. Feedback is welcomed and anonymous. Should you wish to provide feedback to help us improve, please click here: rateitnow.com/llshunteremailfb

I acknowledge and pay my respects to the traditional custodians of the land on which I work and pay my respects to Elders past, present and future.

From: Amanda Antcliff < Amanda. Antcliff@erm.com>

Sent: Friday, 28 August 2020 1:02 PM

To: LLS Admin NorthWest Mailbox <admin.northwest@lls.nsw.gov.au>; LLS Admin Hunter Mailbox

<admin.hunter@lls.nsw.gov.au>

**Cc:** Jamie Chivers <jamie.c@someva.com.au>; Sandra Agudelo <Sandra.A@someva.com.au>; Aref Taleb <aref.t@someva.com.au>; Murray Curtis <Murray.Curtis@erm.com>; Lachlan Giles <Lachlan.Giles@erm.com>

Subject: FW: Consultation regarding Hills of Gold Wind Farm - Local Land Services

#### Good afternoon,

I refer to the email below seeking input from Local Land Services relating to the proposed Hills of Gold Wind Farm project near Nundle NSW. To date we have not received a response from your agencies.

Please forward any additional considerations from your agency in relation to the project that we may take into account when preparing the Environmental Impact Statement (EIS).

#### Regards Amanda

Amanda Antcliff
Principal Environmental Planner
Team Leader Capital Project Delivery

#### **ERM**

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From: Amanda Antcliff

Sent: Monday, July 20, 2020 10:32 AM

To: admin.northwest@lls.nsw.gov.au; admin.hunter@lls.nsw.gov.au

**Cc:** Murray Curtis < <u>Murray.Curtis@erm.com</u>>; Jamie Chivers < <u>jamie.c@someva.com.au</u>>; Sandra Agudelo < <u>Sandra.A@someva.com.au</u>>; Aref Taleb < <u>aref.t@someva.com.au</u>>; Mike Stranger < <u>mike.s@someva.com.au</u>>

**Subject:** Consultation regarding Hills of Gold Wind Farm - Local Land Services

Good morning,

Environmental Resources Management Australia Pty Ltd (ERM) write on behalf of Wind Energy Partners Pty Ltd (Applicant) in relation to the proposed development application for a Wind Farm and associated infrastructure near Nundle NSW (the 'Project'). The proposed Project is located along the ridgeline approximately 5km south of Hanging Rock, 8km south east of Nundle and 60km south east of Tamworth, within the Tamworth Regional, Upper Hunter and Liverpool Plains Local Government Areas (LGA).

The proposed layout Figure is attached for your consideration. The project will involve the construction, operation and decommissioning of a wind farm with:

- Up to 78 turbines, a maximum of 420 megawatts (MW) and maximum height of 230 metres (m) (to blade tip);
- Primary access will be from Morrisons Gap Road, with a secondary access from the Head of Peel Road.
- Internal access tracks will be designed and maintained as all-weather access tracks; and
- Ancillary infrastructure including road upgrades, underground and overhead electricity cabling, substation and a switching station and grid connection to the 330 kV Liddell to Tamworth transmission line.

Stakeholder engagement is a key requirement for the project. The Applicant is seeking to proactively engage with relevant government, non-government and community stakeholders. Your agency has been identified as a key project stakeholder for the Project.

We are seeking any additional considerations from your agency in relation to the proposed Hills of Gold Wind Farm that we may take into account when preparing the Environmental Impact Statement (EIS). If you do have any considerations you would like to provide, we request that you please provide a response within the next 10 business days for inclusion in our impact assessment.

Should you have any questions, please feel free to contact Amanda Antcliff on 02 4903 5502 or via email at Amanda.Antcliff@erm.com

Yours sincerely,

Amanda Antcliff
Principal Environmental Planner
Team Leader Capital Project Delivery

**ERM** 

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From: Laurie < lderrick@bigpond.com>
Sent: Monday, 26 October 2020 6:33 PM

To: Amanda Antcliff

**Subject:** Fwd: Hills of Gold Windfarm , Tamworth NSW: Electromagnetic Interference

Consultation

CAUTION: This email originated from outside of the organization. Do not click links or open attachments unless you recognize the sender and know the content is safe.

Hi Amanda,

Good News NBN see no impact from the turbines on the NBN coverage for their customers . See the details below.

Regards

Laurie

----- Forwarded Message ------

Subject: Hills of Gold Windfarm, Tamworth NSW: Electromagnetic Interference Consultation

Date:Mon, 26 Oct 2020 06:35:18 +0000

From:Frank Van Rooden <FrankVanRooden@nbnco.com.au>

To:Laurie <lderrick@bigpond.com>

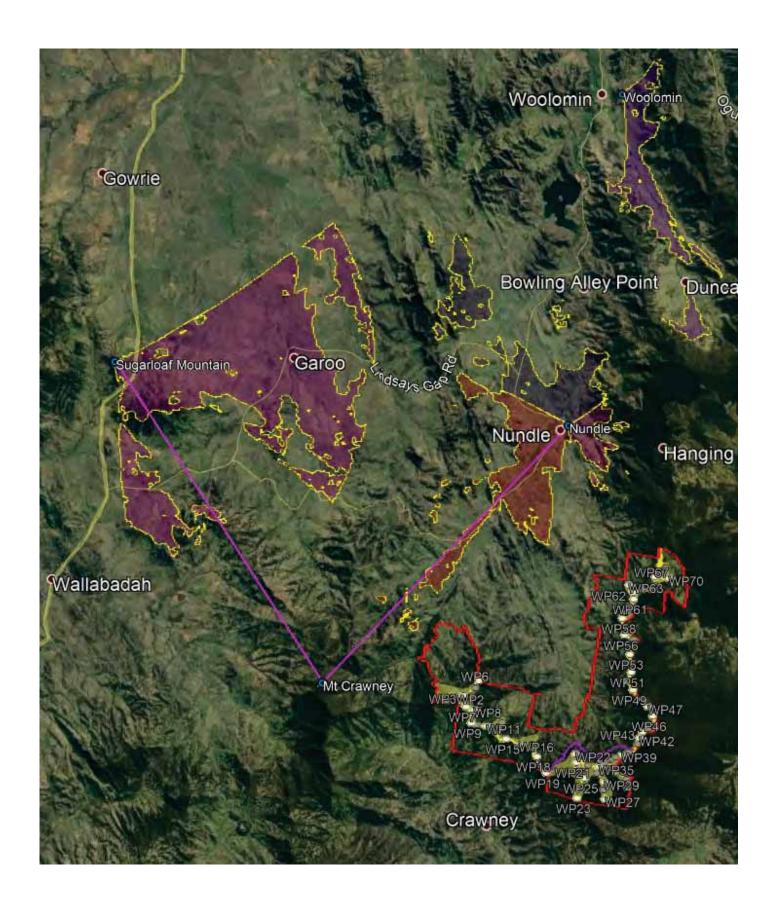
CC:Network\_Capacity\_Enquiries <a href="Network\_Capacity\_Enquiries@nbnco.com.au">Network\_Capacity\_Enquiries@nbnco.com.au</a>, Priyansh Makwana <a href="mailto:spriyanshmakwana@nbnco.com.au">spriyanshmakwana@nbnco.com.au</a>, Tim Smallhorn <a href="mailto:timothysmallhorn@nbnco.com.au">timothysmallhorn@nbnco.com.au</a>, Deepak Dadhwal <a href="mailto:spriyanshmakwana@nbnco.com.au">Deepak Dadhwal@nbnco.com.au</a>, Shahrukh Khalidi <a href="mailto:shahrukhkhalidi@nbnco.com.au">shahrukhkhalidi@nbnco.com.au</a>, Shahrukh Khalidi <a href="mailto:shahrukhkhalidi@nbnco.com.au">shahrukhkhalidi@nbnco.com.au</a>

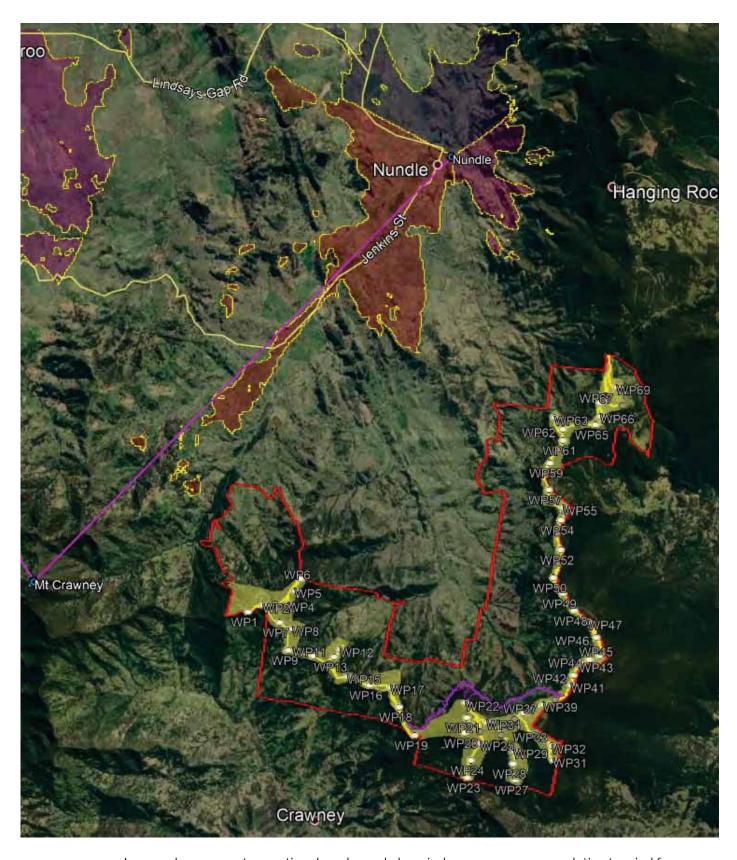
**NBN Classification - Commercial** 

Hi Laurie,

I am happy to chat with you; does 0830 QLD time suit tomorrow morning? My mobile details are shown below.

I have reviewed the data provided and based on the proposed wind farm location it would appear to have no line of sight [LOS] impact between any nearby nbn LTE-TDD base station sites and premises within the current nbn Wireless Coverage Areas.





Images show current operational or planned nbn wireless coverage areas relative to wind farm location and turbines. Nearest turbine is ~4 km from nbn Wireless Coverage Boundary.

Please provide information on any planned RF transmission equipment planned to be installed so a potential interference impact can be assessed. This information should include as a minimum the operating transmission frequencies and transmit power, channel bandwidths, antenna types and radiation patterns as well as the exact location with antenna height, boresight azimuth and tilt [mechanical and electrical tilt].

A standard nbn response for wind farm applications regarding potential interference impact on nbn FW network is as follows:

# Potential Impacts of the Proposed Hills of Gold Wind Farm on NBN Co Spectrum Communication Assets

Referring to an email dated 26 October 2020 regarding the application by Hills of Gold Wind Farm.

We confirm that NBN Co Spectrum Pty Ltd (nbn Spectrum) has a number of spectrum licenses within 75 km of the proposed Hills of Gold Wind Farm.

nbn have strict obligations to provide internet services to the community, and this area has been determined as a FW service area where the footprint of this service is now in place.

nbn will be forced to consider its position as part of the planning should there an interference issue.

If the Application is amended before it is lodged we request that we are sent any amended Application so we can determine whether we have any objections to the amended Application.

We note that, as you would be aware, under section 197 of the *Radiocommunications Act 1992* (Cth) it is an offence to knowingly or recklessly do anything likely to interfere substantially with radiocommunications or otherwise substantially disrupt or disturb radiocommunications.

regards,

Frank

Frank van Rooden M.B.A. , B.Eng (Hons) Electronics
Manager, National Wireless Technical Specialist

Network Capacity & Performance | Fixed Wireless & Transit | Regional Development & Enablement [ RDE ]

M +61 448 803 520 | E frankvanrooden@nbnco.com.au

44 Southgate Avenue, Cannon Hill. QLD. 4170



From: Paul Stangroom < p.stangroom@epuron.com.au >

Sent: Wednesday, 16 September 2020 11:51 AM

To: noc.sydney < noc.sydney@ericsson.com>; nocresdore@nbnco.com.au; NOC Shift Manager

<nocshiftmanager@nbnco.com.au>

Cc: Chris Cantwell <chris.cantwell@attexo.com.au>; Adam Loucas <adam.loucas@middletongroup.com.au>

Subject: [External] Hills of Gold Wind Farm: Electromagnetic Interference Consultation

This message is from an external sender - be cautious, particularly with links and attachments.

Hi

We are conducting early stage consultation for the Hills of Gold Wind Farm near Mount Morgan in Queensland, in particular focusing on Electro-Magnetic Interference.

We request that you review the layout of the turbines and confirm that there will be no impact on your operations.

We attach both a Google Earth .kml file of the wind farm layout and a .csv file containing the wind turbine co-ordinates in GDA94 zone 56, noting that the rotor diameter of our turbines will be between 155 m and 170 m, with hub heights between 149 m and 169 m.

If you have any concerns relating to the development and any potential impacts on your operations, please get in contact by return email or by calling us on the phone number listed below prior to 30<sup>th</sup> September 2020.

Best regards, Paul

Paul Stangroom

General Manager Development (QId)

# EPURON

Level 11, 75 Miller Street,North Sydney, NSW 2060 M: +61 (0)448 663 441 | P: +61 (0)2 8456 7401 | F: +61 (0)2 9922 6645 www.epuron.com.au

From: Amanda Antcliff

Sent: Thursday, 29 October 2020 3:35 PM

To: Anthony.Signor@environment.nsw.gov.au; Catherine.Watt@environment.nsw.gov.au Cc: Joanne Woodhouse; Murray Curtis; Jamie Chivers; Sandra Agudelo; Aref Taleb

**Subject:** RE: Hills of Gold Windfarm

## Hi Anthony,

Just touching base regarding the email below with respect to the Hills of Gold Wind Farm draft Bushfire Management Plan and whether NPWS had any comments.

Thanks Amanda

#### Amanda Antcliff

Principal Environmental Planner Team Leader Capital Project Delivery

#### **ERM**

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From: Amanda Antcliff

Sent: Tuesday, October 20, 2020 4:03 PM

To: 'Anthony.Signor@environment.nsw.gov.au' <Anthony.Signor@environment.nsw.gov.au>

**Cc:** Joanne Woodhouse < Joanne. Woodhouse@erm.com>; Murray Curtis < Murray. Curtis@erm.com>; 'Jamie Chivers' < jamie.c@someva.com.au>; Sandra Agudelo < sandra.a@someva.com.au>; Aref Taleb < aref.t@someva.com.au>

Subject: FW: Hills of Gold Windfarm

## Hi Anthony,

I got a bounce back from Catherine's email advising she was on leave. Please refer to the below for a link to the draft Bushfire Assessment for the proposed Hills of Gold Wind Farm. We welcome comment from NPWS on the draft report.

Regards Amanda

Principal Environmental Planner Team Leader Capital Project Delivery

#### **ERM**

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From: Amanda Antcliff

**Sent:** Tuesday, October 20, 2020 2:58 PM **To:** Catherine.Watt@environment.nsw.gov.au

Cc: Sandra.A@someva.com.au; jamie.c@someva.com.au; Murray Curtis < Murray.Curtis@erm.com >; Joanne

Woodhouse < Joanne. Woodhouse@erm.com >

Subject: RE: Hills of Gold Windfarm

Hi Catherine,

Further to previous discussions between yourself and ERM's Joanne Woodhouse regarding the Bushfire Assessment for the proposed Hills of Gold Wind Farm, please find below a link to the draft report.

## https://theermgroup-

my.sharepoint.com/:f:/g/personal/amanda\_antcliff\_erm\_com/Evs4u\_YRMhZlu1j1IdgPIMEB5SUUOYbzViyzM4HzNcG2lg?e=Zf0Qzg

We welcome any comments on the draft assessment by no later than 30 October 2020 so we can incorporate as required into the final document for submission with the EIS.

Please send any comments to either myself or Joanne (cc'd).

Regards Amanda

Amanda Antcliff

Principal Environmental Planner Team Leader Capital Project Delivery

#### ERM

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PO Box 803, Newcastle NSW 2300 | T +61 2 49035502 | M 0423 775 080 E amanda.antcliff@erm.com | W www.erm.com



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From: Joanne Woodhouse < Joanne. Woodhouse@erm.com>

**Sent:** Friday, June 26, 2020 12:41 PM

To: Catherine.Watt@environment.nsw.gov.au

Cc: Amanda Antcliff < Amanda. Antcliff@erm.com>; Sandra. A@someva.com.au

Subject: Hills of Gold Windfarm

Hi Catherine,

ERM of behalf of Someva Renewables would like to provide you with some preliminary information on the proposed Hills of Gold Windfarm and invite your input into the bushfire risk assessment.

As you may be aware, the proposed Hills of Gold Windfarm Project Area is located approximately 4km south of Hanging Rock, 8km south east of Nundle and 60km south east of Tamworth, within the Tamworth Regional Local Government Area (LGA) and Upper Hunter Shire LGA. The project proposes to connect to the existing 330kV TransGrid Liddell to Tamworth transmission line which is located approximately 23km west from the Project Area.

The project will involve the construction, operation and decommissioning of a wind farm (see attached .kmz noting that this is a preliminary layout) with:

- Up to 78 turbines (final number still being refined), a maximum of 420 megawatts (MW) and maximum height of 230 metres (m) (to blade tip);
- Primary access will be from Morrisons Gap Road, with a secondary access from the Head of Peel Road.
- Internal access tracks will be designed and maintained as all-weather access tracks and will provide improved access opportunities along the ridgeline and into the National Park; and
- Ancillary infrastructure including road upgrades, underground and overhead electricity cabling, substation and a switching station and grid connection to the 330 kV Liddell to Tamworth transmission line.

To inform the preparation of the bushfire risk assessment, ERM are seeking any information you may have on the existing hazards and risks within the Project Area, including the recent fires affecting the region to gain a better understanding of the local fire conditions, the presence of existing fire advantages (key water storages and other resources required to support both ground and aerial firefighting) and to ensure that management and mitigation measures are developed to meet the needs of those on the ground. All key stakeholders will also be invited to provide input in to the development of the recommended mitigation strategies.

Please provide any information via reply email. We will also be available to meet either on site, or other suitable location (ie Nundle or Tamworth) in the week commencing 6<sup>th</sup> July if that suits.

Regards,

Joanne Woodhouse Principal Consultant

From: Amanda Antcliff

Sent:Monday, 31 August 2020 11:38 AMTo:nrar.servicedesk@industry.nsw.gov.au

Cc: Murray Curtis; Sandra Agudelo; Aref Taleb; Jamie Chivers; Lachlan Giles

**Subject:** Hills of Gold Wind Farm - NRAR **Attachments:** Map1\_V3\_24Aug2020.pdf

## Good morning,

Environmental Resources Management Australia Pty Ltd (ERM) write on behalf of Wind Energy Partners Pty Ltd (Applicant) in relation to the proposed development application for the Hills of Gold Wind Farm and associated infrastructure near Nundle NSW (the 'Project'). The proposed Project is located along the ridgeline approximately 5km south of Hanging Rock, 8km south east of Nundle and 60km south east of Tamworth, within the Tamworth Regional, Upper Hunter and Liverpool Plains Local Government Areas (LGA).

The proposed layout Figure is attached for your consideration. The project will involve the construction, operation, and decommissioning of a wind farm with:

- Up to 70 turbines, a maximum of 420 megawatts (MW) and maximum height of 230 metres (m) (to blade tip);
- Primary access will be from Morrisons Gap Road, with a secondary access from the Head of Peel Road.
- Internal access tracks will be designed and maintained as all-weather access tracks; and
- Ancillary infrastructure including road upgrades, underground and overhead electricity cabling, substation and a switching station and grid connection to the 330 kV Liddell to Tamworth transmission line.

Stakeholder engagement is a key requirement for the project. The Applicant is seeking to proactively engage with relevant government, non-government and community stakeholders.

Whilst we have previously discussed water access matters for the project with NRAR officers (ref: V18/1021-23#97), we are seeking any additional considerations from your agency in relation to the proposed Hills of Gold Wind Farm that we may take into account when preparing the Environmental Impact Statement (EIS). If you do have any considerations you would like to provide, we request that you please provide a response within the next 10 business days for inclusion in our impact assessment.

Should you have any questions, please feel free to contact Amanda Antcliff on 02 4903 5502 or via email at Amanda.Antcliff@erm.com

Yours sincerely,

#### Amanda Antcliff

Principal Environmental Planner Team Leader Capital Project Delivery

#### **ERM**

Level 1 | Watt Street Commercial Centre | 45 Watt Street Newcastle NSW 2300 PO Box 803, Newcastle NSW 2300 | T +61 2 49035502 | M 0423 775 080 E amanda.antcliff@erm.com | W www.erm.com

From: Timothy Baker < tim.baker@dpie.nsw.gov.au>
Sent: Thursday, 17 September 2020 10:56 AM

To: Amanda Antcliff

**Subject:** Hills of Gold - EIS assessment requirements

Hi Amanda,

I refer to your email to NRAR on 31 August seeking input to assessment requirements for this project. I can advise NRAR's requirements will be incorporated within the input provided to DPIE Planning by DPIE Water. On review of the EIS NRAR may have further comment on this project.

Regards Tim

Tim Baker | Senior Water Regulation Officer
Natural Resources Access Regulator
Department of Planning, Industry & Environment
M: 0428 162 097 | E: Tim.Baker@nrar.nsw.gov.au
W: www.water.nsw gov.au | www.industry.nsw.gov.au

From: Catherine Timbrell

Sent: Thursday, 20 August 2020 11:18 AM

To: Amanda Antcliff Subject: FW: Quarries

**Attachments:** Construction\_materials\_RR.zip; Hills of Gold.pdf; Quarries.kmz; Hills of Gold.kmz;

MRA\_selection.zip

From: Steven Palmer <steven.palmer@planning.nsw.gov.au>

**Sent:** Sunday, May 31, 2020 5:07 PM

To: Catherine Timbrell <catherine.timbrell@erm.com>

Cc: Amanda Antcliff < Amanda. Antcliff@erm.com>; Murray Curtis < Murray. Curtis@erm.com>

Subject: RE: Quarries

## Hi Catherine,

Quarries can be a bit tricky for us because unless they are for a mineral under the Mining Act, we don't administer them. It's a long story, we collect information on them as best we can, but they don't report to us in the way a mine does. My team is working on updating our MRA (Mineral Resource Audit) dataset that contains this information, but another source is the Resource Regulator. They administer quarries under the safety legislation. I'm attaching both of these. They are based on 80 km intersects from your site, but hopefully you'll find something closer to home. For the reasons I've noted, they can't be considered complete or current, but hopefully they are useful.

They don't have address or contact information which I know would be useful. After plotting them the councils or operators may be helpful in that respect?

## So attached you'll find:

- A map showing the Resource Regulator information;
- A zipped point shapefile from RR;
- A zipped polygon shapefile from my team;
- A spreadsheet showing the RR data and our (MRA) data: and
- KMZs for the Google Earth fans.

Let me know if I can help further or clarify anything?

## Cheers

#### **Steven Palmer**

Manager Land Use, Geological Survey of NSW

Mining, Exploration and Geoscience | Department of Regional NSW T 02 4063 6761 | M 0402 115 007 | E steven.palmer@planning.nsw.gov.au 516 High St | Maitland NSW 2320 PO Box 344 | Hunter Region MC NSW 2310 nsw.gov.au/regionalnsw



The Department of Regional New South Wales acknowledges that it stands on Country which always was and always will be Aboriginal land. We acknowledge the Traditional Custodians of the land and waters, and we show our respect for Elders past, present and emerging. We are committed to providing places in which Aboriginal people are included socially, culturally and economically through thoughtful and collaborative approaches to our work.

From: Catherine Timbrell < <a href="mailto:catherine.timbrell@erm.com">catherine.timbrell@erm.com</a>>

Sent: Wednesday, 27 May 2020 11:31 AM

**To:** Steven Palmer < <a href="mailto:steven.palmer@planning.nsw.gov.au">steven.palmer@planning.nsw.gov.au</a>>

Cc: Amanda Antcliff < Amanda. Antcliff@erm.com>; Murray Curtis < Murray. Curtis@erm.com>

Subject: RE: Quarries

Good morning Steven,

Thank you for getting in touch with me!

That is correct – For some context, ERM are currently preparing an EIS for the Hills of Gold wind farm, and are looking to confirm options for the supply of aggregate for construction within the vicinity of the Project site (4km south of Hanging Rock, 8km south east of Nundle and 60km south east of Tamworth, within the Tamworth Regional LGA and Upper Hunter Shire LGA).

Through a search on Google Maps, my team and I have identified the following quarries approx. 75KM of the site:

- BMR Quarries, Westdale
- Hanson Tamworth
- Boral Currabubula
- Willowtree Gravels, Warrah
- Ardglen Quarry

We also understand that there *may* be a quarry on Crawney Road – are you able to confirm if Resources and Geosciences are aware of any registered quarries on Crawney Road within your system/records? Are there any other quarries within the vicinity in your system which we have missed?

Again, thanks, and I appreciate your help.

Regards,

Catherine Timbrell
Planner, Impact Assessment and Planning

#### **ERM**

Level 15 | 309 Kent St | Sydney NSW 2000 T +61 (0)2 8584 8888 | M +61 (0)405 705 917 E catherine.timbrell@erm.com | W www.erm.com



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From: Steven Palmer <steven.palmer@planning.nsw.gov.au>

Sent: Tuesday, May 26, 2020 8:12 PM

To: Catherine Timbrell < catherine.timbrell@erm.com >

Subject: Quarries

G'day Catherine,

Rumour as it you were speaking with Scott Anson about construction material sources near (or nearish?) a windfarm? I might be able to help with that.

I didn't get any location specifics off Scott. So feel free to either give me a call or email me and let me know what part of the world we're talking about. We'll see what we can do to help out.

#### Cheers

Steven Palmer
Manager Land Use, Geological Survey of NSW

Mining, Exploration and Geoscience | Department of Regional NSW T 02 4063 6761 | M 0402 115 007 | E steven.palmer@planning.nsw.gov.au 516 High St | Maitland NSW 2320 PO Box 344 | Hunter Region MC NSW 2310 nsw.gov.au/regionalnsw



The Department of Regional New South Wales acknowledges that it stands on Country which always was and always will be Aboriginal land. We acknowledge the Traditional Custodians of the land and waters, and we show our respect for Elders past, present and emerging. We are committed to providing places in which Aboriginal people are included socially, culturally and economically through thoughtful and collaborative approaches to our work.

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From: Amanda Antcliff

**Sent:** Monday, 20 July 2020 10:31 AM

To: landuse.minerals@geoscience.nsw.gov.au

Cc: Murray Curtis; Jamie Chivers; Sandra Agudelo; Aref Taleb; Mike Stranger

**Subject:** Consultation regarding Hills of Gold Wind Farm - Division of Resources and Geoscience

Attachments: HoG WF-compressed.pdf

## Good morning,

Environmental Resources Management Australia Pty Ltd (ERM) write on behalf of Wind Energy Partners Pty Ltd (Applicant) in relation to the proposed development application for a Wind Farm and associated infrastructure near Nundle NSW (the 'Project'). The proposed Project is located along the ridgeline approximately 5km south of Hanging Rock, 8km south east of Nundle and 60km south east of Tamworth, within the Tamworth Regional, Upper Hunter and Liverpool Plains Local Government Areas (LGA).

The proposed layout Figure is attached for your consideration. The project will involve the construction, operation and decommissioning of a wind farm with:

- Up to 78 turbines, a maximum of 420 megawatts (MW) and maximum height of 230 metres (m) (to blade tip);
- Primary access will be from Morrisons Gap Road, with a secondary access from the Head of Peel Road.
- Internal access tracks will be designed and maintained as all-weather access tracks; and
- Ancillary infrastructure including road upgrades, underground and overhead electricity cabling, substation and a switching station and grid connection to the 330 kV Liddell to Tamworth transmission line.

Stakeholder engagement is a key requirement for the project. The Applicant is seeking to proactively engage with relevant government, non-government and community stakeholders. Your agency has been identified as a key project stakeholder for the Project.

We are seeking any additional considerations from your agency in relation to the proposed Hills of Gold Wind Farm that we may take into account when preparing the Environmental Impact Statement (EIS). If you do have any considerations you would like to provide, we request that you please provide a response within the next 10 business days for inclusion in our impact assessment.

Should you have any questions, please feel free to contact Amanda Antcliff on 02 4903 5502 or via email at Amanda.Antcliff@erm.com

Yours sincerely,

#### Amanda Antcliff

Principal Environmental Planner Team Leader Capital Project Delivery

#### **ERM**

Level 1 | Watt Street Commercial Centre | 45 Watt Street Newcastle NSW 2300 PO Box 803, Newcastle NSW 2300 | T +61 2 49035502

E amanda.antcliff@erm.com | W www.erm.com

From: Amanda Antcliff

Sent: Friday, 28 August 2020 1:04 PM

To: landuse.minerals@geoscience.nsw.gov.au

Cc: Jamie Chivers; Aref Taleb; Sandra Agudelo; Murray Curtis; Lachlan Giles

**Subject:** FW: Consultation regarding Hills of Gold Wind Farm - Division of Resources and

Geoscience

Attachments: HoG WF-compressed.pdf

## Good afternoon,

I refer to the email below seeking input from Resources and Geosciences relating to the proposed Hills of Gold Wind Farm project near Nundle NSW. To date we have not received a response from your agency.

Please forward any additional considerations from your agency in relation to the project that we may take into account when preparing the Environmental Impact Statement (EIS).

Regards Amanda

## Amanda Antcliff

Principal Environmental Planner Team Leader Capital Project Delivery

## ERM

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From: Amanda Antcliff

Sent: Monday, July 20, 2020 10:31 AM

To: landuse.minerals@geoscience.nsw.gov.au

**Cc:** Murray Curtis <Murray.Curtis@erm.com>; Jamie Chivers <jamie.c@someva.com.au>; Sandra Agudelo <Sandra.A@someva.com.au>; Aref Taleb <aref.t@someva.com.au>; Mike Stranger <mike.s@someva.com.au>

Subject: Consultation regarding Hills of Gold Wind Farm - Division of Resources and Geoscience

Good morning,

Environmental Resources Management Australia Pty Ltd (ERM) write on behalf of Wind Energy Partners Pty Ltd (Applicant) in relation to the proposed development application for a Wind Farm and associated infrastructure near Nundle NSW (the 'Project'). The proposed Project is located along the ridgeline approximately 5km south of Hanging Rock, 8km south east of Nundle and 60km south east of Tamworth, within the Tamworth Regional, Upper Hunter and Liverpool Plains Local Government Areas (LGA).

The proposed layout Figure is attached for your consideration. The project will involve the construction, operation and decommissioning of a wind farm with:

- Up to 78 turbines, a maximum of 420 megawatts (MW) and maximum height of 230 metres (m) (to blade tip);
- Primary access will be from Morrisons Gap Road, with a secondary access from the Head of Peel Road.
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Stakeholder engagement is a key requirement for the project. The Applicant is seeking to proactively engage with relevant government, non-government and community stakeholders. Your agency has been identified as a key project stakeholder for the Project.

We are seeking any additional considerations from your agency in relation to the proposed Hills of Gold Wind Farm that we may take into account when preparing the Environmental Impact Statement (EIS). If you do have any considerations you would like to provide, we request that you please provide a response within the next 10 business days for inclusion in our impact assessment.

Should you have any questions, please feel free to contact Amanda Antcliff on 02 4903 5502 or via email at Amanda.Antcliff@erm.com

Yours sincerely,

Amanda Antcliff

Principal Environmental Planner Team Leader Capital Project Delivery

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From: Amanda Antcliff

Sent: Thursday, 29 October 2020 3:49 PM

To: Allyn Purkiss

Cc: Sandra.A@someva.com.au; jamie.c@someva.com.au; Joanne Woodhouse; Murray Curtis

**Subject:** RE: Hills of Gold Windfarm

## Hi Allyn

Just touching base regarding the email below with respect to the Hills of Gold Wind Farm draft Bushfire Management Plan and whether RFS had any comments.

Regards Amanda

#### Amanda Antcliff

Principal Environmental Planner Team Leader Capital Project Delivery

**ERM** 

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From: Amanda Antcliff

**Sent:** Monday, October 19, 2020 3:21 PM **To:** Allyn Purkiss <Allyn.Purkiss@rfs.nsw.gov.au>

Cc: Sandra.A@someva.com.au; jamie.c@someva.com.au; Joanne Woodhouse < Joanne.Woodhouse@erm.com>;

Murray Curtis < Murray.Curtis@erm.com>
Subject: RE: Hills of Gold Windfarm

Hi Allyn,

Further to previous discussions between yourself and ERM's Joanne Woodhouse regarding the Bushfire Assessment for the proposed Hills of Gold Wind Farm, please find below a link to the draft report.

https://theermgroup-

my.sharepoint.com/:f:/g/personal/amanda\_antcliff\_erm\_com/Evs4u\_YRMhZlu1j1ldgPIMEB5SUUOYbzViyzM4HzNcG2lg ?e=Zf0Qzq

We welcome any comments on the draft assessment by no later than 30 October 2020 so we can incorporate as required into the final document for submission with the EIS.

Please send any comments to either myself or Joanne (cc'd).

Regards Amanda

Amanda Antcliff

Principal Environmental Planner Team Leader Capital Project Delivery

**ERM** 

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From: Joanne Woodhouse < Joanne. Woodhouse@erm.com>

Sent: Wednesday, July 22, 2020 2:52 PM

To: Allyn Purkiss < Allyn.Purkiss@rfs.nsw.gov.au>

Cc: Amanda Antcliff < Amanda. Antcliff@erm.com >; Sandra. A@someva.com.au; jamie.c@someva.com.au

Subject: Hills of Gold Windfarm

Hi Allyn,

Thanks for your reply. At this stage I am trying to fill in a few gaps around recent fire history (see table below). Specifically if you have any information on:

- ignition source;
- ground control and/or aerial support;
- water supply;
- accessibility issues;
- property lost; and

could upgraded road network or other mitigation measures such as provision of additional water supply on the ridgeline as part of the windfarm development assist in future events.

We will also recommendi that site access points must be constructed as the first stage of development and the final design of access roads must enable safe access and egress for residents attempting to leave the area at the same time that emergency service personnel are arriving to undertake firefighting operations. Site access points must be maintained for the life of the project and include appropriate signs throughout the windfarm to assist emergency response crews determine track names, location of turbines and location of any locked gates. Do you have any additional specifications for road design that will need to be considered during this initial design phase of the project noting that the proposed upgrade of the internal road network aims to increase access along the entire length of the ridgeline.

Majors fires reported within the immediate area							
Fire Name	Fire No. and Label	Dates	Area burnt (ha)	Comments			
Fires directly impacting the Project Area							
Pages Creek Road Fire	Fire No.19121263653 Label 2019-20 Wildfire	Start Date 12/11/2019, End Date 1/10/2020	7,494.26	Ben Hall National Park. Difficult steep terrain. This fire is reported to have been the result of a lightning strike.			
Crawney Road Fire	Fire No.13120984154 Label 2013-14 Wildfire	Start Date 12/8/2013, End Date 12/15/2013	69.44	[to be completed following consultation with RFS]			
Nycomma Fire	Fire No.HUN02048 Label 2002-03 Wildfire	Start Date 12/22/2002	31.35	[to be completed following consultation with RFS]			
Fires bordering the Project Area to the west and south west							
Wallabadah South	Fire No. 19121464008 Label 2019-20 Wildfire	Start Date 12/13/2019, End Date 1/6/2020,	4,041.41	Limited access due to steep terrain.			
Back Creek	Fire No. 17092576097 Label 2017-18 Wildfire	Start Date 9/25/2017, End Date 10/11/2017	325.98	[to be completed following consultation with RFS]			
Crawney Pass Fire	Fire No. HUN05028 Label 2005-06 Wildfire	Start Date 3/29/2006, End Date 3/31/2006	183.85	[to be completed following consultation with RFS]			
Fires bordering the Project Area to the east							
HCCO - BARR - Brayshaw - HR	Fire No. HR11022249774 Label 2018-19 Prescribed Burn	Start Date 3/4/2019, End Date 3/6/2019	849.91	[to be completed following consultation with RFS]			
Schofield	Fire No. 12121360845 Label 2012-13 Wildfire	Start Date 12/13/2012, End Date 12/28/2012	1,226.04	[to be completed following consultation with RFS]			
Gulf Gogs Complex	Fire No. HUN02042	Start Date 11/4/2002	6,017.52	[to be completed following consultation with RFS]			

Fire Name	Fire No. and Label	Dates	Area burnt (ha)	Comments		
	Label 2002-03 Wildfire					
Fires bordering the Project Area to the north east						
Pearson Trail Complex	Fire No. 19121163462 Label 2019-20 Wildfire	Start Date 12/10/2019, End Date 12/31/2019	23,053.52	Dungowan Dam Catchment in difficult steep terrain. This fire is reported to have been the result of a lightning strike.		

Many Thanks,

Joanne Woodhouse Principal Consultant

**ERM** 

Level 4 | Watt Street Commercial Centre | 45 Watt Street Newcastle NSW 2300 |

PO Box 803 Newcastle NSW 2300 | T +61 2 49035521 | M 0429 311 798

E joanne.woodhouse@erm.com | W www.erm.com



## ERM The business of sustainability

From: Allyn Purkiss < Allyn.Purkiss@rfs.nsw.gov.au>

Sent: Tuesday, July 14, 2020 12:48 PM

To: Joanne Woodhouse < Joanne. Woodhouse@erm.com>

Subject: RE: Hills of Gold Windfarm

Hi Joanne,

Sorry but I seem to be eternally busy lately.

Probably best to ask when you will be in Tamworth & what day suits you to come to FCC and have a chat as to exactly what we can do to assist, & I will try to fit that in?

Regards,

Allyn

Superintendent Allyn Purkiss | Manager | Tamworth NSW RURAL FIRE SERVICE

From: Joanne Woodhouse < <u>Joanne.Woodhouse@erm.com</u>>

**Sent:** Monday, 6 July 2020 8:44 AM

To: Allyn Purkiss < Allyn.Purkiss@rfs.nsw.gov.au >

Subject: RE: Hills of Gold Windfarm

Thanks Allyn – much appreciated.

Joanne Woodhouse Principal Consultant

**ERM** 

Level 4 | Watt Street Commercial Centre | 45 Watt Street Newcastle NSW 2300 |

PO Box 803 Newcastle NSW 2300 | T +61 2 49035521 | M 0429 311 798

E joanne.woodhouse@erm.com | W www.erm.com



#### ERM The business of sustainability

From: Allyn Purkiss < <a href="mailto:Allyn.Purkiss@rfs.nsw.gov.au">Allyn.Purkiss@rfs.nsw.gov.au</a>>

Sent: Friday, July 3, 2020 9:27 AM

To: Joanne Woodhouse < <u>Joanne.Woodhouse@erm.com</u>>

Subject: RE: Hills of Gold Windfarm

Hi Joanne,

Sorry for the late reply as I have been away. I have a few staff on leave for a few weeks when they come back I will get someone to see what they can do.

Thanks,

**Allyn** 

Superintendent Allyn Purkiss |T| Manager | Tamworth NSW RURAL FIRE SERVICE

----- Original message -----

From: Joanne Woodhouse < <u>Joanne.Woodhouse@erm.com</u>>

Date: 30/6/20 15:11 (GMT+10:00)

To: "Tom Cooper (NSWFB)" < Alan.Cooper@fire.nsw.gov.au >, Liverpool Range

liverpool.range@rfs.nsw.gov.au>, Allyn Purkiss < Allyn.Purkiss@rfs.nsw.gov.au>, Richard Rienstra

<richard.rienstra@fcnsw.com.au>, Catherine.Watt@environment.nsw.gov.au

Cc: Amanda Antcliff < <u>Amanda.Antcliff@erm.com</u>>, <u>Sandra.A@someva.com.au</u>, <u>jamie.c@someva.com.au</u>

Subject: Hills of Gold Windfarm

Hi All,

I am just following up on the emails sent on Friday 26 June regarding the Hills of Gold Windfarm project and thankyou to those that have already responded.

If you are able to provide information on the existing hazards and risks within the Project Area, including the location of existing fire advantages (key water storages and other resources required to support both ground and aerial firefighting). I would appreciate your input by Friday 10 July if possible.

If you would like to meet either on site, or other suitable location (ie Nundle or Tamworth) in the week commencing 6th July please confirm by 10am Thursday 2 July 2020 so that arrangements can be made.

Many thanks,

Joanne Woodhouse Principal Consultant

Principal Consultan

Level 4 | Watt Street Commercial Centre | 45 Watt Street Newcastle NSW 2300 | PO Box 803 Newcastle NSW 2300 | T +61 2 49035521 | M 0429 311 798 | E joanne.woodhouse@erm.com | W www.erm.com



ERM The business of sustainability

From: Amanda Antcliff

**Sent:** Thursday, 29 October 2020 3:51 PM **To:** 'liverpool.range@rfs.nsw.gov.au'

Cc: 'Sandra.A@someva.com.au'; Joanne Woodhouse; 'jamie.c@someva.com.au'; Murray

Curtis

**Subject:** RE: Hills of Gold Windfarm

Hi Myles,

Just touching base regarding the email below with respect to the Hills of Gold Wind Farm draft Bushfire Management Plan and whether RFS had any comments.

Regards Amanda

#### Amanda Antcliff

Principal Environmental Planner Team Leader Capital Project Delivery

## **ERM**

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## ERM The business of sustainability

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From: Amanda Antcliff

**Sent:** Monday, October 19, 2020 3:22 PM **To:** liverpool.range@rfs.nsw.gov.au

Cc: Sandra.A@someva.com.au; Joanne Woodhouse < Joanne.Woodhouse@erm.com>; jamie.c@someva.com.au;

Murray Curtis < Murray. Curtis@erm.com>
Subject: RE: Hills of Gold Windfarm

Hi Myles,

Further to previous discussions between yourself and ERM's Joanne Woodhouse regarding the Bushfire Assessment for the proposed Hills of Gold Wind Farm, please find below a link to the draft report.

https://theermgroup-

my.sharepoint.com/:f:/g/personal/amanda\_antcliff\_erm\_com/Evs4u\_YRMhZlu1j1ldgPIMEB5SUUOYbzViyzM4HzNcG2lg ?e=Zf0Qzq

We welcome any comments on the draft assessment by no later than 30 October 2020 so we can incorporate as required into the final document for submission with the EIS.

Please send any comments to either myself or Joanne (cc'd).

Regards Amanda

Amanda Antcliff

Principal Environmental Planner Team Leader Capital Project Delivery

**ERM** 

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ERM The business of sustainability

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From: Joanne Woodhouse < Joanne. Woodhouse@erm.com>

**Sent:** Friday, June 26, 2020 12:32 PM **To:** <u>liverpool.range@rfs.nsw.gov.au</u>

Cc: Amanda Antcliff < Amanda. Antcliff@erm.com>; Sandra. A@someva.com.au

Subject: Hills of Gold Windfarm

Hi Myles,

ERM of behalf of Someva Renewables would like to provide you with some preliminary information on the proposed Hills of Gold Windfarm and invite your input into the bushfire risk assessment.

As you may be aware, the proposed Hills of Gold Windfarm Project Area is located approximately 4km south of Hanging Rock, 8km south east of Nundle and 60km south east of Tamworth, within the Tamworth Regional Local Government Area (LGA) and Upper Hunter Shire LGA. The project proposes to connect to the existing 330kV TransGrid Liddell to Tamworth transmission line which is located approximately 23km west from the Project Area.

The project will involve the construction, operation and decommissioning of a wind farm (see attached .kmz noting that this is a preliminary layout) with:

• Up to 78 turbines (final number still being refined), a maximum of 420 megawatts (MW) and maximum height of 230 metres (m) (to blade tip);

- Primary access will be from Morrisons Gap Road, with a secondary access from the Head of Peel Road.
- Internal access tracks will be designed and maintained as all-weather access tracks and will provide improved access opportunities along the ridgeline and into the National Park; and
- Ancillary infrastructure including road upgrades, underground and overhead electricity cabling, substation and a switching station and grid connection to the 330 kV Liddell to Tamworth transmission line.

To inform the preparation of the bushfire risk assessment, ERM are seeking any information you may have on the existing hazards and risks within the Project Area, including the recent fires affecting the region to gain a better understanding of the local fire conditions, the presence of existing fire advantages (key water storages and other resources required to support both ground and aerial firefighting) and to ensure that management and mitigation measures are developed to meet the needs of those on the ground. All key stakeholders will also be invited to provide input in to the development of the recommended mitigation strategies.

Please provide any information via reply email. We will also be available to meet either on site, or other suitable location (ie Nundle or Tamworth) in the week commencing 6<sup>th</sup> July if that suits.

Regards,

Joanne Woodhouse Principal Consultant

#### ERM

Level 4 | Watt Street Commercial Centre | 45 Watt Street Newcastle NSW 2300 | PO Box 803 Newcastle NSW 2300 | T +61 2 49035521 | M 0429 311 798 | E joanne.woodhouse@erm.com | W www.erm.com



From: Michelle Read <michelle.read@crownland.nsw.gov.au>

Sent: Friday, 2 October 2020 3:26 PM

To: Amanda Antcliff

Subject:RE: Hills of Gold Wind FarmAttachments:R20841 - DPIE\_CL.zip

#### Hi Amanda

I've reviewed the information provided and it seems that you have identified most of the Crown land in the project area.

I just wanted to clarify management of some of the sites though:

- The Wallabadah Nature Reserve, Crawney Pass National Park and Ben Halls Gap Nature Reserve are not administered under the *Crown Lands Management Act, 2016*; these are dedicated under the *National Parks and Wildlife Act, 1974* and are administered by the NSW National Parks and Wildlife Service; they are not managed by Crown Lands.
- The Ben Halls Gap State Forest is administered by Forestry Corporation and is not managed by Crown Lands
- The reserves identified as Travelling Stock Reserves are Crown land however, they are managed by Local Land Services
- The reserve for rest area is Crown land but is managed by Tamworth Regional Council
- The reserve for trigonomical purposes is Crown land and currently held under grazing licences

If there are plans to utilise Crown reserves in connection with the windfarm project, the proponent will require a licence to occupy the land under the *Crown Land Management Act, 2016.* Guidelines and Policies relating to the issue of licences can be found <a href="here">here</a>. If a licence was required over land that is managed by Local Land Services, Crown Lands would be the issuing authority but the consent of Local Land Services would be required. If a licence was required over the land managed by Tamworth Regional Council, Council would be the issuing authority.

If works or structures are proposed to be within Crown road reserves, approvals and/or licences under the *Roads Act,* 1993 may be required – further information relating to works on Crown roads can be found <a href="https://example.com/here/beauty-state-new-to-sta

Generally, Crown reserves are not available for purchase, except in exceptional circumstances – click <u>here</u> for further information.

Crown roads that are not used or required for access may be sold to an adjoining owner – interested landowners are able to submit an application for the department's investigation and consideration; further information regarding this process can be found on the Roads website page noted in the previous paragraph, under the Crown road sales and closures tab.

If you need any clarification on the contents of the diagrams, please let me know. Please note that the information contained on the attached diagrams is a general representation of the status of the land – if more detailed information is required, a Crown Lands Status Search may be required.

Regards

Michelle Read Acting Area Manager North West

Crown Lands | NSW Department of Planning, Industry and Environment |

T: 6763 3013 | E: tamworth.crownlands@crownland.nsw.gov.au

Level 2 | Noel Park House | 155-157 Marius Street | TAMWORTH NSW 2340 P O Box 2185 | DANGAR NSW 2309 www.dpie.nsw.gov.au

The Department of Planning, Industry and Environment acknowledges that it stands on Aboriginal land. We acknowledge the traditional custodians of the land and we show our respect for elders past, present and emerging through thoughtful and collaborative approaches to our work, seeking to demonstrate our ongoing commitment to providing places in which Aboriginal people are included socially, culturally and economically.

From: 'Amanda Antcliff' via #Tamworth Crownlands <tamworth.crownlands@crownland.nsw.gov.au>

**Sent:** Friday, 28 August 2020 12:47 PM

To: Crownland Tamworth Mailbox <tamworth.crownlands@crownland.nsw.gov.au>

Cc: Sandra Agudelo <Sandra.A@someva.com.au>; Jamie Chivers <jamie.c@someva.com.au>; Aref Taleb <aref.t@someva.com.au>; Murray Curtis <Murray.Curtis@erm.com>; Lachlan Giles <Lachlan.Giles@erm.com>

Subject: Hills of Gold Wind Farm

Good afternoon,

Environmental Resources Management Australia Pty Ltd (ERM) write on behalf of Wind Energy Partners Pty Ltd (Applicant) in relation to the proposed development application for the Hills of Gold Wind Farm and associated infrastructure near Nundle NSW (the 'Project'). The proposed Project is located along the ridgeline approximately 5km south of Hanging Rock, 8km south east of Nundle and 60km south east of Tamworth, within the Tamworth Regional, Upper Hunter and Liverpool Plains Local Government Areas (LGA).

The proposed layout Figure is attached for your consideration. The project will involve the construction, operation, and decommissioning of a wind farm with:

- Up to 70 turbines, a maximum of 420 megawatts (MW) and maximum height of 230 metres (m) (to blade tip);
- Primary access will be from Morrisons Gap Road, with a secondary access from the Head of Peel Road.
- Internal access tracks will be designed and maintained as all-weather access tracks; and
- Ancillary infrastructure including road upgrades, underground and overhead electricity cabling, substation and a switching station and grid connection to the 330 kV Liddell to Tamworth transmission line.

Stakeholder engagement is a key requirement for the project. The Applicant is seeking to proactively engage with relevant government, non-government and community stakeholders.

We have identified and mapped the locations of Crown Land in the vicinity of the Hills of Gold Wind Farm and we would appreciate your input and consultation to ensure that we have identified all the Crown Land near the proposed development. Additionally, we are seeking your feedback on which of the Crown Land uses (buy, lease, license, road works) you would recommend.

Please find attached shapefiles and kmz files of the project development corridor and the Crown Land that we have identified, along with a map of the proposed project.

Should you have any questions, please feel free to contact Amanda Antcliff on 02 4903 5502 or via email at <a href="mailto:Amanda.Antcliff@erm.com">Amanda.Antcliff@erm.com</a>

Yours sincerely,

Amanda Antcliff

Principal Environmental Planner

## Team Leader Capital Project Delivery

**ERM** 

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From: Lobsey, Sam <s.lobsey@tamworth.nsw.gov.au>

**Sent:** Tuesday, 28 July 2020 11:04 AM

To: Amanda Antcliff

Cc: Harrison, Genevieve; Burnes, Kay

**Subject:** Response to ERM Consultation regarding Hills of Gold Wind Farm - Tamworth Regional

Council

Attachments: HoG WF-compressed.pdf

Hi Amanda,

Whilst Tamworth Regional Council elects not to add anything further at this time, given the high level of interest in the community Council strongly advises that you seek widespread community consultation with this project.

Regards,

Sam Lobsey | Manager, Development Planning and Compliance Tamworth Regional Council P O Box 555 Tamworth NSW 2340

P: 02 67675432 M: 0418859136

E: s.lobsey@tamworth.nsw.gov.au

## Submit Large Documents Here

(NB: your email will be sent to a Council group development email Inbox. Please include as much information as necessary such as Application Numbers, Relevant Council Officer Names or nature of email in Subject Line and Message Section of the email to ensure your email is allocated to the right officer).



~ Toyota Country Music Festival Tamworth 2021 - Friday 15 January to Sunday 24 January 2021 ~ www.tcmf.com.au

From: Amanda Antcliff [mailto:Amanda.Antcliff@erm.com]

**Sent:** Monday, 20 July 2020 10:29 AM **To:** Council External Email; Burnes, Kay

Cc: Murray Curtis; Jamie Chivers; Sandra Agudelo; Aref Taleb; Mike Stranger

Subject: Consultation regarding Hills of Gold Wind Farm - Tamworth Regional Council

Good morning,

Environmental Resources Management Australia Pty Ltd (ERM) write on behalf of Wind Energy Partners Pty Ltd (Applicant) in relation to the proposed development application for a Wind Farm and associated infrastructure near Nundle NSW (the 'Project'). The proposed Project is located along the ridgeline approximately 5km south of Hanging Rock, 8km south east of Nundle and 60km south east of Tamworth, within the Tamworth Regional, Upper Hunter and Liverpool Plains Local Government Areas (LGA).

The proposed layout Figure is attached for your consideration. The project will involve the construction, operation and decommissioning of a wind farm with:

- Up to 78 turbines, a maximum of 420 megawatts (MW) and maximum height of 230 metres (m) (to blade tip);
- Primary access will be from Morrisons Gap Road, with a secondary access from the Head of Peel Road.
- Internal access tracks will be designed and maintained as all-weather access tracks; and
- Ancillary infrastructure including road upgrades, underground and overhead electricity cabling, substation and a switching station and grid connection to the 330 kV Liddell to Tamworth transmission line.

Stakeholder engagement is a key requirement for the project. The Applicant is seeking to proactively engage with relevant government, non-government and community stakeholders. Your agency has been identified as a key project stakeholder for the Project.

We are seeking any additional considerations from your agency in relation to the proposed Hills of Gold Wind Farm that we may take into account when preparing the Environmental Impact Statement (EIS). If you do have any considerations you would like to provide, we request that you please provide a response within the next 10 business days for inclusion in our impact assessment.

Should you have any questions, please feel free to contact Amanda Antcliff on 02 4903 5502 or via email at Amanda.Antcliff@erm.com

Yours sincerely,

Amanda Antcliff

Principal Environmental Planner Team Leader Capital Project Delivery

## **ERM**

Level 1 | Watt Street Commercial Centre | 45 Watt Street Newcastle NSW 2300 PO Box 803, Newcastle NSW 2300 | T +61 2 49035502 E amanda.antcliff@erm.com | W www.erm.com



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From: Telco Spectrum < telco.spectrum@customerservice.nsw.gov.au>

Sent: Wednesday, 28 October 2020 12:45 PM

To: Amanda Antcliff

Cc: Luke Fletcher; Telco Spectrum; Murray Curtis; Lachlan Giles

Subject: RE: Proposed Hills of Gold Wind Farm - Consultation with Telco Authority

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Hi Amanda,

I can confirm that there are no concerns arising from the proposed windfarms to our network.

## **Kind Regards**

Jay Sharma Spectrum Engineer, NSW Telco Authority

ICT and Digital Government Division | Department of Customer Service p 02 9219 3158

e jayanta.sharma@customerservice.nsw.gov.au | www.customerservice.nsw.gov.au | Level 10, McKell Building, 2-24 Rawson Place NSW 2000



Please consider the environment before printing this email

From: Amanda Antcliff < Amanda. Antcliff@erm.com>

Sent: Wednesday, 14 October 2020 11:54 AM

To: Jay Sharma < Jayanta. Sharma@customerservice.nsw.gov.au>

Cc: Luke Fletcher < luke.fletcher@customerservice.nsw.gov.au>; Telco Spectrum

<telco.spectrum@customerservice.nsw.gov.au>; Murray Curtis <Murray.Curtis@erm.com>; Lachlan Giles

<Lachlan.Giles@erm.com>

Subject: RE: Proposed Hills of Gold Wind Farm - Consultation with Telco Authority

Hi Jay,

Please find attached the kmz.

Details on the turbine:

Max Height: 230 m

• Rotor diameter: 170 m (including 83.5 m blade length + hub diameter).

## Regards Amanda

#### Amanda Antcliff

Principal Environmental Planner Team Leader Capital Project Delivery

#### **ERM**

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From: Jay Sharma < Jayanta. Sharma@customerservice.nsw.gov.au >

Sent: Wednesday, October 14, 2020 11:25 AM To: Amanda Antcliff <a href="mailto:Amanda.Antcliff@erm.com">Amanda.Antcliff@erm.com</a>>

Cc: Luke Fletcher < <u>luke.fletcher@customerservice.nsw.gov.au</u>>; Telco Spectrum

< telco.spectrum@customerservice.nsw.gov.au >; Murray Curtis < Murray.Curtis@erm.com >; Lachlan Giles

<Lachlan.Giles@erm.com>

Subject: RE: Proposed Hills of Gold Wind Farm - Consultation with Telco Authority

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#### Hi Amanda,

For us to review the impacts of the proposed project, could you share with us any .kml files (or similar) that show the geographical location of the turbines and the blade length?

## **Kind Regards**

Jay Sharma Spectrum Engineer, NSW Telco Authority

ICT and Digital Government Division | Department of Customer Service p 02 9219 3158

# e <u>jayanta.sharma@customerservice.nsw.gov.au</u> | <u>www.customerservice.nsw.gov.au</u> | <u>www.customerservice.nsw.gov.au</u> | Level 10, McKell Building, 2-24 Rawson Place NSW 2000



Please consider the environment before printing this email

From: Telco Client Services < Telco Client Services@customerservice.nsw.gov.au >

Sent: Wednesday, 14 October 2020 11:04 AM

To: Jay Sharma < Jayanta. Sharma@customerservice.nsw.gov.au >; Luke Fletcher

< luke.fletcher@customerservice.nsw.gov.au >

Subject: FW: Proposed Hills of Gold Wind Farm - Consultation with Telco Authority

Hi Jay and Luke,

This came through the Telco Client Services inbox.

Do I forward this to the both of you for your attention or does it need to go to someone else?

Thank you

Regards,

Abbey Zoualfakar Administrative Officer, NSW Telco Authority p 9372 8221

e <u>abbey.zoualfakar@customerservice.nsw.gov.au</u> | <u>www.telco.nsw.gov.au</u> | <u>www.customerservice.nsw.gov.au</u> | <u>www.customerservice.nsw.gov.au | www.customerservice.nsw.gov.au | www.customerservice.nsw.gov.au | www.customerservice.nsw.gov.au | www.customerse</u>



Please consider the environment before printing this email

From: Amanda Antcliff < Amanda.Antcliff@erm.com > Sent: Wednesday, 14 October 2020 10:31 AM

To: Telco Authority <Telco.Authority@customerservice.nsw.gov.au>

Cc: Murray Curtis < Murray. Curtis@erm.com>; Lachlan Giles < Lachlan. Giles@erm.com>

Subject: Proposed Hills of Gold Wind Farm - Consultation with Telco Authority

## Good morning,

Environmental Resources Management Australia Pty Ltd (ERM) write on behalf of Wind Energy Partners Pty Ltd (Applicant) in relation to the proposed development application for the Hills of Gold Wind Farm and associated infrastructure near Nundle NSW (the 'Project'). The proposed Project is located along the ridgeline approximately 5km south of Hanging Rock, 8km south east of Nundle and 60km south east of Tamworth, within the Tamworth Regional, Upper Hunter and Liverpool Plains Local Government Areas (LGA).

The proposed layout Figure is attached for your consideration. The project will involve the construction, operation, and decommissioning of a wind farm with:

- Up to 70 turbines, a maximum of 420 megawatts (MW) and maximum height of 230 metres (m) (to blade tip);
- Primary access will be from Morrisons Gap Road, with a secondary access from the Head of Peel Road.
- Internal access tracks will be designed and maintained as all-weather access tracks; and
- Ancillary infrastructure including road upgrades, underground and overhead electricity cabling, substation and a switching station and grid connection to the existing 330 kV Liddell to Tamworth transmission line.

An Electromagnetic Interference Assessment is being completed and which will be incorporated into the Environmental Impact Statement (EIS) which is to be lodged with Department of Planning, Industry and Environment.

Stakeholder engagement is a key requirement for the Project. The Applicant is seeking to proactively engage with relevant government, non-government and community stakeholders.

We are seeking to consult with Department of Finance, Services and Innovation – Telco Authority in relation to the proposed Hills of Gold Wind Farm. If you do have any considerations or comments you would like to provide for consideration in the EIS, we request that you please provide a response within the next 10 business days for inclusion in our impact assessment.

Should you have any questions, please feel free to contact Amanda Antcliff on 02 4903 5502 or via email at Amanda.Antcliff@erm.com

Yours sincerely,

Amanda Antcliff

Principal Environmental Planner Team Leader Capital Project Delivery

#### **ERM**

Level 1 | Watt Street Commercial Centre | 45 Watt Street Newcastle NSW 2300 PO Box 803, Newcastle NSW 2300 | T +61 2 49035502 | M 0423 775 080 E amanda.antcliff@erm.com | W www.erm.com



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\*

### **Amanda Antcliff**

From: Amanda Antcliff

Sent: Monday, 31 August 2020 11:25 AM

**To:** environmental.assessments@waternsw.com.au

**Subject:** FW: Hills of Gold Wind Farm - consultation with WaterNSW

Attachments: Map1\_V3\_24Aug2020.pdf

### Good morning,

Environmental Resources Management Australia Pty Ltd (ERM) write on behalf of Wind Energy Partners Pty Ltd (Applicant) in relation to the proposed development application for the Hills of Gold Wind Farm and associated infrastructure near Nundle NSW (the 'Project'). The proposed Project is located along the ridgeline approximately 5km south of Hanging Rock, 8km south east of Nundle and 60km south east of Tamworth, within the Tamworth Regional, Upper Hunter and Liverpool Plains Local Government Areas (LGA).

The proposed layout Figure is attached for your consideration. The project will involve the construction, operation, and decommissioning of a wind farm with:

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- Internal access tracks will be designed and maintained as all-weather access tracks; and
- Ancillary infrastructure including road upgrades, underground and overhead electricity cabling, substation and a switching station and grid connection to the 330 kV Liddell to Tamworth transmission line.

Stakeholder engagement is a key requirement for the project. The Applicant is seeking to proactively engage with relevant government, non-government and community stakeholders.

Whilst we have previously discussed water licencing matters for the project with Water NSW officers (advised to liaise with NRAR), we are seeking any additional considerations from your agency in relation to the proposed Hills of Gold Wind Farm that we may take into account when preparing the Environmental Impact Statement (EIS). If you do have any considerations you would like to provide, we request that you please provide a response within the next 10 business days for inclusion in our impact assessment.

Should you have any questions, please feel free to contact Amanda Antcliff on 02 4903 5502 or via email at <a href="mailto:Amanda.Antcliff@erm.com">Amanda.Antcliff@erm.com</a>

Yours sincerely,

Amanda Antcliff

Principal Environmental Planner Team Leader Capital Project Delivery

#### **ERM**

Level 1 | Watt Street Commercial Centre | 45 Watt Street Newcastle NSW 2300 PO Box 803, Newcastle NSW 2300 | T +61 2 49035502 | M 0423 775 080 E amanda.antcliff@erm.com | W www.erm.com

### **Amanda Antcliff**

From: Christine Robinson < CRobinson@upperhunter.nsw.gov.au>

**Sent:** Monday, 27 July 2020 5:02 PM

To: Amanda Antcliff

Subject: RE: Consultation regarding Hills of Gold Wind Farm - Upper Hunter Council

#### Hi Amanda

Thank you for the opportunity for Council to make comment on matters to be considered in preparation of the EIS. Council would expect that the EIS will address all matters contained with the SEAR's issued by DPIE for the project.

It should be noted that Council will be expecting to enter into a VPA with the proponent which will include payment of development contributions towards a community enhancement fund.

Should you require any additional information please contact me on the below details.

## Regards Christine Robinson



Christine Robinson
Manager Planning, Building & Regulatory Services

Phone: 02 6540 1144 Mobile: 0437 138 157

Email: <a href="mailto:crobinson@upperhunter.nsw.gov.au">crobinson@upperhunter.nsw.gov.au</a>

UPPERHUNTER.NSW.GOV.AU

From: Amanda Antcliff < Amanda. Antcliff@erm.com>

Sent: Monday, 20 July 2020 10:30 AM

To: Council Internet Mail <council@upperhunter.nsw.gov.au>; Christine Robinson

<CRobinson@upperhunter.nsw.gov.au>

Cc: Murray Curtis < Murray.Curtis@erm.com>; Jamie Chivers < jamie.c@someva.com.au>; Sandra Agudelo < Sandra.A@someva.com.au>; Aref Taleb < aref.t@someva.com.au>; Mike Stranger < mike.s@someva.com.au>

Subject: Consultation regarding Hills of Gold Wind Farm - Upper Hunter Council

## Good morning,

Environmental Resources Management Australia Pty Ltd (ERM) write on behalf of Wind Energy Partners Pty Ltd (Applicant) in relation to the proposed development application for a Wind Farm and associated infrastructure near Nundle NSW (the 'Project'). The proposed Project is located along the ridgeline approximately 5km south of Hanging Rock, 8km south east of Nundle and 60km south east of Tamworth, within the Tamworth Regional, Upper Hunter and Liverpool Plains Local Government Areas (LGA).

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Stakeholder engagement is a key requirement for the project. The Applicant is seeking to proactively engage with relevant government, non-government and community stakeholders. Your agency has been identified as a key project stakeholder for the Project.

We are seeking any additional considerations from your agency in relation to the proposed Hills of Gold Wind Farm that we may take into account when preparing the Environmental Impact Statement (EIS). If you do have any considerations you would like to provide, we request that you please provide a response within the next 10 business days for inclusion in our impact assessment.

Should you have any questions, please feel free to contact Amanda Antcliff on 02 4903 5502 or via email at Amanda.Antcliff@erm.com

Yours sincerely,

Amanda Antcliff

Principal Environmental Planner Team Leader Capital Project Delivery

#### **ERM**

Level 1 | Watt Street Commercial Centre | 45 Watt Street Newcastle NSW 2300 PO Box 803, Newcastle NSW 2300 | T +61 2 49035502 E amanda.antcliff@erm.com | W www.erm.com



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### **Amanda Antcliff**

From: Amanda Antcliff

**Sent:** Monday, 2 November 2020 1:28 PM **To:** Mathew Pringle; Joanne McLoughlin

Cc: Christine Robinson; Keith Tonkin; Murray Curtis; Georgia Holmes; 'Pavel Davidyuk';

'Jamie Chivers'; Sandra Agudelo; 'Aref Taleb'

Subject: RE: 100505-01 Hills of Gold Wind Farm Aviation Impact Assessment - UHSC

Hi Matt and Joanne,

Following on from our discussions last week regarding the Aviation Assessment for the proposed Hills of Gold Wind Farm, please find below a link to the final Bushfire Assessment that is being submitted today for DPIE adequacy.

https://theermgroup-my.sharepoint.com/:f:/g/personal/amanda\_antcliff\_erm\_com/Ei77d1RxJ3hDibJq2kTWfsgB\_Xd-yqO0fGPfi\_b-SQ9qiQ?e=OgsTfy

Regards Amanda

#### Amanda Antcliff

Principal Environmental Planner Team Leader Capital Project Delivery

FRM

Level 1 | Watt Street Commercial Centre | 45 Watt Street Newcastle NSW 2300 PO Box 803, Newcastle NSW 2300 | T +61 2 49035502 | M 0423 775 080

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From: Pavel Davidyuk <pdavidyuk@aviationprojects.com.au>

Sent: Monday, November 2, 2020 12:45 PM

**To:** Mathew Pringle <mpringle@upperhunter.nsw.gov.au>

**Cc:** Christine Robinson < CRobinson@upperhunter.nsw.gov.au>; Keith Tonkin < ktonkin@aviationprojects.com.au>; Amanda Antcliff < Amanda.Antcliff@erm.com>; Murray Curtis < Murray.Curtis@erm.com>; Joanne McLoughlin

<JMcLoughlin@upperhunter.nsw.gov.au>; Georgia Holmes <qholmes@aviationprojects.com.au>

Subject: RE: 100505-01 Hills of Gold Wind Farm Aviation Impact Assessment - UHSC

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#### Hi Mat

I hope you had a lovely weekend.

It was lovely to meet you, Joanne, Christine and Tom Griffiths last week on Thursday the 29th of October, and discussed the Aviation Impact Assessment of the proposed Hills of Gold WF.

Following our teleconference and presentation last week, please kindly find attached the Final AIA which contains information on stakeholder consultation including some of the users of Scone Airport.

Given Upper Hunter Shire Council has no objections to the Project in principle, it would be much appreciated if the Council provides a revised response on the proposed Project.

Should you or Joanne have any questions, please do not hesitate to contact us.

### Regards

Pavel Davidyuk MEng MAvn CPRA Specialist Consultant — Aviation

Please note that I currently work from Monday to Wednesday

**Mobile** +61 467 431 111 **Phone** +61 7 3371 0788 **Fax** +61 7 3371 0799

Post PO Box 116, Toowong DC Qld 4066 Street 19/200 Moggill Road, Taringa Qld 4068

Web www.aviationprojects.com.au

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From: Mathew Pringle < <a href="mailto:mpringle@upperhunter.nsw.gov.au">mpringle@upperhunter.nsw.gov.au</a>>

Sent: Friday, 23 October 2020 4:16 PM

To: Georgia Holmes < <a href="mailto:gholmes@aviationprojects.com.au">gholmes@aviationprojects.com.au</a>>

 $\textbf{Cc:} \ Christine \ Robinson < \underline{CRobinson@upperhunter.nsw.gov.au} >; \ Keith \ Tonkin < \underline{ktonkin@aviationprojects.com.au} >; \ Pavel \ Automatical States and States are supported by the support of the support of$ 

Davidyuk com>; Amanda Antcliff <a href="mailto:Amanda.Antcliff@erm.com">"Amanda.Antcliff@erm.com">"Antcliff@erm.com">"Antcliff@erm.com">"Antcliff@erm.com">"Antcliff@erm.com">"Antcliff@erm.com">"Antcliff@erm.com">"Antcliff@erm.com">"Antcliff@erm.com">"Antcliff@erm.com</a>

< <u>Murray.Curtis@erm.com</u>>; Joanne McLoughlin < <u>JMcLoughlin@upperhunter.nsw.gov.au</u>>

Subject: RE: 100505-01 Hills of Gold Wind Farm Aviation Impact Assessment - UHSC

Dear Georgia,

Thank you for the opportunity to provide comments in relation to the proposed Hills of Gold Wind Farm project.

We note that the project will affect the minimum sector altitude (MSA) instrument procedure at Scone aerodrome and will affect the air route H99. As advised by Airservices, this will impact on the safety, efficiency or regularity of existing, or future air transport operations into or out of Scone Airport. On this basis, Upper Hunter Shire Council objects to the proposed development.

In order for Council to provide a more detailed response, we will need to review the full Aviation Impact Assessment once completed.

Please let me know if you have any further questions.

### Regards



Mat Pringle

Director Environmental & Community Services

Phone: 02 6540 1139 Fax: 02 6545 2671 Mobile: 0448 688 585

Email: mpringle@upperhunter.nsw.gov.au

#### UPPERHUNTER.NSW.GOV.AU

A Quality Rural Lifestyle - in a vibrant, caring and sustainable community

From: Georgia Holmes [mailto:qholmes@aviationprojects.com.au]

Sent: Tuesday, 20 October 2020 11:06 AM

To: Mathew Pringle <mpringle@upperhunter.nsw.gov.au>

Cc: Christine Robinson < CRobinson@upperhunter.nsw.gov.au >; Keith Tonkin < ktonkin@aviationprojects.com.au >; Pavel

Davidyuk <pdavidyuk@aviationprojects.com.au>; Amanda Antcliff <Amanda.Antcliff@erm.com>; Murray Curtis

<Murray.Curtis@erm.com>

Subject: RE: 100505-01 Hills of Gold Wind Farm Aviation Impact Assessment - UHSC

Importance: High

Good morning Mat and Christine,

I hope my email finds you well.

Could you please provide me an update regarding the response from Council regarding the Hills of Gold Wind Farm, as our client is needing to finalise the specialist reports.

I need a response from Council by no later than COB Monday 26<sup>th</sup> October 2020.

Kind regards,

Georgia Holmes BAvnMgt Consultant

Please note I do not work on Friday

Phone +61 7 3371 0788

Mobile +61 410 636 438 Fax +61 7 3371 0799 Post PO Box 116, Toowong DC Qld 4066 Street 19/200 Moggill Road, Taringa Qld 4068 Web www.aviationprojects.com.au

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From: Georgia Holmes

Sent: Thursday, 15 October 2020 9:20 AM

**To:** Mathew Pringle < <a href="mailto:mpringle@upperhunter.nsw.gov.au">mpringle@upperhunter.nsw.gov.au</a> <a href="mailto:cc: CRobinson@upperhunter.nsw.gov.au">cc: CRobinson@upperhunter.nsw.gov.au</a> <a href="mailto:mpringle@upperhunter.nsw.gov.au">mpringle@upperhunter.nsw.gov.au</a> <a href="mailto:mpringle@upperhunter.nsw.gov.au">mpringle@

Subject: RE: 100505-01 Hills of Gold Wind Farm Aviation Impact Assessment - UHSC

Hi Mat,

I have emailed Christine as well, so I believe she is chasing up the comments. However I would appreciate a response by COB today if possible.

Kind regards,

Georgia Holmes BAvnMgt Consultant

Please note I do not work on Friday

**Phone** +61 7 3371 0788 **Mobile** +61 410 636 438

From: Mathew Pringle < mpringle@upperhunter.nsw.gov.au>

Sent: Thursday, 15 October 2020 9:17 AM

To: Georgia Holmes < gholmes@aviationprojects.com.au>

Subject: Re: 100505-01 Hills of Gold Wind Farm Aviation Impact Assessment - UHSC

Hi Georgia,

I will chase up our Airport Manager for comments and get back to you ASAP.

Regards

Mat Pringle Upper Hunter Shire Council From: Georgia Holmes < <a href="mailto:qholmes@aviationprojects.com.au">qholmes@aviationprojects.com.au</a>>

Sent: Thursday, October 15, 2020 9:35:39 AM

To: Mathew Pringle < <a href="mpringle@upperhunter.nsw.gov.au">mpringle@upperhunter.nsw.gov.au</a>>

Cc: Pavel Davidyuk <pdavidyuk@aviationprojects.com.au>; Keith Tonkin <ktonkin@aviationprojects.com.au>; Amanda

Antcliff < <u>Amanda.Antcliff@erm.com</u>>; Murray Curtis < <u>Murray.Curtis@erm.com</u>> Subject: RE: 100505-01 Hills of Gold Wind Farm Aviation Impact Assessment - UHSC

Good morning Mat,

I hope my email finds you well.

Could you please advise if Council has any comments regarding the Hills of Gold Wind Farm Project.

Kind regards,

Georgia Holmes BAvnMgt

Consultant

Please note I do not work on Friday

Phone +61 7 3371 0788

Mobile +61 410 636 438 Fax +61 7 3371 0799 Post PO Box 116, Toowong DC Qld 4066

Street 19/200 Moggill Road, Taringa Qld 4068

Web www.aviationprojects.com.au<http://www.aviationprojects.com.au/>

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From: Georgia Holmes Sent: Tuesday, 6 October 2020 1:26 PM To: Mathew Pringle <a href="mailto:mpringle@upperhunter.nsw.gov.au">mpringle@upperhunter.nsw.gov.au</a> Cc: Pavel Davidyuk <a href="mailto:pdavidyuk@aviationprojects.com.au">poiects.com.au</a> ; Keith Tonkin <a href="mailto:ktonkin@aviationprojects.com.au">ktonkin@aviationprojects.com.au</a> ; Amanda Antcliff <a href="mailto:Amanda.Antcliff@erm.com">Amanda.Antcliff@erm.com</a> ; Murray Curtis <a href="mailto:Murray.Curtis@erm.com">Murray.Curtis@erm.com</a> > Subject: RE: 100505-01 Hills of Gold Wind Farm Aviation Impact Assessment - UHSC
Good afternoon Matthew,
Thank you for the confirmation, I look forward to receiving your response by next Tuesday.
Kind regards,
Georgia Holmes BAvnMgt

Phone +61 7 3371 0788

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Consultant

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From: Mathew Pringle < mpringle@upperhunter.nsw.gov.au < mailto:mpringle@upperhunter.nsw.gov.au >>

Sent: Tuesday, 6 October 2020 1:02 PM

To: Georgia Holmes < <a href="mailto:qholmes@aviationprojects.com.au">gholmes@aviationprojects.com.au</a>>>

Subject: RE: 100505-01 Hills of Gold Wind Farm Aviation Impact Assessment - UHSC

Hi Georgia,

Thanks for your email. Sorry, this one must have slipped through the cracks.

I will consult our Airport Manager and get back to you by 13 October.

Regards
[cid:image005.jpg@01D6A2CE.1BE8C290]
Mat Pringle Director Environmental & Community Services
Phone: 02 6540 1139
Fax: 02 6545 2671 Mobile: 0448 688 585
Email: <a href="mailto:mpringle@upperhunter.nsw.gov.au">mpringle@upperhunter.nsw.gov.au</a>
UPPERHUNTER.NSW.GOV.AU < <a href="http://www.upperhunter.nsw.gov.au/">http://www.upperhunter.nsw.gov.au/</a> >
A Quality Rural Lifestyle - in a vibrant, caring and sustainable community
From: Georgia Holmes [mailto:gholmes@aviationprojects.com.au] Sent: Tuesday, 6 October 2020 12:45 PM To: Mathew Pringle <mpringle@upperhunter.nsw.gov.au<mailto:mpringle@upperhunter.nsw.gov.au>&gt; Cc: Keith Tonkin <ktonkin@aviationprojects.com.au<mailto:ktonkin@aviationprojects.com.au>&gt;; Pavel Davidyuk <a href="mailto:pdavidyuk@aviationprojects.com.au">&gt; heather Stafford</a> <a href="mailto:hstafford@aviationprojects.com.au">&gt; heather Stafford@aviationprojects.com.au</a> <a href="mailto:hstafford@aviationprojects.com.au">&gt; heather Stafford@aviationprojects.com.au</a> <a href="mailto:hstafford@aviationprojects.com.au">&gt; heather Stafford@aviationprojects.com.au</a></ktonkin@aviationprojects.com.au<mailto:ktonkin@aviationprojects.com.au></mpringle@upperhunter.nsw.gov.au<mailto:mpringle@upperhunter.nsw.gov.au>
<a href="mailto:Amanda.Antcliff@erm.com">&gt;&gt;; Murray Curtis</a> <a href="mailto:Amanda.Antcliff@erm.com">&gt;&gt;; Murray Curtis</a> <a href="mailto:Murray.Curtis@erm.com">&gt;&gt; Subject: RE: 100505-01 Hills of Gold Wind Farm Aviation Impact Assessment - UHSC"&gt;- UHSC</a>
Hello Matthew,
I hope my email finds you well.

Could you please advise if you received our email request for your comments regarding the Hills of Gold Wind Farm.
We would appreciate if your comments regarding the proposed Hills of Gold Wind Farm Project are provided by 13th October 2020.
Kind regards,
Georgia Holmes BAvnMgt
Consultant
Please note I do not work on Friday
Phone +61 7 3371 0788
Mobile +61 410 636 438
From: Georgia Holmes Sent: Wednesday, 26 August 2020 2:58 PM To: 'mpringle@upperhunter.nsw.gov.au' <mpringle@upperhunter.nsw.gov.au<mailto:mpringle@upperhunter.nsw.gov.au>&gt; Cc: Keith Tonkin <ktonkin@aviationprojects.com.au<mailto:ktonkin@aviationprojects.com.au>&gt;; Pavel Davidyuk <pdavidyuk@aviationprojects.com.au<mailto:pdavidyuk@aviationprojects.com.au>&gt;; Heather Stafford <https: documerrolle.com="" shafford@aviationprojects.com.au="">&gt;; 'Amanda Antcliff' <amanda.antcliff@erm.com<mailto:amanda.antcliff@erm.com< p=""> &gt;&gt; Subject: 100505-01 Hills of Gold Wind Farm Aviation Impact Assessment - UHSC</amanda.antcliff@erm.com<mailto:amanda.antcliff@erm.com<></https:></pdavidyuk@aviationprojects.com.au<mailto:pdavidyuk@aviationprojects.com.au></ktonkin@aviationprojects.com.au<mailto:ktonkin@aviationprojects.com.au></mpringle@upperhunter.nsw.gov.au<mailto:mpringle@upperhunter.nsw.gov.au>
Please note that the material contained herein is confidential and should be transmitted only within your organisation on a need to know basis.
Dear Matthew,
Aviation Projects is writing on behalf of ERM Australia Pty Ltd (ERM) in relation to the proposed Hills of Gold Wind Farm

project (HoGWF). The Project Area is located south of Tamworth, south of Nundle, south of Hanging Rock and east of Wallabadah, within the boundaries of Tamworth Regional Council (TRC), Upper Hunter Shire Council (UHSC) and Liverpool Plains Shire Council (LPSC) local government area (LGAs) in New South Wales, and approximately 53 km (28 nm) east from Quirindi Airport (YQDI).

ERM has engaged Aviation Projects to prepare an Aviation Impact Assessment (AIA) for the HoGWF and to formally consult with aviation agencies.

The Project will comprise the following:

- · up to 70 wind turbines;
- · maximum overall height (tip height) of the wind turbines is up to 230 m AGL;
- · highest wind turbine is WP20 with ground elevation of 1410 m AHD and overall height of 1646 m AHD (5400 ft AMSL);
- · 3 existing temporary WMTs with a maximum height of up to 110 m (361 ft) AGL, which have been reported to Airservices Australia; and
- $\cdot$  5 proposed permanent WMTs with a maximum height of up to 155 m (509 ft) AGL, which will be reported to Airservices Australia.

The purpose of the assessment is to consider the impacts on aviation safety arising from HoGWF.

Based on the proposed Project layout and overall turbine overall blade tip height limit of 230 m AGL, the blade tip elevation of the highest wind turbine, which is WP20, will not exceed 1646 m AHD (5400 ft AMSL) and:

- · will not penetrate any OLS surfaces;
- · will penetrate PAN-OPS surfaces;
- · will have an impact on nearby designated air routes;
- · will not have an impact on the grid LSALT;
- · will not have an impact on prescribed airspace;
- · is wholly contained within Class G airspace; and
- $\cdot$  is outside the clearance zones associated with aviation navigation aids and communication facilities.

Based on the analysis conducted, the following recommendations are made:

· 25 nm MSA at Scone Airport in the sector bounded by bearings 070° and 290° should be increased by 100 ft to 6400 ft AMSL:

- · the initial approach altitude for RNAV GNSS approach procedures for runway 29 at Scone Airport should be amended to 6400 ft AMSL to safeguard the approach procedure;
- · air route H99 LSALT should be increased by 300 ft from 6100 ft to 6400 ft AMSL; and
- · air route W130 LSALT should be increased by 200 ft 6200 ft to 6400 ft AMSL.

Please find attached the following files:

- · 100505-01\_Hills of Gold WF\_AIA\_v0.3\_200826.pdf
- · Turbine Co-ordinates.xlsx
- · 100505-01 Hills of Gold Wind Farm.kmz

Would you please provide an assessment of the proposal in respect of matters relevant to Upper Hunter Shire Council.

We would appreciate an acknowledgement of this email and a likely timeframe for your response.

Should you have any questions, please do not hesitate to get in contact.

Kind regards,

Georgia Holmes BAvnMgt

Consultant

Phone +61 7 3371 0788

Mobile +61 410 636 438 Fax +61 7 3371 0799 Post PO Box 116, Toowong DC Qld 4066

Street 19/200 Moggill Road, Taringa Qld 4068 Web www.aviationprojects.com.au<a href="http://www.aviationprojects.com.au/">http://www.aviationprojects.com.au/</a>

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### **Amanda Antcliff**

From: Mathew Pringle <mpringle@upperhunter.nsw.gov.au>

Sent: Monday, 2 November 2020 2:02 PM

To: Pavel Davidyuk

**Cc:** Christine Robinson; Keith Tonkin; Amanda Antcliff; Murray Curtis; Joanne McLoughlin;

Georgia Holmes

Subject: RE: 100505-01 Hills of Gold Wind Farm Aviation Impact Assessment - UHSC

CAUTION: This email originated from outside of the organization. Do not click links or open attachments unless you recognize the sender and know the content is safe.

#### Hi Pavel,

Thank you for forwarding the Final AIA which includes information on stakeholder consultation.

Based on the information available, I advise that Council has no objection to the proposal with respect to aviation impacts and supports the required changes to the minimum sector altitude (MSA) instrument procedure at Scone aerodrome and changes to air route H99.

### Regards



Mat Pringle

**Director Environmental & Community Services** 

Phone: 02 6540 1139 Fax: 02 6545 2671 Mobile: 0448 688 585

Email: mpringle@upperhunter.nsw.gov.au

## UPPERHUNTER.NSW.GOV.AU

A Quality Rural Lifestyle - in a vibrant, caring and sustainable community

From: Pavel Davidyuk [mailto:pdavidyuk@aviationprojects.com.au]

Sent: Monday, 2 November 2020 12:45 PM

To: Mathew Pringle <mpringle@upperhunter.nsw.gov.au>

Cc: Christine Robinson < CRobinson@upperhunter.nsw.gov.au>; Keith Tonkin < ktonkin@aviationprojects.com.au>; Amanda Antcliff < Amanda.Antcliff@erm.com>; Murray Curtis < Murray.Curtis@erm.com>; Joanne McLoughlin

< JMcLoughlin@upperhunter.nsw.gov.au>; Georgia~Holmes~egholmes@aviationprojects.com.au>; Georgia~Holmes~egholmes

Subject: RE: 100505-01 Hills of Gold Wind Farm Aviation Impact Assessment - UHSC

### Hi Mat

I hope you had a lovely weekend.

It was lovely to meet you, Joanne, Christine and Tom Griffiths last week on Thursday the 29th of October, and discussed the Aviation Impact Assessment of the proposed Hills of Gold WF.

Following our teleconference and presentation last week, please kindly find attached the Final AIA which contains information on stakeholder consultation including some of the users of Scone Airport.

Given Upper Hunter Shire Council has no objections to the Project in principle, it would be much appreciated if the Council provides a revised response on the proposed Project.

Should you or Joanne have any questions, please do not hesitate to contact us.

## Regards

Pavel Davidyuk MEng MAvn CPRA Specialist Consultant — Aviation

Please note that I currently work from Monday to Wednesday

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Post PO Box 116, Toowong DC Qld 4066 Street 19/200 Moggill Road, Taringa Qld 4068

Web www.aviationprojects.com.au

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From: Mathew Pringle < <a href="mailto:mpringle@upperhunter.nsw.gov.au">mpringle@upperhunter.nsw.gov.au</a>>

Sent: Friday, 23 October 2020 4:16 PM

To: Georgia Holmes < gholmes@aviationprojects.com.au>

 $\label{lem:cc:christine} \textbf{Cc: Christine Robinson} < \underline{\textbf{CRobinson@upperhunter.nsw.gov.au}} > ; \textbf{Keith Tonkin} < \underline{\textbf{ktonkin@aviationprojects.com.au}} > ; \textbf{Pavel} \\$ 

Davidyuk < pdavidyuk@aviationprojects.com.au >; Amanda Antcliff < Amanda.Antcliff@erm.com >; Murray Curtis

< <u>Murray.Curtis@erm.com</u>>; Joanne McLoughlin < <u>JMcLoughlin@upperhunter.nsw.gov.au</u>>

Subject: RE: 100505-01 Hills of Gold Wind Farm Aviation Impact Assessment - UHSC

Dear Georgia,

Thank you for the opportunity to provide comments in relation to the proposed Hills of Gold Wind Farm project.

We note that the project will affect the minimum sector altitude (MSA) instrument procedure at Scone aerodrome and will affect the air route H99. As advised by Airservices, this will impact on the safety, efficiency or regularity of existing, or future air transport operations into or out of Scone Airport. On this basis, Upper Hunter Shire Council objects to the proposed development.

In order for Council to provide a more detailed response, we will need to review the full Aviation Impact Assessment once completed.

Please let me know if you have any further questions.

### Regards



Mat Pringle

Director Environmental & Community Services

Phone: **02 6540 1139** Fax: **02 6545 2671** Mobile: **0448 688 585** 

Email: mpringle@upperhunter.nsw.gov.au

### **UPPERHUNTER.NSW.GOV.AU**

A Quality Rural Lifestyle - in a vibrant, caring and sustainable community

From: Georgia Holmes [mailto:gholmes@aviationprojects.com.au]

Sent: Tuesday, 20 October 2020 11:06 AM

To: Mathew Pringle <mpringle@upperhunter.nsw.gov.au>

Cc: Christine Robinson < <a href="mailto:CRobinson@upperhunter.nsw.gov.au">CRobinson@upperhunter.nsw.gov.au</a>>; Keith Tonkin < <a href="mailto:ktonkin@aviationprojects.com.au">ktonkin@aviationprojects.com.au</a>>; Pavel

<Murray.Curtis@erm.com>

Subject: RE: 100505-01 Hills of Gold Wind Farm Aviation Impact Assessment - UHSC

Importance: High

Good morning Mat and Christine,

I hope my email finds you well.

Could you please provide me an update regarding the response from Council regarding the Hills of Gold Wind Farm, as our client is needing to finalise the specialist reports.

I need a response from Council by no later than COB Monday 26<sup>th</sup> October 2020.

### Kind regards,

Georgia Holmes BAvnMgt Consultant

Please note I do not work on Friday

Phone +61 7 3371 0788

Mobile +61 410 636 438

Fax +61 7 3371 0799

Post PO Box 116, Toowong DC Qld 4066

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From: Georgia Holmes

Sent: Thursday, 15 October 2020 9:20 AM

To: Mathew Pringle <mpringle@upperhunter.nsw.gov.au> Cc: Christine Robinson < <a href="mailto:CRobinson@upperhunter.nsw.gov.au">CRobinson@upperhunter.nsw.gov.au</a>>

Subject: RE: 100505-01 Hills of Gold Wind Farm Aviation Impact Assessment - UHSC

Hi Mat.

I have emailed Christine as well, so I believe she is chasing up the comments. However I would appreciate a response by COB today if possible.

### Kind regards,

Georgia Holmes BAvnMqt Consultant

Please note I do not work on Friday

Phone +61 7 3371 0788 Mobile +61 410 636 438

From: Mathew Pringle < mpringle@upperhunter.nsw.gov.au >

Sent: Thursday, 15 October 2020 9:17 AM

To: Georgia Holmes < gholmes@aviationprojects.com.au>

Subject: Re: 100505-01 Hills of Gold Wind Farm Aviation Impact Assessment - UHSC

Hi Georgia,

I will chase up our Airport Manager for comments and get back to you ASAP.

Regards

Mat Pringle

**Upper Hunter Shire Council** 

From: Georgia Holmes < gholmes@aviationprojects.com.au>

Sent: Thursday, October 15, 2020 9:35:39 AM

To: Mathew Pringle < mpringle@upperhunter.nsw.gov.au >

Cc: Pavel Davidyuk <pdavidyuk@aviationprojects.com.au>; Keith Tonkin <ktonkin@aviationprojects.com.au>; Amanda

Antcliff < Amanda. Antcliff@erm.com >; Murray Curtis < Murray. Curtis@erm.com >

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Good morning Mat,

I hope my email finds you well.
Could you please advise if Council has any comments regarding the Hills of Gold Wind Farm Project.
Kind regards,
Georgia Holmes BAvnMgt
Consultant
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Cc: Pavel Davidyuk pdavidyuk@aviationprojects.com.au; Keith Tonkin <<a href="mailto:ktonkin@aviationprojects.com.au">ktonkin@aviationprojects.com.au</a>; Amanda

Antcliff < <u>Amanda.Antcliff@erm.com</u>>; Murray Curtis < <u>Murray.Curtis@erm.com</u>> Subject: RE: 100505-01 Hills of Gold Wind Farm Aviation Impact Assessment - UHSC

Good afternoon Matthew,

Thank you for the confirmation, I look forward to receiving your response by next Tuesday.

Kind regards,

Georgia Holmes BAvnMgt

Consultant

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Mobile +61 410 636 438 Fax +61 7 3371 0799 Post PO Box 116, Toowong DC Qld 4066

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From: Mathew Pringle <a href="mailto:mpringle@upperhunter.nsw.gov.au">mailto:mpringle@upperhunter.nsw.gov.au&lt;&gt;&gt; Sent: Tuesday, 6 October 2020 1:02 PM To: Georgia Holmes <a href="mailto:gholmes@aviationprojects.com.au">gholmes@aviationprojects.com.au&lt;&gt;&gt; Subject: RE: 100505-01 Hills of Gold Wind Farm Aviation Impact Assessment - UHSC</a></a>
Hi Georgia,
Thanks for your email. Sorry, this one must have slipped through the cracks.
I will consult our Airport Manager and get back to you by 13 October.
Regards

[cid:image005.jpg@01D6A2CE.1BE8C290]

Mat Pringle **Director Environmental & Community Services** Phone: 02 6540 1139 Fax: 02 6545 2671 Mobile: 0448 688 585 Email: mpringle@upperhunter.nsw.gov.au<mailto:mpringle@upperhunter.nsw.gov.au> UPPERHUNTER.NSW.GOV.AU <a href="http://www.upperhunter.nsw.gov.au/">http://www.upperhunter.nsw.gov.au/</a> A Quality Rural Lifestyle - in a vibrant, caring and sustainable community From: Georgia Holmes [mailto:gholmes@aviationprojects.com.au] Sent: Tuesday, 6 October 2020 12:45 PM To: Mathew Pringle < mpringle@upperhunter.nsw.gov.au < mailto:mpringle@upperhunter.nsw.gov.au >> Cc: Keith Tonkin < ktonkin@aviationprojects.com.au < mailto:ktonkin@aviationprojects.com.au >>; Pavel Davidyuk <pdavidyuk@aviationprojects.com.au<mailto:pdavidyuk@aviationprojects.com.au>>; Heather Stafford <a href="mailto:hstafford@aviationprojects.com.au">>; Amanda Antcliff</a> <Amanda.Antcliff@erm.com<mailto:Amanda.Antcliff@erm.com>>; Murray Curtis <Murray.Curtis@erm.com<mailto:Murray.Curtis@erm.com>>> Subject: RE: 100505-01 Hills of Gold Wind Farm Aviation Impact Assessment - UHSC Hello Matthew, I hope my email finds you well.

Could you please advise if you received our email request for your comments regarding the Hills of Gold Wind Farm.

We would appreciate if your comments regarding the proposed Hills of Gold Wind Farm Project are provided by 13th October 2020.

Kind regards,
Georgia Holmes BAvnMgt  Consultant
Please note I do not work on Friday
Phone +61 7 3371 0788  Mobile +61 410 636 438
From: Georgia Holmes Sent: Wednesday, 26 August 2020 2:58 PM To: 'mpringle@upperhunter.nsw.gov.au' < <u>mpringle@upperhunter.nsw.gov.au</u> <mailto:mpringle@upperhunter.nsw.gov.au>&gt; Cc: Keith Tonkin &lt;<u>ktonkin@aviationprojects.com.au</u><mailto:ktonkin@aviationprojects.com.au>&gt;; Pavel Davidyuk &lt;<u>pdavidyuk@aviationprojects.com.au</u><mailto:pdavidyuk@aviationprojects.com.au>&gt;; Heather Stafford &lt;<u>hstafford@aviationprojects.com.au</u><mailto:hstafford@aviationprojects.com.au>&gt;; 'Amanda Antcliff' &lt;<u>Amanda.Antcliff@erm.com</u><mailto:amanda.antcliff@erm.com>&gt;; Murray Curtis &lt;<u>Murray.Curtis@erm.com</u><mailto:murray.curtis@erm.com>&gt; Subject: 100505-01 Hills of Gold Wind Farm Aviation Impact Assessment - UHSC</mailto:murray.curtis@erm.com></mailto:amanda.antcliff@erm.com></mailto:hstafford@aviationprojects.com.au></mailto:pdavidyuk@aviationprojects.com.au></mailto:ktonkin@aviationprojects.com.au></mailto:mpringle@upperhunter.nsw.gov.au>
Please note that the material contained herein is confidential and should be transmitted only within your organisation on a need to know basis.
Dear Matthew,
Aviation Projects is writing on behalf of ERM Australia Pty Ltd (ERM) in relation to the proposed Hills of Gold Wind Farm project (HoGWF). The Project Area is located south of Tamworth, south of Nundle, south of Hanging Rock and east of Wallabadah, within the boundaries of Tamworth Regional Council (TRC), Upper Hunter Shire Council (UHSC) and Liverpool Plains Shire Council (LPSC) local government area (LGAs) in New South Wales, and approximately 53 km (28 nm) east from Quirindi Airport (YQDI).
ERM has engaged Aviation Projects to prepare an Aviation Impact Assessment (AIA) for the HoGWF and to formally consult with aviation agencies.

The Project will comprise the following:

- · up to 70 wind turbines;
- · maximum overall height (tip height) of the wind turbines is up to 230 m AGL;
- · highest wind turbine is WP20 with ground elevation of 1410 m AHD and overall height of 1646 m AHD (5400 ft AMSL);
- · 3 existing temporary WMTs with a maximum height of up to 110 m (361 ft) AGL, which have been reported to Airservices Australia; and
- · 5 proposed permanent WMTs with a maximum height of up to 155 m (509 ft) AGL, which will be reported to Airservices Australia.

The purpose of the assessment is to consider the impacts on aviation safety arising from HoGWF.

Based on the proposed Project layout and overall turbine overall blade tip height limit of 230 m AGL, the blade tip elevation of the highest wind turbine, which is WP20, will not exceed 1646 m AHD (5400 ft AMSL) and:

- · will not penetrate any OLS surfaces;
- · will penetrate PAN-OPS surfaces;
- · will have an impact on nearby designated air routes;
- · will not have an impact on the grid LSALT;
- · will not have an impact on prescribed airspace;
- · is wholly contained within Class G airspace; and
- · is outside the clearance zones associated with aviation navigation aids and communication facilities.

Based on the analysis conducted, the following recommendations are made:

- · 25 nm MSA at Scone Airport in the sector bounded by bearings 070° and 290° should be increased by 100 ft to 6400 ft AMSL;
- · the initial approach altitude for RNAV GNSS approach procedures for runway 29 at Scone Airport should be amended to 6400 ft AMSL to safeguard the approach procedure;
- $\cdot$  air route H99 LSALT should be increased by 300 ft from 6100 ft to 6400 ft AMSL; and
- · air route W130 LSALT should be increased by 200 ft 6200 ft to 6400 ft AMSL.

· 100505-01_Hills of Gold WF_AIA_v0.3_200826.pdf
· Turbine Co-ordinates.xlsx
· 100505-01 Hills of Gold Wind Farm.kmz
Would you please provide an assessment of the proposal in respect of matters relevant to Upper Hunter Shire Council.
We would appreciate an acknowledgement of this email and a likely timeframe for your response.
Should you have any questions, please do not hesitate to get in contact.
Kind regards,
Georgia Holmes BAvnMgt
Consultant
Phone +61 7 3371 0788
Mobile +61 410 636 438 Fax +61 7 3371 0799
Post PO Box 116, Toowong DC Qld 4066
Street 19/200 Moggill Road, Taringa Qld 4068 Web www.aviationprojects.com.au <a href="http://www.aviationprojects.com.au/">http://www.aviationprojects.com.au/</a>
OFFICES IN BRISBANE, MELBOURNE AND PERTH
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AVIATION. FROM THE GROUND UP.

Please find attached the following files:

## AVIATION PROJECTS Pty Ltd / ABN 88 127 760 267

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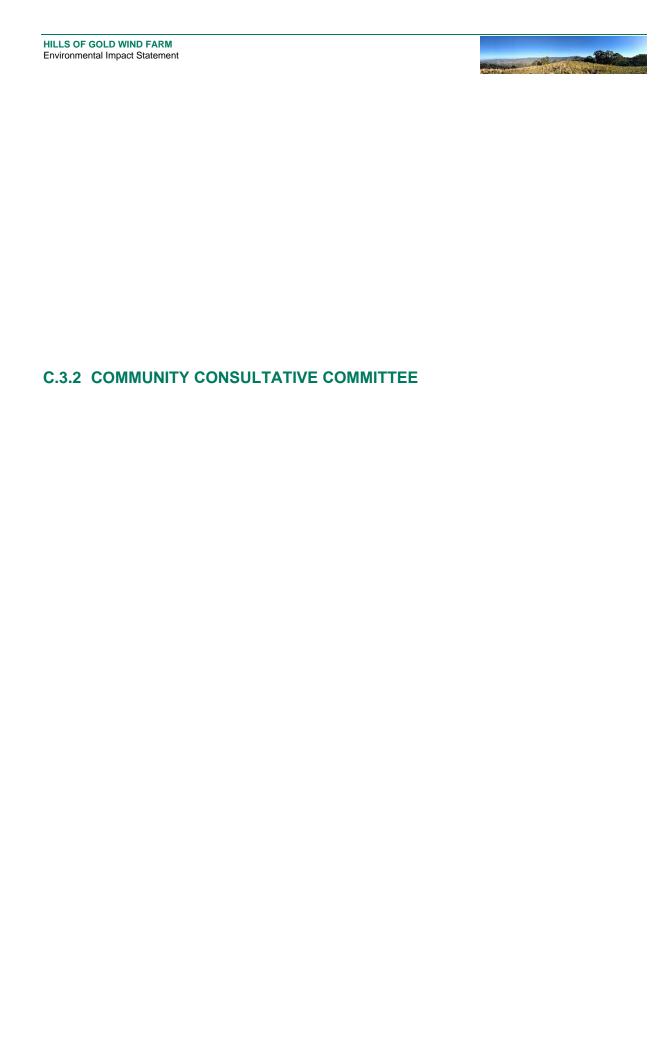
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Minutes: Minutes of the 1st Meeting of the Hills of Gold Windfarm Community Consultative Committee (CCC)

Wednesday 12 June 2019

Held at the Tamworth Regional Council Office, Nundle

Members Present: Michael Chamberlain (MC) – community representative, Kay Burnes (KB) – Tamworth Regional Council, Donna Ausling (DA) - Liverpool Plains Shire

Council, Christine Robinson (CR) – Upper Hunter Shire Council, Megan Trousdale (MT) – Nundle Business Tourism and Marketing Group

representative, Margaret Schofield (MSc) – community representative, Marcia Ajani (MA) – community representative, Michael Stranger (MSt) – Someva representative, John Krsjula (JK) – Hills of Gold Preservation Inc representative, John Willcox (JW) – Inclusive Engagement / Someva representative, Simon Chivers (SC) – Someva representative, Jamie Chivers (JC) – Wind Energy Partners representative, Ian Worley (IW) - community

representative

Apologies: Nil

Independent Chair: David Ross (DR)

Agenda Items		Who to Present
1.	Introductions and apologies	David Ross
2.	Declaration of pecuniary or other interests	David Ross and all
3.	Introduction to the CCC process and guidelines	David Ross
4.	Overview of the proposal	Jamie Chivers
5.	General Business	All
6.	Next Meeting – 18 September 2019	All

Agenda Item	Discussion	Action/By Whom
1.	Welcome and Apologies	
	Meeting commenced at 6:30 pm. DR welcomed all and commented that he had received more committee applications for this CCC – 23 in total – than any other he has been involved with. This was a sign of great local participation and spirit. He noted that he had allowed Wind Energy Partners (WEP) to have four representatives present for this meeting in order to give the committee an understanding of the WEP project team; however, in future meetings, WEP would only be allowed to have three representatives present. Furthermore, while a community representative was allowed to attend via the phone because it was important for them to be involved in this initial induction, this would not be allowed in the future as there are numerous alternate CCC representatives who are keen to play a role; namely: Bruce Moore, Edward Hughes, Megan Carberry, Nick Bradford, Selena Sylvester and Teresa Eather.	
2.	<b>Declaration of pecuniary or other interests</b> — The chair advised that he is paid a fee to chair these meetings.	
3.	Introduction to the CCC Process and Guidelines  DR gave a presentation on CCC roles, the process for taking minutes and the code of conduct.	
	CCC Roles	
	Key to the role for the CCC members is the necessity to be a conduit between the community and the committee, sending information out and bringing information into the committee. Should a CCC member be unable to attend, they are to notify DR who will arrange for an appropriate alternate to attend instead. Should a council representative be unable to attend, Council can nominate an alternate.	
	DR must be independent, allowing all members to raise their views and questions and ensure that all issues are properly considered. DR committed to allowing CCC members to provide feedback on his independence every three or four meetings.	
	WEP / Someva representatives must provide timely and accurate information to the CCC. Responses to meeting actions are required within 28 days.	
	With respect to observers, the guidelines state that DR would have to seek feedback from the committee before deciding whether to let an individual be an observer. In the case of Hills of Gold, DR declared that he had knocked back requests for observers for the present meeting in accordance with Department of Planning and Environment (DPE) guidance that individuals who are on groups already represented on the CCC cannot attend.	
	A discussion was then held on observers before the committee unanimously agreed that no observers would be allowed at CCC meetings. This decision could be revisited in the future.	

# **Introduction to the CCC Process and Guidelines (continued)**

### **Minute Taking**

DR noted that the minutes would be a summary of each meeting's proceedings, rather than a transcript. Draft minutes would be provided for review within a week. Members would then have a week in which to provide comments.

DR noted that there had been a request for meetings to be livestreamed. After a discussion on this, the committee unanimously agreed that the minutes would be the sole record of meetings.

The minutes would also be uploaded to the WEP website [https://www.hillsofgoldenergy.com/ccc]

#### **Code of Conduct**

DR reminded members that all, including himself, were to comply with the code. Should anyone not comply, they can be given warnings. Three warnings and people could be removed from the committee. Furthermore, if a member misses three consecutive meetings without an appropriate reason, they can also be removed.

With respect to media interest, DR is the only committee member who can talk on behalf of the entire CCC. Should the situation arise, members can talk to the media on their own behalf (or on behalf of the group that they represent) but not on behalf of the committee.

MT to provide DR details of local media contacts so that they can be informed of the CCC's commencement

# 4. Overview of the Proposal

JC introduced himself, confirming that he is a Director in WEP, which has four shareholders. He gave a presentation, summarising the proposal. This commenced with a timeline of works required to get to a decision on the proposal.

A Preliminary Environmental Assessment has been prepared by WEP and lodged with DPE [http://bit.ly/2KtvONI]. The PEA has been distributed to government agencies who have provided requests for further detailed assessments.

This information was used to create the Secretary's Environmental Assessment Requirements (SEARs). It is anticipated that it will take about two years to prepare the Development Application (DA) and Environmental Impact Assessment (EIA) before public exhibition occurs. Exhibition of the assessment document is for a minimum of four weeks for interested people to make submissions. WEP must then respond to the submissions before a determination is made.

MT noted that a copy of the PEA is to be placed at the library shortly.

# **What is Proposed**

Up to 97 turbines are proposed ~ 410 MW generated. This will require: upgrading existing roads and creating new roads; up to two substations and underground cabling between turbines and 24 km of overhead powerlines; and an operations and maintenance building. Foundations can be slab, pile or rock type depending on ground conditions. The slab type is most common with slab sizes generally between 17 to 20m diameter and 2-3 metres depth. This will be determined through the assessment process.

# **Overview of the Proposal (continued)**

A discussion was then held about how deep the 33 kV cables would be buried with some members concerned that cables may not be buried deep enough. JC noted that the cables would be encased and buried to comply with Australian standards. Furthermore, a resistivity test would identify the cable diameter and depth.

Some land agreements are still being finalised so the boundary of the proposal has also not been finalised. Turbines would be delivered from Newcastle.

JC noted that the proposal would reduce the wholesale cost of energy and provide more renewable energy in the national electricity market.

Questioned on whether WEP would "walk away" if they don't get an investor, JC responded that the company needs an investor with expertise in construction and operation. Further questioned on whether the PEA or future environmental assessments would be funded by a private investor, JC could not comment, citing commercial-in-confidence.

A committee member questioned whether the grid would cope with both Hills of Gold and the Walcha wind farms? JC responded that the Integrated Systems Plan is produced by AEMO in conjunction with TransGrid to manage consistency of flow [http://bit.ly/31N1OkZ].

Other benefits from the proposal were noted by JC including: a reduction in coal fired power; 34 operational jobs forecast and 272 construction jobs; renewable energy for 193,000 homes; a community enhancement fund (CEF) for \$2,500 per turbine; and a general economic injection into the regional economy by associated landowners and those employed by the project.

Questioned on whether the figures quoted were based on a "worst cast scenario" of 97 turbines, could the number of turbines decrease, JC said yes.

Members of the committee noted that there are 42 dwellings living within 3 km of the project area.

A member questioned whether the ridge line is a good place to build turbines, based on the Nation Wind Farm Commissioner's Report. JC noted that the key requirement for best placed wind turbines is where the wind is strongest and most consistent – this is usually on ridge lines but there are other considerations. DR noted that the National Wind Farm Commissioner could be invited sometime to discuss this as well.

A discussion was then held on who administers the fund. A section 355 committee, a council advisory committee or an environmental trust? Furthermore, questions were raised with respect to the risk of the CEF disappearing should an investor come on board. JC observed that the company would need to enshrine the CEF into the DA conditions. A member expressed concern how Nundle or Hanging Rock groups were to believe they could borrow funds against the CEF to build infrastructure like heated pools, retirement homes, funding for clubs etc.

#### The SEARs

A detailed environmental assessment will need to be undertaken in a number of specialty areas; namely, landscape and visual, noise, biodiversity, traffic and transport, hazards and risks, heritage, water and soils, waste, social and economic. Consultants have now been engaged to work on survey and design work to satisfy the SEARs.

WEP to present at next meeting on forecasted calculations

DR and JC to identify who administers the CEF [see s5.2.1 of http://bit.ly/2MY90ax].

Meeting Closed: 8:55 pm

# **Appendix 1: Actions**

Page No	Action No	Description	Date Raised
3	1	MT to provide DR details of local media contacts so that they can be informed of the CCC's commencement	12 June 2019
4	2	WEP to present at next meeting on forecast calculations	12 June 2019
4	3	DR and JC to identify who administers the CEF	12 June 2019
5	4	JC to look into a site trip for our Nov / Dec meeting	12 June 2019





# Wind Energy Partners

- 100% Australian Owned
- Principals have a track record in the power sector, renewables, construction and law.



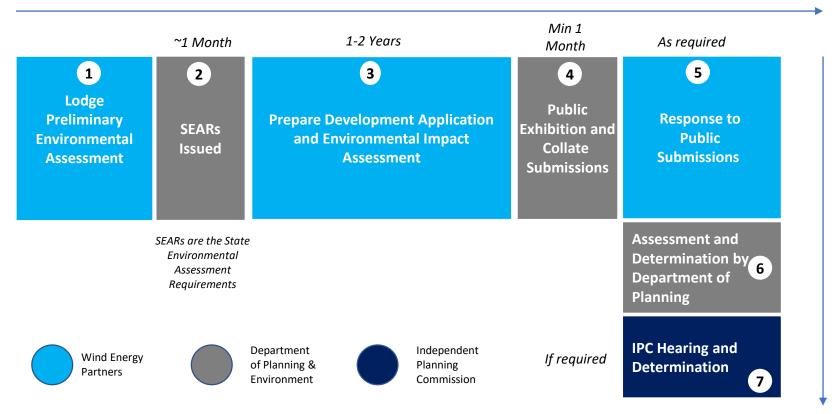
- 100% Australian Owned
- Development Management including planning, technical, and construction advisory
- Track record of 300MW of wind advisory in Australia and 550MW of Wind investment and construction internationally



- Locally owned (15km north of Nundle)
- Community Engagement
- Experience in energy sector and recently successful wind project near Goulburn

## The NSW State Significant Project Planning Process





#### Notes:

The Department of Planning & Environment may request any additional information at any time and *timeframes are* estimates and subject to change







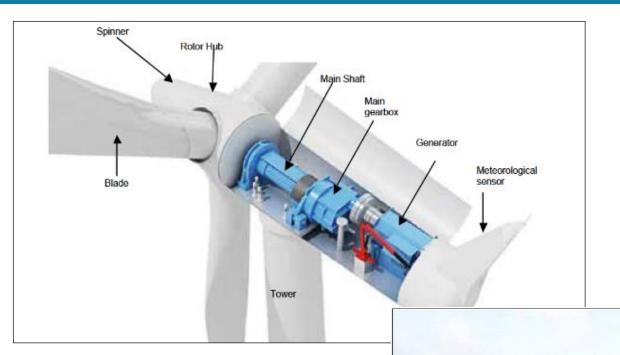






# About the proposed wind turbines





Hub Height between 130-155m

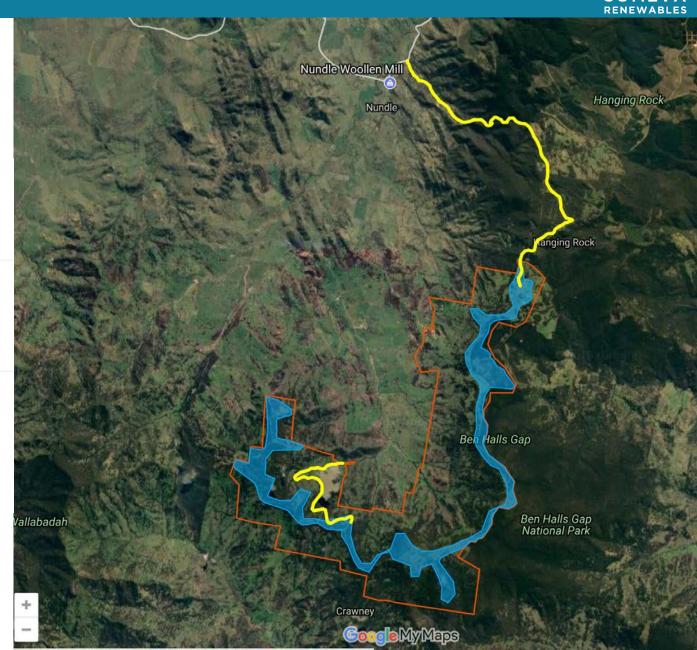
Maximum Tip Height 220m

Blades between 65-80m

## Early Concept Boundaries and Development Corridor



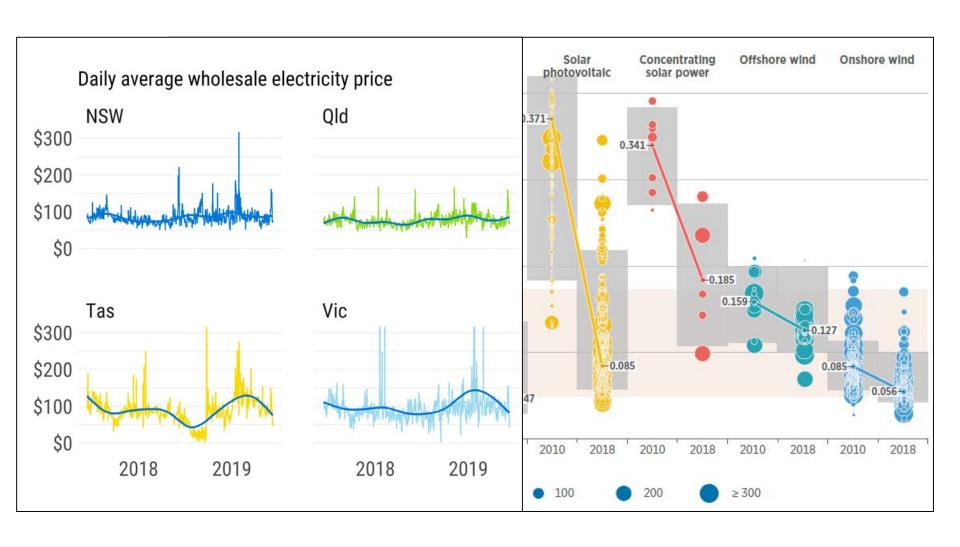
- Boundary
  - 👢 Hills Of Gold Boundary
- Construction Corridor
  - Construction Corridor
- Site Access Route
  - Site Access 1
  - Site Access 2





Australian Global Emissions Targets	<ul> <li>Hills of Gold Energy will support Australia meeting our global emission target by avoiding almost 1.2m tonnes of CO2 per annum</li> </ul>		
Reducing the Cost of Energy	<ul> <li>Expected to support a reduction in the cost of wholesale electricity and provide more renewable energy into the district</li> </ul>		
Replacing Coal Fired Power	<ul> <li>Provide a viable replacement for old coal fired power stations such as Liddell, Bayswater and Vales Point.          Carbon intensity of generation          tCO2e/MWh, National Electricity Market</li> </ul>		
Transition Jobs	An opportunity for growing regional jobs for increased rural migration and as traditional power sector jobs      0.9      0.8      0.8		



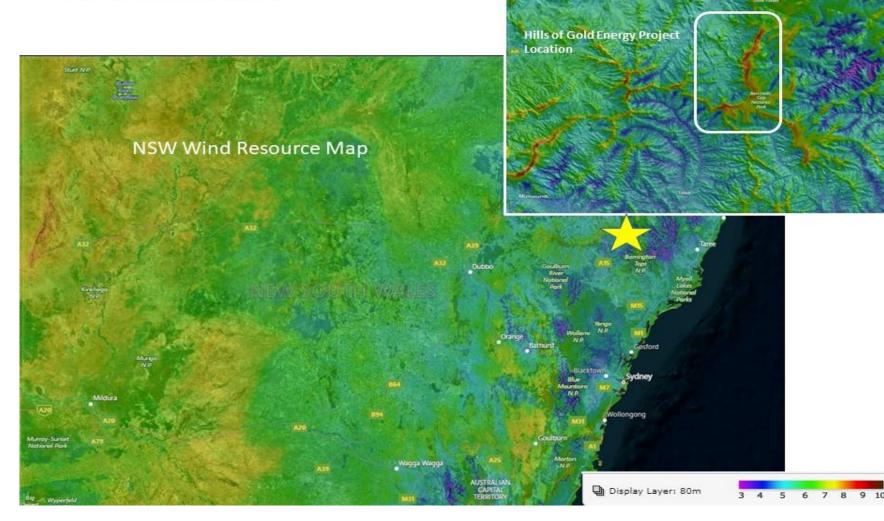




Optimal wind resources	Strong wind speed observed through 8 years of wind monitoring on multiple met masts. The proposal site is considered feasible as it exhibits a high wind resource for NSW.
Suitable Land	Use of predominately existing agricultural use ridgelines and desirable ridge orientation with existing access tracks in existence.
Local Residents	The site has been selected due to relative isolation of the site and low population density in the region reducing the potential impact particularly around noise, visual and potential shadow flicker impacts.
Local impacts minimised	Limited residents located within 4km of the site boundary and commitments to further investigate impacts on those living within 4km.
Proximity to electrical network	24km from 330kV TransGrid Liddell to Tamworth transmission line, with capacity to accept the generation capacity following consultation with TransGrid.
Regional Skills	Tamworth has been identified as a potential source of skills for construction and operation due to the existence of a variety of sectors and industries as well as strong population of 200,000.

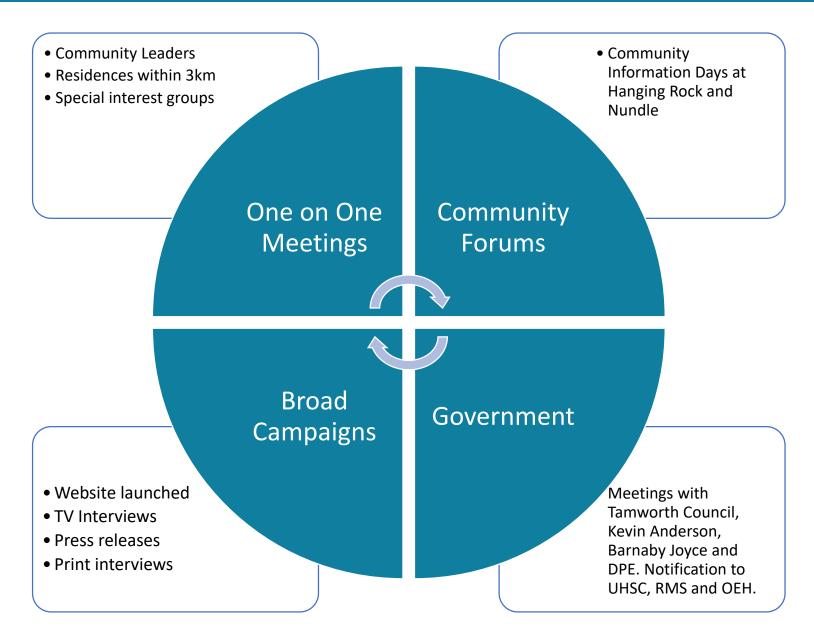


NSW Wind Resource Map and Hills Of Gold Energy Project Location



## Community Consultation





## State Environmental Assessment Requirements (SEARs)



- Issued November 2018 following PEA acceptance
- SEARs require a detailed Environmental Impact Assessment supported by:
  - Detailed technical assessment of 14 speciality areas against 38 technical guidelines
  - Establish CCC
  - Consultation with 16 local, state and commonwealth authorities
  - Consult community groups and affected landowners

# State Environmental Assessment Requirements (SEARs)



Specialty Discipline	Overview		
Landscape and Visual	Detailed assessment of visual impacts of all components in accordance with Wind Energy; Visual Assessment Bulletin (DPE 2016).		
Noise	Detailed assessment of turbine, ancillary equipment, construction, traffic and vibration noise impacts in accordance with relevant NSW codes and guidelines.		
Biodiversity	Assess biodiversity values and the likely biodiversity impacts of the development and the projects impact on birds and bats		
Traffic and Transport	Assess the construction and operational traffic impacts of the development		
Hazards and Risks	Aviation safety, telecommunications, electro-magnetic frequency and other potential health impacts, bushfire risk management, blade throw,		
Heritage	Aboriginal heritage and other non-aboriginal heritage assessment		
Water and Soils	Quantify water required and sources available and any impacts on these sources.		
	Assess measures to minimise erosion on steep gradient land		
Waste	Identify waste types and how these will be reduced, reused or disposed of		
Social and Economic	Social and economic impacts and benefits to the community and state includin assessment of impact to community infrastructure and tourism		

Detailed SEARs are available on the DPE's Major Projects Website

# Thank you for your time...questions?









# Crookwell 3 wind farm referred to IPC

Date: 02.05.2019 Type: Departmental Media Release
Author: NSW Department of Planning and Environment
The Department of Planning and Environment has referred Crookwell 3 Wind
Farm to the Independent Planning Commission (IPC) for final decision, saying it should be refused due to significant cumulative visual impacts on the landscape and residents.

Mike Young, Executive Director of Resource Assessments, said the proposal is for the construction and operation of a new wind farm with 23 turbines up to 157 metres in height approximately five kilometres from Crookwell in the Southern Highlands.

"There's strong support for renewable energy in NSW and the Government is backing the industry's development including with guidance on assessment of impacts, community engagement and more," he said.

"We considered this project on its merits, and our recommendation to refuse it draws on extensive community consultation and advice from an independent visual expert.

"The proposal is right next door to the Crookwell 2 Wind Farm, built by the same proponent. Some people would be able to see five wind farms from their front door.

"When it comes to visual impact, lots of factors need to be considered – from windfarm distance to residential areas to distracting blade glint and turbine flicker.

"We acknowledge the proponent has made changes to reduce impacts and has reached agreement with a number of landowners, but our independent visual expert has advised there would still be significant visual impacts on up to 27 residences.

"Mr Young said the <u>NSW Wind Energy Framework</u>, introduced by the NSW Government in 2016, set clear and consistent rules for wind farm development.

"The Framework recommends turbines this size should be more than 2.1 kilometres from residences, but in this case 17 of the 23 proposed turbines are less than that, with some residences as close as 1.1 kilometre.

"The proposal is also inconsistent with local planning controls, which classify more than two-thirds of the proposed site as an environmental management zone. Overall, our assessment concluded the site is fundamentally not suitable for a large-scale wind farm.

The IPC will review the Department's assessment before making its final decision. Read the Department's assessment report and reasons for refusal of the proposed Wind Farm at the Department's <u>Major Projects website</u>.

#### Note to editors

#### As at 9 April 2019:

- There were thirteen major operating wind farms in NSW, with a total capacity of about 1400 MW.
- Four new wind farms were commissioned in 2018-19:
  - The 270 MW Sapphire wind farm is the largest in NSW and can provide enough electricity to power over 131,000 NSW homes.
  - The 199 MW Silverton 1 wind farm can provide enough electricity to power over 96,000 NSW homes.
  - The 172 MW White Rock 1 wind farm is the second largest in NSW and can provide enough electricity to power over 80,000 NSW homes.
  - The 92 MW Crookwell 2 wind farm was also commissioned, which can generate enough energy to power almost 45,000 homes.
- Two wind farms were under construction, amounting to about 250 MW and worth \$500m in investment.
- 11 wind farms had planning approval, almost 2,600 MW and worth about \$4bn and 6 wind farms were seeking planning approval, over 1,350 MW and worth around \$1.5bn in investment.

Tagged: Wind Farm | Crookwell | Southern | Highlands

The Department acknowledges the Traditional Custodians of the land and pays respect to all Elders past, present and future.

I work for NSW | NSW Government

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Minutes: Minutes of the 2<sup>nd</sup> Meeting of the Hills of Gold Windfarm Community Consultative Committee (CCC)

Wednesday, 18 September 2019

Held at the Tamworth Regional Council Office, Nundle

Members Present: Sandra Agudelo (SA) – Someva Representative, Kay Burnes (KB) – Tamworth Regional Council, Michael Chamberlain (MC) – Community

Representative, Teresa Eather (TE) – Nundle Business Tourism & Marketing Group Representative (alternate), John Krsjula (JK) – Hills of Gold

Preservation Inc Representative, Bruce Moore (BM) – Community Representative (alternate), Christine Robinson (CR) – Upper Hunter Shire Council,

Margaret Schofield (MSc) – Community Representative, Peter Schofield (PS) – Community Representative, Michael Stranger (MS) – Someva

Representative, Ian Worley (IW) – Community Representative

Apologies: Marcia Ajani (MA) – Community Representative, Donna Ausling (DA) – Liverpool Plains Shire Council, Jamie Chivers (JC) – Wind Energy Partners

Representative, Simon Chivers (SC) – Someva Representative, Megan Trousdale (MT) – Nundle Business Tourism & Marketing Group Representative

Independent Chair: David Ross (DR)

Secretary: Corinne Culbert-Rafferty (CCR)

Ager	nda Items	Who to Present
1.	Welcome & Apologies	David Ross
2.	Declaration of Pecuniary or Other Interests	David Ross & All
3.	Business Arising from Previous Meeting	All
4.	Previous Minutes	All
5.	Presentation on Biodiversity Assessment	Michael Stranger & Sandra Agudelo
6.	Presentation on Heritage Assessment	Michael Stranger & Sandra Agudelo
7.	General Business a. Frequency of Meetings	All
8.	Next Meeting – TBA	All

Agenda Item	Discussion	Action/By Whom
1.	Welcome & Apologies  Meeting commenced at 6:35pm. DR advised of resignation of Marcia Ajani due to personal reasons. DR reminded that the CCC aimed to represent all views of the community and whilst doing so, to always maintain respect to each other.	DR to recommend replacement for Marcia Ajani to DPIE.
2.	Declaration of Pecuniary or Other Interests  DR advised that he was paid a fee to chair the meeting as is CCR for taking the meeting minutes.	
3.	Business Arising from Previous Meeting After a discussion was held to clarify the information that MS and SA were presenting in relation to the agenda, MS requested to provide additional important project information of relevance to issues raised by CCC members in the previous meeting  Community Enhancement Fund  While responses had previously been provided to the CCC on outstanding actions from the previous meeting, MS discussed the Community Enhancement Fund (CEF) via a slideshow presentation (page 5) (attached). Details were outlined in this document of the establishment and administration of the CEF.  A lengthy discussion was held on the fund with a CCC member expressing concern at where the money could be used. The member tabled examples of Voluntary Planning Agreements (VPAs) for wind farm projects that showed the variability across CEF's in terms of the funding made available per MW. For example, \$1,250/MW and \$3,000/turbine were offered in other proposed wind farm sites in NSW. Alternatively, a proportion may be used on road maintenance (see attached). MS outlined specific examples of ways in which CEF funding could be used in the local community and that multiple scenarios for administration were possible.  A member queried whether the figure of \$2,500/turbine offered by WEP is negotiable. MS noted that this amount is what WEP is proposing to offer to the CEF at this stage. It was confirmed by Council representatives and DR that the CEF, potentially as part of a wider VPA, would require a negotiation between the three Councils and WEP and the Department of Planning to determine the detail. Should the proposal be approved, the agreement would also identify the structure of the CEF, which could be anything from a community advisory committee through to a Trust.  Furthermore, the Councils anticipate that, should the proposal be approved, they (the Councils) would consult with the community during negotiations to gain their input into where monies could be allocated. It really is a long way off being final	
	MS proposed a separate Community Enhancement Fund Workshop be undertaken for further discussion with the CCC. While the workshop may not occur until well into 2020 or later, a workshop will provide feedback for the design of a draft CEF and prior to finalising and submitting as part of the project Development Application. A workshop for the CCC is to really help understand how it works and what can be contributed. The CCC agreed to this.	MS to organise Community Enhancement Fund Workshop in early 2020
	Site Visit	

Agenda Item	Discussion	Action/By Whom
	November/December site visit proposed. There are requirements to gain access onto the Project site with landowners.  Job Forecasts	
	MS discussed job forecasts via a slideshow presentation (page 3) (attached).	
	A member questioned how accurate the figures were and MS advised that the figures used in calculations were from	MS to present
	identified projects' Environmental Impact Statements (EIS) and not actual numbers. A member raised whether the jobs referred to were in fact full-time or part-time jobs? A member raised what jobs would be actually allocated in Nundle and what the actual job titles would be and whether perhaps training would be required for such jobs. MS proceeded through the presentation wherein the types of construction and operation jobs were outlined.	numbers for jobs based on recent reports of actual projects constructed and whether jobs are
	A member questioned when construction is concluded, where do the positions go and if they were leaving a current role, would they be able to find a replacement job. MS advised that jobs could be fulfilled by locals wherever possible. He confirmed that it is a commitment of the project to create local job opportunities, and updated figures would be available in time. The member further questioned what impacts this would have on employment requirements for other businesses. DR observed that this highlighted the importance of having a CCC meeting, sometime, on socio-economic benefits and impacts associated with the proposal so these issues could be discussed in further detail. SA pointed out that the EIS will include a socio-economic impact component, which is part of the project State Environmental Assessment Requirements	full time or part time.
	(SEAR's).	
	A member asked what the worst-case scenario would be rather than the best case. MS said he would acquire updated figures on Sapphire and White Rock projects to present at the next meeting.	MS to present actual job data on White Rock and Sapphire projects.
4.	Previous Minutes	
	A member objected that, contrary to what DR said at the last meeting, if the primary representative of a particular stakeholder group cannot attend the CCC, DR does not choose who the alternate is. The CCC guidelines state that the stakeholder group decides.	
	DR agreed to this point but noted that, in practice, what he had said at the last meeting would still meet those needs. That is, he would be seeking an alternate that was a "like for like" replacement in consultation with that group. He had done this when MT was an apology for the present meeting.	
	The CCC endorsed the minutes as an acceptable reflection of what was discussed at the previous meeting.	
5.	Project Announcement - Engie	
	MS and SA presented information on a new commercial arrangement with ENGIE, a French energy company with 103GW of energy capacity installed and over 160,000 employees worldwide (page 11) (attached) They are a long-term owner and operator of renewable infrastructure and have recently finished construction on the Willogoleche Wind Farm project in South Australia. WEP will remain as Developer for the project and receive financial, technical and commercial support from Engie.	

Agenda Item	Discussion	Action/By Whom
6.	Presentation on Biodiversity Assessment  Sa presented on the key aspects of the Wind Farm Development Process outlining Technical, Environmental, Social and Economical aspects. A timetable was presented with the estimated timeframe to complete the SEAR's, which were issued in November 2018 (please see attached presentation).  Refer to "8. Survey" (page 25) within the attached slideshow presentation for detailed information.  The consulting firm ARUP is undertaking the necessary surveys. Spring Surveys were undertaken in November 2018 and recent Winter Surveys in August 2019, with further surveys to be undertaken. As part of the biodiversity assessment, WEP will call on the specialist consultants Biosis and their Bird Collisions Risk Data Collection – Avian Turbine Collision Risk Model to determine the risk of impacts on birds.  Under the Commonwealth Environmental Protection Biodiversity Conservation (EPBC) Act, there is a requirement to determine what listed threatened flora & fauna may exist in the area, based on individual species identification as well as the types of habitat that are present, so and assessment of impact can be made. A proposed action then needs to be referred to the Commonwealth if there is potential for significant impact. The Minister will have twenty (20) business days to make a decision.  The referral would be put on public exhibition, enabling the public to comment.  The EPBC Act is a Commonwealth Act. The Proponent has to cover requirements from the Commonwealth and State. The current provided SEARs are from the NSW Department of Planning. The information in the EPBC referral includes a preliminary biodiversity and EPBC Act Impact Assessment, which includes outcomes of previous desktop assessments and field surveys.  A member questioned how studies are being undertaken during the present drought period (since 1 January 2017) as species that could normally be there but currently are not. How are these current conditions relevant to the assessment process? MS noted that current climate	MS to advise CCC when referral is publicly available.  The tabled Flora and Fauna Report to be considered by WEP in their biodiversity assessment.

Agenda Item	Discussion	Action/By Whom
	A member asked that the Barnard River Wild Dog Control Association Management Plan 2018 be reviewed and considered in the preparation of the surveys and impact assessment. It was prepared by the Regional Managers of State Forests and National Parks. It contains the appropriate agreed management for Wild Dogs.	The Barnard River Wild Dog Control Association Management Plan
	A member also mentioned Crawley Pass and the thirteen (13) threatened species that had been identified there (including the Booroolong Frog).	2018 is to be provided to WEP.
7.	Presentation on Heritage Assessment	
	Refer to "9. Survey" (page 28) within the <i>attached</i> slideshow presentation for detailed information.	
	A Preliminary Cultural Heritage Due Diligence Assessment was completed. A desktop Aboriginal Heritage Impact Management System (AHIMS) search was undertaken and five (5) objects have been found to be located in the study area, and these areas will be avoided. They are with respect to Aboriginal Heritage Sensitivity.	
	A review and impact assessment of non indigenous cultural heritage will be undertaken using information from a number of heritage registers, including within the Council Local Environment Plan (LEP). A member noted that there are local items considered by the public to be of heritage value that aren't captured by the various registers; for instance, the Lutana Site and Yellow Rock aren't on the list. The community will need to be consulted. MS confirmed that heritage sites important to the local community will be incorporated into the CHAR via the community consultation process.	
	A final Cultural Heritage Assessment Report (CHAR) is required as part of the heritage assessment process. Kelleher Nightingale Consulting Pty Ltd will undertake this report as sub-consultant to ARUP.	
	Transport Route Assessment	
	A Transport Route Assessment was recently completed. This assessment included potential routes from Port of Newcastle to Nundle, and Nundle to the Site Boundary. A member raised the point of traffic impact during construction on local traffic flows during school periods, etc. A Traffic Management Plan would address timing and be prepared prior to construction. MS reviewed correspondence received from residents who live on Morrisons Gap Road, and noted that Morrison Gap Road has not been confirmed as the final primary route. It is anticipated that the final route may be identified by mid-2020. Carrying capacity was also investigated as part of transport assessment. Weight will be addressed when wind farm and turbine design has been finalised.  Dust suppression will be addressed within the Environmental Impact Assessment as part of the Traffic Management Plan. WEP have not undertaken discussion with the Councils or DPIE regarding sealing of Morrison Road for the project but will consider it when assessing the preferred route and impacts to residents. Potential damage to roads caused by construction	

Agenda Item	Discussion	Action/By Whom
	and operation would be assessed as part of the EIS and an agreement with Council made to repair any damage. If proposal is approved, with respect to roads, this would be addressed in conditions of approval with the opportunity for input from Councils. All wind farm turbine components will be addressed in the traffic management plan.	
	A CCC member relayed some correspondence from a community member questioning what compensation there would be for their local business (Air B n B) when disrupted due to road congestion. It was noted that, as these are early days and the transport route and traffic management plan will not be finalised for some time, no answers can be provided for these questions yet.	
	Project Progress – 2 x meteorological masts had been installed and commissioned in July 2019. These are designed to operate for 5 years. See page 21 of the <i>attached</i> slideshow presentation.	
8.	General Business  A member submitted the Wind Farm Commissioners Report Observations, questioning whether locating turbines on ridges is indeed the ideal location. They believed that this contradicted what was said in the previous CCC meeting by WEP. DR noted that, when the CCC believes it is appropriate, the National Wind Farm Commissioner Andrew Dyer could be invited to come along to a meeting and respond to these questions (as Andrew, himself, has offered).	
	A member advised that the majority of the Nundle Community oppose this project and was tabling forty plus questions. DR was happy to accept this document. However, he felt it was important to set the expectation with the CCC and the wider community that many of their questions may not have answers yet. These would be answered over the course of the next two years or so as the proponent continues the development process and environmental impact assessment to support DA submission.	
	DR also noted that, in the past, CCCs were set up once something had been approved – for during the construction and operation phases. It has been quite rare to involve communities so early in a proposal but Department of Planning saw much value in doing that for this proposal. Of great importance is that the CCC can provide WEP with input and feedback and shape the impact assessment will before what would otherwise have been the case. An Environmental Assessment may miss these things so it is important that this information is brought forward and considered.	DR to remove
	Forty-two residencies have been identified as affected within a 3 km radius of the proposed project boundary. This could equate to approx. eighty people in a community of approx. 500. The previous minutes mentioned that this was "not a lot" it has been requested that this reference be removed. DR noted that while he has final say on the minutes, he confirmed that he would remove this reference.	reference to "not a lot" in previous minutes.
		SA to create updated timetable in order to

Agenda Item	Discussion	Action/By Whom
	A member raised on behalf of a stakeholder group some issues that came out of the last meeting. It was requested that the frequency of the meetings be increased to a minimum of every two (2) months perhaps. DR suggested that the meeting frequency reflect when news from the proponent is available. Therefore, meetings could certainly be held more frequently, dependent on when there is information to discuss. A very broad timetable is presently in place but SA will look to create a calendar by early next year with relevant dates around various specialist studies. DR noted a conversation could then be held in order to schedule meetings for the rest of 2020 beyond simply holding quarterly meetings.	set future CCC meeting schedule
	The member also raised the issue of why members' initials weren't included in the minutes when they raised a matter and that this should be changed. DR advised that he didn't put in initials into the previous minutes (with the exception of his and the proponents) as he wanted to create an environment in meetings where people felt comfortable that views could be shared without anyone feeling worried about what they were saying.	
	A member has lodged a complaint as they were contacted by a host land owner advising that his property is private property and this member would not be permitted access.	
	DR said this is a prime example of why initials weren't included within the minutes, in order to respect the sensitivities that may be occurring within the community as a result of the proposal. A vote was undertaken regarding initials being used within the minutes and there was a majority in agreement to not use initials within the minutes.	DR to look into whether "alternates"
	Regarding the site trip for November/December, a member requested whether the "alternate" CCC applicants could be included for this purpose. DR to look into this.	can attend Site Visit.
	A member queried whether "alternates" could attend meetings as observers, in order to have the continuity if CCC members were apologies. DR confirmed that the DPIE had advised that alternates may not attend however will ask the Department again.	DR to contact DPIE to see if alternates can attend meetings they are not filling in for.
	A member queried how are landowners in the current investigation area being informed? What actions are WEP taking to consult with the land owners. Further, should WEP be liaising with Real Estate Agents in area so that buyers are informed? MS confirmed that WEP continue to be in ongoing discussions with wind farm and transmission area landowners Information is available to be included by vendors in the sale process. WEP will consult with anyone within a 3km buffer area. WEP agrees with Wind Farm Commissioner recommendations on project information being given to a potential land buyer as part of sale due diligence.	
	It was raised by a member that this meeting went on for far too long. DR agreed noting that moving forward, there should only be one topic per meeting. He noted that, further to his prior commitment to the CCC, he would call for feedback as to his chairing of the meetings at the next meeting.	

Agenda Item	Discussion	Action/By Whom
5.	Next Meeting Date TBA	MS to advise a few date options late November/early December for Site Visit Meeting.

Meeting Closed: 10.20pm

#### Appendix 1: ACTIONS

Page No	Action No	Description	Date Raised	Date Completed
3	1	MT to provide DR details of local media contacts so that they can be informed of the CCC's commencement.	Meeting 1 - 12 June 2019	18 Sept 2019
4	2	WEP to present at next meeting on forecast calculations.	Meeting 1 - 12 June 2019	18 Sept 2019
4	3	DR and JC to identify who administers the CEF.	Meeting 1 - 12 June 2019	Closed, addressed in Item 7.
5	4	JC to look into a site trip for our Nov/Dec meeting.	Meeting 1 - 12 June 2019	Closed, addressed in Item 8.
2	5	DR to recommend replacement for Marcia Ajani to DPIE.	Meeting 2 – 18 Sept 2019	
2	6	MS to organise Community Enhancement Fund Workshop in early 2020.	Meeting 2 – 18 Sept 2019	
3	7	MS to present numbers for jobs based on recent reports of actual projects constructed and whether jobs are full time or part time	Meeting 2 – 18 Sept 2019	
3	8	MS to present actual job data on White Rock and Sapphire projects.	Meeting 2 – 18 Sept 2019	
4	9	MS to notify CCC when EPBC Act referral is publicly available.	Meeting 2 – 18 Sept 2019	
4	10	The tabled Flora and Fauna Report to be shared with WEP and WEP to consider in their biodiversity assessment.	Meeting 2 – 18 Sept 2019	
5	11	The Barnard River Wild Dog Control Association Management Plan 2018 is to be provided to WEP.	Meeting 2 – 18 Sept 2019	
7	12	DR to remove reference to "not a lot" in previous minutes.	Meeting 2 – 18 Sept 2019	
7	13	SA to create updated timetable in order to set future CCC meeting schedule	Meeting 2 – 18 Sept 2019	
7	14	DR to look into whether "alternates" can attend Site Visit.	Meeting 2 – 18 Sept 2019	
7	15	DR to contact DPIE to see if alternates can attend meetings they are not filling in for.	Meeting 2 – 18 Sept 2019	

8	16	MS to advise a few date options late November/early December for Site Visit.	Meeting 2 – 18 Sept 2019	
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# CCC Meeting Agenda



- 1. Previous Minutes/Actions Review
  - Job Forecasts
  - Community Enhancement Fund
  - Site Visit
- 2. Project Announcement
- 3. Wind Farm Development
  - Life Cycle
  - Key Aspects
  - Timetable
  - Development Advisors
- 4. Project Progress Update
  - EPBC Act Referral Assessment Process
  - Meteorological Masts
  - o Transport Route Assessment
  - Transport Case Study
- 5. Biodiversity Survey Methodologies
- 6. Heritage Survey Methodologies



#### Job Forecasts

Forecasts presented in the PEA were taken from construction/operational jobs for other wind farms proposed in the New England and NSW area including:

Wind Farm	Size	Construction Jobs	Operational Jobs
Sapphire	270	150	20
White Rock	175	166	7
Glen Innes	81	85	20
Crudine Ridge	134	75	N/A
Average Jobs/MW		0.8 Jobs/MW	0.09 Jobs/MW
Hills of Gold Assumptions		0.7Jobs/MW	0.08 Jobs/MW
Hills of Gold Job Forecasts	410	272	34



### Job Forecasts: types of Construction Jobs

#### Trades

- o Electrical Trades
- Mechanical Trades
- Building Trades
- o Rigging
- o Mobile Plant Operator / Truck Driver
- o Cleaning
- o Crane Operators
- Labourer / Trades Assistant
- Metal Trades
- o Health & Safety
- o Supervisors
- o Landscaping
- o Administration
- o Health and Safety

#### Suppliers

- o Labour
- o Sand
- Water
- o Crushed rock
- o Cement
- Gravel
- Equipment hire(tractors, graders, etc)







## Community Enhancement Fund

## Key Elements:



1. Purpose and Objective



2. Establishment and Administration



3. Funding Eligibility Criteria



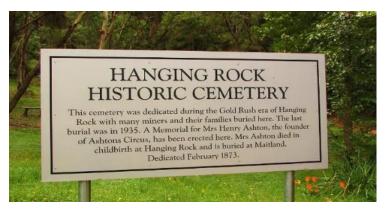
## Community Enhancement Fund



- 1. Purpose and Objective
- Support Existing Community Initiatives
  - Examples: Go for Gold Festival, Nundle Great Dog Race
- o Support and Build Strong Communities
  - Example: Upgrading community buildings and facilities such as the Nundle Memorial Hall and Hanging Rock Community Hall
- o Preserve and Enhance Historic Places
  - o Example: Hanging Rock Historic Places









## Community Enhancement Fund



# 2. Establishment and Administration

Background	Community Management Committee under S355 provide an opportunity for local communities to develop ownership of facilities and services and play an active role in the provision of them"	
Benefits	<ul> <li>Experience in Nundle and Hanging Rock (i.e., Hanging Rock Community Hall, Nundle Go for Gold) and transparency through existing Council guidelines</li> <li>Can become legally required when submitted along with Development Application for inclusion under Conditions of Approvation Currently the most common way within NSW of administering community enhancement funds</li> </ul>	
Appointment of Members	<ul> <li>Independently run by local community representatives with active involvement in the community on behalf of Council</li> <li>Members must represent diverse views across the community and should be rotated at regular intervals</li> <li>Alternatively could be administered by the Community Consultative Committee under the guidelines</li> </ul>	
Governance	Strong governance and guidelines available covering:  Responsibilities and Appointment of Members  Meetings  Risk Management  Sustainability  Finance  Code of Conduct	
Funding Rounds	Proposed to administer 2 rounds of funding per year against agreed criteria	
Further reading	https://www.tamworth.nsw.gov.au/Council/Community-Management-s355-Committees  https://epuron.com.au/documents/64/Survey-report-26-August-2016-Part1.pdf	
Other structures	tructures Can be administered under Incorporated or unincorporated charities/trusts with specific charter	

# 1. Previous CCC Meeting Minutes/Actions Review



#### Community Enhancement Fund



# 3. Funding Eligibility Criteria

Communities to Benefit



#### Assessment Criteria Guide

- Within 20km of Turbines
- Specific Communities (i.e, Hanging Rock, Nundle, Crawney

#### 1. Purpose and Objective

- 1. Support Existing Community Initiatives
- Support and Build Strong Communities
- Preserve and Enhance Historic Places

- Direct and indirect community benefit and community need
- · Demographics served
- Demonstration of need for financial assistance
- Project/ program viability
- Background of applicant
- The extent to which project or program duplicates other available facilities or programs in the area

# 1. Previous CCC Meeting Minutes/Actions Review



# Community Enhancement Fund Proposed Next Steps



Community Enhancement Fund Workshop?



Receive Feedback and Input into Community Enhancement Fund Design





WEP Prepare Draft Community Enhancement Fund Design

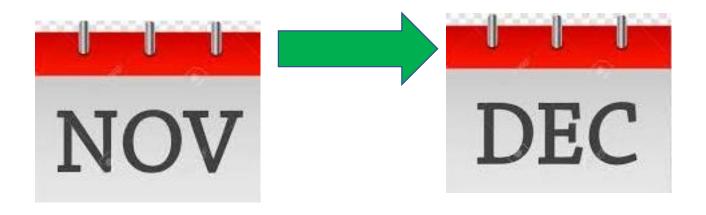
# 1. Previous CCC Meeting Minutes/Actions Review



#### Site Visit

JC to look into a site trip for our Nov / Dec meeting

- Biodiversity/ecology spring surveys scheduled for October (key CCC and community focus);
- Timing allows opportunity for presentation on survey methodologies and preliminary survey results from winter/spring surveys;
- Available anytime towards end of November and start of December



## 2. Project Announcement: ENGIE



- Providing financial, technical and commercial support to WEP to continue HOGWF development and, subject to successful project permits and financial close, would construct and operate the wind farm.
- engie

- WEP remain as Proponent/Developer
- o French energy company with over 160,000 employees worldwide
- A world leader in the zero-carbon energy transition
- o 103 GW installed worldwide, with over 25% renewables
- Long-term Owner/Operator of renewables
- ENGIE's Australian projects include:



Willogoleche Wind Farm, SA (119MW); completed construction in 2019



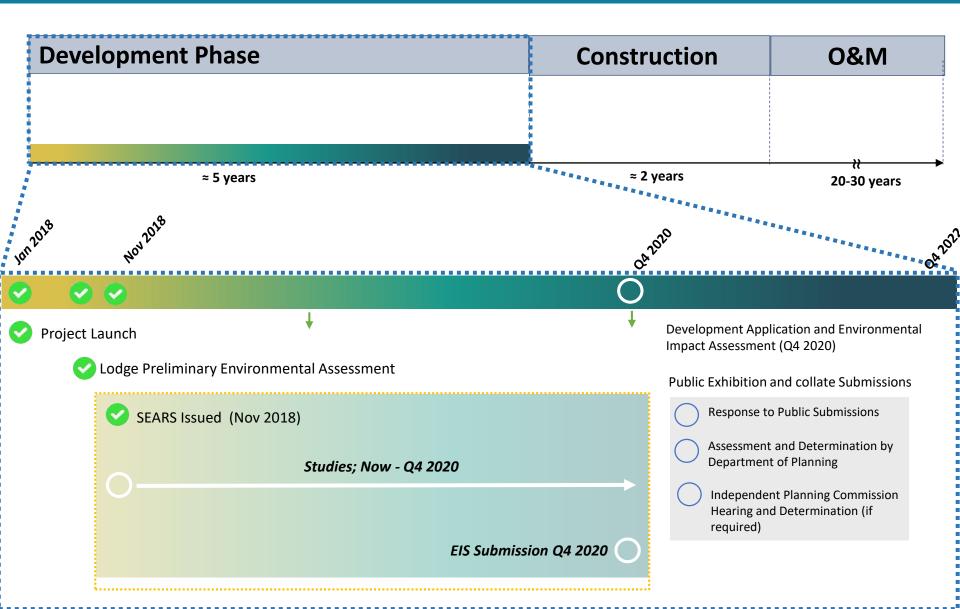
Pelican Point power station, SA (485MW)



Synergen Power peaking station, SA (396MW)

# 3. Wind Farm Development: Life Cycle





# 3. Wind Farm Development: Key Aspects





**SEARS Issued** (Nov 2018)

The Environmental Impact Statement (EIS) for the development must comply with the requirements in Schedule 2 of the Environmental Planning and Assessment Regulation 2000.

Q4 2020

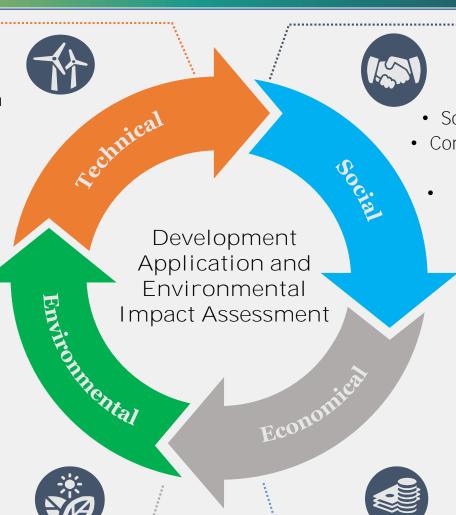


#### Technical

- Project Infrastructure
  - · Roads, TL, Substation
- Project Layout
  - # Turbines
  - · Hub Height
  - Max Tip Hight
- Geology & Topography
- Hydrology

#### Environmental

- Landscape and visual
- Biodiversity
  - EPBC Referral Act
- Noise and Vibration
- Hazard Risk: Aviation, telecommunication, health, bushfire.
- Soil and Water



#### Social

- WF Landowners
- TL Landowner
- Social benefits/impacts
- Consultation community and local councils
  - Traffic and Transport
    - Heritage

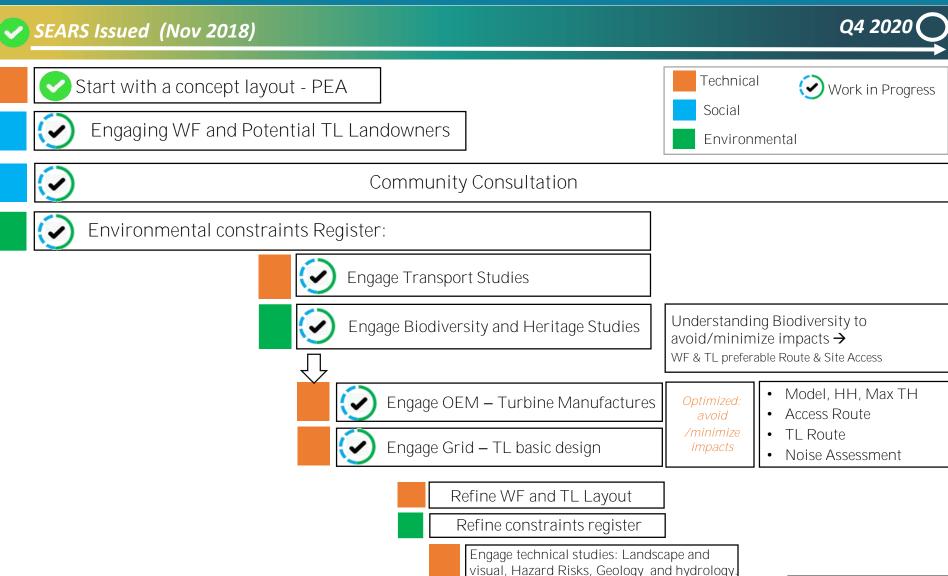
Economical

- Feasibility analysis
  - CAPEX
  - OPEX

# 3. Wind Farm Development: Timetable



Final WF Footprint



# 3. Wind Farm Development: Community Consultation Frequency





# 3. Wind Farm Development: Advisors



	Scope	Experience
ARUP biosis.	EPBC Referral Application Lead Environmental and Social Impact Consultant	Proven record in wind farm project experience in Australia:  o Environmental Impact Assessment. o Biodiversity specialists. o Botanical and vegetation assessment specialists. o Bird and bat strike collision risk modelling. o Accredited assessors under the BAM.
Kelleher Nightingale Consulting Pty Ltd	Specialist flora and fauna studies	Leaders in Cultural Heritage Consulting
DNV·GL	Wind Data and Layout Engineering Consultants	Leaders in wind farm technical engineering, wind data management and assessments.
ART AUSTRALIAN RADIO TOWERS	Met Mast installation and maintenance	Leaders in Australia for designing, manufacturing, installing, commissioning and maintenance of wind data met masts.

# 4. Project Progress Update: EPBC Referral Process



#### Deciding if a proposed action needs to be referred

Is the proposed action likely to have a significant impact on a matter of national environmental significance?

Approval is not required from the Minister.

# The matters of national environmental significance are:

- World heritage properties
- National heritage places
- o Wetlands of international importance
- Threatened species and ecological communities
- o Migratory species
- o Commonwealth marine areas
- The Great Barrier Reef Marine Park
- Nuclear actions (including uranium mines), and
- o A water resource, in relation to coal seam gas development and large coalmining development.



- 1) Submit a referral to the Minister via the Department.
- The Minister decides within 20 business days on informed of decision whether approval is required under the EPBC Act

Control Action

Action is subject to the assessment and approval Process under the EPBC Act. Not Control
Action
Particular Manner

Approval is not required if the action is taken in Accordance with the Manner specified.

Not Control Action

Approval is not required if the action is taken in accordance with the referral.

For a full diagram please refer to:

# 4. Project Progress Update: EPBC Referral Report



Biodiversity values are being assessed using a *staged approach* aiming to:

- o To gain an early understanding of the site constraints, and
- To inform the EPBC Act referral

Stage 1

Desktop assessments, preliminary field surveys, vegetation mapping and threatened species assessment.

Stage 2

Detailed and targeted field surveys in accordance with the requirements of the SEARs and any supplementary SEARs covering the requirements of the DoEE (winter, spring and summer 2019 and summer and winter 2020).

#### The aim of the Stage 1

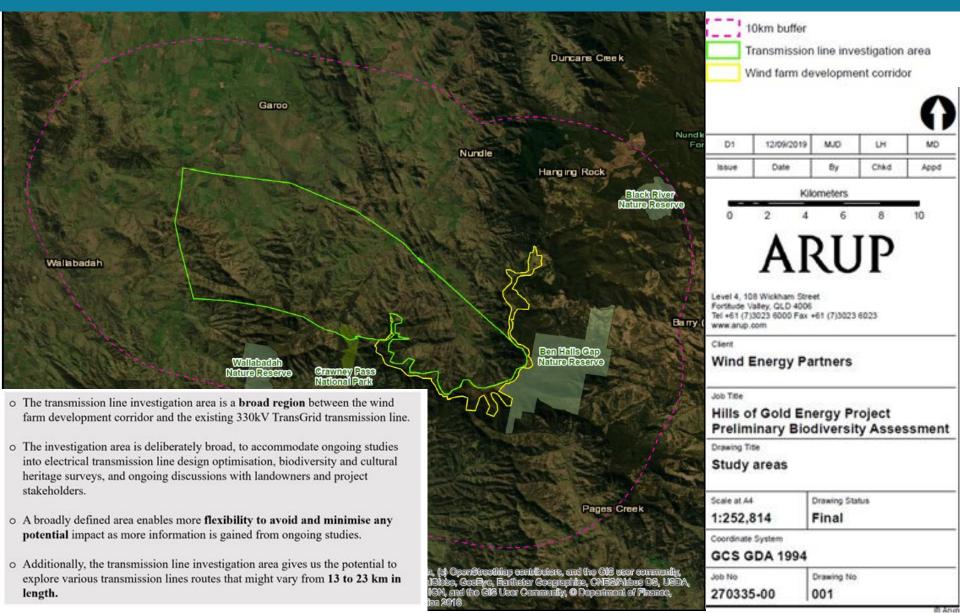
(1)

Identify vegetation communities present:

- o Plant Community Types (PCTs): Delineation of vegetation zones based on condition (moderate/good or low) and ancillary code (high, medium, poor, derived grassland).
- o Identification of any Threatened Ecological Communities (TECs) present within the study area.
- (2) Habitat assessment to determine the suitability of habitat for threatened flora and fauna species credit species and key ecosystem credit species.
- Complete a *likelihood of occurrence* assessment for listed threatened TECs and species under the EPBC Act, based on the findings of the vegetation mapping and habitat assessments.
- Complete a *significant impact assessment* under the EPBC Act guidelines to identify the potential for significant adverse impacts to listed threatened TECs and species.

# 4. Project Progress Update: EPBC Referral Report





# 4. Project Progress Update: EPBC Referral Report



MNES	Wind Farm Development Corridor	Transmission Line Investigation Area			
Threatened Ecological Communities					
White Box – Yellow Box – Blakelys Red Gum Grassy Woodland (critically endangered)	Significant impact unlikely	Potential for direct impact of the TEC mapped within the transmission line investigation area			
Threatened flora species					
Bluegrass (vulnerable)	Significant impact unlikely	Significant impact unlikely			
Small Snake Orchid (endangered)	Potential for significant impact if identified within footprint	Potential for significant impact if identified within footprint			
Blackbutt Candlebark (vulnerable)	Significant impact unlikely due to limited habitat	Potential for significant impact if identified within footprint			
Fragrant Pepperbush (vulnerable)	Impact unlikely due to limited habitat	Potential for significant impact if identified within footprint			
Austral Toadflax (vulnerable)	Potential for significant impact if identified within footprint	Potential for significant impact if identified within footprint			
Threatened fauna species					
Booroolong Frog (endangered)	Significant impact unlikely, as project unlikely to directly impact on hydrology in Peel River	Significant impact unlikely			
Regent Honeyeater (critically endangered)	Significant impact unlikely	Potential to impact of suitable habitat within investigation area			
Spotted-tailed Quoll (endangered)	Significant impact unlikely	Significant impact unlikely			
Greater Glider (vulnerable)	Significant impact unlikely	Significant impact unlikely			
Brush-tailed Rock-wallaby (vulnerable)	Significant impact unlikely	Significant impact unlikely			
Koala (vulnerable)	Significant impact unlikely	Significant impact unlikely			
Grey-headed Flying-fox (vulnerable)	Significant impact unlikely	Significant impact unlikely			
Migratory species					
Fork-tailed Swift	Potential for significant impact if identified within footprint	Significant impact unlikely			
White-throated Needletail	Potential for significant impact if identified within footprint	Significant impact unlikely			
Satin Flycatcher	Significant impact unlikely	Significant impact unlikely			
Rufous Fantail	Significant impact unlikely	Significant impact unlikely			

#### Box 1: Wind farm corridor and transmission line design status and optimisation process

Currently, Hills of Gold Wind Farm project is undergoing a design optimisation process. This optimisation process is a multidisciplinary exercise that is performed under the planning framework and State and Local government requirements and it considers technical, environmental, social, and economic variables.



The main goal of this exercise, it is to find the optimal project footprint for the wind farm corridor and the transmission line route that is compliant with project's planning framework, landowners' approval, and will avoids and /or minimises vegetation, flora and fauna impacts and is still feasible from technical, social and economic perspectives.

The broad transmission line investigation area was selected in order to provide flexibility to final route selection as studies and consultation progress.

Finally, the proposed surveys presented here will allow the identification and survey of listed threatened ecological communities and species that are likely to occur within the project area in order to be avoided. The survey results will play a pivotal role in the wind farm corridor and transmission line design optimisation process and in the decision-making process to avoid or minimise impacts.

# 4. Project Progress Update: Met Mast Installation



- 2 x masts installed & commissioned July 2019
- Purpose: better understand HOGWF wind resource
- Specialist contractors ART Renewables
- Compliant with Australian and International Standards
- o Data available online in real-time
- CASA/ASA, Tamworth council and local stakeholders notified.
- o Aviation marker balls installed.



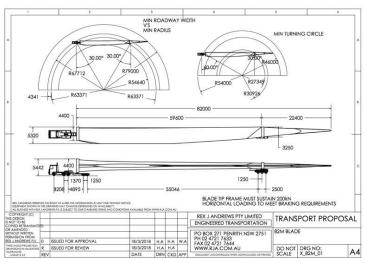
# 4. Project Progress Update: Transport Assessment



#### **Transport Route Assessment**

- Desktop assessment and field survey completed 18<sup>th</sup>
   June by specialist transport contractors
- Considers transport route options:
  - Port of Newcastle to Nundle
  - Nundle to Site Boundary options:
    - o Morrisons Gap Road
    - Head of the Peel Road
- Major wind turbine generator components:
  - Blades, towers, hubs, nacelles and drivetrains both dimensions and weights considered.
- Assessment includes recommendations on vehicle/trailer configurations for components under investigation
- Preliminary information on roadworks and infrastructure modifications required
- Next steps to undertaken traffic and transport assessment expected to be completed by mid 2020





# 4. Project Progress Update: Transport Assessment

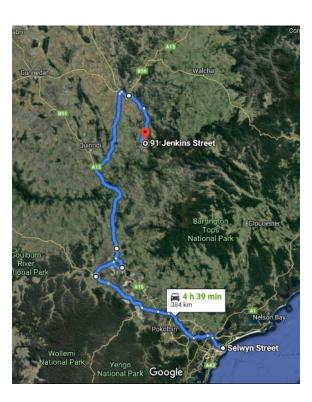


#### **Main Routes: Newcastle port to Nundle**

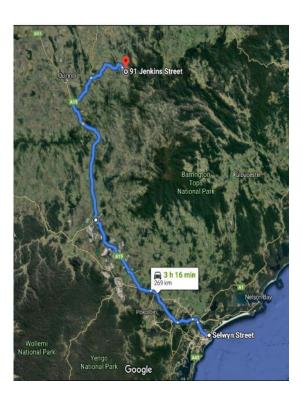
Route 1	Blades	311 km
Route 2	Towers	384 km
Route 3	Remaining components	269 km

#### **Route 1 - Blades**

#### **Route 2 - Towers**



#### **Route 3 – Remaining components**



# 4. Project Progress Update: Transport Case Study



Transport Case Study - Goldwind Cattle Hill Wind Farm, Bothwell, Tasmania



# 8. Biodiversity Survey Methodology Overview

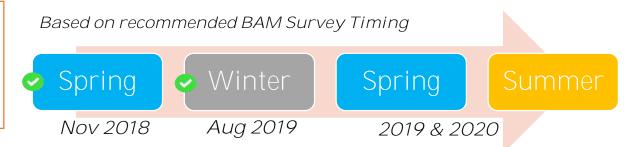




Candidate Threatened Flora and Fauna

Biodiversity Study, EPBC Referral Act - List of Targeted flora and fauna species

- o Plants
- o Amphibians
- o Birds
- o Mammals
- o Reptiles





# Flora and Fauna Surveys

- o Diurnal bird surveys
- Hollow-bearing trees and stick nest surveys for raptors, owls and Glossy Black Cockatoo
- o Nocturnal bird surveys for owls
- o Nocturnal mammal surveys
- Nocturnal frog surveys
- o Camera trapping for mammals and bat detectors

- o Threatened flora surveys
- Habitat assessment
- o Vegetation condition and structure plots
- o Winter, spring and summer bird activity surveys to validate collision risk models
- o Aquatic ecology surveys

- 2) Bird Collisions Risk Data Collection
  - It will be prepared in accordance with Avian Turbine Collition Risk Model (Smales et al. 2013), property of Biosis.
  - o This collision risk assessment model has been large used by wind energy industry and regulators (Commonwealth of Australia).

# 8. Biodiversity Survey Methodology Overview



#### Recommended targeted surveys and timing

#### Threatened flora species

Scientific name	Common name	BAM survey timing	Proposed survey phase
Plants			
Acacia atrox	Myall Creek Wattle	Any time	Spring
Asterolasia sp. 'Dungowan Creek'	Dungowan Star Bush	Any time	Spring
Chiloglottis platyptera	Barrington Tops Ant Orchid	Sep - Oct	Spring
Commersonia procumbens		Aug - May	Spring
Dicanthium setosum	Bluegrass	Dec - May	Summer
Digitaria porrecta	Finger Panic Grass	Dec - Jan	Summer
Eucalyptus nicholii	Narrow-leaved Peppermint	Any time	Spring
Homopholis belsonii	Belson's Panic	Dec - Apr	Summer
Homoranthus prolixus	Granite Homoranthus	Any time	Spring
Picris evae	Hawkweed	Sep - Feb	Summer
Polygala linariifolia	Native Milkwort	Any time	Spring
Pterostylis elegans	Elegant Greenhood	Dec - May	Summer
Tasmannia glaucifolia	Fragrant Pepperbush	Any time	Spring
Tasmannia purpurascens	Broad-leaved Pepperbush	Any time	Spring
Thesium australe	Austral Toadflax	Sep - Feb	Summer
Tylophora linearis		Sep - May	Summer

#### Threatened fauna species

Scientific name	Common name	BAM survey timing	Proposed survey phase
Amphibians	·		
Adelotus brevis	Tusked Frog	Oct – Feb	Summer
Litoria booroolongensis	Booroolong Frog	Nov - Dec	Spring
Litoria daviesae	Davies Tree Frog	Sep – Jan	Spring
Litoria subglandulosa	Glandular Frog	Oct - Dec	Spring
Mixophyes balbus	Stuttering Frog	Sep - Mar	Summer
Birds	<u> </u>		
Anthochaera phrygia	Regent Honeyeater	Sep – Dec	Spring
Burhinus grallarius	Bush Stone-curlew	Any time	Summer
Callocephalon fimbriatum	Gang-gang Cockatoo	Oct - Jan	Spring
Calyptorhynchus lathami	Glossy Black Cockatoo	Mar - Aug	Winter
Hamirostra melanosternon	Black-breasted Buzzard	Sep - Nov	Spring
Hieraaetus morphnoides	Little Eagle	Aug - Oct	Winter
Lathamus discolour	Swift Parrot	May - Aug	Winter
Lophoictinia isura	Square-tailed Kite	Sep - Jan	Spring
Ninox strenua	Powerful Owl	May - Aug	Winter
Tyto novaehollandiae	Masked Owl	May – Aug	Winter
Tyto tenebricosa	Sooty Owl	May – Aug	Winter

# Survey Methodologies

Commonwealth of Australia - Survey Guidelines for Australia's for:

- Threatened Bats
- o Threatened Birds
- Threatened Reptiles
- o Threatened Frogs
- Threatened Mammals
- Threatened Fish
- Threatened Orchids
- EPBC Act referral guidelines for the vulnerable koala

- Department of Environment and Climate Change (2009) Threatened species survey and assessment guidelines: field survey methods for fauna. NSW Government, Sydney.
- Department of Environment and Conservation (2004) Threatened Biodiversity Survey and Assessment Guidelines for Developments and Activities – Working Draft. NSW Government, Sydney.
- Office of Environment and Heritage (2016) NSW Guide to Surveying Threatened Plants. NSW, Government, Sydney
- Office of Environment and Heritage (2017) Biodiversity Assessment Method, NSW, Government, Sydney

# 8. Biodiversity Survey Methodology Overview



### Recommended targeted surveys and timing

#### Threatened fauna species

Mammals			
Aepyprymnus rufescens	Rufous Bettong	Any time	Spring to Summer
Cercartetus nanus	Eastern Pygmy Possum	Oct - Mar	Spring to Summer
Chalinolobus dwyeri	Large-eared Pied Bat	Sep - Mar	Summer (if required)
Dasyurus maculatus	Spotted-tailed Quoll	Any time	Spring to Summer
Falsistrellus tasmaniensis	Eastern False Pipistrelle	Dec - Feb	Summer (if required)
Macropus parma	Parma Wallaby	Any time	Spring to Summer
Miniopterus australis	Little Bentwing-bat	Dec - Feb	Summer (if required)
Miniopterus schreibersii oceanensis	Eastern Bentwing-bat	Nov - Feb	Summer (if required)

1				
	Mammals			
	Myotis macropus	Southern Myotis	Nov - Mar	Summer (if required)
	Petauroides volans	Greater Glider	Any time	Summer
	Petaurus norfolcensis	Squirrel Glider	Any time	Spring to Summer
	Petrogale penicillata	Brush-tailed Rock-wallaby	Any time	Spring to Summer
	Phascolarctos cinereus	Koala	Any time	Spring and Summer
	Pteropus poliocephalus	Grey-headed Flying-fox	Any time	Winter and Spring
	Vespadelus troughtoni	Eastern Cave Bat	Nov - Jan	Summer (if required)

Reptiles			
Hoplocephalus bitorquatus	Pale-headed Snake	Nov - Dec	Summer
Uvidicolus sphyrurus	Border Thick-tailed Gecko	Nov - Mar	Summer

# Survey Methodologies

Commonwealth of Australia - Survey Guidelines for Australia's for:

- Threatened Bats
- o Threatened Birds
- o Threatened Reptiles
- Threatened Frogs
- o Threatened Mammals
- Threatened Fish
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- Office of Environment and Heritage (2016) NSW Guide to Surveying Threatened Plants. NSW, Government, Sydney
- Office of Environment and Heritage (2017) Biodiversity Assessment Method, NSW, Government, Sydney

# 9. Heritage Survey Methodology Overview



#### Four Phases of assessment complying with relevant instruments and guidelines

Phases to complete Cultural Heritage Assessment Report (CHAR)



2 Early 2020

3 Early Mid 2020



Desktop and Preliminary Field Surveys Aboriginal Community Consultation

Aboriginal Field Surveys Cultural Heritage Assessment Report

# 9. Heritage Survey Methodology Overview



#### Assessment process

- Determining if the activity will disturb the ground surface or any culturally modified trees
- Database search: Aboriginal heritage information management system (AHIMS) and known information sources

  Landscape assessment
- (3) Impact avoidance assessment
- 4 Desktop assessment and visual inspection
- The Code of Practice specifies that if the initial assessment process identifies that Aboriginal objects will be or are likely to be harmed, then further investigation and impact assessment is required

The OEH process involves "taking reasonable and practical measures to determine whether your actions will harm an Aboriginal object and, if so, what measures can be taken to avoid that harm" (OEH 2010:4).

# 9. Heritage Survey Methodology Overview



#### Compliance with instruments and guidelines

Guide to Investigating, Assessing and Reporting on Aboriginal Cultural Heritage in NSW (OEH 2011).

Code of Practice for the Archaeological Investigation of Aboriginal Objects in NSW (OEH 2010).

Aboriginal Cultural Heritage Consultation Requirements for Proponents 2010 (OEH 2010)

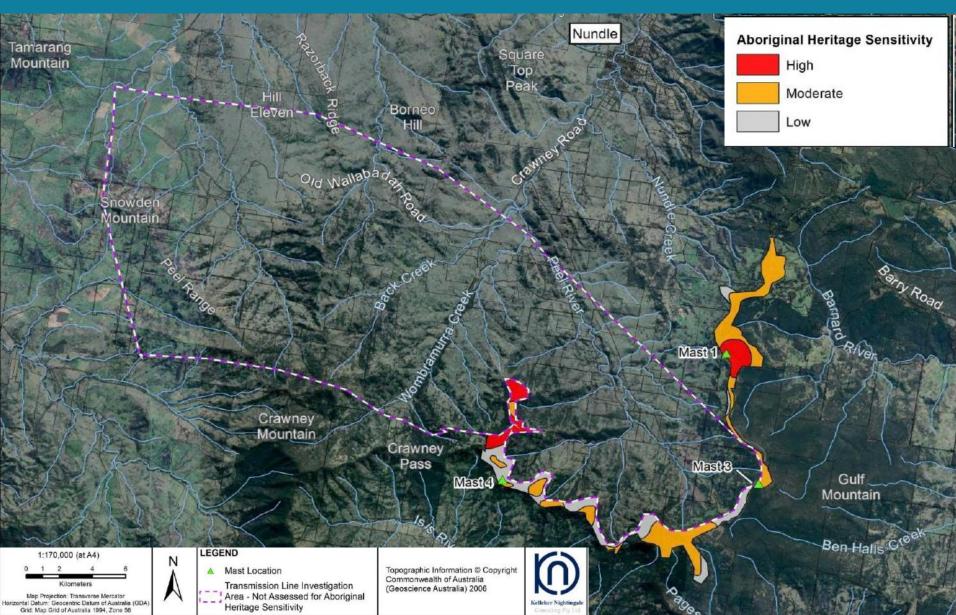
Due Diligence Code of Practice for the Protection of Aboriginal Objects in New South Wales (DECCW, 2010). The Australia International Council on Monuments and Sites (ICOMOS) Burra Charter (Australia ICOMOS, 2013). Engage Early: Guidance for proponents on best practice Indigenous engagement for environmental assessments under the *Environment Protection and Biodiversity Conservation Act* 1999 (EPBC Act) (DoE, 2016).

Aboriginal Cultural Heritage: Standards and Guidelines Kit (NPWS, 1997). Ask First; A Guide to Respecting Indigenous Heritage Places and Values (Australian Heritage Commission, 2002).

The Burra Charter (AICOMOS 2013)

# 9. Heritage Survey Methodology Results







### COMMUNITY CONSULTATIVE COMMITTEE MEETING

### **Questions to Wind Farm Proponent from**

- If Morrisons Gap Road is the chosen access route to the proposed wind farm, what changes to the road do you envisage will be necessary, i.e. tree removal and/or lopping, easing of corners etc?
- The turbine hosts on the Malonga property have previously told some Morrisons Gap Road residents that you will be sealing the road. As dust will be a major problem during and after construction, is this your intention?

\* \* \*

CC C Representative البالم السولة How will project developers compensate my Air BNB business ( a other tourist based businesses) when impacted by road & traffic conjestion due to large vehicles carrying entrastructure and the like

# CCCRepresentative

What amount of concrete is required for each turkine! Where is the concrete production facility to be located. How much water will be required to produce concrete Where will the water be sourced! Would project developers worsider compensating Nudle residents by providing rain water tanks and phon hig

#### Hills of Gold Preservation Inc 1800437

David Ross Chairman Hills of Gold Energy Community Consultation Committee

17 September 2019

Dear David

Re: Community Consultation Committee Meeting Minutes

Hills of Gold Preservation Inc members recently passed a motion to write to you asking that the minutes include the names of contributors to the discussion and when asking questions. Community members are relying on their representatives to pass on their concerns and questions and would like to be able to discuss the minutes with representatives as needed. Having names included will assist the community greatly in this process.

Yours sincerely

Toan!

Sharon Csanki

Secretary

Hills of Gold Preservation Inc

#### **VPA Crudine Ridge**

The draft Crudine Ridge VPA. Rather than offering dollars per turbine, this one offers \$1250 per MW of installed capacity

file:///C:/Users/MSI-EX627/Downloads/Crudine%20Ridge%20Draft%20VPA.pdf

#### **VPA Liverpool Range**

Liverpool Range VPA. Note the contribution (\$3000 per turbine, indexed)

- 5.4 Allocation of the Development Contributions The Managing Council shall allocate Development Contributions as follows: (a) It shall first allocate the Administration Allowance; (b) After subtracting the Administration Allowance from the relevant Development Contribution, it shall allocate 70% of the net balance to the Community Enhancement Fund and 30% to the Road Maintenance Fund or as otherwise agreed in writing between the Company and the Host Councils
- 5.5 Allocation of the Development Contributions between the Host Councils The Host Councils agree to allocate: (a) the Road Maintenance Fund for the purpose stated in the definition of Road Maintenance Fund, as agreed by the Host Councils; and (b) the Administration Allowance between the two Host Councils as agreed by the Host Councils. 5.6 Indexation of monetary Development Contributions

  Where this Agreement provides that an amount is to be increased by CPI, then the amount will be increased in accordance the following formula:  $A = B \times C/D$

Where: A = the indexed amount at the time the payment is to be made. B = the contribution amount or rate stated in clause 5.2 of this Agreement.

C = the CPI most recently published before the date of payment. D = the CPI most recently published before 28 March 2020 (being the day two years after the date upon which the Development Consent was granted).

<u>file:///C:/Users/MSI-EX627/Downloads/Enclosure%20-</u> %20Liverpool%20Range%20Wind%20Farm%20final%20draft%20VPA%20for%20 Council%20endorsement.pdf

### Community Consultation Committee Initial Questions from members of Hills of Gold Preservation Inc

- 1. Who are all the directors and shareholders of Wind Energy Partners Pty Ltd?
- 2. When will the CCC be inspecting the project area and placement of turbines?
- 3. We request that the name Hills of Gold Energy be changed. "Hills of Gold" is a name adopted by locals decades ago to encourage tourism. Wind Energy Partners' use of the locally developed name amounts to a theft of identity, and its use for a project, that will potentially take away Nundle's magic and change its character forever, is offensive to a great number of people in our community. A location specific name is not acceptable to the community.
- 4. Now that there are 3 councils involved, how will the money be split up?
- 5. When will turbine numbers be finalised and WEP be transparent to the community?
- 6. How many turbines are needed to make the project viable?
- 7. Where will the site office, power station, battery storage facility and any other ancillary works be located? What area is typically needed for these works? Does it need to be flat land and if so, does WEP envisage needing to clear land for this purpose? How much?
- 8. Is the project running on time and what has been accomplished in this time?
- 9. What roads are planned for upgrade or to be built in order to provide access?
- 10. Will compensation for damage to roads from intense heavy vehicle use be taken from the same funding pool allocated for community compensation?
- 11. The proposal has been public for over a year now, why are there STILL adjoining landholders who have not been contacted for discussion about the project?
- 12. Division in the community... What are their proposals to bring the community together? So far there has been significant bullying, vandalism and defamation from particular people with vested interests. How do they plan to tackle this? Eg, better communication from WEP with emails, meetings, following guidelines, acknowledging community concerns, petition against the project etc?
- 13. Being an isolated area, landholders are always on high alert to trespassers, thieves, illegal hunters and poachers, particularly when there are more people around eg holidays. What measures can be put in place to protect local landholders from potential increased crime and heightened levels of anxiety?
- 14. Would the chair and committee be willing to be the first fully transparent CCC in the country?

- 15. Where and how many bird audio monitoring stations do you currently have in place? What are the terms of the study?
- 16. Should this go ahead, what guarantees are there that damages to local roads by the heavy equipment will be promptly rectified by the developer?
- 17. What guarantees are there that Nundle will handle any community funding and not Tamworth Council?
- 18. How can the compensation fund be set up to prioritise Nundle and Hanging Rock communities?
- 19. It has been found that wind coming over mountainous terrain can cause serious damage to wind turbines, reducing their commercial life to just 10 years. What would happen if the turbines became less effective or inoperable, thus reducing income to all stakeholders?
- 20. What studies will be done regarding shadow flicker and how would those results be reported back to landholders?
- 21. Will a Hydrology Report be done and by whom? Where will water be sourced for the Hanging Rock proposal?
- 22. What responsibilities does WEP have to correct misinformation circulating in the community once it becomes aware of it?
- 23. What are the main concerns and considerations for councils?
- 24. During the first meeting in February 2018 when WEP met with a few Nundle residents to advise us of the potential project, a representative of WEP told the group, (quote) 'if the majority of the community does not want this project, the project will not go ahead'. Does WEP still stand by that?
- 25. What value does WEP place on locations with existing tourism based on scenic value?
- 26. Would Wind Energy Partners Pty Ltd build the wind farm or would the project be sold to a wind farm developer?
- 27. In its March presentation Wind Energy Partners proposed the potential of 272 construction and 34 operational jobs and maintenance jobs after the construction phase. How do these jobs figures compare with similar wind farm projects?
- 28. If the owner of a wind farm goes bankrupt, the liability for decommissioning of wind turbines falls to the turbine host. If the turbine host declares bankruptcy what guarantee does the community have that the wind turbines will be removed at the end of the wind farm's life?
- 29. What will happen to the wind turbine foundations when the wind farm is decommissioned?

- 30. Sapphire Wind Farm Community Consultative Committee minutes from July 2018 state that the project is behind schedule due to weather, and work will now be 24/7 on 12 hour shifts 6am-6pm. How does WEP envisage bad weather would impact this proposal and can you guarantee this won't happen in our community causing increased commuter traffic, truck movements, and night work site lighting?
- 31. What impact does WEP think this project will have on the relaxed lifestyle in the village and tourism?
- 32. If a landholder signs a Benefit Sharing Agreement does it mean they will be seen to accept any impacts and not be assessed by the Department for visual and noise impacts?
- 33. The Victorian Government recently introduced rules for all new wind turbine developments to have noise levels checked by an independent auditor who is approved by the Environment Protection Authority (EPA) before and after construction. Do you support the NSW Government introducing similar improvements to wind turbine assessment and compliance?
- 34. What types of testing or modelling will be done to assess the "echo factor" in the valley and gullies around the area? What is it called and will individual properties be assessed if requested?
- 35. If a landholder's place of work is separate from where they live, will their place of work be assessed for noise ie sheds, yards?
- 36. In the Liverpool Range Wind Farm Determination the highest level of **construction noise** in one residence was assessed at up to 50dB and for 23 other residences up to 40-45dB. How is construction noise assessed compared to construction traffic noise and operational wind turbine noise?
- 37. How much power does a wind turbine itself need to operate?
- 38. What will happen with the soil that is removed from the ground to build the turbines?
- 39. How does the proponent envisage the profile of the mountain range will change due to excavation, movement of soil, roads and infrastructure?
- 40. Is the proponent willing to provide a 3D model to the community showing the locations of turbines on the landscape? If so, when would it be provided?
- 41. Where is all the water coming from to make all the concrete? How many mega litres will be requested as an allocation? Please provide an itemized list of how the water will be budgeted for use.
- 42. What are the processes required to investigate a water source for the project and what approvals are needed?
- 43. What width of land is required for the transmission lines? Does this need to be fully cleared land? What would this equate to in hectares?

- 44. How much area does a battery storage facility need? Does it need flat land and will excavation be carried out to achieve any flat land required? Same questions for sub station, workers' facilities and turbine pads.
- 45. What was WEP's obligation to contact and consult with landowners in the district and did WEP meet its obligations?
- 46. What powers the turbines during these long months of minimal wind? And how do they cope with sudden extremely strong gusts?
- 47. Bush fires are a major concern in the Hanging Rock. What measures would be put in place to protect landowners and ensure that emergency services could attend unhindered?
- 48. The ecosystems in the vicinity of the proposed turbines are rare, but also very diverse. Has the environmental impact assessment looked at each turbine site separately?
- 49. When would the first jobs become available? Would you please provide a timeline for employment?

36 threatened fauna species and

5 threatened flora species likely to occur in the proposed project area.

HOGPI engaged a respected local ecologist to review the PEA and he recommended:

- 1. Minimal clearing of roadside vegetation, proposed project area turbine locations and tracks, and transmission line easement to reduce loss of nesting sites, food sources, shelter, foraging areas, and species decline.
- 2. Vegetation must be mapped to identify and avoid where endangered ecological communities occur.
- 3. Before any clearing of roadside vegetation, proposed project area turbine locations, or transmission line easements, sites are to be thoroughly searched for threatened plants and animals.
- 4. 16 of the threatened animals likely to occur are dependent on tree hollows for nesting, roosting or denning.
- 5. Clearing of hollow trees is to be avoided and removing tree hollows and compensating with nesting boxes is not supported.
- 6. Conduct surveys of roadside vegetation, proposed project area turbine locations and tracks, and transmission line easements allowing seasonal timing to identify threatened species likely to occur.
- 7. Where possible the proposed project area existing and new clearing is to be regenerated to allow for connectivity and funnel birds and bats away from turbines (threatened species recorded, Flame Robins, Greated glider, Spotted-tailed quoll, Koala would benefit from increased connectivity).
- 8. Obtaining offset land remote to the proposed project area is not supported, nor is cash contribution to the government to obtain offsets.
- 9. Disturbing streams and adjoining forest must be avoided to preserve Davies Tree Frog occurring from high altitude down to 750m, and Booroolong Frog occurring in low altitude streams up to 750m.
- 10. Engage independent bat and bird experts over a minimum period of 12 months, recording unique factors at each tower location taking into account changes in topography, elevation, vegetation communities and flora and fauna species. Community to determine independent bat and bird expert, providing feedback to the community before the EIS completed.
- 11. For each bird species at each tower location study movements to determine migratory paths, seasonal foraging areas, nesting areas, flight heights and flight paths of migratory insects.

- 12. Survey raptor nesting sites, and study raptor use of wind updrafts on ridge tops and where they use updrafts.
- 13. Study which other birds use wind updrafts on ridge tops and where thy use updrafts.
- 14. For each bat species at each tower location study seasonal activity and foraging areas, roosting sites, flight heights, use of wind updrafts on ridge tops and identify migratory paths and/or commuting corridors.
- 15. For each bat species study bat foraging activity as related to wind speed.
- 16. Study insect use of updrafts on ridge tops.
- 17. Survey raptor nesting sites, and study raptor use of wind updrafts on ridge tops and where they use updrafts.
- 18. The 91m set back from 9km boundary with Ben Halls Gap Nature Reserve, with up to 20 turbines proposed on its fence line, is not supported.
- 19. Remnant open forest east and west of the proposed turbine ridgeline, and adjoining Ben Halls Gap Nature Reserve with a high abundance of threatened species should be buffered by at least a 500m setback.
- 20. It is expected that setbacks will be increased to 500m for locations of known threatened bird and bat habitat and nests of raptors and owls and bat roosts.
- 21. Researchers recommend a distance of at least 80m from the blade tip to the canopy of hollow-bearing trees to reduce blade strike risk to birds and bats.

Table 1. Threatened plants recorded in the Nundle area

Scientific Name	Common Name	NSW status	Comm. status	Records
Eucalyptus oresbia	Small-fruited Mountain Gum	V		31
Eucalyptus rubida subsp. barbigerorum	Blackbutt Candlebark	V	V	2
Chiloglottis platyptera	Barrington Tops Ant Orchid	V,P,2		1
Tasmannia glaucifolia	Fragrant Pepperbush	V	V	1
Tasmannia purpurascens	Broad-leaved Pepperbush	V		12

Table 2. Threatened fauna likely to occur in the Nundle region divided into likely habitat groups

Scientific Name Common Name			Comm. status	Likely Habitat
Litoria booroolongensis	Booroolong Frog	E1,P	Е	Low streams
Litoria daviesae	Davies' Tree Frog	V,P		High streams
Haliaeetus leucogaster	White-bellied Sea-Eagle	V,P	С	River - Dam
Miniopterus schreibersii	Eastern Bentwing-bat	V,P		Caves -mines
oceanensis				
Hieraaetus morphnoides	Little Eagle	V,P		Low woodlands
Lophoictinia isura	Square-tailed Kite	V,P,3		Low woodlands
Falco subniger	Black Falcon	V,P		Low woodlands
Climacteris picumnus victoriae	Brown Treecreeper	V,P		Low woodlands
Artamus cyanopterus cyanopterus	Dusky Woodswallow	V,P		Low woodlands
Melanodryas cucullata cucullata	Hooded Robin	V,P		Low woodlands
Stagonopleura guttata	Diamond Firetail	V,P		Low woodlands
Chthonicola sagittata	Speckled Warbler	V,P		Low woodlands
Petaurus norfolcensis	Squirrel Glider	V,P		Low woodlands
Nyctophilus corbeni	Corben's Long-eared Bat	V,P	V	Low woodlands
Pteropus poliocephalus	Grey-headed Flying-fox	V,P	V	Low woodlands
Lathamus discolor	Swift Parrot	E1,P,3	CE	Low woodlands
Neophema pulchella Turquoise Parrot		V,P,3		Low woodlands
Melithreptus gularis gularis	Black-chinned Honeyeater (eastern subspecies)	V,P		Low woodlands
Uvidicolus sphyrurus	Border Thick-tailed Gecko	V,P	V	Low woodlands
Anthochaera phrygia	Regent Honeyeater	E4A,P	CE	Low woodlands
Glossopsitta pusilla	Little Lorikeet	V,P		Forests & woodlands
Ninox connivens	Barking Owl	V,P,3		Forests & woodlands
Tyto novaehollandiae	Masked Owl	V,P,3		Forests & woodlands
Daphoenositta chrysoptera	Varied Sittella	V,P		Forests & woodlands
Phascolarctos cinereus	Koala	V,P	V	Forests & woodlands
Calyptorhynchus lathami	Glossy Black-Cockatoo	V,P,2		High forests
Ninox strenua	Powerful Owl	V,P,3		High forests
Tyto tenebricosa	Sooty Owl	V,P,3		High forests
Pachycephala olivacea Olive Whistler		V,P		High forests
Petroica boodang	Scarlet Robin	V,P		High forests
Petroica phoenicea	Flame Robin	V,P		High forests
Dasyurus maculatus	Spotted-tailed Quoll	V,P	Е	High forests
Petauroides volans	Greater Glider	P	V	High forests
Petaurus australis	Yellow-bellied Glider	V,P		High forests
Falsistrellus tasmaniensis	Eastern False Pipistrelle	V,P		High forests
Scoteanax rueppellii	Greater Broad-nosed Bat	V,P		High forests

#### **Wind Commissioner's Report**

#### 2. Neighbour Consultation and Agreements

#### 2.2 Recommendations

1.1.1. Developers of wind energy projects should, where practical, proactively identify all potential neighbours at the commencement of the development activity and implement an effective, ongoing consultation program with all contactable neighbours throughout the project's development. While it may vary by project and geography, neighbours affected may include residents that live in a proximity range of 0.0 km to 5.0 km from potential turbine locations as well as residents in close proximity to other wind farm related infrastructure, such as power transmission or supply infrastructure. This indicative distance range for consultation may need to be greater in situations where, for instance, turbines are proposed to be erected on a ridge.

#### 8. Site Selection

#### 8.1 Observations

Also, we have found that locating turbines on the top of hills or ridges, while optimum for capturing the wind resource, can have greater impacts on visual amenity, may lead to specific noise and shadow flicker scenarios for residents in the valley beneath and may have other impacts on the community. Access roads for hill ridge wind farms can also be obtrusive and significantly constrain the available farming land in the area.

Conversely, there appear to be minimal issues raised to date about wind farms that are located on large land holdings, or on flat or slight to moderate undulating land and sites that are well away from neighbours.

#### 8.2.1 Recommendations

State and local governments should consider assessing proposed wind energy projects on a wider range of criteria (including the suitability of a location from a community impact perspective and the degree of community support) and then prioritising projects for approval or progression accordingly.

Minutes: Minutes of the 3<sup>rd</sup> Meeting of the Hills of Gold Windfarm Community Consultative Committee (CCC) Tuesday, 10 December 2019

Held at the Tamworth Regional Council Office, Nundle Library, Nundle

Members Present: David Ross (Chair); Jamie Chivers (Wind Energy Partners); Sandra Agudelo (Wind Energy Partners); Mike Stranger (Wind Energy Partners); John

Krsulja (Hills of Gold Preservation Inc "HOGP"); Megan Trousdale (Nundle Business Tourism & Marketing Group "NBTMG"); Margaret Schofield; Ian Worley; Bruce Moore; Megan Carberry (Alternate Representative); Kay Burns (Tamworth Regional Council); Donna Ausling (Liverpool Plains Shire

Council); Christine Robinson (Upper Hunter Shire Council)

**Apologies:** Michael Chamberlain; Peter Schofield

**Independent Chair:** David Ross (DR)

Secretary: Corinne Culbert-Rafferty (CCR)

Agenda Items	Who to Present
1. Welcome & Apologies	David Ross
2. Declaration of Pecuniary or Other Interests	David Ross & All
3. Business Arising from Previous Meeting	All
a. Site Visit & Correspondence	
b. Questions from HOGP Inc to Answers Provided by WEP	
c. Transport Route Assessment	
4. Previous Minutes	All
5. Correspondence	All
6. Update on Proposal	All
a. Project Update Presentation	
b. Group Discussion on Key Concerns and Responses to Previously Tabled Questions	
c. Indigenous Heritage Consultation	
7. General Business	All
a. EPBC Act Referral	
b. Community Division	
c. Feedback on Chairing	
8. Next Meeting – TBA	David Ross

Agenda Item	Discussion	Action/By Whom
1.	Welcome & Apologies	
	Meeting commenced at 6:30pm.	
2.	Declaration of Pecuniary or Other Interests	
	DR advised that he was paid a fee to chair the meeting as is CCR for taking the meeting minutes.	
3.	Business Arising from Previous Meeting	
	a. Site Visit & Correspondence	
	Site access to two CCC members had previously been denied due to host landowner requirements. All correspondence has	MS to provide letter a
	been disclosed between relevant parties. Some CCC members requested written confirmation as to what the issues were	to why access was
	relating to access being denied to them.	denied to some CCC members.
	The landowner denying access has since accepted everyone should have fair and equal access and permitted all CCC	
	members access to the site upon request by WEP. In the interest of the group and project, site access has been granted by	DR & MS to prepare
	the landowner. The proposed dated for the site visit are 4, 5 or 11 February 2020. DR and MS to prepare an email to this	email relating to Site
	affect ASAP.	Visit ASAP.
	It was noted that the Barnard River Wild Dog Management Plan is being reviewed on 10 February 2020. Following that	
	review, the new document will be submitted to WEP for their consideration.	
	NBTMG tabled an undated email from them to WEP in this regard, which is annexed hereto and marked "A".	
	b. Questions from HOGP Inc to Answers Provided by WEP	
	50 questions were tabled from HOGP. All questions were answered by WEP. However, HOGP queried why it took longer	
	than the required 28 days. Further, the date on the responses was in fact incorrect. WEP accepted that the date was a typo	
	and amended the date accordingly. HOGP will review the responses by WEP and come back to them with further questions	
	in due course.	
	c. Transport Route Assessment	
	The desktop and field transport studies were undertaken on 18 June 2019 by a specialist contractor. It was undertaken	
	from Nundle to the site boundaries. A member believed that the document stated it was to 91 Gill Street in Nundle and	
	didn't include up to the site boundary. However, JC noted that this was not the case. JC noted that, as presented in last	
	September CCC meeting, transport assessment included Main Routes for blades, towers and remaining components from	
	Newcastle port to Nundle including to the site boundary. Currently, as technology is under investigation, preferable route	
	from Nundle to Site will be further investigated once technology is selected. Full assessment transport assessment will be	

Agenda Item	Discussion	Action/By Whom
	presented as soon as it is finalised. Consultation is to be around traffic and transport. Assessment is being made around traffic movements and exact streets and potential land clearing if required. The CCC wants to see the transport route assessment as well as upgrades and modifications that will be undertaken as required within the assessment. In August 2020 a preferred route will be identified and therefore consultation can take place around that point. A lot of detail for modifications and improvements, etc will be contained therein. Design and impact of vegetation will be contained within the flora and fauna studies. The movements of the logging trucks and existing traffic is to be considered and analysed within the study.	
4.	Previous Minutes	
	There was a unanimous acceptance of the minutes from meeting # 2.  It was brought up that the minutes from meeting # 1 need to be updated with respect to the reference to Tamworth's population. The population was stated as 200,000 however the actual LGA is 58,000. The scoping report should also reflect this.	WEP to update the website and scoping report to reflect to accurate population for Tamworth.
5.	Correspondence David reminded CCC members that he had received a letter regarding concerns about his chairing of the meetings from an interested stakeholder outside of the region.	
	A member tabled for inclusion in the minutes an email from DPIE to NBTMG dated 07.08.19, which is annexed hereto and marked "B", correspondence between NBTMG and Planning NSW dated 24.10.19 which is annexed hereto and marked "C" and a Media Release by Independent Planning Commission re Crookwell dated 25.10.19, which is annexed hereto and marked "D".	
6.	Update on Proposal a. Project Update Presentation	
	MS proposed that the CCC's Community Enhancement Fund (CEF) Workshop could take place on one of the following dates: 25, 26 or 27 February 2020. DR accepted that, as the workshop would be an extraordinary meeting for the committee, alternate members can be included.	WEP to create letter
	It was proposed that a community letter be created by WEP. As a mail run or via café and/or post office. It was suggested a letter box drop to include a survey to acquire public input on Non-Indigenous Cultural Heritage, Landscape and Visual Assessment and the CEF. Some of the Councils observed that their residents may not know about the proposal and therefore, the Timor side of the range, as well as Willow Tree and Wallabadah be included in the consultation. It was suggested that correspondence can be sent from Murrurundi Post Office. Community feedback by letterbox drop.	and survey for pre CEF Workshop letter box drop.

Agenda Item	Discussion	Action/By Whom
	Regarding the Local Ecologist Flora and Fauna Report that had previously been tabled at a CCC meeting, WEP explained that the report was shared with ARUP/Biosis for consideration in ongoing biodiversity surveys. A document that includes results of a cross-comparison of threatened flora and fauna species in the report versus the EPBC Act Referral was tabled and shared with CCC members.	
	MS noted that a letter from Federal Government is yet to be received which will determine as to whether it will be a controlled action.	
	The Spring Survey for flora and fauna has been undertaken by ARUP and Biosis. MS believed that it had been a successful trip with results expected in March. WEP will present survey preliminary results as a project update in a CCC meeting. A CCC member queried how environmental impact studies on flora and fauna could be conducted during one of the region's worst droughts. MC responded that the Biodiversity Report will assess the current conditions vs previous conditions.	
	A member asked whether consideration has been given to assessing how existing land clearing nearby had impacted on flora and fauna populations? Should adjoining areas be assessed? How will neighbouring properties be assessed? It was queried why the site radius of 10km for the survey is taking place in front of turbines (west of the turbines). Should it not be assessed from 10km from the centre of the corridor? How is the assessment behind the corridor (east, south and north of the corridor) being assessed? WEP explained that the scope of the studies for biodiversity surveys, as explained in the EPBC referral document and during September CCC meeting, include target surveys in the wind farm development corridor and the transmission line investigation area. Also, a desktop analysis of vegetation community mapping has been performed for a 10 km buffer as part of the Preliminary Biodiversity and EPBC Act Significant Impact Assessment Report under evaluation.	
	Landscape & Visual Assessment – currently preparing scope and engagements to be SEARs compliant. CCC member asked can anyone in the community affected, ask WEP to be included in a Visual Assessment? WEP confirmed that yes, they can.	
	Noise Studies – currently preparing scope and engagements.	
	The turbine suppliers are presently being consulted together.	
	Ongoing consultation with TransGrid for connection is underway.	
	b. Group Discussion on Key Concerns and Responses to Previously Tabled Questions	

Agenda Item	Discussion	Action/By Whom
	Job Data has been acquired on the White Rock and Sapphire project. This was detailed within the WEP presentation. A copy of which is annexed hereto and marked "E". It was requested that these figures also be provided for the Liverpool Range Windfarm.	MS to prepare figure for the Liverpool Range Windfarm.
	NSW Dept of Energy has released its Electricity Strategy. Details can be found on <a href="https://www.energy.nsw.gov.au">www.energy.nsw.gov.au</a>	
	David invited everyone to have ten minutes to discuss with the person(s) next to them what has been discussed so far tonight so as to enable them to address any larger issues that need to be discussed through time and what WEP need to address or provide further detail on.	
	Key issues that were identified by members included:	
	<ul> <li>Concerns about when the wind farm is up and running, what are the longer-term binding commitments for management regarding fires and wild dogs i.e. vegetation management within distances of the turbines.</li> <li>Could local community be consulted with respect to the long term operation of the proposal i.e. back burning, etc. with respect to Fire Management Plans.</li> <li>State Electricity Strategy – with respect to grid management and the forthcoming decommissioning of Liddell, has the proposal have some association with this. JC noted that the proposal is considered in the Australian Electricity Market Operators Integrated System Plan.</li> <li>The need for the community to heal (see below for discussion on this)</li> <li>Community Enhancement Fund – instead of an s355 committee, consideration needs to be given to other structures eg trust or working group be established to ensure that the community is not left with assets that are impractical.</li> <li>Residents Development Application was knocked back by Council due to "proposed" wind farm. There was concern from other landowners who may be considering development applications. It was suggested by WEP that consultation between WEP and any landowners looking to lodge applications be undertaken so that both can seek to manage any impacts for either proponent.</li> <li>Lack of communication to the southern side (Crawney Pass) of the project. Owners around Crawney and Timor may be unaware or not have accurate communication.</li> </ul>	
	c. Indigenous Heritage Consultation	

Agenda Item	Discussion	Action/By Whom
	Cultural Heritage current deadlines are not achievable for some stakeholder groups. WEP are working towards having the community survey by the end of the year. It was noted that the HOGP information had been received. Visual montage to be addressed as to various impacts on lifestyle.	
7.	General Business	
	a. EPBC Act Referral	
	WEP presented a progress update. WEP explained that the development area remains as presented in the last CCC hold in September 2019 and as presented in the EPBC referral Act report. The layout from the wind turbine manufacturer is expected in March 2020. It was noted that not all properties and or plots were listed within the referral. It was further listed as not a bushfire prone area. There was disagreement between members of the CCC as to whether this is inaccurate. WEP explained that it has been in contact with the Department of Energy and Environment in regards of plots numbers and is currently following this up with the Department of Energy and Environment. It was noted the transmission line corridor has changed since the PEA.  It was raised that there is an ongoing investigation with respect to alleged illegal land clearing. Will this affect the ecology as the area has been manipulated and changed? JC noted that the survey will deal with what is present and the alleged clearing took place without WEP's knowledge of whether it was legal or illegal.	WEP to make follow up with Department of Energy and Environment to make corresponding amendments within the EPBC Referral as outlined at this meeting.
	A community member requested that reference be made in the Referral to Ben Halls Gap Nature Reserve and Crawley Pass National Park as well as the impact on the south, east and north - not just the West.	Amendments by ARUF to be shared with CCC
	b. Community Division	
	WEP want to understand the reasons for division and therefore want to be able to address concerns raised. Commitment from WEP next year is to educate, meet people, share information and have more face time presence within the community.	
	General Business  A discussion then took place on an array of issues.  JC appreciated that there may be concerns within the community about the name of the project, "Hills of Gold Energy".  WEP is more than happy to change the name if it is upsetting the broader community and would appreciate feedback in this regard. A CCC member noted that there were 110 people at a community meeting who felt that the name was not popular. Another member of the CCC queried the accuracy of this information. This will be added to the survey.	WEP to add project
	A member raised the issue of alternates being allowed to attend as observers. DR noted that, as a consequence of an action on him from the last meeting, he had approached DPIE who had advised that alternates could not attend meetings as observers.	name feedback to letter box drop survey

Agenda Item	Discussion	Action/By Whom
	A member requested that a Fire Management Plan be created for windfarms. The local RFS to be consulted in doing so to establish a long-term management plan.	
	Presented to meeting by a member was a letter by a JP dated 9 December 2019, a copy which is annexed hereto and marked F. The member observed that the JP held no personal opinion on the proposal and has analysed the signatures in the petition in comparison with the latest census figures. The member concluded that the majority of Nundle / Hanging Rock community members do not support a wind farm development in the area. A discussion then took place with other CCC members disagreeing with the petition results and observing that it was inaccurate for members to refer to what the community does or doesn't want.	firefighting. The local RFS to be consulted in doing so to establish a long-term management plan.
	A member also noted that, in early 2018 in a meeting with a select group of community members, a WEP contractor observed said "If the community doesn't want it (the wind farm), it won't happen". The CCC member then asked if WEP will withdraw their application if Nundle have the numbers to oppose the development. JC said the letter would be considered while another CCC member questioned the numbers.	
	Presented by a member was an article by Glen Innes Examiner dated 23 July 2019, a copy which is annexed hereto and marked G.	
	DR notified the CCC that, as part of the CCC guidelines, he has a requirement to prepare an annual report. This will require holding a discussion in the new year to reflect on what key issues were covered in 2019 and, importantly, what issues the CCC members wish to cover in 2020.	
	WEP noted that a Fire Management Plan will be part of the EIS as per Hazard/Risks section in the SEARs. Additionally, the local RFS to be consulted in doing so to establish a long-term management plan.	
	c. Feedback on Chairing	
	DR observed that he would appreciate feedback on his chairing in order for him to improve the experience that members have and ensure his independence. Feedback from some members included:  • Address things and move forward.	
	Within the first meeting, you didn't come across as an Independent Chair. It appeared that it was favoured towards     WEP however this meeting everything has gone really well.	
	<ul> <li>Meeting 2 no agenda followed. This meeting has been much better.</li> <li>Minutes appear watered down and in favour of WEP. DR noted that, while the CCC guidelines give him the final say on what gets included in the minutes, he generally allows most edits to be included.</li> </ul>	

Agenda Item	Discussion	Action/By Whom
	WEP to correspond via David so everyone is privy to all information.	
8.	Next Meeting Date	
<b>0.</b>	TBA	
	Site Visit – early February 2020 (4, 5 or 11 February 2020)	
	Community Enhancement Fund Workshop – end February 2020 (25, 26 or 27 February 2020)	

Meeting Closed: 8.45pm

#### **ACTIONS**

Page No	Action No	Description	Date Raised	Response
2	5	DR to recommend replacement for Marcia Ajani to DPIE.	Meeting 2 - 18 Sept 2019	Bruce Moore has now replaced Marcia.
3	8	MS to present actual job data on White Rock and Sapphire projects.	Meeting 2 – 18 Sept 2019	Presented by WEP at Meeting 3 – see WEP Presentation, which is annexed hereto and marked "E".
7	13	SA to create updated timetable in order to set future CCC meeting schedule.	Meeting 2 – 18 Sept 2019	Presented by WEP at Meeting 3 – see WEP Presentation, which is annexed hereto and marked "E".
2	18	MS to provide letter as to why access was denied to some members.	Meeting 3 - 10 Dec 2019	
2	19	DR & MS to prepare email relating to Site Visit ASAP.	Meeting 3 - 10 Dec 2019	
3	20	WEP to update the website and scoping report to reflect to accurate population for Tamworth.	Meeting 3 - 10 Dec 2019	
3	21	WEP to create letter and survey for pre CEF Workshop letter box drop	Meeting 3 - 10 Dec 2019	
4	22	MS to prepare figure for the Liverpool Range Windfarm.	Meeting 3 - 10 Dec 2019	
6	23	WEP to make reference within the EPBC as outlined at this meeting.	Meeting 3 - 10 Dec 2019	
6	24	Amendments by ARUP to be shared with CCC	Meeting 3 - 10 Dec 2019	

6	25	WEP to add project name feedback to letter box drop survey.	Meeting 3 - 10 Dec 2019	
6	26	Fire Management Plan to be created for windfarms and firefighting. The local RFS to be consulted in doing so to establish a long-term management plan.	Meeting 3 - 10 Dec 2019	

Cc: John Krsulja <johnkrsulja@yahoo.com.au>;

David.Ross@phoenixstrategic.com.au; Jamie Chivers <jamie.c@someva.com.au>;

Sandra Aqudelo <Sandra.A@someva.com.au>; Mike Young (DPE-DASP)

<Mike. Young@planning.nsw.gov.au>; Nicole Brewer

<nicole.brewer@planning.nsw.gov.au>; Anthony Ko

<Anthony.Ko@planning.nsw.gov.au>

Subject: Re: CCC Stakeholder group representation on Site Visit

Good morning Michael,

I am sorry I did not have the chance to meet you at the last CCC meeting. I am writing to provide feedback from Nundle Business Tourism and Marketing Group Inc regarding replacing me on the site visit planned next Monday, November 11 at 3pm.

At its meeting this morning Nundle Business Tourism and Marketing Group Inc members motioned:

- 1. It is unacceptable to members that their elected President and DPIE chosen CCC member is not allowed to attend the CCC site visit, and they ask that Wind Energy Partners Pty Ltd insists on their President's access in the interests of transparency, equal opportunity, and continuity of community consultation.
- 2. Nundle Business Tourism and Marketing Group Inc requests a written explanation about why its President and DPIE chosen representative has been refused access to the CCC site visit.

This is a professional relationship between DPIE, Wind Energy Partners Pty Ltd, and Nundle Business Tourism and Marketing Group Inc. It has nothing to do with any personal tension between Mr Robinson and me.

If Wind Energy Partners Pty Ltd does not insist on equality of access for the Nundle Business Tourism and Marketing Group Inc President, it is complicit in denying the President access.

It would be expected that Wind Energy Partners Pty Ltd would have a lease agreement at this stage and would not require permission to access the proposed project area for community consultation or other purposes.

Nundle Business Tourism and Marketing Group Inc members consider the CCC site visit is an important opportunity to understand, discuss, and communicate the proposal at future CCC and NBTMG Inc meetings and in the wider community. There may not be many other opportunities for site visits, if any.

The NBTMG Inc President and DPIE chosen CCC member may be an active member of the CCC for years to come and without access to the site visit will be at a background knowledge disadvantage for the duration of the CCC.

This issue is bigger than Mr Robinson, it is about equality and approved access to all proposed developments.

This sets a precedent for the future operation of the CCC, and other CCCs in the State.

Who has the power here, the land holder, developer, or State Government? Can a landholder anywhere in the State, for any State Significant Development deny a CCC member approved access to a proposed project site?

If this proposal is approved Mr Robinson will have no control over who accesses the project area, whether he likes them or not.

Mr Robinson's behaviour is unprofessional and continues a 21-month pattern of bullying and intimidating community members who raise concerns and promote discussion about the proposal. It is obstructing effective community consultation.

It is unacceptable that this issue has been discussed outside of CCC meetings. Other CCC members, other than Nundle Business Tourism and Marketing Group Inc and Hills of Gold Preservation Inc members, would not know that John Krsulja and I have been denied access to the site visit. How would they feel about this? Would they question its transparency? Would they want the site visit to go ahead?

The CCC communication on this issue has been inconsistent. I received notification of the revised change of time of the site visit, but I did not receive an email distributed regarding details about what to bring etc to pass onto a nominated representative. All CCC members should receive all CCC correspondence.

Nundle Business Tourism and Marketing Group Inc would appreciate your response regarding its requests by 9am, Wednesday, November 6, 2019.

Yours sincerely, Megan Trousdale President Nundle Business Tourism and Marketing Group Inc

On 2 Oct 2019, at 11:05 am, Mike Stranger < mike.s@someva.com.au> wrote:

Good Morning John and Megan,

Further to the proposed site visit discussion in Hills of Gold CCC meeting last week, and as Jamie noted in his email response to you on the matter of the Jim Robinson complaint, are you please able to nominate two persons from the Hills of Gold Preservation Inc and Nundle Business and Tourism Group stakeholder groups respectively, to replace yourselves on the site visit planned for November/December? To echo Jamie's sentiments, we have attempted to reason with Jim on the benefit of yourselves attending the site visit, both as instrumental representatives of these stakeholder groups and as CCC members, and cannot provide any further explanation as to how Jim Robinson has come to his decision to decline access. Appointing representatives of your nominated stakeholder groups to attend in your stead, is the most obvious and accessible solution currently available to us under the circumstances.

We note also in the email from Jamie that we proposed a meeting with the

From: Mike Stranger mike.s@someva.com.au

Subject: RE: CCC Stakeholder group representation on Site Visit

Date: 6 November 2019 at 3:36 pm

To: Megan Trousdale megan@exchangestores.com.au

Cc: John Krsulja johnkrsulja@yahoo.com.au, David.Ross@phoenixstrategic.com.au, Jamie Chivers jamie.c@someva.com.au, Sandra Agudelo Sandra.A@someva.com.au, Mike Young (DPE-DASP) Mike.Young@planning.nsw.gov.au, Nicole Brewer nicole.brewer@planning.nsw.gov.au, Anthony Ko Anthony.Ko@planning.nsw.gov.au

#### Hi Megan

Thank you for your email and continued input on behalf of members in the Nundle Business Tourism and Marketing Group Inc.

We understand and agree with the concerns of the Nundle Business Tourism and Marketing Group regarding ensuring CCC members are given equal opportunity and transparency in understanding the proposed wind farm and a site visit without all members of the CCC is not reflecting of best practise for transparent and equal opportunity in community consultation. We have sought to ensure access to all members of the CCC and commit to continue to seek this. Our rights to access the land change as the project moves into later stages of development and we respect the rights of all landowners during this period.

Based on this we are prepared to post-pone the site visit until it is possible for all members of the CCC to attend for equal opportunity and transparency. We are regretful that this affects the broader CCC's interest in visiting the proposed site and commit to seeking to resolve the concerned landowners view to allowing equal access for all CCC members.

We do not propose that any site visit replace the regularity of CCC meetings and we will be providing David Ross with a proposed December date for the next CCC and expect to continue discussing the Nundle Business Tourism and Marketing Group Inc interest in the project at this opportunity.

I remain available to discuss any of the above as it suits you.

Regards,

Michael Stranger +61 449 631 875



www.somevarenewables.com

Someva Pty Limited Level 4, 17-19 Bridge St Sydney NSW 2000

From: Megan Trousdale <megan@exchangestores.com.au>

Sent: Monday, 4 November 2019 11:57 AM To: Mike Stranger <mike.s@someva.com.au>



From: Anthony Ko Anthony.Ko@planning.nsw.gov.au

Subject: RE: Visual Assessment
Date: 7 August 2019 at 3:42 pm

To: Megan Trousdale megant@westnet.com.au

AK

Hi Megan,

As discussed yesterday, the Wind Energy Guidelines recognises that there are circumstances where dwellings or key public viewpoints located above the 'Preliminary Assessment Tool line' (being 3 km for a turbine height of 220m) may require further consideration due to topography or other landscape features. It is expected that the EIS will assess the visual impacts to dwellings and other sensitive receivers located beyond 3 km from the nearest proposed turbine.

In preparing the environmental impact statement, the Applicant should consider the elements of the landscape important to the community, including public and private viewpoints. These areas of importance should be shared with the Applicant for inclusion in the Visual Baseline Study.

Kind Regards

#### Anthony Ko Senior Environmental Assessment Officer, Energy and Resources

Planning and Assessment | Department of Planning, Industry and Environment T 02 8217 2022 | E anthony.ko@planning.nsw.gov.au Level 30, 320 Pitt Street, Sydney NSW 2001 www.dpie.nsw.gov.au



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Please consider the environment before printing this e-mail.

Dear Nicole

Thank you for providing this information.

It will be reassuring for our members neighbouring the proposed project area and in along the proposed transmission lines route/s.

Best regards

Megan

On 24 Oct 2019, at 10:58 am, Nicole Brewer < nicole.brewer@planning.nsw.gov.au > wrote:

Dear Megan,

A development application for State Significant Development requires consent in writing from landowners where project infrastructure is located. Wind Energy Partners has identified in its Scoping Report that the transmission line would form part of the Hills of Gold project and therefore it would need to provide landowners consent.

The land acquisition powers you refer to, are typically limited to activities where a public authority such as TransGrid, is the proponent. Where TransGrid is a proponent, it would seek to negotiate easements with landowners in the first instance and would typically use its land acquisition powers as a final resort.

Regards Nicole

### Nicole Brewer

A/ Director | Energy Assessments | Planning and Assessment 320 Pitt Street | GPO Box 39 | Sydney NSW 2001 T 02 9274 6374 E nicole.brewer@planning.nsw.gov.au

\*\*My regular work days are Tuesday, Thursday and Friday <image001.jpg>

<image002.jpg><image003.jpg> <image004.jpg> Subscribe to our newsletter



### MEDIA RELEASE

# CROOKWELL III WIND FARM REFUSED DEVELOPMENT CONSENT

25 October 2019

The state's Independent Planning Commission has refused development consent for a multi-million-dollar wind farm development in the NSW Southern Tablelands.

The Department of Planning, Industry and Environment referred the proposed 23-turbine Crookwell III Wind Farm to the Commission for determination in April this year amid community opposition.

Commissioners Peter Duncan (Panel chair), Professor Zada Lipman and Adrian Pilton were appointed to consider the \$120-million project, earmarked for a 1500-hectare site at Crookwell, 25km northwest of Goulburn.

The Commissioners met with Crookwell Development Pty Ltd (the Applicant), Department and Upper Lachlan Shire Council. They also held a public meeting in Crookwell to listen to the community's concerns which centred around visual and landscape impacts, potential human health impacts and remediation and rehabilitation.

After carefully considering all the evidence and weighing the community's views, the Commission has today (Friday 25 October 2019) determined to refuse this state significant development application.

In its Statement of Reasons for Decision, the Commission concluded that while the wind farm "would result in the public benefits of delivering renewable energy and reduce the reliance on fossil fuel consumption, there are significant residual issues", including:

- the visual impacts of the Project are unacceptable given the significant visual impacts on multiple residences and the proximity of turbines to non-associated residences
- the site is not suitable for the Project, because of its proximity to and the nature and scale of visual impacts on residences and the community
- the Project is inconsistent with objects (a), (b), (e) and (g) of the Environmental Planning and
  Assessment Act 1979 and is therefore not in the public interest; and
- the Project does not satisfactorily address the objectives of the E3 Environmental Management
   Zone of the Upper Lachlan LEP 2010 that require the protection of aesthetic values

The Commission also cited the Project's potential adverse cumulative impacts in an area where there are other wind farms already operating.

"The community raised a number of significant concerns about the visual impacts of the project on surrounding residences and the cumulative effect of wind farm projects with residences potentially able to view wind turbines in multiple viewing sectors," the Commission noted. "The community expressed concern that wind farm projects will transform the landscape from an attractive rural landscape towards an industrial landscape dominated by wind turbines."

The Department originally referred the SSD application to the former Planning Assessment Commission (PAC) in 2015 with a recommendation that the proposed wind farm be approved; however, after a holding a public meeting the PAC sent it back to the Department for further assessment.

The Department completed its final assessment report in April this year, which concluded the wind farm should be refused.

The Commission's Statement of Reasons for Decision is available here: https://www.ipcn.nsw.gov.au/projects/2015/02/crookwell-iii-windfarm

#### Disclaimer

This media statement has been prepared by the Commission's media unit for general information only. It does not form part of the Commission's Statement of Reasons for Decision, and should not be read as part of, or as a substitute for, that Statement of Reasons for Decision.



# CCC Meeting Agenda



- 1. Business arising from previous meeting
  - Site Visit
  - WEP Responses to CCC Questions
  - Community Enhancement Fund Workshop
  - o Job Data: White Rock and Sapphire Projects
  - o Local Ecologist Flora and Fauna Report
  - o Project Timetable
- 2. Update on proposal
  - a. Project update presentation
    - o Flora and Fauna Surveys
    - Land scape and visual
    - Noise and vibration
  - b. Group discussion on key concerns and responses to previously tabled questions
    - o Job Data: White Rock and Sapphire Projects
    - WEP Responses to CCC Questions
    - o The EPBC Act Referral
    - o Non-Indigenous Cultural Heritage Information

# 1. Business arising from previous meeting



Action	Comment
Site Visit	<ul> <li>Site visit discussed in September CCC meeting and agreed via email for November;</li> <li>Postponed due to access issues at the time for CCC members;</li> <li>Access issues now resolved for all CCC members;</li> <li>Proposed new dates are: 4, 5 or 11 February 2020.</li> </ul>
WEP Responses to CCC Questions	o Information provided in Project Update.
Community Enhancement Fund Workshop	<ul> <li>Proposed by WEP in September CCC meeting;</li> <li>Dates of 25, 26 or 27 February 2020 proposed via David Ross email on 11 November 2019.</li> </ul>
Job Data - White Rock and Sapphire Wind Farm Projects	o Information provided in Project Update.
Project Timetable	<ul> <li>Requested by members in September CCC meeting;</li> <li>Shared with CCC members via David Ross email on November 25, 2019;</li> <li>Published to HoG website.</li> </ul>

# 1. Business arising from previous meeting



Action	Comment
Local Ecologist Flora and Fauna Report	The table report on potential species and survey methodology has been shared with ARUP/Biosis for consideration in ongoing biodiversity surveys.
	The mark to the table of species was shared with CCC members by the chair November 11,2019.
	Includes results of a cross-comparison of threatened flora and fauna species in the report versus the species list in the EPBC Act Referral.



### a. Project update

- o Flora and Fauna Surveys
  - A second spring survey was performed week of Nov 18 to 22
  - Summer target species surveys will continue as planned in early 2020.



- Landscape and visual assessment
  - o Preparing scope and engagements to be SEARs compliant
  - o Landscape and Visual Rep Viewpoints with public access to be determined with the CCC
- Noise Studies
  - o Preparing scope and engagements
  - Background noise monitoring locations to be established and consultation with residents considered representative of groups of housing or close to the project boundary



### a. Project update

- o Progress with turbine suppliers on layout and suitable turbines
- o Ongoing consultation with Transgrid
- o Neighbour Benefit Sharing Program
- Ongoing Social and Environmental Assessment of Transmission Line Route



- b. Group discussion on key concerns and responses to previously tabled questions
  - Job Data: White Rock and Sapphire Projects
  - White Rock (Stage 1), 175MW:
     Construction 300\*
     Operation 10-15\*
  - Sapphire, 270MW:
     Construction 150\*\*
  - WEP Responses to CCC Questions
  - Requested by members in September CCC meeting;
  - Shared with CCC members via David Ross email on November 25, 2019;
  - Published to HoG website.

Regional NSW website, accessed 04 December 2019, link: <a href="https://www.investregional.nsw.gov.au/success-stories/white-rock-wind-and-solar-farm-project/">https://www.investregional.nsw.gov.au/success-stories/white-rock-wind-and-solar-farm-project/</a>

<sup>•</sup> Sapphire Wind Farm website, accessed 04 December 2019, link: https://www.sapphirewindfarm.com.au/



### b. Other information regarding jobs and investment

- The renewable industry has employed over 8,000 direct construction jobs mostly in regional and rural Australia since 2016
- Additional indirect jobs as a result of construction were estimated to be 1,500 jobs for a 336MW in South Australia or 7 x the direct jobs as a result of local spending in café, services, accommodation etc.
- A study assessed that a construction workforce for 50MW would provide \$1.2m in local spending.
- Projects due to start construction or financially committed are expected to create another 16,650 direct construction jobs according to the Clean Energy Council.
- An updated National Job Survey is being undertaken to measure employment across the clean energy sector with results due in early 2020.

Clean Energy Council website, accessed 10 December 2019, link: <a href="https://assets.cleanenergycouncil.org.au/documents/advocacy-initiatives/submissions/senate-select-committee-jobs-for-the-future.pdf">https://assets.cleanenergycouncil.org.au/documents/advocacy-initiatives/submissions/senate-select-committee-jobs-for-the-future.pdf</a>



In November NSW Dept of Energy released its Electricity Strategy identifying:

- Traditional generators are getting older and closing
- Firmed renewables are the cheapest type of new reliable generation
- The grid is getting overcrowded
- Coordination of Generation and Transmission
- Seeking to reduce risk for investors and engage communities by rolling out Renewable Energy Zones
- Encouraging investment in new generators and a modern grid
- The policy is comprehensive and covers a range of other electricity policies and initiatives to benefit electricity consumers.

Policy summary information is available at:

https://energy.nsw.gov.au/



### b. Group discussion on key concerns and responses to previously tabled questions

The EPBC Act Referral

.... "The EPBC Act Referral: There are concerns by members of the community to items not presented by WEP and changes made to the potential development area"...

- WEP open to hear and discuss community concerns.
- o Development area:
  - WEP presented the last CCC a project progress update with the development area.
  - As of today, development area remains as presented in the last CCC and as presented in the EPBC Act Referral
  - As per timetable shared with the community, WEP is expecting a Wind turbine Layout from Wind Turbine Manufactures in March 2020.
  - o A corresponding update will be made to CCC members in accordance with this results.

## o Cultural Heritage Information

...."The concerns raised by community members regarding timeline and community consultation required. "

- WEP is open to suggestions on the most suitable approach for how to gain local community knowledge and inform ongoing heritage survey work.
- o Ideally, community feedback is received during planning period, so that enough resources are allocated and ensure detailed field archaeological survey work incorporate and best benefit from the local knowledge gained during the consultation process.



## Timetable



- Requested date: September 18, 2019
- o Shared with CCC members: David Ross email on November 25, 2019

HoG WF - Development Plan	2019										2020										
	М4	М5	м6	М7	м8	М9	Mio	Mii	Ms2	Mi	M2	М3	M4	М5	346	М7	M8	М9	Mio	Mii	М
Community																					
CCC - Meetings									9												
Community Enhancement Fund worshop																					
Site Visit																					
Development Studies																					
Flora and Fauna Surveys (BDAR)																					
Prepare EPBC Assessment																					
Noise and Vibration Studies																					
Preliminary - Transport Route Study																					
Preliminary Heritage Assessment																					
Wind Farm Layout Design																					
Preliminary Visual Montages																					
Heritage and Cultural Work																					
Social and Economic Assessment																					
Aviation and Communication Assessment																					
Visual Montages and Shadow Flicker																					L
Transport Assessment																					
Hazards and Risk Assessment																					
Soil and Erosion																					
Hydrology Study																					
Environmental Impact Assessment																					

9<sup>th</sup> December 2019

To whom it may concern,

I confirm that I have analysed the signatures of the Nundle and Hanging Rock residents/landholders/voters in the Hills of Gold Preservation Inc petition in comparison with the latest Australian Census figures.

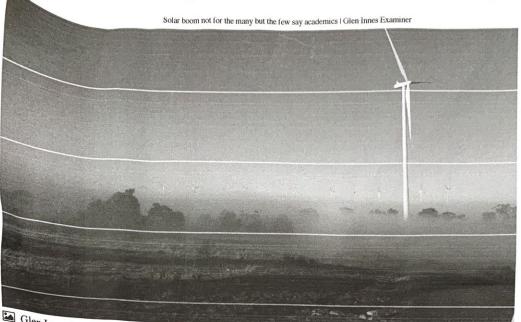
It is my conclusion that the majority of Nundle and Hanging Rock residents/landholders/voters do not support a wind farm development in the Nundle/Hanging Rock area.

Furthermore, I make this declaration without holding a personal opinion or position with regards to the proposed wind farm development in the Nundle/Hanging Rock NSW area.

Your sincerely,

Tracy Rodgers

Tracy Rodgers JP for NSW 198113



Glen Innes is home to NSW's largest wind farm, but the benefits have mainly gone to a few, say a pair of academics.

The benefits of NSW's largest wind power plant have been "privatised" into the hands of a few local landholders according to a pair of Sydney academics studying Glen Innes' experience with the renewable energy boom.

Linda Connor and Rebecca Pearse, both of the University of Sydney, visited Glen Innes last week to study the economic and social consequences of the enormous \$400 million White Rock and \$550 million Sapphire energy projects, the latter the largest in the state.

"(The benefits are) quite restricted in some ways - obviously people who've got land are beneficiaries," said Dr Connor.

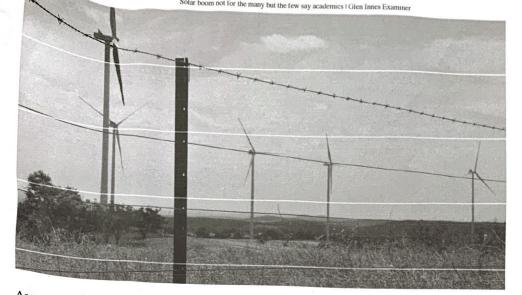
"From what we've heard, people would like to be more active participants in getting cheaper electricity for example - which isn't happening as a result of these projects, (the boom is) not having that impact at all."

Doctor Pearse pointed out the irony that the town faces a <u>relatively high unemployment rate</u> despite nearly a billion dollars' investment ending just last year.

"I can see what is effectively a power station on the ridge line - the electricity grid has arrived in this region in a new way - but it's not translating to cheaper power," said Dr Pearse.

But they said there would be many more chances to get it right, and were hopeful that the renewable sector might actually listen to the concerns of locals contained in their report. They essentially have little choice.

"What can make or break some projects in terms of their viability is their social licence to operate - the extent to which the local community is happy for them to arrive," said Dr Pearse.



As a result, she said the solar and wind industry is much more willing to develop "its techniques of corporate social responsibility" than the mining industry, which she had previously studied in the Upper Hunter and Liverpool Plains.

Wind-funded community grants and a commitment by the companies to hire and contract locally are voluntary, for example. She said they also made efforts to consult with community members in a genuine way.

Dr Connor speculated it's about political power; by comparison the mining industry is "much more powerful", particularly in NSW where it is the biggest export industry.

"I think that the renewable energy companies are being much more careful to take account of objections - they really don't want bad publicity and I guess you can see that from the point of view of being a new industry you want to have a good social licence to operate."

But up to this point, they said, much of the community they had talked to, including at a GLENRAC event organised last week, had seen modest long-term benefit from the multi-billion dollar projects, with by far the biggest benefits outside the construction phase flowing to landowners, with benefits "individualised" and "privatised".

Linda Connor said she thinks the average resident of Glen Innes should turn to their state and federal member for action.

"They're voters!'

"Obviously if energy is a priority then probably thinking about what the policies are of the different parties they're voting for.

"Even getting a decent energy policy that was upfront (would be a good start)."

They hope to soon meet with the Australia Institute, which is helping fund the research. They hope to win further funding to help develop a report with policy recommendations for future renewable development.

- SHARE
  - TWE

#### **Cultural Heritage**

Cultural heritage is the legacy of physical artifacts and intangible attributes of a group or society that are inherited from past generations, maintained in the present and bestowed for the benefit of future generations. Cultural heritage includes tangible culture, intangible culture, and natural heritage. The deliberate act of keeping cultural heritage from the present for the future is known as Preservation or Conservation, though these terms may have more specific or technical meaning in the same contexts in the other dialect. Cultural heritage is unique and irreplaceable, which places the responsibility of preservation on the current generation.

In 2018 Hills of Gold Preservation Inc communicated to DPIE that the following sites are areas of cultural and heritage significance to its members:

- Intersection of Lindsay's Gap Rd and Nundle Rd;
- Nundle Golf Club;
- Nundle Bowling Club;
- Nundle Sport and Recreation Ground;
- Nundle Cemetery;
- Nundle Courthouse Museum (State heritage listed);
- Teamsters Rest, Crawney Rd E2 corridor (Nundle's only accessible biodiversity pocket);
- Crawney Pass National Park;
- DAG Sheep Station;
- Ben Halls Gap Nature Reserve;
- Goonoo Goonoo Glasshouse Restaurant, New England Highway;
- Morrisons Gap Rd (cleared area inside Robinsons boundary provides most consistent and strongest telecommunications access. It is imperative for safety that this site be accessible).

In addition, HOGPI members would like to add:

- Hanging Rock outcrop;
- Yellow Rock
- Great Dividing Range ridgeline from Hanging Rock to Crawney Mountain:
- Sheba Dams:
- Jenkins Street;
- Oakenville Street.
- Devils Elbow

HOGPI would like the opportunity to take this list back to its members for further input, given 12 months additional knowledge of the proposed project.

### John Krsulja

"The Historic Wombramurra Station was in the hands of a group named Armitage & Company up until 1847/1848, stretching from Crawney Pass down the eastern side of the Peel River to Nundle and back towards Hanging Rock".

- Wombramurra Homestead
- Wombramurra Sale yards
- Wombramurra Station
- Wombramurra Woolshed Complex
- Wombramurra Creek
- Peel River, Barnard River & Isis River
- Head of Peel Valley & Road access
- Trigonometric Station
- Ben Halls Nature Reserve access via Morrisons Gap Road for: Farrels Trail, Ben Halls Trail, B Trail & Firths Trail.
- Ben Halls Nature Reserve access via Turnip Paddock Trail for access to Treefern Trail, Berry Trail, Ben Halls Trail & Nissan Hut Trail.
- Stockyard Creek & Brayshaws Creek, BH NR
- Nundle Crown/Public Reserve, near Nundle Cemetary
- National Heritage Trail, Crawney Road & Crawney Pass
- "Hills Of Gold" (Reference for location & tourism)
- Nundle Gold Rush
- Nundle Gold Mines
- Go For Gold Chinese Easter Festival, Great Nundle Dog Race, Nundle Rocks, Country at The DAG & DAG Songwriters Retreat

### Non Indigenous Cultural Heritage

### 03.12.19 – Jamie Chivers to John Krsulja

From: Jamie Chivers <jamie.c@someva.com.au>

To: John Krsulja <johnkrsulja@yahoo.com.au>; David Ross - VUCA Strategist

<david.ross@phoenixstrategic.com.au>

Cc: Mike Young (DPE-DASP) <mike.young@planning.nsw.gov.au>; Nicole Brewer <nicole.brewer@planning.nsw.gov.au>; Anthony Ko <anthony.ko@planning.nsw.gov.au>; Mike Stranger <mike.s@someva.com.au>; Sandra Agudelo <sandra.a@someva.com.au>

Sent: Tuesday, 3 December 2019, 08:16:14 am AEST

**Subject:** RE: Hills of Gold CCC: Information for the CCC and seeking information from the CCC

Hi John,

Thank you for your email and raising these concerns with us on the time allocation for the community information gathering exercise for non-indigenous heritage values and sites in the Hanging Rock, Nundle and adjacent communities. Please be assured that we do understand the importance of this issue to the local community, and that our commitment to thorough community consultation on the issue is demonstrated in our suggestion of the distribution of a feedback form via CCC members and proactivity in commencing the community feedback exercise without waiting for the next CCC meeting or commencing to the next stage of the studies.

As communicated in the updated project timeline shared with the CCC, and in line with our planned EIA submission at the end of 2020, presentation of the cultural heritage survey information is scheduled for August 2020. Whilst we have completed preliminary cultural heritage surveys for the wind farm and transmission line development corridors (presented in the September CCC meeting), we will commence planning for the next phase of our cultural heritage surveys with ARUP and Kelleher Nightingale Consulting in 2020. Ideally, community feedback is received during this planning period, so that sufficient resources are allocated and ensure detailed field archaeological survey work incorporate and best benefit from the local knowledge gained during the consultation process. From the initial discussion in the September CCC meeting, a number of specific sites were mentioned by local residents Theresa Ether, Margaret Schofield and Ian Worley, and it was the intent of capturing this information on the form that was sent. It has always been our intent to discuss progress on this at the December CCC meeting, and we are open to suggestions on the most suitable approach for how to gain local community knowledge and inform ongoing heritage survey work.

We look forward to receiving feedback and discussing at the next CCC.

Regards,

Jamie Chivers

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Sydney NSW 2000

### 01.11.19 – David Ross to John Krsulja

David Ross - VUCA Strategist <a href="mailto:david.ross@phoenixstrategic.com.au">david.ross@phoenixstrategic.com.au</a>

To:John Krsulja
1 Dec at 1:08 pm
Hi John

thanks very much for that email. Maybe we can get WEP to talk to this matter at the CCC meeting as well as share *how* they have been consulting on indigenous issues (ie has consultation entailed solely emailing the CCC? Or have they been having lengthy discussions with relevant groups?). That would be interesting to find out.

regards David

### 29.11.19 – John Krsulja to David Ross & Jamie Chivers

From: John Krsulja <johnkrsulja@yahoo.com.au> Sent: Friday, 29 November 2019 12:10 PM

To: David Ross - VUCA Strategist <david.ross@phoenixstrategic.com.au>; Jamie Chivers

<jamie.c@someva.com.au>

**Cc:** Mike Young (DPE-DASP) <mike.young@planning.nsw.gov.au>; Nicole Brewer <nicole.brewer@planning.nsw.gov.au>; Anthony Ko <anthony.ko@planning.nsw.gov.au> **Subject:** Re: Hills of Gold CCC: Information for the CCC and seeking information from the CCC

To David and Jamie.

At our CCC Meeting on September 18<sup>th</sup> the CCC members observed that there were non-indigenous cultural heritage sites in the project development area, which were not listed in the Tamworth Local Environmental Plan, or on publicly available cultural heritage databases.

In response to the request from WEP to "please briefly fill out the attached sheet, providing information on the non-indigenous cultural heritage sites you would like to see included in their cultural heritage assessments and to provide feedback by the end of November", community members have again expressed disappointment that proper and thorough community consultation on such an important community issue has not taken place.

Members of the community would like to express concern they have not had the necessary time to discuss or provide additional data, research and local knowledge available within this timeline and believe this very sensitive issue should be discussed at the next CCC meeting on December 10th and a proper forum of Community Consultation be decided upon, one that WEP should then conduct to all members of the community.

On behalf of community members, I hope we have an understanding of the importance of this issue and time needed to consult with regards to this matter, and look forward to further discussions at the CCC meeting on December 10<sup>th</sup>.

Regards John Krsulja.

#### 01.11.19 - David Ross to CCC Members

On Friday, 1 November 2019, 01:06:39 pm AEST, David Ross - VUCA Strategist <a href="mailto:david.ross@phoenixstrategic.com.au">david.ross@phoenixstrategic.com.au</a> wrote:

Dear All

WEP have asked me to provide the following to you on the:

- Biodiversity referral (for your information); and
- Non Indigenous cultural heritage (for your input).

#### **Biodiversity Referral**

As per WEP's commitment to notify the CCC when the Hills of Gold EPBC Act referral is listed online for public exhibition, please be advised that WEP have today received notification from the DoEE of the referrals' posting on their website. The referral number is 2019/8535 and website link is here: <a href="http://epbcnotices.environment.gov.au/publicnoticesreferrals/">http://epbcnotices.environment.gov.au/publicnoticesreferrals/</a>

Please let WEP know if there are any issues accessing the referral.

#### Non Indigenous Cultural Heritage

WEP are in the process of planning for the next phases of their cultural heritage survey work with their consultants, ARUP, due to commence in January 2020.

If you recall from our September 18<sup>th</sup> CCC, CCC members observed that there were non-indigenous cultural heritage sites in the project development area, which were not listed in the Tamworth Local Environmental Plan, or on publicly available cultural heritage databases. WEP wish to include these sites in the scope of their surveys, regardless of whether they were officially recognised as a cultural heritage site of significance.

Rather than wait until the next CCC meeting, WEP would like to commence the consultation process sooner rather than later, and discuss progress at the next CCC.

With that in mind, WEP would appreciate it - if you are interested - to please briefly fill out the attached sheet, providing information on the non-indigenous cultural heritage sites you would like to see included in their cultural heritage assessments? If you wish to provide this feedback, could you please do so by the end of November?

ike to see included in their cultural heritage assessments? <mark>If you wish to provide this</mark>	
eedback, could you please do so by the end of November?	
Thanks very much for your time	
Thanks very much for your time	

David

regards

Chair, Hills of Gold CCC

### Site Visit and Questions/Answers

### 02.12.19 - Mike Stranger to John Krsulja

Mike Stranger <mike.s@someva.com.au>

To:John Krsulja

Cc:Mike Young (DPE-DASP), Nicole Brewer, Anthony

Ko, David. Ross@phoenixstrategic.com.au, Sandra Agudeloand 1 more...

2 Dec at 11:07 am

Hi John,

Further to the below from Jamie, just a short email to notify you that the attached responses have been published on the Hills of Gold website, see

here: https://www.hillsofgoldenergy.com/ccc.

Please feel free to share this email and my contact details with members of the Hills of Gold Preservation Inc, in the event they wish to contact me directly.

We look forward to discussing these responses with you in the CCC meeting next week.

Best Regards,

Michael Stranger

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Level 4, 17-19 Bridge St Sydney NSW 2000

### 19.11.19 – Jamie Chivers to John Krsulja

From: Jamie Chivers <jamie.c@someva.com.au> Sent: Tuesday, 19 November 2019 4:04 PM To: John Krsulja <johnkrsulja@yahoo.com.au>

Cc: Mike Young (DPE-DASP) <mike.young@planning.nsw.gov.au>; Nicole Brewer

<nicole.brewer@planning.nsw.gov.au>; Anthony Ko

<anthony.ko@planning.nsw.gov.au>; Mike Stranger <mike.s@someva.com.au>;

Sandra Agudelo <Sandra.A@someva.com.au>

**Subject:** Response to Hills of Gold Preservation Inc.

Hi John

Thank you for your patience while we compiled responses to your questions.

Please find attached responses to all 49 questions with supporting information.

To ensure transparency and equal access to information we will publish your questions and our responses on our website.

Thank you for your input for which we will be able to ensure concerns are more adequately detailed during the studies currently or planned to be completed.

Have a good week.

Regards,

Jamie Chivers

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### 06.11.19 – Jamie Chivers to John Krsulja

**From:** Jamie Chivers <jamie.c@someva.com.au> **To:** John Krsulja <johnkrsulja@yahoo.com.au>

**Cc:** Mike Young (DPE-DASP) <mike.young@planning.nsw.gov.au>; Nicole Brewer <nicole.brewer@planning.nsw.gov.au>; Anthony Ko <anthony.ko@planning.nsw.gov.au>; Mike Stranger <mike.s@someva.com.au>; Sandra Agudelo <sandra.a@someva.com.au>

Sent: Wednesday, 6 November 2019, 03:46:14 pm AEST

Subject: RE: Jim Robinson

Hi John

Thank you for your email and continued input on behalf of members in the Hills of Gold Preservation inc.

We understand and agree with the concerns of the Hills of Gold Preservation Inc regarding ensuring CCC members are given genuine opportunity for input and transparency in understanding the proposed wind farm and a site visit without all members of the CCC is not reflected of best practise for transparent and equal opportunity in community consultation. We have sought to ensure access to all members of the CCC and commit to continue to seek this. Our rights to access the land change as the project moves into later stages of development and we respect the rights of all landowners during this period.

As advised to Megan Trousdale and following your suggestion we are prepared to post-pone the site visit until it is possible for all members of the CCC to attend for equal opportunity and transparency. We are regretful that this affects the broader CCC's interest in visiting the proposed site and commit to seeking to resolve the concerned landowners view to allowing equal access for all CCC members.

We do not propose that any site visit replace the regularity of CCC meetings and we will be providing David Ross with a proposed December date for the next CCC and expect to continue discussing the Nundle Business Tourism and Marketing Group Inc interest in the project at this opportunity.

We appreciate the list of questions submitted and had previously offered to address the HOGP Inc directly but note your concerns raised and understand this would not be your preferred means for addressing the list of questions or providing consultation around the EPBC Application. The HOGP Inc concerns are valid and as part of our commitment to ensure the ongoing assessment takes these into account we will ensure they are addressed

as part of our submission to the Department of Planning and Industry and Environment along with detailed assessments responding to the SEARs once the project design has evolved to current surveys.

There are questions within your 49 that can be responded to earlier and we will respond to those questions by the 15<sup>th</sup> of November.

I remain available to discuss any of the above as suits you.

Regards,

Jamie Chivers

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Sydney NSW 2000

### 03.11.19 – John Krsulja to Jamie Chivers

From: John Krsulja <johnkrsulja@yahoo.com.au>

Sent: Sunday, 3 November 2019 2:00 PM

**To:** Jamie Chivers < jamie.c@someva.com.au>

Cc: Mike Young (DPE-DASP) <mike.young@planning.nsw.gov.au>; Nicole Brewer

<nicole.brewer@planning.nsw.gov.au>; Anthony Ko

<anthony.ko@planning.nsw.gov.au>; Mike Stranger <mike.s@someva.com.au>;

Sandra Agudelo <Sandra.A@someva.com.au>

Subject: Re: Jim Robinson

Hi Jamie,

Hills Of Gold Preservation Inc held a General meeting on Thursday 31st October to discuss community concerns, including your email and the matters included, hence the delayed response.

The HOGP General Meeting was extremely well attended and our members wish to express their deep disappointment in their Stakeholders group elected President been denied access to the site visit to be held on Monday 11th November.

I am not in a position to comment or nominate another representative on behalf of the Nundle Business Tourism & Marketing Group, and as the NBTMG have a General Meeting on Monday 4th November, I'm sure the denied access of their President will also be discussed at that meeting.

The importance of meaningful community consultation is to demonstrate transparency and to ensure opportunities for genuine input by all members of the community.

HOGP members believe as Wind Energy Partners are the proponents of this proposed development they are a true representation of the development and not the host land holders, furthermore access to land should have been agreed upon before lodging development applications and by denying access to the groups President, the members feel you are denying access to the entire group.

Hills Of Gold Preservation Inc members wish to convey the following:

- HOGP will not select another representative to replace the DPIE elected CCC member and HOGP elected President John Krsulja.
- HOGP members ask for a valid reason, in writing, to be given as to why their elected representative has been denied access to the CCC site visit.
- HOGP members are left to believe that if in fact, it is the majority host landholder who determines who can and can't attend the site visit, does this set a precedent for future activities of the CCC? What else will John Krsulja and Megan Trousdale be excluded from?
- HOGP members feel as not all CCC members can be provided with safe access to the site visit, members feel the site visit should be postponed and the denied access by CCC Stakeholder Group representatives be discussed at the next Q4 CCC meeting for all members to decide action to be taken.

As per CCC Guidelines: 4.2 Meeting Procedures

- 'The Committee may decide to undertake regular site visits of the project in conjunction with it's meetings, or at other convenient times'.
- Should the site visit continue without all representatives, we look forward to the December CCC meeting and seek to ensure the site visit will not be classed as the Q4 CCC meeting.

As per CCC Guidelines: 5 Responsibilities of Proponent

- HOGP Inc members would like to express their disappointment that 'not one' of the 49 Questions tabled on the communities behalf have been addressed or answered within the 28 days.

With regard to WEP's invitation to hold a workshop/information session to provide further detail on the EPBC Act Referral.

- HOGP members felt that such an important issue would be better served if ALL members of the Nundle/Hanging Rock community were invited to a Town Hall meeting that offered the chance for discussion.
- HOGP would like to inform WEP that some of our HOGP members wish to remain anonymous due to fear of intimidation.

- As the EPBC Act Referral has been lodged, HOGP members also questioned if the timing was inappropriate or obsolete, given community members have had no chance for genuine input, or to provide valuable input and local knowledge to WEP submission.

Regards John Krsulja

### 11.10.19 – Jamie Chivers to John Krsulja

On Friday, 11 October 2019, 09:58:00 am AEST, Jamie Chivers < <u>jamie.c@someva.com.au</u>> wrote:

Hi John,

Further to my response we would like to update you on the action taken from our side with respect to your compliant. We wish to make it clear that WEP do not condone threatening or offensive behavior and seek to ensure engagement can be done in a calm and constructive way. The input received from Hills of Gold Preservation Inc is valuable feedback and we appreciate the effort that will ensure a robust assessment during the planning phase. WEP have taken the following action to your compliant and input:

- We have taken further action and made contact with participating landowners in the
  project and provided advice on how to communicate concerns they have and
  reiterated that any communications relating to wind farm matters should be directed
  to WEP in the first instance or through members of the CCC who can represent their
  views at regular meetings.
- Regarding the site visit we have requested that you nominate replacement representatives from the Nundle Business Tourism Group and Hills of Gold Preservation Inc to attend the site visit in order to ensure these stakeholder groups are represented.
- We have also proposed a workshop/information session be held with Hills of Gold Preservation Inc, to provide further detail on the EPBC Act Referral, upcoming biodiversity surveys and also to provide a reconciliation of the threatened fauna species list that was presented in the CCC with what is listed in the EPBC Referral.

Please advise if you wish for us to take any further action with regards to your complaint, and we will endeavour to assist where we can.

More generally, we can provide the following information relevant to your questions presented in the CCC meeting last week and the project:

• We have compiled the list of 49 questions, presented by yourself on behalf of the Hills of Gold Preservation Inc in last week's CCC Meeting, into a community correspondence register and commenced work on responding to these. As you know from last week's meeting, we will

- not be in a position to provide the specifics that a lot of these questions seek, however we will attempt to provide information where we can and at a minimum when we anticipate having some of the answers;
- An updated newsletter was released which you should have received both hard and soft copies
  of;
- We have received confirmation that the EPBC Act Referral lodgement has been received by
  the DoEE, however they have advised there is a queue of submissions requiring validation by
  their team and they cannot provide a date for when it will be publicly available. As per our
  commitment to the CCC and community, we will however provide notification to the CCC
  when this occurs.

Should you have any further queries or concerns, please feel free to contact me.

Regards,

Jamie Chivers

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### 24.09.19 – Jamie Chivers to John Krsulja

From: Jamie Chivers

Sent: Tuesday, 24 September 2019 12:28 PM To: John Krsulja <johnkrsulja@yahoo.com.au>

Cc: Mike Young (DPE-DASP) < mike.young@planning.nsw.gov.au >; Nicole Brewer < nicole.brewer@planning.nsw.gov.au >; Anthony Ko < anthony.ko@planning.nsw.gov.au >; Mike

Stranger < mike.s@someva.com.au > Subject: RE: Jim Robinson

Hi John

Thank you for bringing this phone call to my attention and we take note you are choosing to register your compliant with us.

As you correctly state and the minutes record, it was agreed by the CCC that we investigate a site visit for CCC members. We progressed to organise this with Jim Robinson, who's land is instrumental in an effective site visit and made it clear to Jim that this was a request of the broader CCC and certainly no one in particular. I'm sorry I can't provide more information on how Jim came to his views but would be willing to organise a call to discuss this with him if you would like further action taken. My understanding is there are personal disagreements between you and Jim and that as a result Jim is unwilling to allow access to his land. However as part of our commitment to organising a site visit we would like to work with you to ensure that a representative from the Hills of Gold Preservation Society can join and this will be done in a manner that ensures safe site visit for all and will the required permissions from landowners. If there is a member you could recommend please let me know and I will progress the required permissions.

With regard to the CCC we would like to thank you for your active and considered contribution. In order to better provide detailed information we would like to offer a workshop/information session with interested members of the Hills of Gold Preservation Society specific to discussing the EPBC Assessment which will shortly be made public. I hope this is an initiative that supports the interest of your group and can ensure that we are considering your interests and concerns in our biodiversity surveys and subsequent design.

Please feel free to contact me via email or on my mobile if you would like any further action to be taken.

Regards,

Jamie Chivers

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### 23.09.19 - John Krsulja to Jamie Chivers

From: John Krsulja <<u>johnkrsulja@yahoo.com.au</u>>
Sent: Monday, 23 September 2019 10:46 AM
To: Jamie Chivers <<u>jamie.c@someva.com.au</u>>

Cc: Mike Young (DPE-DASP) < mike.young@planning.nsw.gov.au >; Nicole Brewer < nicole.brewer@planning.nsw.gov.au >; Anthony Ko < anthony.ko@planning.nsw.gov.au >

Subject: Fw: Jim Robinson

Hi Jamie.

I am writing to make a complaint against the potential majority turbine land host Jim Robinson.

As you are aware I am part of the Community Consultation Committee as a representative of the stakeholder group Hills Of Gold Preservation Inc (HOGP)

Representing well over 100 financial members which in itself comes with tremendous responsibility and the burdens associated with taking time out away from my business and family life to meet regularly with HOGP Executive and HOGP General meetings and to convey their concerns to WEP and the DPE.

At the first CCC meeting held 12/06/19, the Committee spoke of gaining access to the proposed development site to see the locations of the proposed turbines, to help members could gain a better understanding of the proposed development site, due to most of the members never to have set foot on the proposed development area.

An email from CCC Chairman David Ross on 20/08/19 updated Committee members that you were to look into the site visit to be scheduled for November.

On 21/08/19, the day after David's email, I received the attached recorded message on my business phone. (Attached recording and messages)

As Jim Robinson was contacted by WEP to discuss access for a site visit, it remains unclear how Jim would determine that it was myself wanting to drive a load of people around his property.

Clarification needs to be made that I am a representative of a stake holder group and a member of a Community Consultation Committee who does not wish to feel threatened or singled out by Jim or anyone for that matter, and certainly not contacted and left voice messages threatening me with jail and fines for setting foot on his property.

I trust you will attend to my complaint and give me the reassurance that myself and my family will not be held responsible for actions determined by either the CCC or anyone else with regards to his property and proposed development.

I look forward to your reply,

Regards John Krsulja

#	Date Raised	Date Responded	Question	Response
1	18-Sep-19	19-Nov-19	What roads are planned for upgrade or to be built in order to provide access?	Minor upgrades may be required along Lindsays Gap Road, Barry Rd, Morrisons Gap Road, Head of the Peel Rd with significant work required around "devils elbow" if this route is preferred for turbine blades and towers. Currently the preferred route has not been finalised as traffic and transport assessment along the feasible routes will help determine which is the preferred route with the lowest impact to communities. This is expected to be completed in August 2020 in accordance with the attached program.
2	18-Sep-19	19-Nov-19	When will the CCC be inspecting the project area and placement of turbines?	CCC members are being invited for a site visit in early 2020. Permissions from host landowners are being sought to facilitate access to all areas of the proposed wind farm development area. This site visit in early 2020 is being timed so as to maximise the potential to view areas of proposed facilities including substation, O&M facility location and proposed turbine layout.
3	18-Sep-19	19-Nov-19	Being an isolated area, landholders are always on high alert to trespassers, thieves, illegal hunters and poachers, particularly when there are more people around eg holidays. What measures can be put in place to protect local landholders from potential increased crime and heightened levels of anxiety?	As presented in the last CCC meeting held last September, a Social and Economic Assessment will be performed as part of the SEARS requirements. The main purpose of this study is to assess changes in social and economic variables that might be impacted (either positive or negative). We will take on your concerns regarding potential for increase in crime and request this is assessed as part of the social studies. The social and economic assessment is expect to be finished by August 2020.
4	18-Sep-19	19-Nov-19	The ecosystems in the vicinity of the proposed turbines are rare, but also very diverse. Has the environmental impact assessment looked at each turbine site separately?	Initially surveys capture the entire area identified in the PEA as the wind farm development corridor. The result is a comprehensive understanding of the flora and fauna species that are or could be present given habitat available, and allows for the final wind turbine generator locations to be modified and positioned such that the impact to threatened flora and fauns species or ecological communities can be avoided, mitigated or minimised. Targeted species surveys are also undertaken where proposed project infrastructure is proposed. The information from biodiversity surveys will be presented in the final Environmental Impact Statement.

5	18-Sep-19	19-Nov-19	The proposal has been public for over a year now, why are there STILL adjoining landholders who have not been contacted for discussion about the project?	We have either spoken to or attempted to speak to all adjoining landowners or landowners to the development corridor or transmission line corridor. We welcome feedback to any specific landowners who would like to meet and discuss the project.
				The survey effort for timing for threatened species, bird utilisation and vegetation condition plots will meet the requirements of the NSW Biodiversity Assessment Method (BAM) and any EPBC Act requirements, meet requirements published by the Office of Environment and Heritage, (OEH) and the Commonwealth Department of Environment and Energy (DoEE).
6	18-Sep-19	19-Nov-19	Where and how many bird audio monitoring stations do you currently have in place? What are the terms of the study?	Field surveys have been scoped based on the results of the Preliminary Biodiversity Assessment for the wind farm corridor and the Border Rivers Gwydir/Namoi Regional Native Vegetation Mapping (OEH, 2015) desktop mapping for the transmission corridor and potential transport routes up on to the ridge.
	·			The list of candidate threatened species for targeted surveys has been obtained through the Biodiversity Assessment Method Calculator for Plant Community Types in the project area (wind farm development corridor and transmission line corridor), rapid ecology survey carried out in 2017 and detailed spring surveys undertaken in 2018. The BAM Candidate Species reports are attached for information. Further species list have been cross checked against HOGPI input (thank you for input here).
				Office of Environment and Heritage have been consulted and accepted methodologies proposed by ARUP. Bird monitoring stations (SongMeters) have been established across the site. The location and numbers will be presented as part of the Biodiversity Assessment Report.
7	18-Sep-19	19-Nov-19	What are the main concerns and considerations for councils?	Council continue to be engaged on a regular basis with project updates. Councils interest is broad in the project but have focused on community consultation efforts, status of detailed studies, potential transport routes and project timelines.

8 18-Sep-19 19-Nov-19

if Morrisons Gap Road is the chosen access route to the proposed wind farm, what changes to the road do you envisage will be necessary, i.e. tree removal and or lopping, easing of corners, etc.?

The Transport Route Assessment was recently completed and presented as the CCC.

Please see minutes from the CCC and our presentation which is also available on our website.

As per the information in the minutes, we have not arrived at a final conclusion on the route that will be taken for transport of major wind turbine components, however we can confirm that Morrisons Gap Road is one of the routes that is under consideration. If Morrisons Gap Road is selected as the preferred transport route, then the extent of modifications - and potential for vegetation removal - will depend on the final wind turbine blade and tower sections selected. As part of biodiversity surveys the potential routes are being surveyed and any vegetation removal will be assessed as part of the Biodiversity Assessment Report.

Similarly, and with regards to your second question regarding sealing the Morrisons Gap Road and dust suppression during construction we will investigate both options to mitigate any dust impact to local residents. Dust generation, traffic impacts and water consumption will all be considered in detail in the project Environmental Impact Statement, which we have commenced work on and will be available for review by the public at the end of next year per our studies plan (attached). The EIS will be available for public review and comment via the Department of Planning, Industry and Environment website, and we will ensure you and the community are notified of this.

9	18-Sep-19	19-Nov-19	What width of land is required for the transmission lines? Does this need to be fully cleared land? What would this equate to in hectares?
10	18-Sep-19	19-Nov-19	Would Wind Energy Partners Pty Ltd build the wind farm or would the project be sold to a wind farm developer?
11	18-Sep-19	19-Nov-19	In its March presentation Wind Energy Partners proposed the potential of 272 construction and 34 operational jobs and maintenance jobs after the construction phase. How do these jobs figures compare with similar wind farm projects?

Generally transmission line easements can range from 30 - 90 metres, depending on the transmission line design and voltage to be transmitted. We are currently commencing early phase electrical transmission line concept design work with electrical transmission contractors, and at this stage estimate an easement of 60 metres is required for final construction. Generally, clear access under transmission lines is desirable, so that transmission lines and poles can be accessed to conduct routine maintenance or in the event of damage. However, there are some instances where transmission lines can be strung over vegetated areas, such as to cross from one side of a gully or steep hillside to the other. As the transmission line route and length is not yet finalised, a final total hectare figure is not yet available. The EPBC referral provides some indications of the extent of clearing that may be required and is available on our website through https://www.hillsofgoldenergy.com/news-and-updates. In the September CCC meeting and newsletter, it was announced that Wind Energy Partners had entered into an agreement with Engie, a French energy utility company with 103GW of installed power generation capacity worldwide. Engie are providing financial, technical and commercial support to WEP to continue HOGWF development and, subject to successful project permits and financial close, would construct and operate the wind farm.

In the September CCC meeting, Wind Energy Partners presented information on how the 272 construction jobs and 34 operational job forecast estimates were derived. These job forecast estimates were proportionately estimated based on the job forecast estimates of Sapphire, White Rock, Glen Innes and Crudine Ridge Wind Farms and the potential megawatt capacity of the Hills of Gold Wind Farm. The information is presented on page 3 of the project presentation in the September CCC minutes on the Hills of Gold Wind Farm website. Additional job figure information has been provided to CCC members on direct and indirect construction and operations jobs generated in the Australian wind industry, as presented by the Clean Energy Council and Australian Wind Alliance publications.

Please see the link following for the presentation made including references to jobs. <a href="https://www.hillsofgoldenergy.com/ccc">https://www.hillsofgoldenergy.com/ccc</a>

12	18-Sep-19	19-Nov-19	When will turbine numbers be finalised and WEP be transparent to the community?
13	18-Sep-19	19-Nov-19	Now that there are 3 councils involved, how will the money be split up?

Information was presented to the CCC on 18th September meeting on the current design optimization process that the Hills of Gold Wind Farm is currently undergoing. The design optimisation process is a multidisciplinary exercise that is performed under the planning framework and State and Local government requirements and considers technical, environmental, social, and economic variables. The main goal of this exercise, it is to find the optimal project footprint for the wind farm corridor and the transmission line route that is compliant with project's planning framework, landowners' approval, and will avoids and /or minimises vegetation, flora and fauna impacts and is still feasible from technical, social and economic perspectives. Once this footprint is better understood, a preliminary wind turbine layout will be presented to the community expected in March 2020. A diagram showing the wind farm design process is available at the following link. https://www.hillsofgoldenergy.com/ccc

It is assumed this question is in relation to the Community Enhancement Fund committed to by the Hills of Gold Wind Farm Project.

The Community Enhancement Fund design and how it will interact with the Tamworth Regional, Liverpool Plains and Upper Hunter Councils is not yet finalised and will involve input and discussion with CCC members as proposed in the last meeting. In the last CCC meeting, Wind Energy Partners proposed a Community Enhancement Fund workshop be held with CCC members, which includes representatives from these three councils. The purpose of the workshop would be to present a number of different case studies and options on how a CEF could be setup and operate for the Hills of Gold Wind Farm, including key elements such as Purpose and Objectives, Establishment and Administration/Governance, and Funding Eligibility Criteria. The outcome of the workshop would be the receipt of feedback and community input in the design of the CEF, which WEP would then use to prepare a draft for review by the CCC. Information and sources for reference are available at the following link.

https://www.hillsofgoldenergy.com/ccc

14	18-Sep-19	19-Nov-19	What powers the turbines during these long months of minimal wind? And how do they cope with sudden extremely strong gusts?	Modern wind turbine generators have a number of advanced safety mechanisms to protect the components and ensure the longevity of their operation. Turbine have pitch control for blades to maximise the output at low wind speeds and protect the equipment at high wind speeds. There are also brakes applied in high wind speeds. Turbines are designed to withstand the turbulence and wind gusts and this is assessed when determining which turbine to select.
				Turbine operate when the wind speed reaches of 3m/s. There are only short periods and typically not for extended periods of time where the wind speed on the proposed site is not over 3m/s.
15	18-Sep-19	19-Nov-19	If a landholder signs a Benefit Sharing Agreement does it mean they will be seen to accept any impacts and not be assessed by the Department for visual and noise impacts?	The Department of Planning, Industry and Environment, as the Determining Authority for the project, will take into account all visual and noise impacts of the project on the community and landholders, even if landowners have entered into a Benefit Sharing Agreement with the proponent of the project. In some cases landowners can agree to higher thresholds within the guidelines for assessment under.
16	18-Sep-19	19-Nov-19	What studies will be done regarding shadow flicker and how would those results be reported back to landholders?	A shadow flicker assessment will be completed and results will be consulted to local residents. These studies will be done following consultation with the community on the preliminary layout and associated visual montages produced. These are currently planned to be completed in August 2020.
17	18-Sep-19	19-Nov-19	What guarantees are there that Nundle will handle any community funding and not Tamworth Council?	Please see our response to your question above. The administration of the Community Enhancement Fund is being determined through a process of engagement with the CCC members to determine the most appropriate governance for the fund. The purpose and objectives as agreed with the CCC will form the basis of how funding is managed.
18	18-Sep-19	19-Nov-19	How can the compensation fund be set up to prioritise Nundle and Hanging Rock communities?	The workshop is designed to seek input into these questions. As mentioned above we sought one of the agenda items in the workshop to be the Objectives and Purpose and Selection Criteria. We think it is important that it is clear to who the fund should benefit and the types of initiatives. This is being sought through input from CCC members and HOGP are encouraged to attend this workshop.
19	18-Sep-19	19-Nov-19	Should this go ahead, what guarantees are there that damages to local roads by the heavy	We expect that condition reports of the roads being used by the project will be assessed and any impacts directly caused as a result of the project would be rectified. This is an area local council and Roads and Maritime Services will be consulted on through the process.

			equipment will be promptly rectified by the developer?	
20	18-Sep-19	19-Nov-19	Will compensation for damage to roads from intense heavy vehicle use be taken from the same funding pool allocated for community compensation?	Funding for the Community Enhancement Fund will not include any wear and tear on roads used by project vehicles. The Community Enhancement Fund is established to provide additional benefits to the community not upgrade or fix roads.
21	18-Sep-19	19-Nov-19	How many turbines are needed to make the project viable?	Similarly, to the answer to the previous question, as we progress with the design optimisation process, we will have a better understanding of all project constraints. The outcome of this optimization process will be a layout that will be compliant with planning framework and State and Local government requirements and considers technical, environmental, social, and should be still viable from the economic perspective. The project is constantly being assessed for viability however is committed to complete environmental studies and lodge a development application. The number of turbines expected to go into construction depends on the outcome of the planning

application and market conditions prevailing prior to construction.

22	18-Sep-19	19-Nov-19	We request that the name Hills of Gold Energy be changed. "Hills of Gold" is a name adopted by locals decades ago to encourage tourism. Wind Energy Partners' use of the locally developed name amount to a theft of identity, and its use for a project, that will potentially take away Nundle's magic and change its character forever, is offensive to a great number of people in our community. A location specific name is not acceptable to the community.
			It has been found that wind coming over mountainous terrain can cause serious

23 18-Sep-19

19-Nov-19

It has been found that wind coming over mountainous terrain can cause serious damage to wind turbines, reducing their commercial life to just 10 years. What would happen if the turbines became less effective or inoperable, thus reducing income to all stakeholders?

# We sought a name that we believed would expand on the reputation of the region as a tourist destination hence the decision to use "Hills of Gold". However we remain open to changing this if it is the views of the broader community including specifically the business and marketing community request.

We will seek this is tabled at the next CCC to gain input from all members on their views.

# The wind conditions are used to complete a load analysis on all components of the turbines. The project will select turbines that are designed for the wind conditions on the project site. There are a number of projects constructed around Australia and overseas on similar landscapes. Wind turbulence is a well understood input into citing and planning projects.

We have detailed wind data across the site and continue to assess the suitability of different turbine models for these conditions. This is not a risk to this project. We are unaware of any projects in Australia that have faced such problems.

18-Sep-19 19-Nov-19 Is the project running on time and what has been accomplished in this time?

The Hills of Gold wind farm project is currently on schedule, and the following is a non-exhaustive list of a number of project milestones and accomplishments achieved since the beginning of 2018:

- Preliminary Environmental Assessment lodged;
- Issuance of State Environmental Assessment Requirements;
- Entered into agreement with Engie for the provision of financial, technical and commercial support to the Hills of Gold Wind Farm Project;
- Submission of Environmental Protection and Biodiversity and Conservation Act Referral;
- Installation and commissioning of two new meteorological masts;
- Collection of approximately two years of wind campaign monitoring and data collection to further understand wind resource;
- Progress in identifying social constraints for both the establishment of wind farm and transmission line development corridor;
- Released 2 x community newsletters;
- Conducted a preliminary indigenous Cultural Heritage Assessment;
- Conducted two rounds of field biodiversity surveys and assessments;
- Prepared a preliminary Landscape and Visual Assessment;
- Completed a Transport Route Assessment for transport of major wind turbine components from Port of Newcastle to the Site Boundary;
- Commenced discussions with turbine manufacturers and electrical transmission line design consultants and contractors for the development of preliminary concept designs for the wind farm and transmission lines;

These accomplishments have been communicated to the local community through various mediums, including town hall meetings, newsletters, website updates, CCC meetings, one on one meetings and email distributions.

25	18-Sep-19	19-Nov-19	During the first meeting in February 2018 when WEP met with a few Nundle residents to advise us of the potential project, a representative of WEP told the group, (quote) 'if the majority of the community does not want this project, the project will not go ahead'. Does WEP still stand by that?	Someva remains committed to continuing to engage and learn about specific concerns of the community. With stronger input and ownership by the community to the ultimate design and benefit sharing regimes we hope the community sees this is as great opportunity for the future of Nundle and Hanging Rock.
26	18-Sep-19	19-Nov-19	What value does WEP place on locations with existing tourism based on scenic value?	We have engaged with the business and tourism group to discuss concerns and have taken specific input from them regarding scenic values. These will be assessed as part of the visual montages and further discussion will occur with them.
27	18-Sep-19	19-Nov-19	Where will the site office, power station, battery storage facility and any other ancillary works be located? What area is typically needed for these works? Does it need to be flat land and if so, does WEP envisage needing to clear land for this purpose? How much?	Please see section 2.4 of the Preliminary Environmental Assessment which provides a summary of the infrastructure and potential area required.  We are currently completed biodiversity studies in order to finalise turbine layout and ancillary infrastructure including the transmission line route and location of the substation, O&M facility, storage areas and any other required infrastructure on the development corridor. These facilities will be prioritised in areas that avoid or minimise any clearing required.  We seek land that is as flat as possible to locate the substation, switching station, O&M facility and any storage areas.

28	18-Sep-19	19-Nov-19	What will happen with the soil that is removed from the ground to build the turbines?	This will be backfilled and compacted. More detail can be provided in the Soil and Erosion scope to be completed as part of the EIS. We are open to suggestions for how excess soil could be used for local agricultural benefit.  Options are explored for local beneficial reuse of deeper excavated material, in applications such as road and temporary crane pad construction, drainage, and others. This however depends on the geotechnical characteristics and suitability of the material for these applications, and environmental issues relating to erosion and sediment control, water quality and dust need to be considered and control measures put in place in these reuse scenarios.
29	18-Sep-19	19-Nov-19	Division in the community What are their proposals to bring the community together? So far there has been significant bullying, vandalism and defamation from particular people with vested interests. How do they plan to tackle this? Eg, better communication from WEP with emails, meetings, following guidelines, acknowledging community concerns, petition against the project etc?	We treat these allegation seriously and would encourage anyone who has felt any intimidation to contact us directly. We seek to employ best practise in our engagement with community members and ensure equal and fair access to information.
30	18-Sep-19	19-Nov-19	What responsibilities does WEP have to correct misinformation circulating in the community once it becomes aware of it?	We see this as an ongoing responsibility to be aware of information that is being circulated however as is the case with vast channels for distributions we focus on ensuring accurate information is available on our website.  WEP maintain a website which offers regular updates on the project and details provided through CCC meetings for those interested. Someva also undertake one-on-one meetings with anyone who has questions about the project. We encourage anyone within the HOGPI to reach out if they would like to speak to us directly.

31	18-Sep-19	19-Nov-19	Who are all the directors and shareholders of Wind Energy Partners Pty Ltd?	Wind Energy Partners Pty Ltd is an Australian business registered with the Australian Securities & Investments Commission. The directors of the company are Jamie Chivers, Colin Liebmann, Rowan Liebmann and Rob Leacock. Shareholders of WEP are Colin and Julia Liebmann, Rowan and Miranda Liebmann, Kimchi Holdings Pty Ltd, Pogo Holdings Pty Ltd. Further information on the company is available on the ASIC website.
32	18-Sep-19	19-Nov-19	Will a Hydrology Report be done and by whom? Where will water be sourced for the Hanging Rock proposal?	Yes, a Hydrology Report will be completed by an independent, specialist consultant and the report will be presented along with the Environmental Impact Statement. This report is expected to be completed in August 2020 and submitted as part of the EIS.
33	18-Sep-19	19-Nov-19	Is the proponent willing to provide a 3D model to the community showing the locations of turbines on the landscape? If so, when would it be provided?	Visual montages will be prepared for the final wind turbine generator layout, from a number of different locations around the Hanging Rock, Nundle and Crawney communities. Feedback from the community has been received to areas of visual importance and these will be prioritised for the benefit of the community. A project timetable is attached and shows visual montages completed in June 2020.

34	18-Sep-19	19-Nov-19	Would the chair and committee be willing to be the first fully transparent CCC in the country?	We believe we are a fully transparent CCC and any ideas are welcomed for discussion at the CCC.
35	18-Sep-19	19-Nov-19	If the owner of a wind farm goes bankrupt, the liability for decommissioning of wind turbines falls to the turbine host. If the turbine host declares bankruptcy what guarantee does the community have that the wind turbines will be removed at the end of the wind farm's life?	There are provisions in land owner agreements that require the removal of wind turbines if they are not continuously operated or at the end of the agreed lease. The requirements are supported by bank guarantees to ensure resources are available to fulfil this obligation. Further to this if a approval is granted with a condition to remove the turbines this obligation would be on the next owner of the project.
36	18-Sep-19	19-Nov-19	What will happen to the wind turbine foundations when the wind farm is decommissioned?	Wind Turbine equipment will be removed and the foundations will remain buried underground.

37	18-Sep-19	19-Nov-19	Sapphire Wind Farm Community Consultative Committee minutes from July 2018 state that the project is behind schedule due to weather, and work will now be 24/7 on 12 hour shifts 6am-6pm. How does WEP envisage bad weather would impact this proposal and can you guarantee this won't happen in our community causing increased commuter traffic, truck movements, and night work site lighting?	Historic weather patterns are considered by contractors when committing to timeframes and work within approvals. While ultimately we can't control the weather conditions the historic conditions are used as a basis for project planning. Transport movements will be assessed against an expected project timetable and traffic will be limited to that which is assessed in the study and committed through the application. The conditions of approval (if granted) could enshrine these limits.
38	18-Sep-19	19-Nov-19	What impact does WEP think this project will have on the relaxed lifestyle in the village and tourism?	There are a number of wind farms that have been built and are now currently operating in remote and regional parts of Australia. We encourage members of the HOGP Inc to reach out to these communities to better understand long term changes to their community and lifestyle. Further information made available through the National Wind Farm Commissioner and long term concerns arising is available from this link:
39	18-Sep-19	19-Nov-19	The Victorian Government recently introduced rules for all new wind turbine developments to have noise levels checked by an independent auditor who is approved by the Environment Protection Authority (EPA) before and after construction. Do you support the NSW Government introducing similar improvements to wind turbine assessment and compliance?	https://www.nwfc.gov.au/publications/2018-annual-report  WEP supports the decisions of the Government to place what they consider to be best practise across a range of technical, environmental and social assessments. We would actively participate in understanding the requirements of this and how we could adopt these measures should the government seek input from the industry.
40	18-Sep-19	19-Nov-19	What types of testing or modelling will be done to assess the "echo factor" in the valley and gullies around the area? What is it called	We have yet to engage our noise and acoustic engineers to complete detailed noise studies. Your concern is noted and we will seek to understand how "echo factor" is being assessed. Noise studies are currently scheduled to be completed by October 2020 however consultants will be engaged earlier and feedback can be provided to this questions earlier in the year.

			and will individual properties be assessed if requested?	
41	18-Sep-19	19-Nov-19	If a landholder's place of work is separate from where they live, will their place of work be assessed for noise ie sheds, yards?	Please see noise guidelines adopted by NSW below and following that is a link to the South Australian Noise Guidelines which provides the technical assessment requirements.  https://www.planning.nsw.gov.au/-/media/Files/DPE/Bulletins-and-Community-Updates/wind-energy-noise-assessment-bulletin-2016-12.pdf  https://www.epa.sa.gov.au/data and publications/all publications/for councils/wind farm noise
				The documents state that dwellings need to be assessed for any impact to noise. Our SEARs require that we assess noise under the following guidelines depending on the type of noise generated:
42	18-Sep-19	19-Nov-19	In the Liverpool Range Wind Farm Determination the highest level of construction noise in one residence was assessed at up to 50dB and for 23 other residences up to 40-45dB. How is construction noise assessed compared to construction traffic noise and operational wind turbine noise?	<ul> <li>assess wind turbine noise in accordance with the NSW Wind Energy: Noise Assessment Bulletin (EPA/DPE, 2016);</li> <li>assess noise generated by ancillary infrastructure in accordance with the NSW Noise Policy for Industry (EPA, 2017);</li> <li>assess construction noise under the Interim Construction Noise Guideline (DECC, 2009);</li> <li>assess traffic noise under the NSW Road Noise Policy (DECCW, 2011); and</li> <li>assess vibration under the Assessing Vibration: A Technical Guideline (DECC, 2006);</li> </ul>
				These documents can be searched online for the specific requirements of each and how our noise consultants will be required to apply requirements to the wind project.

in the order of 0.1% rounded up.

How much power does a wind turbine itself

need to operate?

43 18-Sep-19 19-Nov-19

This depends on the turbine but power is only required to start the turbine. A small

infeed is required to turn the turbine into the wind and pitch the blades to capture

energy. This amount of energy equates to very small amount of the energy generated,

44	18-Sep-19	19-Nov-19	How does the proponent envisage the profile of the mountain range will change due to excavation, movement of soil, roads and infrastructure?	Earth works are expected to be required however turbines and roads will be cited to minimise these works. This will be better understood during detailed design however we don't expect the profile of the mountain range to change materially as a result of these earthworks.
45	18-Sep-19	19-Nov-19	Where is all the water coming from to make all the concrete? How many mega litres will be requested as an allocation? Please provide an itemized list of how the water will be budgeted for use.	The amount of water required will depend on the final layout and detailed design. Water is required mainly for foundations and dust suppression. The sources and uses of water will be detailed in the environmental impact assessment. We can commit to ensuring that this question is responded to in detail in the EIS.
46	18-Sep-19	19-Nov-19	What are the processes required to investigate a water source for the project and what approvals are needed?	<ul> <li>Our SEARs require that the following is completed for water assessment.</li> <li>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;</li> <li>access potential impacts on the quantity and quality of surface and groundwater resources, including impacts on other water users and watercourses;</li> <li>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 Water Guidelines for Controlled Activities (DPI, 2012) and (if necessary) Why do Fish Need to Cross the Road? Fish Passage Requirements for Waterway Crossings (DPI, 2003); and</li> <li>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.</li> </ul>
47	18-Sep-19	19-Nov-19	How much area does a battery storage facility need? Does it need flat land and will excavation be carried out to achieve any flat land required? Same questions for sub station, workers' facilities and turbine pads.	Yes flat land is the preference. As mentioned in a question above we are currently determining the most suitable locations for this infrastructure based on the biodiversity surveys and preliminary turbine design. Priority will be given to flat land and land that is less environmentally sensitive.

48	18-Sep-19	19-Nov-19	What was WEP's obligation to contact and consult with landowners in the district and did WEP meet its obligations?	<ul> <li>gathering valuable knowledge from the community;</li> <li>establishing relationships between the proponent and the community.</li> <li>WEP undertook meetings with key stakeholder groups, held public meetings, undertook house visits, engaged local media, sent newsletters and surveys and engaged local community consultants in order to go above the requirements for early consultation.</li> <li>Please refer to section D "Community Consultation Approach and Results" in our Preliminary Environmental Assessment which is also attached for your information. We sought to be transparent and provide a comprehensive list of concerns raised as part of our efforts to engage early.</li> </ul>
49	18-Sep-19	19-Nov-19	Hanging Rock. What measures would be put in place to protect landowners and ensure that emergency services could attend unhindered?	Improved access to firefighting services will be available to fight fires if approaching from or to neighbouring properties to the project. Access to this region is currently challenging and onsite all weather roads will improve this for fire-fighting. In the event of aerial support we will engage with Rural Fight Fighting Services to ensure that operational support can be provided and turbine stopped to support firefighting efforts in the region. A hazards and risk assessment will be completed and rural fire service consulted as part of the development application.
50	18-Sep-19	19-Nov-19	When would the first jobs become available? Would you please provide a timeline for employment?	We have already sought to hire locals where possible including community consultants. Employment will be available from when construction commences and then again for the long term operation of the project. Timelines for seeking approvals are provided in the attached and we would expect construction to commence within 18-24months of lodging an development application subject to approvals and other conditions.

NSW Wind Guidelines recommend that early consolation is completed to:
inform the community about the project and the strategic context;

HoG WF - Development Plan		2019									2020										
1100 WF - Development Fair			М6	<b>M</b> 7	М8	М9	М10	M11	M12	M1	M2	М3	M4	М5	М6	<b>M</b> 7	M8	М9	M10	M11	M12
Community																					
CCC - Meetings																					
Community Enhancement Fund worshop																					
Site Visit																					
Development Studies																					
Flora and Fauna Surveys (BDAR)																					
Prepare EPBC Assessment																					
Noise and Vibration Studies																					
Preliminary - Transport Route Study																					
Preliminary Heritage Assessment																					
Wind Farm Layout Design																					
Preliminary Visual Montages																					
Heritage and Cultural Work																					
Social and Economic Assessment																					
Aviation and Communication Assessment																					
Visual Montages and Shadow Flicker																					
Transport Assessment																					
Hazards and Risk Assessment																					
Soil and Erosion																					
Hydrology Study																					
Environmental Impact Assessment																					

# APPENDIX D COMMUNITY CONSULTATION APPROACH AND RESULTS

**Prepared by Inclusive Engagement** 



# Hills of Gold Energy Project Community Consultation Report



### **About Inclusive Engagement**

Inclusive Engagement are a husband and wife team who live 15km north of Nundle and have a 30 year history of community consultation for large multinational energy companies with interests in renewable energy, mineral exploration and oil and gas. IE specialise in bringing local stakeholders closure to project developers and ensuring information about potential projects is correctly communicated to all those who may be impacted or have an interest in the development.

Project ID	Hills of Gold Energy Project (HGEP)
Document Name	Community Consultation Strategy and Results
Submission Date	11 May 2018
Lead Author	John and Christine Willcox
Client	Wind Energy Partners
Scope of Report	Summary of Community Consultation Strategy and Results

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### 1. Background

Inclusive Engagement (IE) were engaged by Wind Energy Partners (WEP) to support initial community consultation and gain a greater understanding of local interests in a proposed wind farm in the area in accordance with the Wind Farm Guidelines 2016 issued by the Department of Planning and Environment and using best practise for community consultation for wind farms.

### 2. Stakeholder Engagement Strategy

IE initially advised WEP on a Stakeholder Engagement Strategy. The aim of the strategy was to identify and engage stakeholders of the project in 3 categories depending on their proximity and potential interest in the project.

- □ **Category 1** Those landholders directly or with the potential to host wind turbines, substations, site access and transmission line infrastructure.
- □ Category 2 Adjacent landholders to the supplied development corridor generally within the 3km as per the NSW wind farm guidelines. It is important for those who are closest to the proposed project to be given information regarding potential impacts, the project benefits and timelines for development, construction and operation.
- □ **Category 3** Broader surrounding community, community groups, Tamworth Council, business groups, community groups, planning authorities, relevant government departments and local media.

The purpose of categorising stakeholders is to ensure they are consulted in an appropriate forum to encourage open discussion and share information most efficiently.

Each stakeholder group has been approached based on different forums to ensure information is used to guide the project design and areas of interest that require further investigation.

Category 1 and Category 2 stakeholders were met one on one at their homes. Meetings were held by IE and in some cases WEP was requested for follow up meetings where further detail was required. This allowed WEP to understand the proximity and specific setting of the stakeholder and also allow concerns to be voiced in a flexible and two way manner. The intent was to build relationships that could last during development and construction such that stakeholders could feel comfortable communicating directly with WEP as the project progresses. This also better allowed WEP and IE to understand the context to local concerns. As the project progresses these key stakeholders will continue to be informed, consulted and collaborated with to ensure any impacts of detailed assessments are discussed directly. In certain circumstances mitigation strategies may be required to the project design or specific plans of management to mitigate or minimise to acceptable levels the impact to nearby residents.

Attitude to co-operating with the proposed development, areas of "No Go" on the affected land, input into suitable access corridors, specific terms of access that address individual landholder concerns including biosecurity and any areas of ecological significance with regard to vegetation mapping were included in discussions. A community survey was also provided as part of these meetings for submission to WEP. Where a response was not provided from the survey, all issues, comments and concerns were captured in the form of contemporaneous notes. These notes were then added to the Stakeholder Register.

Category 3 stakeholders were also met prior to the lodgement of the PEA. Larger special interest group meetings took place to understand how these interests might be impacted and specific community values and opinions can be understood. It should be noted that the community requested a number of additional meetings for which WEP organised to provide more information.

### 3. Broader Community Engagement Strategy

In order to engage with the community in the Tamworth region an above the line strategy was taken to provide high level information about the project.

In order to promote attendance at the public meetings and interaction with broader community interests the following was undertaken:

- Media release and interviews with local papers, a local TV station and a local radio station
- Flyers were dropped in letter boxes and a notices put up in public places
- Community leaders were engaged and provided advice on the nature and timing of the community forums.
- High profiles clubs such as Rotary, Lions and Country Womens Association were engaged to support the hosting of public meetings

The result of this strategy ensured strong participation in public meetings and better knowledge of the project in the region. Please see attached appendix for examples of media attention.

### 4. Summary of Results

Key meetings were held with the following groups:

- Over 50 one on one meetings were held with families in close proximity to the proposed wind farm including along the proposed transmission line route.
- A community forum was held at the Nundle Memorial Hall at which an estimated 250 people were present
- A community forum was held at the Hanging Rock Memorial Hall in which an estimated 80 people were present
- Three meetings were held with the Nundle Business and Tourism Group
- The Nundle Business and Tourism Group hosted a meeting prior to the community meeting and provided WEP with information the community specifically wanted addressed in the community forums. This information is summarised below.

- Council was engaged twice, initially to introduce the project, and a follow up meeting was held to brief Councillors, planning and the communication team on the project.
- Regular meetings and communication with Tamworth Council Nundle and Hanging Rock representative.
- Over 200 phone calls were received by IE and WEP from interested community members during the time of the public meetings and subsequent to these.

At all meetings with all interested parties, a full stakeholder register has been maintained including full property descriptions, names of owners and occupiers, details of topics discussed and any concerns. All communications records have been stored.

Surveys and category 3 stakeholder meetings were also helpful to determining potentially interested candidates for a broad representation of community members for a community consultative committee to represent wider community concerns ,and communication plans to address these

A summary of feedback through the following mediums has been compiled to present a summary of community interest in the project:

- One on one meetings
- Surveys returned from one on one meetings
- Input from special interest groups
- Public meeting questions asked
- Direct communication including calls and emails received

A summary of the feedback is categorised into areas of interest:

### Economic Opportunity

- There is interest in the opportunities the wind farm would create for local businesses however concern within the existing tourism businesses as to the impact of the project on regular and existing visitors. This was a mixed opinion with some expecting an increase in tourism and others not. Overall the majority of respondents agreed there would be increased economic opportunities.
- There was interest from the community in ensuring jobs were provided to local community members
- There is interest from the community in how those without businesses or supporting the project would benefit through a community fund.
- There is concern that the mountain range is an important tourism attraction adding to the appeal of Nundle additional to the heritage of the town.
- There was concern the town could not support accommodating the staff required to construct the project
- It was suggested WEP work with the community to promote eco-tourism through open days of the wind farm, walking and mountain bike routes, potential tourism operators to access parts of the wind site and look outs to be established at key vantage points in the development corridors.

### Sustainability and Environment

- Interest was expressed in how towns such as Nundle and Hanging Rock could become 100% renewable and could this allow businesses and individuals to benefit from lower cost and renewable energy.
- There was significant interest in renewable energy and how sustainable the generating type is when considering embodied energy in the manufacturing vs the efficiency.
- Overall strong support for renewable energy however there were also concerns as to why the specific project site had been chosen. A strong focus on presentations and discussions was on the project justifications. A specific question was raised during a public meeting suggesting the community would be more supportive of the Project if it were moved further East into the heavily forested area and further from the transmission line.
- There is no private access to the Ben Halls Gap National Park and local residents and business operators suggested that improved access would provide better utility of the national park.
- However it was also stated impacts of native and virgin bushland, native animals, birds, peace and quiet of the area should be assessed as to the construction and operational impacts.
- Sheba Dams are an important tourism destination and historically significant area.
- The community wanted to know whether there were any endangered species in the National Park or on the project site.
- Concern for affects on micro-climates on the site
- Interest in how much vegetation removal would be required to host the project
- The project site is the start of watersheds feeding several downstream rivers.
   Concern was raised on the impact the project would have on these watercourses.
- Concern for potential erosion on the site and the impact habitat and watercourses on the site
- How much water is required and where would the water be sourced for construction
- How many full time jobs would be created in the project?
- Where would construction staff be housed and would this impact existing tourism businesses such as the Woollen Mill

### Visual Amenity

- The community seeks a greater understanding of the visual impact of the project based on the likely turbine models, size and layout of the project.
- Specific areas of significance to the community from which the visual amenity was requested to be assessed included:
  - Visual assessment was requested to be assessed from further distances than 3km from the proposed site
  - The Hanging Rock lookout and descending the road from Hanging Rock

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- From within the town of Nundle (specifically from Jenkins St, Oakenville St, and the cemetery)
- o From Hanging Rock
- From residences along Morrisons Gap Road
- From the New England Highway and Lindsays Gap Road near the New England Highway
- o From the Golf Course and Bowling Club in Nundle
- Historic homesteads including Woombramurra, Koobah, the DAG Sheepstation and Cottage on the Hill.
- The road over Crawney looking North towards the ridge
- o Properties along Morrisons Gap Rd
- o The homestead on Head of the Peel Rd
- o Homesteads on the other side of the Crawney Pass near Timor.
- It was requested that visual photomontages be used to express the visual impact from area of significance
- There were misconceptions to the location of the wind farm above Nundle and the visual impact if in that location.
- Comments were received that the forestry plantation along the ridge further to the North of the development corridors had already altered the visual amenity of the ridge in parts.
- A number of people living with views of the area of the site expressed it be a priority to minimise visual impact
- The colour of the turbines should be such that they minimise the visual impact. It was also stated that those hills are often shrouded in clouds, particularly in the morning.
- Detail was requested by those living closer to the project on how shadow flicker will be assessed on residents.

## Health Impacts

 There were concerns for whether there could be health impacts for those living nearby caused by powerlines, wind turbines or construction related activities.

## Transport and Access

- Concern was raised over the impact of dust on nearby residents on the unsealed Head of the Peel Rd and Morrisons Gap Rd if either are used for access to the site as currently proposed. It was suggested to prioritize upgrade of Morrisons Gap Road to a tarred road due to increased traffic from trucks etc, and a speed limit imposed.
- Concern was raised by residents in Nundle and Hanging Rock as to construction traffic volumes and timings. Members of Hanging Rock community suggested WEP look at overtaking bays on the Barry Rd on route to Hanging Rock. Nundle community members mentioned specific concern to the location of the primary school and school bus routes.
- Further detail was requested on where roads would need to be upgraded and the size of equipment being transported.

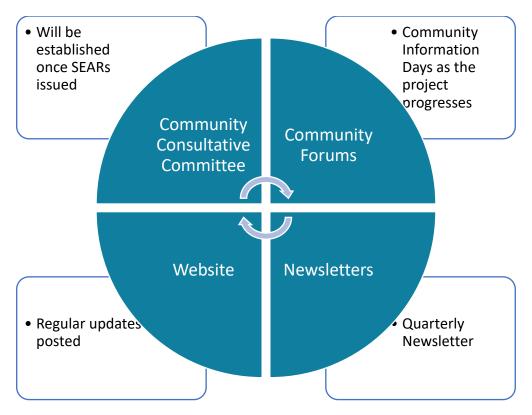
- There is an expectation that construction jobs during two years initially would increase income in hotels/general store/service station/takeaway.
- Creation of 34 jobs during project lifetime potentially increasing pre/primary school sustainability and participation in community groups, injected income from the project into community projects.

## General Interest:

- Residents along Morrisons Gap road and Shearers road complained about the poor telecommunications in the area and requested installation of a mobile phone tower to service the area
- More information was requested on layout, turbine types and sizes and transmission line route and structures required.
- Regular community updates were requested and representation by certain community members in a community consultative committee.
- Was there a greater risk of fires during construction and operation
- Neighbouring landowners to the project current use aerial methods for fertilising their land. Concern was raised as to whether this practise can continue and if not the impact on the value of their land
- Certain residents with a greater viewshed of the proposed development corridor raised concerns of reduced property values
- Suggestions to reduce the size of the project to just provide power to Nundle and surrounds rather than the whole state.
- Further information on whether turbines will require aviation lighting.
- It was suggested we include Solar in the project is it was not as significant visual impact.
- Concern the technology would be outdated in 5-10 years
- Concern wind power is more expensive than traditional power
- Interest from some of the community in how they can benefit from being allowed to invest in the project.
- There was concern raised of the potential proximity of turbines to lifestyle blocks on Morrisons gap road in the north of the site, particularly with regard to dust during construction and operational transport routes, visual impact, noise and shadow flicker. It was requested that turbines are located further down the ridge given the extent of ridgeline available.
- How can the community benefits offered through the community enhancement fund be ensured to be paid by the company

## 5. Community Communication Plan

It has been advised to maintain several mediums of communication to continue to provide information to the community. The following was recommended by IE to WEP to maintain information flow regarding the project to the community.



During meeting contact details were collected in order to provide the community with regular updates in their preferred medium. It is understood that WEP will be using these channels to continue to communicate updates on the project.

Further to formal communication channels as discussed above, Inclusive Engagement continue to maintain ongoing contact with the community as key contacts. It is estimated that we have received over 200 phone calls from communities members in the lead up and following the public meetings.

# 6. Ongoing Community Engagement Strategy by Project Development Period

The following ongoing engagement strategies have been advised to Wind Energy Partners based on key milestones of the project:

Category of Stakeholder and Sub-Group	Objective	Medium
1. Pre-Submission of Preliminary Environmental A	Assessment	
Category 1 - landholders directly or with the potential to host wind turbines, substations, site access and transmission line infrastructure	As discussed in the body of this docume	ent above
Category 2 - Adjacent landholders to the supplied development corridor generally within the 3km as per the NSW wind farm guidelines  Category 3 – Local Community around Hanging Rock		
and Nundle  Category 3 – Tamworth Council, Nundle Business and Tourism Marketing Group, Lions, CWA, Rotary, relevant government departments  Category 2 – Media and broader community ground		
Category 3 – Media and broader community around		
Tamworth Local Government Area.	cement Poquiroments	
2. Following receipt of State Environmental Asses Category 1 - landholders directly or with the potential to host wind turbines, substations, site access and transmission line infrastructure Category 2 - Adjacent landholders to the supplied development corridor generally within the 3km as per the NSW wind farm guidelines	Ensure timely updates are received that might directly affect property Ensure there is consultation during the scoping and execution of impact assessment work where this is relevant to potentially affected properties Provide an opportunity to guide the project design such that concerns are understood and assessed by WEP	<ul> <li>One on one meetings</li> <li>Newsletters,</li> <li>Website updates</li> <li>CCC Membership</li> </ul>
Category 3 – Local Community around Hanging Rock and Nundle	Ensure factual information is available at all times for the community	<ul><li>Newsletters,</li><li>Website updates</li><li>CCC Membership</li></ul>

Category 3 – Tamworth Council, Nundle Business and Tourism Marketing Group, Lions, CWA, Rotary, relevant government departments	Provide this in forums that suit a range of stakeholders where internet is not always the most convenient way to receive.  Maintain regular contact based on major project milestones being achieved and communicating progress towards milestones. Ensuring that project information is shared early Collaboration to ensure existing interests are understood and the impact and opportunities and impacts for these groups are discussed regularly Provide an opportunity to guide the project design such that concerns are understood by WEP	-	One on one meetings Website
Category 3 – Media and broader community around Tamworth Local Government Area.	Provide regular updates of the project progress and relevant opportunities that may be available for the broader community.	1	Website and press releases
3. Prior to submission of Environmental Impact Assessment as further assessment on layout and suitable turbine is assessed			
Category 1 - Landholders directly or with the potential to host wind turbines, substations, site access and transmission line infrastructure  Category 2 - Adjacent landholders to the supplied development corridor generally within the 3km as per the NSW wind farm guidelines	Ensure timely updates are received that might directly affect property Provide an opportunity to guide the project design such that concerns are understood and assessed by WEP	- - -	One on one meetings Newsletters, Website updates CCC Membership

Category 3 – Local Community around Hanging Rock and Nundle	Ensure factual information is available at all times for the community Provide this in forums that suit a range of stakeholders where internet is not always the most convenient way to receive.	<ul><li>Newsletters,</li><li>Website updates</li><li>CCC Membership</li></ul>
Category 3 – Tamworth Council, Nundle Business and Tourism Marketing Group, Lions, CWA, Rotary, relevant government departments	Collaboration to ensure detailed impact assessments are clearly communicated to specific groups Provide opportunities for two-way communication and discussion on areas of the impact assessment that cause concern or require further explanation.	<ul><li>One on one meetings</li><li>Website</li></ul>
Category 3 – Media and broader community around Tamworth Local Government Area.	Provide regular updates of the project progress and relevant opportunities that may be available for the broader community.	- Website and press releases
Following Submission of Environmental Impact Asses	ssment (EIS) and during public exhibiti	on of EIS
Category 1 - landholders directly or with the potential to host wind turbines, substations, site access and transmission line infrastructure  Category 2 - Adjacent landholders to the supplied development corridor generally within the 3km as per the NSW wind farm guidelines	Provide an opportunity for questions to be asked directly about the details in the EIS	- One on one meetings
Category 3 – Local Community around Hanging Rock and Nundle	Ensure the broader community is aware the detailed assessment is available and how they can learn more about this and ask questions.	<ul><li>Community Forums</li><li>Website</li><li>Media</li></ul>
Category 3 – Tamworth Council, Nundle Business and Tourism Marketing Group, Lions, CWA, Rotary, relevant government departments	Provide a link to the Major Projects website and an opportunity to discuss	<ul><li>One on one meetings</li><li>Newsletters</li></ul>

	any queries before lodging any responses.				
Category 3 – Media and broader community around Tamworth Local Government Area.	Provide information to the broader community that detailed assessments are available for review on the Major Projects website	- Website and press releases			
Following determination by the Department of Planning and Environment					
To be determined through project evaluation period and responses from key stakeholders through the assessment of state environmental assessment requirements.					

## The Northern Daily Leader, 4th April 2018

#### Hanging Rock urges Nundle to consider wind farm jobs by Jamieson Murphy



WHILE businesses in Nundle are concerned about the impact the proposed \$600-million wind farm will have on tourism, the Hanging Rock community is weighing up the potential jobs.

The development would create 270 jobs during its 18 to 24 month construction phase, with a further 34 ongoing jobs to operate and maintain the wind farm.

Fifth-generation Hanging Rock resident Luke Brand is an engineer by trade and only gets to spend weekends in the town, because he commutes to Sydney for work.

"It's difficult to find good, steady, ongoing work in this area and its surrounds," he said.

"It's not every day that a \$600 million development lands on your back door.

"It'll bring a lot of construction work, along with a lot of long-term well-paying jobs – 32 jobs spread across Nundle and Hanging Rock would be an extraordinary opportunity for our two towns."

Mr Brand urged Nundle businesses to consider more than just the potential tourism impacts.

"I would welcome the long-term economic benefits of substantial employment – tourism ebbs and flows, but the stable employment will be around for decades," he said.

Bruce Moore lives on a property 20km out of Hanging Rock, and installed his own 50m-tall wind turbine nine years ago.

He sought to ease some of the common concerns being raised.

"In nine years, we've not found one dead bird or bat," Mr Moore said.

"It's 80 metres from by bedroom window, and it has no noise impact."

Mr Moore said while a "small nucleus" of Nundle residents had already voted against the project, the community had a responsibility to closely consider it from both sides.

"I would encourage people to look at the positives, rather than just the negatives," he said.

"The traffic flow through Hanging Rock will change the daily routine of the community, but if the road gets upgraded as a result, there's the positive.

"Nundle businesses are worried about tourism, but if they get on the front foot and explore all the avenues, it could have a positive tourism impact."

Gerry Chan has lived in Hanging Rock with his wife for 17 years.

"It's God's country - but we don't want everyone to know that," he said, laughing.

"For myself personally, I see the wind farm's positives outweighing the negatives."

"With renewable energy, we're doing our little bit to leave this planet a bit clean than it is at the moment."

Weblink: <a href="http://www.northerndailyleader.com.au/story/5314760/hanging-rock-urges-nundle-to-consider-wind-farm-jobs-over-tourism-impact/">http://www.northerndailyleader.com.au/story/5314760/hanging-rock-urges-nundle-to-consider-wind-farm-jobs-over-tourism-impact/</a>

Last Accessed: 11th April 2018

## The Northern Daily Leader, 6<sup>th</sup> March 2018

#### Nundle says \$600m wind farm won't divide community, by Jamieson Murphy



FULL HOUSE: Nundle resident Shawn Stone speak to the audience. To the left, some of the turbines at White Rock Wind Farm near Glen Innes, which are similar to the Nundle proposal. Photos: Megan Trousdale /Peter Hardin

A \$600-million wind farm on the picturesque hills above Nundle is bound to stir up emotions, but the town has vowed not to let the issue divide it.

More than one-third of the town's population turned out to a public meeting about the proposed development, which would see up to 98 wind turbines, each standing at 220-metres-tall, stretch along 20 kilometres of ridgeline from Hanging Rock to Crawney, south east of Nundle.

Nundle Business Tourism and Marketing Group chair Nick Bradford said for many residents it was their first time hearing about the Wind Energy Partners proposal.

"For a town of less than 300 people to get 110 people turn up to a meeting, it obviously means it's sparked people's attention," Mr Bradford said.

He stressed that despite the emotive nature of the proposal, the "brilliant meeting" was "very respectful of people's differing opinions".

"This is a community who cares," Mr Bradford said.

"You cant buy that, you can't engineer that. It's just something that is inherently in the people who live here."

Advocates on both sides of the debate spoke to the crowd, touching on the common theme of the economic benefits to the region and the proposal's visual impact on the town.

"The Nundle township does not finish where the houses finish, our brand and our identity are our hills of gold that extend to the ridge," Mr Bradford said.

"Some people may think that 98 wind turbines up there may not look attractive. Some may think differently."

Mr Bradford described himself as a "fence sitter", and hoped the community maintained an open mind to the project.

"We'll find out a lot more information during two community meetings with the developer at the end of the month," he said.

The meetings will be held on March 22 and 23.

The Leader understands Wind Energy Partners takes the first step in getting the project off the ground at the end of the month, applying to the state government for its Standard Secretary's Environmental Assessment Requirements (SEARs). Environmental studies are also expected to take place this year.

Wind Energy Partners spokesman Jamie Chivers said the company looked forward to continuing its discussions with the community.

"The Hanging Rock and Nundle area has a rich history and could have an exciting future," Mr Chivers said.

"We are proposing to develop a wind farm following a feasibility study that proves the hills of gold are windy too."

Weblink: http://www.northerndailyleader.com.au/story/5267690/nundles-hills-of-gold-scouted-for-600m-wind-farm/

Last Accessed: 11th March 2018

## The Northern Daily Leader, 8th March 2018

### Nundle mulls wind farm benefits, jobs and visual impact, by Jamieson Murphy



PICTURESQUE: The main concern about the proposal is about the visual impact it will have on Nundle's hills of gold. Photo: Megan Trousdale

THE proposed \$600-million wind farm near Nundle would bring more than 300 jobs to the region, the project's developer says.

The 98-wind turbine proposal from Wind Energy Partners would need a workforce of 272 during its 18 to 24 month construction phase.

Once completed, there would be up to 34 ongoing jobs to operate and maintain the wind farm over its 25-year lifetime.

There is also the potential for the project to include a solar farm, located on Lindsays Gap Rd, near Old Wallabadah Rd, towards the New England Hwy.

Wind Energy Partners have suggested it would create a community investment fund, to give back to the region around the wind farm.

"Discussions have been held with special interests groups to understand how the project could enhance the existing local heritage and tourism industry," a Wind Energy Partners' spokesperson said.

"Furthermore, Wind Energy Partners will engage with community leaders in Nundle and Hanging Rock to discuss how a dedicated community fund could support local initiatives such as education, tourism, health of other community special interests."

The Nundle community is still weighing up the pros and cons of the development. The major point of contention is the visual impacts of the project.

The wind turbines would stand at 220-metres-tall, stretching along 20 kilometres of ridgeline from Hanging Rock to Crawney, south east of Nundle.

More than one-third of the town's 300 people turned up to a community meeting about the development on Monday. Two more community meetings will be held in the town on March 22 and 23.

#### **QUICK FACTS**

- \$600 million project
- 272 jobs during construction
- 34 ongoing jobs
- 18-24 months to build
- 25-year lifetime
- Could include solar farm
- Possible community investment fund

Weblink: http://www.northerndailyleader.com.au/story/5272578/nundle-wind-farm-would-bring-more-than-300-jobs-to-region/

Last Accessed: 11th March 2018

## **About Inclusive Engagement**

## John Willcox – Principal Consultant

John was raised on a small crops farm in Bowen NQ (and supports the NQ Cowboys!). He has spent his professional career as an agronomist, change management consultant and a CEO for two large agribusinesses.

John and his wife Christine began their careers in the Emerald Irrigation Area solving problems with a new Irrigation Scheme on a daily basis associated—understanding Irrigation Scheduling and Pest Management, salinity and farming systems.

In addition to expertise in agronomy, irrigation and extension and adoption practices, John developed his commercial and business skills running a consulting business, then as Regional Manager of CottCo Ag Sales, and more recently as CEO of two large agribusinesses. Both of these CEO positions involved substantial restructuring and repositioning of the companies.

John is an expert in stakeholder engagement and change management. This is evidenced by the success of the several initiatives he has been involved with - the Water Use Efficiency Initiative, the "Target 10 Tonne' change management program for Indonesia's largest sugar producer, and the success of the Landholder Relations Team he managed for a major gas company. His philosophy is to achieve inclusion, empowerment and ownership of all stakeholders. This involves creating a clear understanding of agendas through honest, open discussion and the dovetailing of outcomes to achieve common ground.



#### **Christine Willcox - Consultant**

Christine has had a long and successful career as an agricultural and change management consultant. She is a qualified Irrigation Agronomist and was the first female cotton consultant in Queensland. She spearheaded the adoption and implementation of integrated pest management strategies and pioneered irrigation scheduling based on crop water use models, neutron probes and, more recently, capacitance probes.

She has extensive experience in project design, management, implementation and review. Christine was a key member of the initial Rural Water Use Efficiency Initiative - a highly successful change management program on water reform for the Australian Sugar Industry. She was part of the McKinsey & Co Sugar Team that restructured Indonesia's largest sugar producer, taking it to World Best Practice in two years. As part of this initiative Christine was solely responsible for designing, managing, negotiating and implementing a pest management program across 65,000 ha – a world first.

In addition to driving change management and capacity-building programs, Christine has great organisational and administrative skills. She recently completed a contract as Business Coordinator for a major CSG company, setting up systems and procedures to handle the rapid growth of the CSG industry.

On top of her professional career, Chris is the founder and manager of one of Australia's significant Arabian Performance Horse Studs – Aqaba Arabians. She enjoys passing on her skills and knowledge to the new custodians of her lifelong passion for horses – her three grandchildren!





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# **APPENDIX E COMMUNITY CONSULTATION SURVEY**



# Nundle Renewable Energy Park

## **Local Community Consultation Survey**

Survey Purpose: The region of Nundle is rich in natural resources presenting a high potential for renewable energies. These include solar PV and wind turbines.

The purpose of this survey is to understand the attitudes towards renewable energy in the Nundle community.

#### Introduction:

The number of renewable energy projects in Australian is increasing on account of state and federal policies encouraging the uptake of renewable technologies to reduce greenhouse gas emissions and now because it is cheaper than alternate coal and gas projects. Renewable energy facilities are designed and located to take advantage of the available resources. The facilities also need to be reasonably close to existing electrical grid infrastructure in order to economically deliver to consumers the electricity they generate.

They are many different type of renewable facilities that can produce green electricity. Solar farms, wind farms, hydroelectric power plants or biomass power plants are the most commons.

The development of renewable energy projects can take 5-10 years given the importance of studying the available resources and the suitability of different technology of their long lives. These types of projects are design for 35 years with the potential for longer in some circumstances.

It is important to understand values within the community and ensure that these are taken into consideration in the concept design, construction and operational phase of projects.



This questionnaire has been made to group information on the Nundle community opinions on renewables.

The Survey
About the survey:
The survey comprises multiple choice and open-ended questions and should take approximately 10-15 minutes to complete.
Who should complete it:
The survey is designed for a wide range of persons from the community to assess views and opportunities that might be created by a renewable energy park in the region. Key participants should include residents, local landowners, local businesses with or without the skills to contribute, elected and community leaders, local interest groups who perhaps have an interest in tourism, the environment or sustainability.
What's next
Results of the survey will be taken into consideration for preliminary concept design of a renewable energy project and allow Someva to directly feed information to the project developer and investors. It will create a preliminary understanding of the community concerns and help provide us and the government form a view as to how to proceed with a minimum impact.
Questions about the Nundle Wind Farm
Note: Some of the survey's questions can expect more than one answer
Question 1:
What is your relationship with the Nundle community?
<ul> <li>You own a business in Nundle, Hanging Rock or Crawney</li> <li>You are an employee of a business in Nundle, Hanging Rock or Crawney</li> <li>You are a locally elected</li> <li>You are a local landowner</li> </ul>
☐ You are a resident of Nundle
You are a resident of Hanging Rock
<ul> <li>✓ You are resident of Crawney</li> <li>☐ You are planning to acquire a property in Nundle, Hanging Rock or Crawney</li> <li>☐ Other:</li> </ul>
Question 2:
Have you ever seen a renewable energy facility?
☐ Yes☐ No

Question 3:
What kind of facility was it?
<ul> <li>□ A Solar Farm (Thermal or Photovoltaic)</li> <li>□ A Hydroelectric Dam</li> <li>□ A Wind Farm</li> <li>□ A Biomass Power Plant</li> <li>□ Other, it was</li> <li>□ I have never seen a renewable energy facility</li> </ul>
Question 4:
What did you like about that/these energy facility(ies)
<del></del>
☐ I have never seen any
Question 5:
What did you dislike about that/these energy facility(ies)
☐ I have never seen any
Question 6:
The Australian Government is committed in environmental objectives including the Renewable Energy Target which is designed to require 23% of all electricity from renewables and the Paris agreement which is global commitment to carbon dioxide reduction.
Do you think Australia should have entered into these agreements?
☐ Yes ☐ No because

Question 7:
In addition, with these engagements, traditional Australian electricity power plants like coal facilities are aging and scheduled for retirement. This decommissioning of thermal generation capacity will create a need for new energy. Do you think renewable installation combined with battery storage or pumped hydro storage facilities can replace traditional types of coal and gas generation?
☐ Yes ☐ I am not sure ☐ Not at all, this type of production can't be reliable
Question 8:
Do you think renewable energy facility is economically an opportunity for Nundle and that new opportunities will be created?
☐ An Opportunity ☐ A threat to existing business ☐ I'm indifferent
Question 9:
Please expand on your comments in question 8 if you would like to add more information
☐ I believe that
Question 10:
If you were a member of the authority giving approval for a renewable energy power plant installation, what would be the most important request(s) you would ask to the developer to undertake?
☐ I would ask the developer to prioritise
☐ I don't really know
Question 11:  As a member of the Nundle Community or around, would you be in favour of a renewable energy power plant
installation in the area?
☐ Yes ☐ No

Question 12:
What kind of benefits would you expect the Nundle region from a renewable energy installation?
would expect
Question 13:
Are you aware of any endangered or threatened species of flora and fauna in the vicinity? If Yes please specific pecies and any information to help us assess.
Question 14:
Oo you visit any particular landscape features regularly or are there any features of the landscape you value highly?
Question 15:
Are you aware of any aboriginal or European cultural heritage sites? If 'yes' please provide us information to dentify areas of significance.
Question 16:
f a community consultation committee would be formed to discuss about any project, would you be interested in being a community representative to represent the local community interests?
☐ Yes ☐ No
f yes, please enter your contact details bellow to let us contact you to move forward.
Name: First Name:
Address Phone Number: email address

Question 17:	
Do you think this survey was useful a public opinion on renewables?	and its questions were relevant for a first community approach to understand
☐ Yes	
	e
in No, i believe you should have	T
If you are interested in staying informule please either complete your details of details.	cus on trying to find the best way to create benefits for the Nundle community ect.  med about any potential renewable energy project updates and opportunities on this form or alternatively email <a href="mailto:jamie.c@someva.com.au">jamie.c@someva.com.au</a> with your contact  First Name:
Address	
Phone Number:	email address:
Property Description DP/Lot Number	(if known)
Thank you for your time and conside	ration,
Jamie Chivers	
Development Manager	
0423 336 345	



Someva Pty Limited

36 threatened fauna species and

5 threatened flora species likely to occur in the proposed project area.

HOGPI engaged a respected local ecologist to review the PEA and he recommended:

- 1. Minimal clearing of roadside vegetation, proposed project area turbine locations and tracks, and transmission line easement to reduce loss of nesting sites, food sources, shelter, foraging areas, and species decline.
- 2. Vegetation must be mapped to identify and avoid where endangered ecological communities occur.
- 3. Before any clearing of roadside vegetation, proposed project area turbine locations, or transmission line easements, sites are to be thoroughly searched for threatened plants and animals.
- 4. 16 of the threatened animals likely to occur are dependent on tree hollows for nesting, roosting or denning.
- 5. Clearing of hollow trees is to be avoided and removing tree hollows and compensating with nesting boxes is not supported.
- 6. Conduct surveys of roadside vegetation, proposed project area turbine locations and tracks, and transmission line easements allowing seasonal timing to identify threatened species likely to occur.
- 7. Where possible the proposed project area existing and new clearing is to be regenerated to allow for connectivity and funnel birds and bats away from turbines (threatened species recorded, Flame Robins, Greated glider, Spotted-tailed quoll, Koala would benefit from increased connectivity).
- 8. Obtaining offset land remote to the proposed project area is not supported, nor is cash contribution to the government to obtain offsets.
- 9. Disturbing streams and adjoining forest must be avoided to preserve Davies Tree Frog occurring from high altitude down to 750m, and Booroolong Frog occurring in low altitude streams up to 750m.
- 10. Engage independent bat and bird experts over a minimum period of 12 months, recording unique factors at each tower location taking into account changes in topography, elevation, vegetation communities and flora and fauna species. Community to determine independent bat and bird expert, providing feedback to the community before the EIS completed.
- 11. For each bird species at each tower location study movements to determine migratory paths, seasonal foraging areas, nesting areas, flight heights and flight paths of migratory insects.

- 12. Survey raptor nesting sites, and study raptor use of wind updrafts on ridge tops and where they use updrafts.
- 13. Study which other birds use wind updrafts on ridge tops and where thy use updrafts.
- 14. For each bat species at each tower location study seasonal activity and foraging areas, roosting sites, flight heights, use of wind updrafts on ridge tops and identify migratory paths and/or commuting corridors.
- 15. For each bat species study bat foraging activity as related to wind speed.
- 16. Study insect use of updrafts on ridge tops.
- 17. Survey raptor nesting sites, and study raptor use of wind updrafts on ridge tops and where they use updrafts.
- 18. The 91m set back from 9km boundary with Ben Halls Gap Nature Reserve, with up to 20 turbines proposed on its fence line, is not supported.
- 19. Remnant open forest east and west of the proposed turbine ridgeline, and adjoining Ben Halls Gap Nature Reserve with a high abundance of threatened species should be buffered by at least a 500m setback.
- 20. It is expected that setbacks will be increased to 500m for locations of known threatened bird and bat habitat and nests of raptors and owls and bat roosts.
- 21. Researchers recommend a distance of at least 80m from the blade tip to the canopy of hollow-bearing trees to reduce blade strike risk to birds and bats.

Table 1. Threatened plants recorded in the Nundle area

Scientific Name	Common Name	NSW status	Comm. status	Records	Included in EPBC Referral Report and ARUP/Biosis biodiversity surveys?
Eucalyptus oresbia	Small-fruited Mountain Gum	V		31	Y
Eucalyptus rubida subsp. barbigerorum	Blackbutt Candlebark	V	V	2	Y
Chiloglottis platyptera	Barrington Tops Ant Orchid	V,P,2		1	Y
Tasmannia glaucifolia	Fragrant Pepperbush	V	V	1	Y

Tasmannia purpurascens	Broad-leaved Pepperbush	V	12	Y

Table 2. Threatened fauna likely to occur in the Nundle region divided into likely habitat groups

Scientific Name	Common Name	NSW status	Comm. status	Likely Habitat	Included in EPBC Referral Report?
Litoria booroolongensis	Booroolong Frog	E1 <b>,</b> P	Е	Low streams	Y
Litoria daviesae	Davies' Tree Frog	V,P		High streams	Y
Haliaeetus leucogaster	White-bellied Sea- Eagle	V,P	С	River - Dam	Y
Miniopterus schreibersii oceanensis	Eastern Bentwing-bat	V,P		Caves -mines	Y
Hieraaetus morphnoides	Little Eagle	V,P		Low woodlands	Y
Lophoictinia isura	Square-tailed Kite	V,P,3		Low woodlands	Y
Falco subniger	Black Falcon	V,P		Low woodlands	N
Climacteris picumnus victoriae	Brown Treecreeper	V,P		Low woodlands	Y
Artamus cyanopterus cyanopterus	Dusky Woodswallow	V,P		Low woodlands	Y
Melanodryas cucullata cucullata	Hooded Robin	V,P		Low woodlands	Y
Stagonopleura guttata	Diamond Firetail	V,P		Low woodlands	Y
Chthonicola sagittata	Speckled Warbler	V,P		Low woodlands	Y
Petaurus norfolcensis	Squirrel Glider	V,P		Low woodlands	Y
Nyctophilus corbeni	Corben's Long-eared Bat	V,P	V	Low woodlands	Y
Pteropus poliocephalus	Grey-headed Flying- fox	V,P	V	Low woodlands	Y
Lathamus discolor	Swift Parrot	E1,P,3	CE	Low woodlands	Y
Neophema pulchella	Turquoise Parrot	V,P,3		Low woodlands	N
Melithreptus gularis gularis	Black-chinned Honeyeater (eastern subspecies)	V,P		Low woodlands	N
Uvidicolus sphyrurus	Border Thick-tailed Gecko	V,P	V	Low woodlands	Y
Anthochaera phrygia	Regent Honeyeater	E4A,P	CE	Low woodlands	Y
Glossopsitta pusilla	Little Lorikeet	V,P		Forests & woodlands	Y
Ninox connivens	Barking Owl	V,P,3		Forests & woodlands	N
Tyto novaehollandiae	Masked Owl	V,P,3		Forests & woodlands	Y
Daphoenositta chrysoptera	Varied Sittella	V,P		Forests & woodlands	Y
Phascolarctos cinereus	Koala	V,P	V	Forests & woodlands	Y
Calyptorhynchus lathami	Glossy Black-	V,P,2		High forests	Y

	Cockatoo				
Ninox strenua	Powerful Owl	V,P,3		High forests	Y
Tyto tenebricosa	Sooty Owl	V,P,3		High forests	Y
Pachycephala olivacea	Olive Whistler	V,P		High forests	Y
Petroica boodang	Scarlet Robin	V,P		High forests	Y
Petroica phoenicea	Flame Robin	V,P		High forests	Y
Dasyurus maculatus	Spotted-tailed Quoll	V,P	Е	High forests	Y
Petauroides volans	Greater Glider	P	V	High forests	Y
Petaurus australis	Yellow-bellied Glider	V,P		High forests	Y
Falsistrellus tasmaniensis	Eastern False Pipistrelle	V,P		High forests	Y
Scoteanax rueppellii	Greater Broad-nosed Bat	V,P		High forests	Y



## Australia's 82 operational wind farms are delivering significant financial and social benefits to their host communities.

- Wind farm construction has delivered an economic boost of almost \$4 billion to regional Australia—over half of this in the last five years. Wind farms under construction now are injecting a further \$1.6 billion in economic activity into the regional economy.
- ≅ The 2GW of new wind farm capacity currently under construction have created an estimated 1,950 direct local jobs and a further 4,500 indirect jobs in local businesses that supply to the projects.
- Across the 25-year life span of Australia's existing wind farms and wind farms under construction, an estimated \$10.5 billion could be delivered to host communities.

Sharing these benefits equitably with local host communities ensures these projects generate not just much-needed clean energy, but also strengthen the social and economic health of regional Australia.

For the first time, Building Stronger Communities: Wind's growing role in regional Australia presents a list of wind farm Community Enhancement Funds across the nation and illustrates the direct and indirect financial and social benefits to Australia's regional communities from wind power.

Between \$19 and \$21.5 million goes directly into regional communities every year through payments to host landholders and wind farm Community Enhancement Funds (CEFs). With fourteen more wind farms under construction, that annual figure will increase to between \$30 and \$32.5 million.

From 2019, Community Enhancement Funds will make available \$2.5 million annually for community projects. A diverse range of other benefit sharing mechanisms will see additional payments go to neighbouring landholders, local councils and community shareholders.

If the 70-plus wind farms in the development pipeline are constructed, more than \$7 million could flow into regional communities through CEFs alone each year.

Wind farms are playing an increasingly important role in regional communities. With the right Federal and State policy settings, wind farms, and other renewable energy projects, can become an even stronger part of regional community life.

As Australia builds enough new wind power to meet the 2020 Renewable Energy Target and the rapidly falling cost of wind energy drives new installation, regional Australia should continue to benefit.

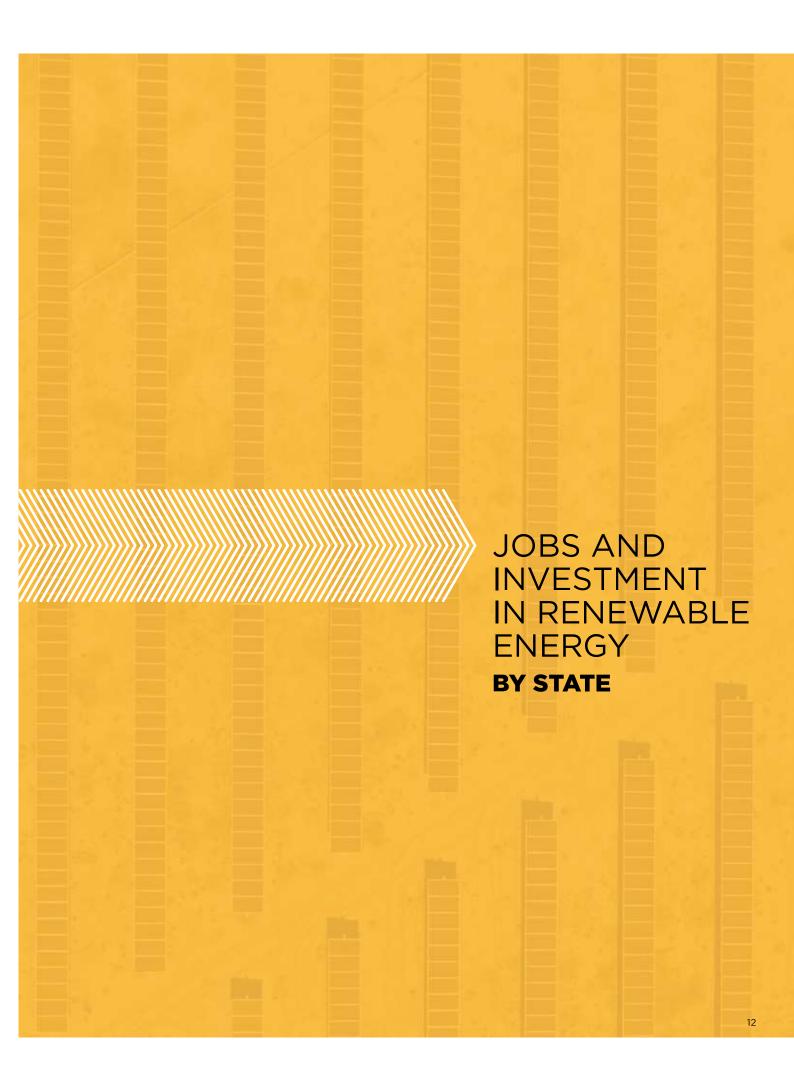
However, the current National Energy Guarantee (NEG) is unlikely to create a stable investment environment for renewable energy projects and could leave regional areas out in the cold.

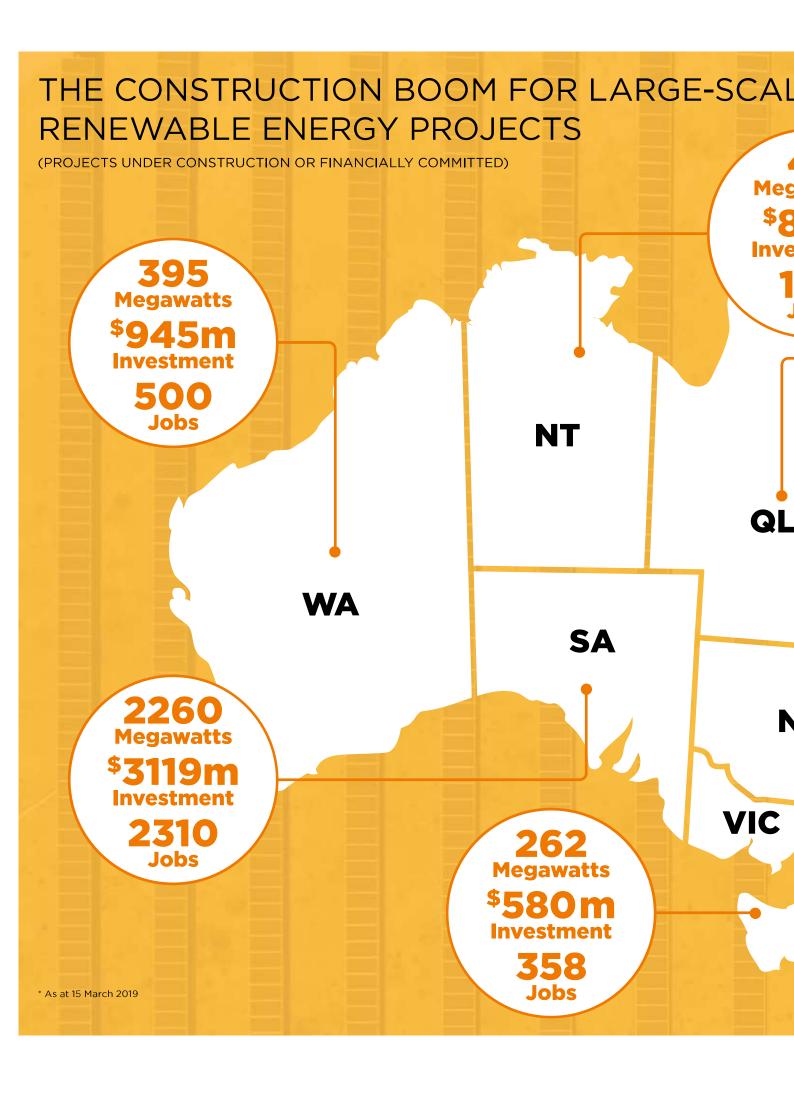


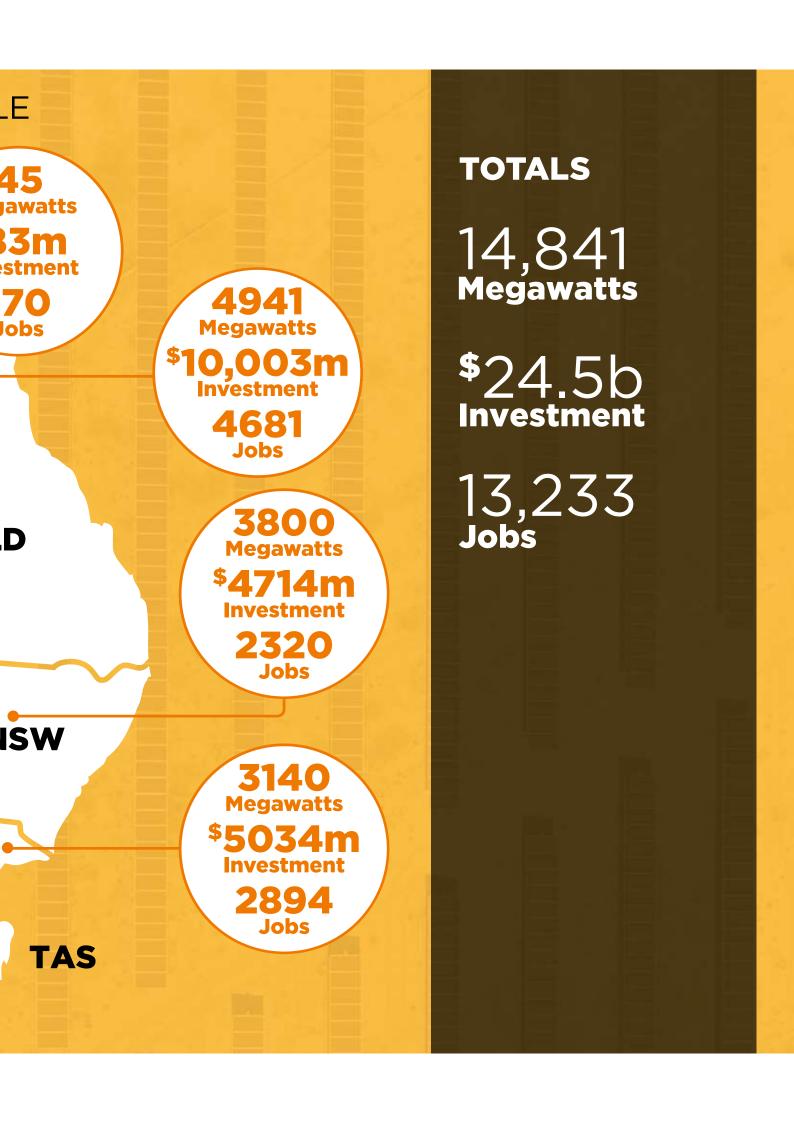












Minutes: Minutes of the 4<sup>th</sup> Meeting of the Hills of Gold Windfarm Community Consultative Committee (CCC)

Wednesday, 1 April 2020

Held VIA Dial-in Teleconference

Members Present: Jamie Chivers (Wind Energy Partners); Mike Stranger (Wind Energy Partners); Sandra Agudelo (Wind Energy Partners); Bruce Moore; Ian Worley;

Michael Chamberlain; Margaret Schofield; Megan Trousdale (Nundle Business Tourism & Marketing Group Representative); John Krsulja (Hills of

Gold Preservation Inc Representative)

**Apologies:** Peter Schofield; Kay Burns (Tamworth Regional Council); Donna Ausling (Liverpool Plains Shire Council); Christine Robinson (Upper Hunter Shire

Council)

**Independent Chair:** David Ross

**Secretary:** Corinne Culbert

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	
	Meeting commenced at 6:30pm.	
1.	David outlined the ground rules for running the meeting via teleconference. Before asking questions, please pause to prevent unnecessary interruptions. When asking a question, firstly identify yourself.	
	Discussed apologies and having an alternate where necessary.	
	Declaration of Pecuniary or Other Interests	
2.	David advised that he was paid a fee to chair the meeting as is Corinne for taking the meeting minutes.	
	Business Arising from Previous Meeting	
3.	WEP to come back to the CCC with the full correct Lot numbers listed. These amendments are to be shared with the CCC.	WEP to advise correct Lot numbers.
	Previous Minutes	
	Minutes were issued in draft form and then in final form after the last meeting. It was also noted that the minutes can be reviewed via the HOG website under the community page.	DR to change agenda template so that numbers 4. & 3. are
	Minutes to be reissued with the Agenda before the upcoming meeting.	swapped around.
4.	Questioned why number 4 "Previous Minutes" is after 3 "Business Arising". The CCC is requesting they be swapped around. While the current format complies with the CCC guidelines, David is happy to swap the items around.	DR to attach the previous minutes with the upcoming meeting
	The Barnard River Wild Dog Management Plan was scheduled to be finalised on 10 February. It was advised by a community member that the relevant committee are yet to meet to sign the document. It is going forward but still pending.	agenda.
	It was agreed by all in attendance at the 3 <sup>rd</sup> meeting that the Previous Minutes were true and correct.	
5.	Correspondence	

Agenda Item	Discussion	Action/By Whom
	Raised in Agenda Item 3 (C) Transport Route Assessment. Observed by a community member that report requested but not yet received. Advised by Jamie that what has been assessed to date covers several route options. There will be a lot more information available to the CCC once the traffic and transport assessments are conducted. It is proposed that information will be provided in August 2020 once complete.  Community member noted that, at the CCC meeting held on 18 September, on pages 32, 33 & 34 of the presentation that a desktop survey was undertaken on 18 June 2019 by specialist transport contractors. The CCC would like to be provided with the preliminary transport surveys that have already been undertaken. Jamie advised that Traffic and Transport are still to undertake their surveys and thereafter a preferred route will be advised. Upgrade details are unable to be provided until it is finalised.	
	Letter from Teresa Eather of HOGPI. Complaint made against the social and visual assessment. Regarding the timing and delivery of the turbine layout. Disappointed as to the timing of receiving the information. Mike noted that a response is in the process and forthcoming. A response to HOGPI and shared to CCC by end of next week and will be a response to the various points raised within the letter.	WEP to respond to HOGPi letter by this time next week.
	Email from Anthony Ko to a committee member. He outlined that the Wind Energy Guidelines recognise that there are circumstances that may require further visual assessment investigations due to topography or other landscape features. It is expected that the EIS will assess the visual impacts to dwellings and other sensitive receivers located beyond 3km from the nearest turbines.  Subsequently, a community member asked what is the methodology for the visual assessments? What sites are identified for the montages? Jamie responded that viewpoints outside 3km will be assessed. Feedback taken from the community and surveys have been undertaken. A list of public places where photo montages were requested has been provided through surveys and consultation. Considering residences and public viewpoints outside of 3km will be undertaken. Opportunities for these photo montages to be shared will be available.  A request was made by a member for the CCC to be provided with a list of where these locations will be. Mike noted that	WEP to advise CCC of list of photo montage locations.
	in April preliminary photo montages will be provided based upon some selected locations advised to WEP by the community. A list will be available to the CCC.  Update on Proposal	
6.	Agreed to send presentations out as soon as possible before meetings so the CCC can review. Hard copy of presentation to be mailed to one of the members.  Noted that Noise and Vibration will be discussed.	WEP to provide hard copy of future presentations to a member
	a. Project Update Presentation	

Agenda Item	Discussion	Action/By Whom
	Site Visit undertaken on 11 February 2020 over two visits. Northern and Eastern portions visited. Locations for construction pointed out.	
	Requested by committee members that a revised layout of the 78 turbines include highlighting as to where the concrete batching and substations will be located and have them annexed to these minutes. Indicative locations can be advised. Jamie observed that an indicative crane hard stand for turbines is 30 by 50 metres. A number of studies including geotech to be undertaken to confirm specific sizes and areas. Still unknowns as further investigations are required.  Community Survey Response – CCC raised that the timing for survey was not ideal. It was not an ideal time given the recent bushfires and therefore not a priority for the community to complete. As well as being over the Christmas and New Year period. CCC requested that it be undertaken again particularly given everyone is at home and has time. WEP advised that the surveys are still coming in and being reviewed. The survey can still be downloaded off the website. Suggested by the CCC that there is an extended deadline to complete the survey. Mike said that was reasonable and it will be communicated.	WEP to mark-up the site layout where the concrete batching, substations, battery storage facility and transmission line route as well as accommodation will be located.
	CCC requesting the survey be extended to Woolomin, Dungowan and Piallamore given the transport route.	WEP to extend the survey deadline.
	COVID restrictions will have some impact on the studies to be undertaken and this is being determined.	
	CEF Workshop undertaken on 26 February 2020. Outcome and summary outlined within slide. Mike was appreciative of the good feedback received during the workshop. CEF design being prepared to share with Councils and the CCC. Likely over the next couple of weeks and following that there will be an opportunity for further feedback from those who attended the workshop. CCC requested before publishing documents whether what is discussed is realistic. A community member noted that no clarification has been received whether the \$2500 per turbine will remain the same under the new proposed layout. Would this fund a retirement home for instance? Community has high expectations of what this fund will provide. Flyer distributed into the community and should be included. The numbers of the turbines seem to be quite varied. The timing of the workshop wasn't ideal, observed the community member.  Jamie noted that the layout is for 78 turbines and confirmed that yes it is \$2,500 per turbine. WEP is maintaining their commitment. A further commitment announcement will be made next week regarding an additional Neighbour Benefit Sharing Program. Friends of the Windfarm Group has been established and WEP isn't providing them with any information additional to what is provided to others who request it. There has been an event created by them and a request has been sent out for WEP to talk there. No information would be provided by WEP to that group that hasn't been advised to the CCC. The neighbour program will be released via the WEP website.	
	Slide 11 – Jamie discussed recent media attention on the proposal that involved committee members. The opinions shared in the member do not reflect the truth. WEP want to make it clear that no turbines are to be located in town. Jamie noted that it was claimed that the CCC are dragging the chain and comments relating to claims that the project would cause soil to fill up the creeks. A community member identified themselves as the person who was interviewed. It was noted by	

Agenda Item	Discussion	Action/By Whom
	them that they did not instigate the interview, that the interviewer was talking broadly when saying that there would be turbines "in town".	
	Media Policy – reminder only David to talk on behalf of the CCC though that wasn't an issue in this specific situation.	
	b. Discussion On-Site Layout	
	Slide 12 – WEP has provided information and collected more information to provide the preliminary turbine layout. And it is preliminary as it is constantly being updated as further information comes to hand.	
	WEP have attempted to show as clearly as possible the turbine layout.	Founds on City Minister Inc.
	Another site visit requested by community members so more of the layout can be reviewed. To particularly incorporate the western portion. Due to COVID 19 a way forward would be to contact Mike to see what can be arranged. Pencilling in a September 2020 visit at this stage.	Further Site Visit to be considered when possible.
	In response to a question, Jamie noted that the set back from the start of Ben Halls Gap Nature Reserve is 185m. That is the buffer to the turbine.	
	The EIS is scheduled to go on exhibition in December 2020.	
	A community member noted that the location of Hanging Rock Village on the layout is out by a few km and Crawney is noted as a town but isn't a town. WEP has noted that the information is downloaded from mapping software and could be corrected.	Review map for accuracy.
	In response to a series of questions from the members, Mike noted that the site boundary in red is based on the lot and deposited plan boundaries. 7 landowners have signed up to the proposal There are Crown Roads unformed and formed around the site. To the south are unformed and to the north are formed Crown Roads. A community member explained that the watershed is the Aboriginal boundary which is the tip and top of the ridge. Is the watershed affected?	WEP to review whether the watershed is affected
	Will a survey be undertaken to determine legal boundaries? Fence lines don't always follow the correct survey. WEP will undertake surveys to finalised the boundary locations. WEP aren't worried about where fence lines are located but more so who owns the land.	
	CCC requested locations of noise loggers as part of the Noise Assessment.	WEP to provide feedback on when

Agenda Item	Discussion	Action/By Whom
	Members of the committee asked who made the decision on the placement of the turbines? Jamie responded that input came from a number of consultants namely biodiversity (Biosis), ARUP, heritage (K & C) as well as landowners. Constraints were provided where they cannot go. A professional wind engineer (Wind Pioneers based in India and the UK) placed the turbines.	surveys were undertaken.
	A member asked if these consultants set foot on the site, in particular the wind engineer? WEP have advised that the wind engineer is not required to set foot. The consultants who provided inputs have attended the site.	
	Feedback to be provided as to when surveys undertaken re drought etc.	
	c. Group Discussion on Key Areas to Focus on for 2020 Meetings	
	It was decided that the visual montages and assessment and neighbour benefit sharing program would be a key discussion topic for the next meeting.	
	General Business	
	When will Neighbour Agreements or compensation to someone not hosting a turbine be advised. What is the timeline to when landowners will be approached? WEP is working of the Neighbour Benefit Sharing Program and broad compensation. Jamie noted that dates should be announced within the next week. WEP will approach the individuals. Eligibility criteria is going to be publicly available and presented to the CCC and entire community. Definitive timeline requested by CCC.	WEP to confirm timeline for contact under "Neighbour Program".
_	A community member wanted the committee to know that Supplementary SEARs were issued on 23 December 2019. It is responding to the EPBC Act referral. To be annexed to these minutes. Target species surveys to be undertaken whether the species are actually there or "might" be there. Anthony Ko confirmed that the whole area affected is included within this Supplementary SEARs.	
7.	Information regarding visual impact from aviation lighting from another CCC to be annexed to these minutes.	
	A member highlighted that there was attendance by non committee members on the site visit, which included the land owners and there was only one representative from the Council. Further, on the second site visit a community member who is not on the committee was present. WEP confirmed that the land owners were in attendance as it was their property. Regarding the community member who is not on the committee, it was an invitation by the landowners. This was not an invitation extended by WEP.  A committee member believed that the landowners were not constructive. When does the lease hold from WEP commence? That cannot be disclosed as that is under commercial confidence.	
	Termine to an action and the analysis an	WEP to respond.

Agenda Item	Discussion	Action/By Whom
	For the record, on 11 October 2019 Jamie sent an email to HOGP – proposed workshop information session with HOGP. Offer came through after WEP had lodged their EPBC so no point in having a meeting but suggested all the community attend such a meeting. No meeting was knocked back just a suggestion to include everyone. Copy email annexed hereto.	
	All agreed that the teleconference went well. This is the best way forward at present given the social distancing requirements.	David to contact Council's
	Approach Councils to see if there are alternate options for attendance.	
	Next Meeting	
8.	Teleconference requested for Wednesday, 6 May 2020 at 6.30pm	
	Meeting closed at 9.15pm	

## **Appendix 1: Actions**

Appen			
Page No	Action No	Description	Date Raised
2	1	WEP to advise correct Lot numbers as part of EPBC Referral.	1 April 2020
2	2	DR to change agenda template so that numbers 4. & 3. are swapped around.	1 April 2020
2	3	DR to attach the previous minutes with the upcoming meeting agenda.	1 April 2020
3	4	WEP to respond to letter from HOGPI by this time next week.	1 April 2020
3	5	WEP to advise CCC of list of photo montage locations.	1 April 2020
3	6	WEP to provide hard copy of future presentations to a member	1 April 2020
3	7	WEP to mark-up the site layout where the concrete batching, substations, battery storage facility and transmission line route as well as accommodation will be located.	1 April 2020
4	8	WEP to extend the survey deadline.	1 April 2020
4	9	Further Site Visit to be considered when possible.	1 April 2020
5	10	WEP to review map for accuracy.	1 April 2020
5	11	WEP to review whether the watershed is affected.	1 April 2020
6	12	WEP to provide feedback on when surveys were undertaken.	1 April 2020
6	13	WEP to confirm timeline for contact under "Neighbour Program".	1 April 2020
6	14	WEP to respond to email dated 11 October 2019 between Jamie and HOPG.	1 April 2020
6	15	David to contact Council's about alternate options to ensure they have someone in attendance.	1 April 2020



# Meeting Agenda



- 1. Introduction and apologies
- 2. Declaration of pecuniary or other interests
- 3. Business arising from previous meeting
- 4. Previous minutes
- 5. Correspondence
- 6. Update on Proposal
  - Site visit summary
  - Community Survey #2 Summary
  - Community Enhancement Fund (CEF) workshop summary
  - Hills of Gold project in the Media
  - EIS timetable
  - Updated 78 WTG layout
  - Landscape and Visual Update
  - Noise and vibration Update
  - Socioeconomic Update
- 7. General Business
- 8. Next Meeting

# Review/Actions from December CCC



Page No	Action No	Follow up Action	Date	Result of Follow up Action
2	18	MS to provide letter as to why access was denied to some members.	Meeting 3 – 10 Dec 2019	Completed. Letter provided to CCC via email 3 <sup>rd</sup> February 2020. (Letter included as exhibit)
2	19	DR & MS to prepare email relating to Site Visit ASAP.	Meeting 3 – 10 Dec 2019	Site visit completed via 2 hosted site visits on the 11 <sup>th</sup> February 2020 (Site Visit re-visited later in Update on Proposal section)
3	20	WEP to update the website to reflect to accurate population for Tamworth.	Meeting 3 – 10 Dec 2019	HoG website update completed 15 <sup>th</sup> Dec ( <a href="https://www.hillsofgoldenergy.com/news-and-updates">https://www.hillsofgoldenergy.com/news-and-updates</a> ) and Scoping Report on NSW DPIE website updated 17 <sup>th</sup> Dec 2019 ( <a href="https://www.planningportal.nsw.gov.au/major-projects/project/9701">https://www.planningportal.nsw.gov.au/major-projects/project/9701</a> )
3	21	WEP to create letter and survey for pre CEF Workshop letter box drop	Meeting 3 – 10 Dec 2019	Completed. Community Survey #2 was distributed via letter box drop 20 <sup>th</sup> December 2019. The survey included a question relating to the community's view on priorities for the Community Enhancement Fund.  Update: 421 additional surveys sent out to Wallabadah, Barry, Pages Creek, Crawney and Timor on week commencing 16 <sup>th</sup> March. (Community Survey re-visited later in Update on Proposal section)
4	22	MS to prepare figure for the Liverpool Range Windfarm.	Meeting 3 – 10 Dec 2019	Completed. Liverpool Range newsletter provided to CCC via email 3 <sup>rd</sup> February 2020, with up to 800 direct jobs during construction and up to 47 full-time staff during the 25 plus years of operation. (Newsletter included as exhibit)

# Review/Actions from December CCC



Page No	Action No	Follow up Action	Date	Result of Follow up Action								
6	23	WEP to make reference within the EPBC as outlined at this meeting.	Meeting 3 – 10 Dec 2019	Completed. Update sent out to CCC via email 16 <sup>th</sup> March, 2020, following response from DoEE. EPBC Act referral documentation will not be updated. The information was sufficient to be able to be considered in DoEE's referral decision, for the proposal to be determined as Controlled Action and subsequent assessment by an accredited process under the NSW <i>Environmental Planning and Assessment Act 1979</i> .  They have recommended that the updated information be presented for public consultation via the assessment process.  The below information will be included in all future project documentation generated and provided for public consultation during the assessment process:  Identification of the wind farm development corridor as a bushfire prone area, as amended and in line with the designation given by the Rural Fire Service; Identification of applicable Lots in Deposited Plans, and; Identification of Ben Halls Gap as a Nature Reserve and Crawney Pass as a National Park								
6	24	Amendments by ARUP to be shared with CCC	Meeting 3 – 10 Dec 2019	Relates to Action No 23. See above response.								

# Review/Actions from December CCC



Page No	Action No	Follow up Action	Date	Result of Follow up Action
6	25	WEP to add project name feedback to letter box drop survey.	Meeting 3 – 10 Dec 2019	Completed, included in Community Survey #2. (Community Survey re-visited later in Update on Proposal section).
6	26	Fire Management Plan to be created for windfarms and firefighting. The local RFS to be consulted in doing so to establish a long-term management plan.	Meeting 3 – 10 Dec 2019	In progress. Update sent out to CCC via email 21st January 2020.  This action aligns with a SEAR's requirement to "identify potential hazards and risks associated with bushfires / use of bushfire prone land, including the risks that a wind farm would cause bush fire and any potential impacts on the aerial fighting of bush fires and demonstrate compliance with Planning for Bush Fire Protection 2006 (if located on bushfire prone land)".  The SEAR's also requires WEP to consult with RFS as part of the Consultation and Hazard and Risk Assessment process to be included in the EIS. As we anticipate this to be a particular topic of interest by the community given the recent fire activity in the region, please see "Wind Farms and Bushfire Operations" document prepared by the Australasian Fire and Emergency Service Authorities Council Limited. We are presenting this document for background information only, and it is not intended to replace formal consultation with the local RFS and fire fighting authorities as part of the planning process, which will be ongoing throughout 2020.  (Wind Farms and Bushfire Operations document included as exhibit)



# Site Visit Summary



Date of visit	Notes on visit
Tuesday 11 <sup>th</sup> February. First tour: 3 -5pm Second tour: 5-7pm	<ul> <li>The site visit was an agreed action arising from June 2019 CCC meeting.</li> <li>Purpose: provide CCC members and alternates opportunity to inspect wind farm development corridor and facilitate greater understanding of the site, wind farm development, planning and design optimization process.</li> <li>Invitation to all HoG CCC members and alternates.</li> <li>2 x two-hour site visits to accommodate work schedules, avoid daytime temperatures, allow open discussion in smaller groups and safe access to areas of interest.</li> <li>Visited northern/eastern portion of the wind farm development corridor via Morrison's Gap Road, including key viewpoints of Hanging Rock, Nundle, Head of the Peel, Nundle Creek and Ben Hall's Gap National Park/State Forest.</li> <li>Key discussion points: potential ancillary infrastructure locations, turbine foundations and civil earthworks, wind resource information, meteorological mast operation, biodiversity surveys and development schedule.</li> </ul>

# Community Survey #2 Results Summary



Question	Response										
	The priorities cover events, tourism, community buildings, community programs, and infrastructure. These include;										
Community Enhancement Fund Priorities	<ul> <li>Nundle Go for Gold</li> <li>Great Nundle Dog Race</li> <li>Country Picnic</li> <li>Australia Day</li> <li>Nundle Information Outlet</li> <li>Walking/Bike Tracks</li> <li>Golf Course</li> <li>Medical Facilities</li> <li>Old Church Boutique</li> </ul>										
Changing the name from Hills of Gold	14/34 responded yes for name change (41%)										
Do you think the Project will have a significant visual impact on your property?	17/34 responded yes (50%) to concerns of interrupted views from properties										
Are there any additional Public viewpoints to consider for visual montages?	<ul> <li>Nundle Bowling Club</li> <li>Lindsay Gap Road and Nundle Road Intersection</li> <li>Dag Sheep station wedding venue</li> <li>Private property viewpoints</li> </ul>										
Please provide information for non-indigenous cultural heritage sites	<ul> <li>Snow Gums Forest</li> <li>Natural habitats, e.g. koala's and other wildlife</li> <li>School of Arts Building</li> <li>The Peel Inn</li> <li>Nundle Cemetery</li> <li>Wombramurra Station</li> <li>Nundle Memorial Hall</li> </ul>										

# **CEF Workshop Details**



- The CEF workshop occurred on February 26th 2020 from 5:30-8pm in Nundle Memorial Hall
- Someva representatives: Jamie Chivers, Mike Stranger
- The CCC members present were: John Krsulja, Megan Trousdale, Kay Burnes, Michael Chamberlain, Ian Worley, Donna Ausling, Margaret Schofield, Sam Lobsey
- Alternate members present: Selena Sylvester, Nick Bradford, Teresa Eather, Megan Carberry
- Purpose: To present existing information and integrate views of the community into the key elements of the community enhancement fund in order to develop a draft CEF design.

# **CEF Outcomes and Summary**

Community Enhancement Fund Presentation and Summary Notes Attached as Exhibit



## CEF Purpose and Objectives

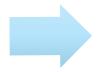
- No maintenance of council related assets
- Projects that improve the environment
- Social and economic benefit to the town
- Upgrades to the community assets
- Improving education
- Enhances wellbeing and lifestyle

### CEF Establishment & Governance

- Broad representation of communities and appropriate involvement of council
- Key roles such as administration, marketing and treasurer
- Transparency and integrity of members is critical
- Process for resolving disputes
- Nomination and voting process discussed
- Ensuring no conflicts of interest

#### Fund Eligibility Criteria

- Must have an impact within a 30km radius of the turbines
- Addresses key community needs and not that of individuals and businesses
- Demonstration of the requirement for funds and legitimacy of applying
- Project feasibility and the degree to which the project is already happening in the community
- Applications display methods to improve the community



# Hills of Gold Project in the Media



- As a member of a CCC committee the member's code of conduct agreement within the CCC guidelines emphasis accountability and transparency when discussing information to the public.
- A statement made by Ben Fordham on 2GB talkback radio, "There is a private developer, Wind Energy Partners wants
  to whack a \$600 million-dollar wind farm in the middle of the town, they would have 98 wind turbines standing 200m
  tall, running along 20km between Nundle and a spot called Hanging Rock"
- It was then confirmed by a CCC member that "The actual proposal is the ridgeline above Nundle."
- Fact Check: The turbines will be located south of both Nundle and Hanging Rock and won't run through the town. The closest turbine to Hanging Rock is 5.42km away and to Nundle is 8.42km away. The furthest turbine from Hanging Rock is 19km and to Nundle is 20.2km.
- The member of the CCC stated:
  - "We have this community consultative process and they're kind of dragging the chain on this, they have told us nothing".
  - "No hydrological studies have been done. They have to dig deep and dig into the mountain and then you have all the soils that flows down through the water catchment starts to silt up all your creeks"
- As discussed in the September 2019 and December 2019 CCC Hydrological studies will be completed as part of the impact assessment. As discussed today we have created setbacks of 40m for turbines from any creeks and waterways.

# **EIS Timetable**



### Commitments that have been achieved

HoG WF - Development Plan	2019									2020											
2 store princing rain		M5	M6	M7	M8	M9	M10	M11	M12	M1	M2	M3	M4	M5	M6	M7	M8	M9	M10	M11	M12
Community																					
CCC - Meetings																					
Community Enhancement Fund worshop																					
Site Visit											Y										
Development Studies																					
Flora and Fauna Surveys (BDAR)																					
Prepare EPBC Assessment						S															
Noise and Vibration Studies																					
Preliminary - Transport Study																					
Preliminary Heritage Assessment																					
Wind Farm Layout Design - preliminary												<b>S</b>									
Preliminary Visual Montages																					
Heritage and Cultural Work																					
Social and Economic Assessment																					
Aviation and Communication Assessment																					
Visual Montages and Shadow Flicker																					
Transport Assessment																					
Hazards and Risk Assessment																					
Soil and Erosion																					
Finalise Constraints Mapping																					
Hydrology Study																					
Environmental Impact Assessment																					

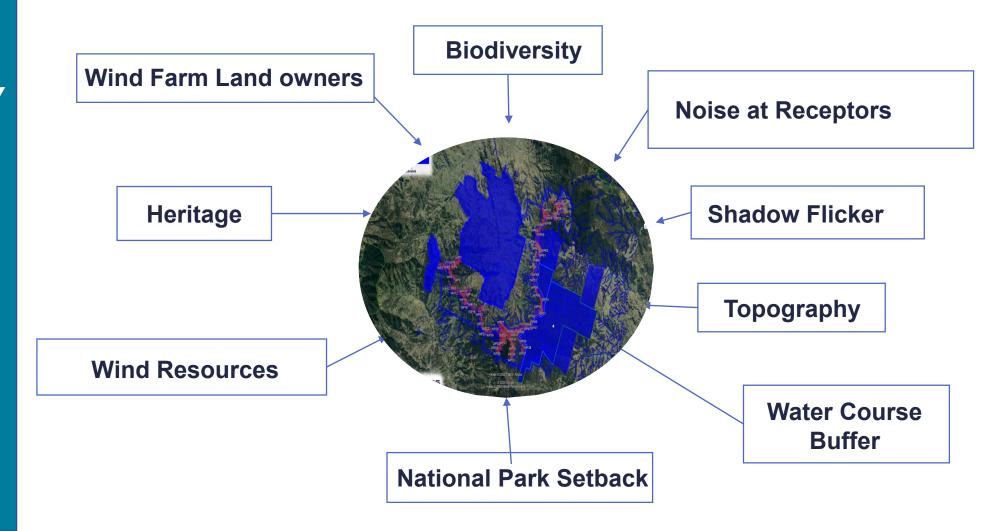
# Updated WTG Layout

How did we arrive at this preliminary optimized layout?



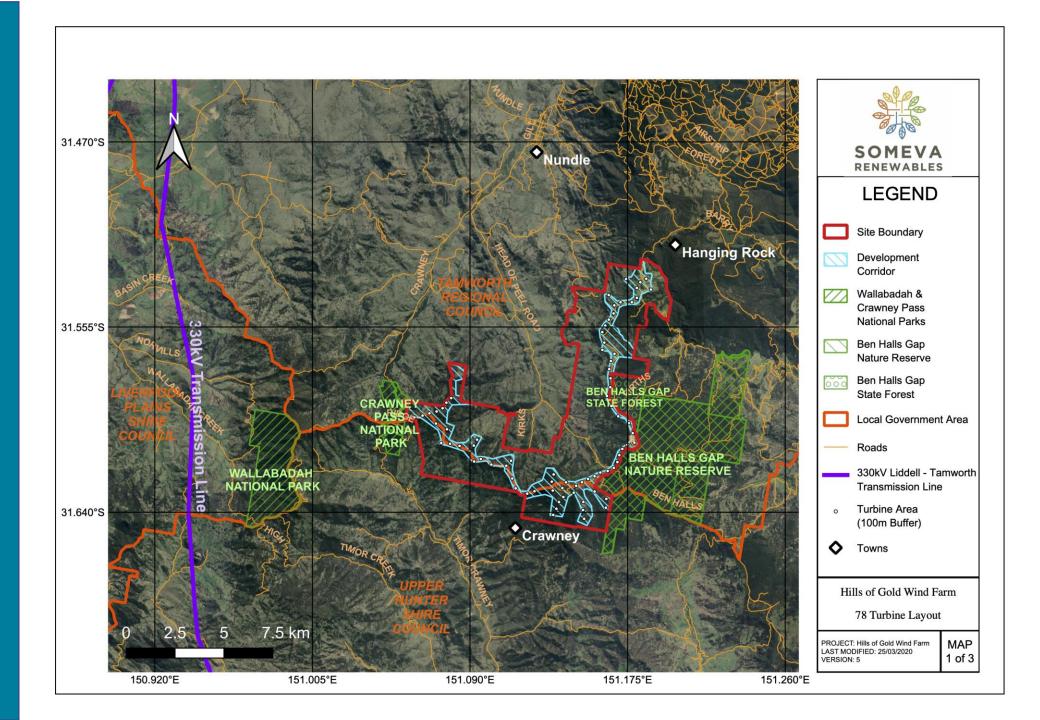
### **Reducing Impacts through Studies and Consultation**

- Through technical consultants we have mapped technical, environmental, social and land variables as well as project constraints.
- This allowed us to find an optimized preliminary wind farm layout.
- This layout will be further optimized as technical studies progress.



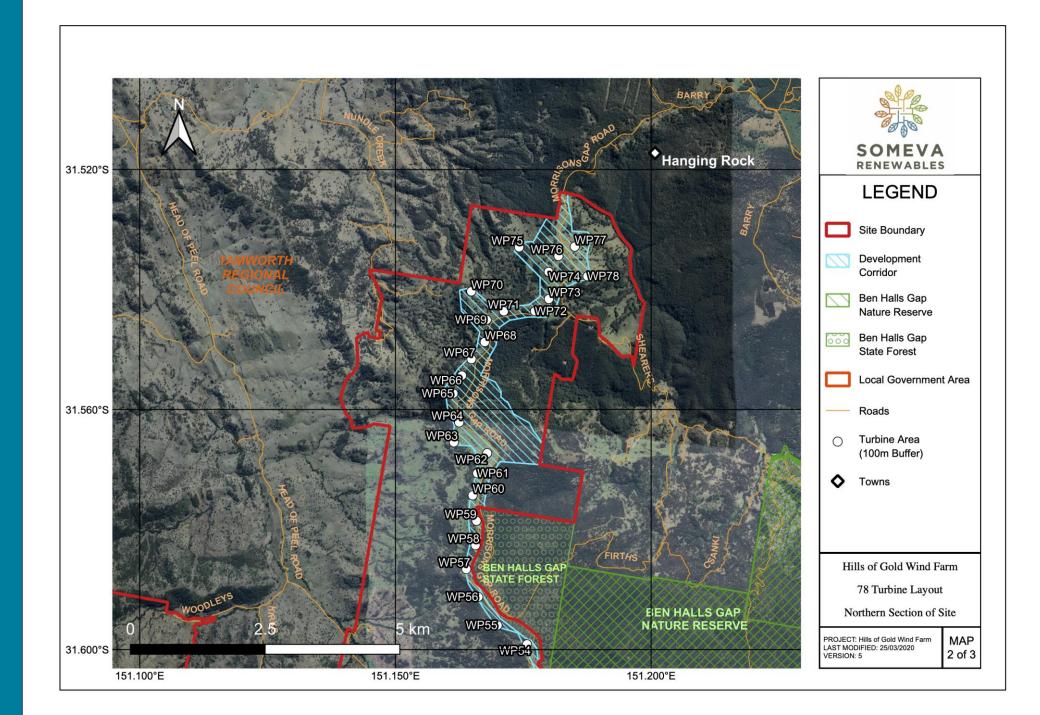
# Updated 78 WTG Layout





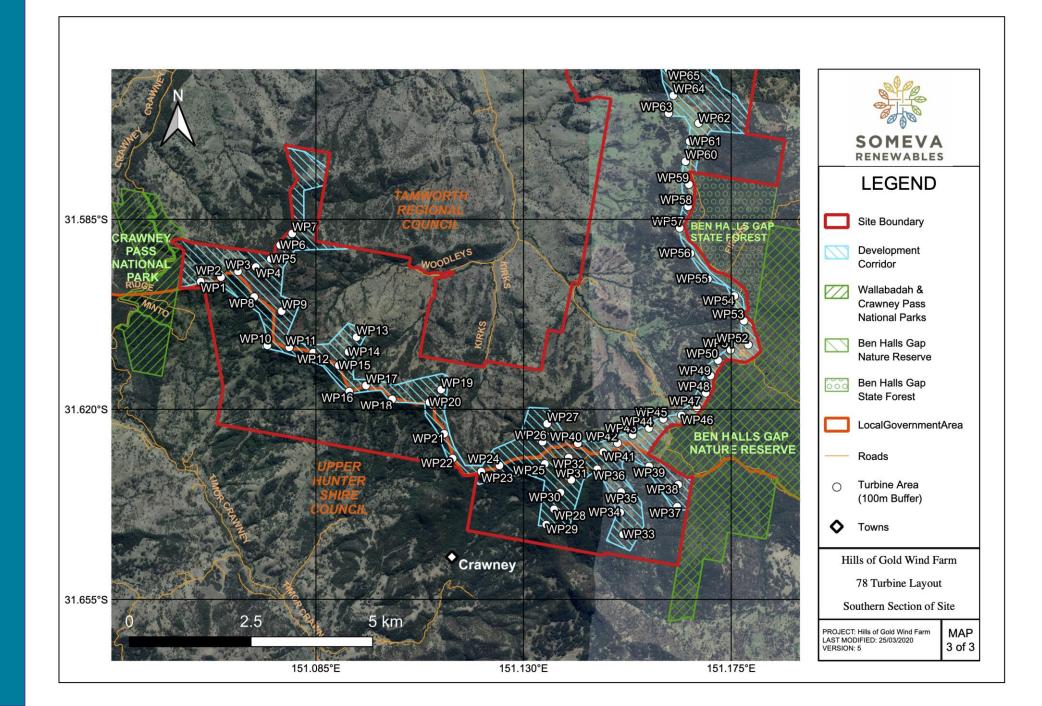
# Updated 78 WTG Layout





# Updated 78 WTG Layout

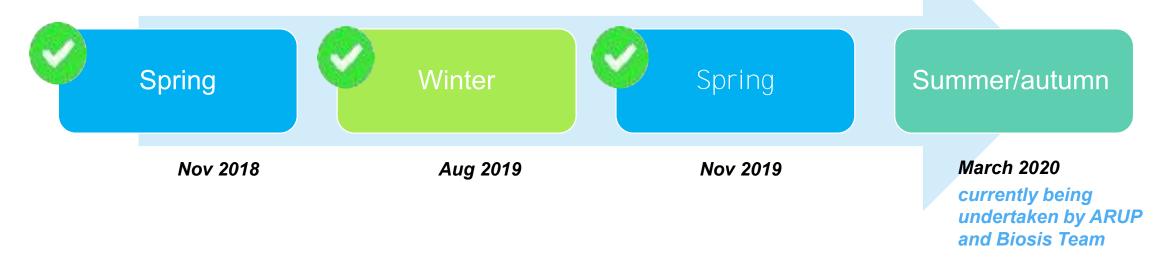




# Biodiversity Update







### **Next Steps**

- ARUP and Biosis team to analyse, compile and update all data that have been gathered up to date.
  - PCT and TEC
- Put together BDAR (Biodiversity Development Assessment Report).

# Landscape and Visual Update



### **ERM and Moir** Selected to Complete **Studies**







#### Phase 1

Desktop study and preliminary consultation

Preliminary assessment:

Multiple Wind Turbine Tool.

Preparation of Zone of Visual

Consultation of community

sensitive areas and potential

Influence Diagram (ZVI).

important viewpoints.

Likely visual impacts,

key viewpoints.

Visual Magnitude and

#### Phase 2

Field Work and Preliminary Photomontages in Progress



- Ground truth digital terrain model to confirm potential views and further identify potentially impacted areas.
- Detailed photographic survey.
- Direct consultation with community members commenced
- Preliminary photomontages for consultation will be shared in April 2020

#### Phase 3

Landscape and Visual Impact Assessment



- Visual baseline study:
  - Establishes existing landscape and visual conditions
- Scenic quality classes and objectives of each visual influence zone.
- Shadow flicker assessment

#### Phase 4

**Impact** Assessment Report



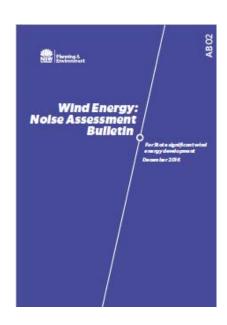
Preparation of Landscape and Visual final report.

# Noise and Vibration Update





# Selected to Complete Studies



#### Phase 1

Preliminary Wind Farm Noise Model



- The noise from the proposed layout was predicted for all identified relevant noise sensitive locations at various wind speeds.
- Determination of background noise monitoring locations based on Sonus recommendation.

#### Phase 2

Baseline Noise Monitoring Campaign



landowners has commenced including provision of information and preparing responses to HOGPI questions

Consultation with

- 5 locations for noise monitoring were recommended by Sonus
- WEP have included an additional 3 locations following community consultation to a total of 8
- 6 weeks of monitoring data collection expected with Class 1 loggers

#### Phase 3

Wind Farm/Ancillary Infrastructure Impact Noise Assessment



- A second iteration of the noise model will be prepared based on any revised turbine locations if required and background noise recorded
- Where changes are required to the layout to achieve the noise requirements, these recommendations will be made

#### Phase 4

Noise Assessment Report



- Production of noise contours for the final report and plotted over an aerial photograph for presentation purposes.
- Final report drafting.

# Socioeconomic Update





# Selected to Complete Studies

#### Phase 1

Preliminary assessment

#### Phase 2

Consultation with Stakeholders

#### Phase 3

Economic and social Impact Assessment

#### Phase 4

Socioeconomic Assessment Report



- Undertake research on the socio-demographic and economic profile of the Tamworth Regional Council and the surrounding Upper Hunter and Liverpool Plains Council areas.
- Review the local strategic plans to identify the values and objectives important to the Nundle.
- Local Stakeholders consulted on interest in participating in assessment and contact details provided to SGS for consideration.
- Planned to start first week of April via phone or teleconference (due to COVID-19 travel and social distancing restrictions) with stakeholders
- Purpose of consultation with local stakeholders is to better understand the current economic and social functioning of the area.

- Economic assessment of the project during construction and operational phases to be considered.
- An assessment of the impact on local tourism considered.
- An assessment of the impact on the brand of the local area considered.
- An assessment of the impact of investment attraction and local skills development.
- An assessment of resident's perceptions of the Hills of Gold Wind Farms.

- Preparation of final socioeconomic assessment report.





#### Attachments List:

- 1. Wind Energy Partners Response to CCC Action No 18 Denial of access to some CCC members for site visit planned for September 2019
- 2. Tilt Renewables Liverpool Range Newsletter with Employment Statistics
- 3. AFAC Wind Farms and Bushfire Operations Guideline
- 4. Hills of Gold Wind Farm Community Information Sessions Flyer
- 5. Hills of Gold Community Enhancement Fund Workshop Presentation
- 6. Hills of Gold Community Enhancement Fund Workshop Summary Notes
- 7. Someva Renewables response CCC Meeting Tabled Document Tuesday 10th December
- 8. Preliminary Updated Wind Turbine Layout
- 9. Hills of Gold Preservation Inc Letter Socio-Economic Assessment and Visual Impact Assessment
- 10. Wind Energy Partners Response to Hills of Gold Preservation Inc Letter Socio-Economic Assessment and Visual Impact Assessment
- 11. Wind Energy Partners Response to Hills of Gold Preservation Inc Letter Socio-Economic Assessment and Visual Impact Assessment attachment SGS Economics Memorandum
- 12. Community Enhancement Fund ideas
- 13. Commonwealth Department of Agriculture, Water and the Environment assessment requirements Hills of Gold Wind Farm (EPBC 2019/8535) (SSD 9679)
- 14. Hills of Gold CCC Aviation lighting issues March 2020





To Members of the Hills of Gold Community Consultative Committee

1st February 2020

RE: CCC Action No 18 – Denial of access to some CCC members for site visit planned for September 2019

Dear Hills of Gold CCC members,

As discussed in the December 2019 CCC meeting, and as the minutes reflect, during the initial planning stages of the site visit scheduled for September 2019, a wind farm host landowner was unwilling to provide access to two members of the CCC, and the nominated representatives of the Hills of Gold Preservation Inc and Nundle Business, Tourism and Marketing Groups.

Upon Someva seeking to understand the reasons for the refusal of the 2 members, it was understood those members have been active in opposing the development and that existing relationship of the landowner and the two CCC members had suffered as a result.

However, the host landowner recognized the value of a visit to the wind farm development site for all CCC members, and importance of representation by the nominated stakeholder groups on the site visit.

As was discussed in the December CCC Someva and Wind Energy Partners are committed to an inclusive and transparent CCC and subsequently agreed with the host landowner this importance to follow industry best practice.

Agreement was reached for all CCC members to attend, and a new site visit has been scheduled for February 11<sup>th,</sup> 2020.

Someva trusts this provides sufficient explanation and shows a strong intent for open and transparent access to information. We look forward to the upcoming opportunity to take a tour of the Hills of Gold wind farm development corridor with all CCC members.

Sincerely,

Jamie Chivers

Managing Director – Wind Energy Partners

jamie.c@someva.com.au

+61 423 336 345

36-38 Young St

Sydney NSW 2000



Newsletter Edition

1

May 2019

Tilt Renewables is pleased to announce it has completed the acquisition of the Liverpool Range Wind Farm from Epuron. When fully constructed, the project could add up to 1000 MW of new renewable energy generation to NSW and be one of the largest wind farm projects in Australia.

#### **Project snapshot**

Turbines
Up to 267

Installed capacity
About 1000 MW

**Project investment** \$1.5 billion

Project status

Planning and environmental approvals received

#### **Environmental benefits**

The project will provide enough clean energy to power more than 500,000 homes and save 2.3 million tonnes of greenhouse gas emissions, the equivalent of removing 750,000 cars from our roads.

#### **Economic benefits**

A community fund will operate for the project, providing \$3000 per wind turbine per year for community investment. The project will also generate a massive increase in revenue for local businesses including (but not limited to) accommodation providers, hospitality businesses such as cafes and hotels, service stations and fencing contractors.

#### **Employment**

Up to 800 direct jobs during construction and up to 47 full-time staff during the 25 plus years of operation.

#### **Tilt Renewables**

Tilt Renewables is a publicly listed company (ASX/NZE: TLT) with more than 19 years' experience in developing, owning and operating renewable generation assets across Australasia.

Tilt Renewables has several operating assets in both Australia and New Zealand with an installed capacity of more than 630MW and a further project currently being constructed in Victoria with an additional capacity of 336MW.

Tilt Renewables currently has about 2000MW of projects with planning approvals and a total pipeline of about 3000MW of wind, solar, storage and peaking options. This is one of the strongest pipelines in the market.

Our strategic goal is to be the leading renewable energy business in Australasia by more than doubling our current operating renewable generation capacity over the next five years, and then position ourselves for further wind and solar builds. As a company, we do what we say we'll do and value integrity in how we go about our work.

Tilt Renewables is currently constructing the 80-turbine Dundonnell Wind Farm project in Victoria. The project commenced construction in January this year and is expected to be operational in the last quarter of 2020.

#### **Landowner meetings**

Several members of our team recently visited Coolah and Cassilus to conduct a series of landowner and community group meetings.

The response from everyone we met was very encouraging and we will be dropping in again from time to time.



#### Where to from here?

Tilt Renewables has acquired the project from Epuron, the company that has been developing the project since 2008.

Across this time, Epuron has obtained the necessary planning consents and environmental approvals for the construction and operation of the project. These approvals and commitments will now be transferred to Tilt Renewables.

We have begun the process of meeting our key stakeholders and are looking forward to developing a community engagement plan to ensure the community is consulted and informed.

The team will soon commence its review of the current wind farm design to ensure the site is best placed to take advantage of the most modern turbine technology. This process of optimisation will ensure that the cost of building the project is minimised and we take full advantage of the wind potential of the site.

Prior to being able to determine a construction date for the project, we will need to secure an offtake agreement for the energy generated by the wind farm and complete several further environmental and heritage studies that are requirements of the development consent.

Construction of the entire project will take up to three years and require about 800 construction personnel. Due to the sheer size of the proposed wind farm, Tilt Renewables will consider developing the project in stages.

Once further information is available about the construction of the project, including timing, Tilt Renewables will actively engage the community to look at workforce accommodation strategies, local business readiness and participation in the project.

In the meantime, if you have any queries about the project or possible business and employment opportunities, please do not hesitate to contact us.









# Wind Farms and Bushfire Operations



Version 3.0 25 October 2018 Doctrine ID: 2053

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#### Disclaimer

This document has been developed from consultation and research between the Australasian Fire and Emergency Service Authorities Council Limited (**AFAC**), its members and stakeholders. It is intended to address matters relevant to fire, land management and emergency services across Australia, New Zealand and the Pacific region.

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#### Citation

Australasian Fire and Emergency Service Authorities Council 2018, *Wind Farms and Bushfire Operations* (AFAC Publication No. 2053), AFAC, Melbourne, Australia.

#### Review period

This AFAC guideline should be reviewed by the doctrine owner by October, 2023.

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### Acknowledgements

AFAC wishes to acknowledge the contribution made to this work by the Rural and Land Management Group, the Clean Energy Council, the Country Fire Authority, South Australian Country Fire Service and the National Wind Farm Commissioner.

### Source of authority

Approved by AFAC Council on 25 October, 2018.

### Purpose

This position is to state AFAC member agencies approach towards wind farms, their development and operations in relation to bushfire prevention, preparedness, response and recovery. It seeks to clarify the bushfire risks posed by planned and existing windfarms, risks to emergency responders operating in and around wind farm facilities and risks to windfarms as critical infrastructure from external fire. It also provides guidance for AFAC member agencies, wind farm developers, wind farm operators and other stakeholders in planning for bushfire prevention, preparedness, response and recovery activities in and around existing and planned wind farm facilities.

### Scope

This position highlights issues and provides guidance relating to planning for bushfire prevention, preparedness, response and recovery operations in and around existing and planned wind farm facilities. It excludes the environmental, social and economic issues associated with wind farms. It does not provide any judgments on the values or otherwise of wind farms.

Meteorological monitoring towers are often installed on planned wind farm sites for pre-construction investigative activities. Unmarked meteorological monitoring towers and guy ropes present greater risks for aerial firefighting operations than wind turbines. Therefore, this position considers bushfire operations in planned wind farm sites as well as wind farms that are under construction and in operation.

While many wind farms are located on private property, in some jurisdictions and locations land management agencies will be the first agency to respond to a bushfire

in or around a wind farm. Therefore, the guidance in this position relates to land management agencies as well as rural and urban fire authorities.

# Statement of engagement

The 2012 Wind Farms and Bushfire Operations position was developed by the Rural and Land Management Group with input from the Clean Energy Council. In this revised position, the Rural and Land Management Group have incorporated feedback provided by the Australian National Wind Farm Commissioner.

### Audience

This position is intended for AFAC member agencies, wind farm developers, wind farm operators, land use planners and relevant regulators.

# Definitions, acronyms and key terms

In this position, the following terms have specific meanings.

**Preparedness:** arrangements to ensure that, should an emergency occur, all those resources and services that are needed to cope with the effects can be efficiently mobilised and deployed. Measures to ensure that, should an emergency occur, communities, resources and services are capable of coping with the effects (AIDR 2018).

**Prevention:** regulatory and physical measures to ensure that emergencies are prevented, or their effects mitigated (AIDR 2018).

**Recovery:** the coordinated process of supporting emergency-affected communities in reconstruction of the physical infrastructure and restoration of emotional, social, economic and physical wellbeing (AIDR 2018).

**Response:** actions taken in anticipation of, during, and immediately after an incident to ensure that its effects are minimised, and that people affected are given immediate relief and support (AIDR 2018).

### Introduction

Wind power is a rapidly expanding mode of renewable energy production in Australia with installed capacity doubling in the past five years. Approximately 80 wind farms were in operation by the end of 2017, with another 13 wind farms under construction and at least another four wind farm projects with financial commitment that are expected to commence construction in 2018 (Clean Energy Council 2018).

In the context of an increasing number of wind farms it is important for AFAC member agencies to clarify their position in relation to windfarm development and operations and highlight some important considerations in risk mitigation.

### AFAC's guideline

## Bushfire risks in and around wind farm facilities

Wind farms are not expected to adversely affect fire behaviour, nor create major ignitions risks. Fire and land management agencies and wind farm developers and operators have a shared interest in mitigating the following bushfire related risks.

#### Ignition caused by wind farm infrastructure or operations

Automatic shutdown and isolation procedures are generally installed within the turbine system. However, it is possible that turbines can malfunction and start fires within the unit. This is generally considered a low risk given appropriate protection measures. Operation of winches and machinery during monitoring and maintenance tasks may also lead to ignitions. Subject to relevant national, state and territory legislation, wind farms may operate on days of total fire ban.

#### Lightning risks

Given that wind turbines can attract lightning during thunderstorms, it is possible that wind turbines may reduce the risk of bushfires caused by lightning, particularly if turbines are located on a ridge. If struck by lightning, turbine towers are generally not expected to start fires as they have built-in protection mechanisms.

### Firefighting limitations in and around the wind farm facilities

Wind farms may result in aerial firefighting limitations due to aerial obstacles created by wind turbines and meteorological monitoring towers. The bushfire at the Waterloo wind farm demonstrated that if conditions are clear and wind turbines are turned off, wind turbines are clearly visible from aircraft and are not likely to constrain aerial firefighting operations (Clean Energy Council 2017). However, during this event transmission infrastructure, meteorological towers and guy-ropes were difficult to see (Clean Energy Council 2017); this infrastructure does have potential to limit the effectiveness of aerial firefighting operations. Access and egress challenges on the ground as well as water supply issues can also create firefighting limitations, if not planned for appropriately. Wind farms can also impact response operations by interfering with local and regional radio transmissions (Australian Wind Energy Association 2004a).

### Hazards for emergency responders, including aerial personnel

Turbine towers, meteorological monitoring towers and power transmission infrastructure pose risks for aerial firefighting operations. Meteorological monitoring towers and power transmission infrastructure are generally difficult for aerial personnel to see, if they are not marked appropriately. If wind turbines were not shut down, moving blades and wake turbulence would create significant hazards for low flying aircraft, thus the shutting down of wind turbines, in an emergency situation, is defined in wind farm emergency procedures. A wind farm facility's power lines may pose electrocution risks, that are exacerbated due to smoke during a bushfire.

### Bushfire spread within wind farm facilities and impacts on wind farms as critical infrastructure

Wind farms are not expected to adversely affect fire behaviour in their vicinity. Local wind speeds and direction are already highly variable across landscapes affected by turbulence from ridge lines, tall trees and buildings. Any potential for wake turbulence from wind turbines influencing fire behaviour is expected to be controlled through the shutting down of wind turbines in a bushfire event. Sufficient planning for access roads and fuel modified buffer zones will reduce the risk of wind farm ignitions spreading beyond the property and reduce the risk of external fire impacting wind farm infrastructure.

## Wind farms and bushfire management

#### Prevention

Bushfire management issues are best treated at the planning stage of a wind farm project. Local planning controls are in place to regulate these issues with respect to any infrastructure development and some local planning controls refer specifically to wind farms. Fire and land management agencies may consider developing guidelines that outline preferred preventative safety measures for wind farm facilities in a manner that is targeted to local legislation and planning regulations.

Access roads should be considered when planning the layout of a windfarm. Appropriately planned access roads can increase the ability of fire and land management agencies to successfully undertake firefighting operations by allowing increased accessibility for emergency vehicles. Access roads and other infrastructure can also reduce the likelihood of fire moving through or leaving the property and can act as an effective firebreak in many circumstances. Naming and marking conventions for access roads should be considered to enhance accessibility. For example, marking an access road as A-B to indicate that it links landmark A with B; landmarks used for this purpose should be identifiable on site and marked on any site mapping. Access road marking should clearly indicate no through roads.

Where wind farms are located in vegetation types other than grassland, the planning for access routes and fuel modified buffer zones should consider:

- potential for bark spotting material to breach control lines
- potential for higher intensity fires associated with higher fuel hazard and more complex fuel arrangement
- fire vehicle off-road access challenges in woody vegetation pre-existing forest roads and fuel modified buffer zones.

Where applicable, buildings located on the site should comply with Australian Standard AS 3959- 2009 *Construction of Buildings in Bushfire Prone Areas* to improve their performance when subjected to burning debris, radiant heat or flame contact generated from a bushfire.

The location of water access points should also be considered when planning the layout of a wind farm. In the event of a fire, water supply should be available and easily identifiable by emergency response personnel to avoid hindering fire suppression efforts.

Planning for ongoing vegetation management in and around the wind farm facility should also be considered in the early stages of a wind farm development.

Other preventative measures relate to the type of

equipment that is used in the development of a wind farm. There are wind farm turbine models that have safe shutdown systems and protection mechanisms in the cases of fire. Installation of these can assist in preventing fires around the wind farm.

Wind farms can interfere with local and regional radio transmissions by physical obstruction and radio frequency electromagnetic radiation (Australian Wind Energy Association 2004a). The risk of radio communications affecting emergency response operations may be considered in the planning stages for a wind farm development. This issue may be considered in wind farm site selection and equipment selection.

Windfarm developers should also be aware that meteorological monitoring towers, which are associated with pre-construction investigative activities as well as operating wind farms, are generally more likely to pose a risk to pilots as they are not easily visible structures. For these structures, developers should record these towers in the Tall Structures Database maintained by Air Services Australia (Civil Aviation Safety Authority 2018) and install warning lights or visible markers (such as orange balls) on all masts to minimise risks during aerial firefighting operations.

During the planning phase of the wind farm, developers and operators should ensure the following by the time construction commences:

- all relevant staff are aware of emergency protocols and procedures
- the wind farm's emergency contact number is readily available online and is attended to at all times by trained staff
- turbines can be rapidly shut down in emergency situations and protocols should be explicit about what party has the authority to direct turbine shut-down procedures
- contingent communication systems are in place in case of failed telephone communication attempts
- relevant fire and land management agencies can gain access throughout the wind farm site during bushfire operations – this may require prior coordination with landowners to ensure access is not constrained
- relevant fire and land management agencies have been provided up-to-date information on the layout and design of the wind farm infrastructure. During the construction period of a wind farm, the developer should provide periodical updates to fire and land management agencies as the wind farm is progressively built.

#### **Preparedness**

Wind farm developers and operators should ensure they have effective emergency management procedures and

incident action plans in place in the event of bushfires and other emergencies. Wind farm organisations should ensure that all relevant staff are aware of these plans and procedures and should know their roles and responsibilities.

Wind farm developers and operators should take responsibility for the following:

- preparing emergency management protocols e.g. communications from and with the fire and land management agencies and access to the property
- shutdown and positioning of turbines upon request by the relevant fire or land management agency when the operator becomes aware of a bushfire in the area
- implementing and testing bushfire response plans
- providing appropriate emergency response training and equipment to staff
- proactively liaising with fire and land management agencies and sharing information with communities in the case of an emergency.

It is important that wind farm developers and operators liaise with the relevant fire and land management agencies to prepare appropriate emergency management and response protocols. The wind farm proponent should also provide details of wind farm infrastructure to relevant authorities, such as the layout of wind turbines, wind monitoring towers and transmission lines. Any expected radio interference should also be communicated to relevant fire and land management agencies and be considered in the development of an incident action plan.

Wind farms are an infrastructure development that should be considered by fire and land management agencies through the preparation of incident action plans for the suppression of bushfires in their vicinity. These considerations are routine and wind farms are not expected to present elevated risks to operations compared to other electrical infrastructure.

Agency incident action plans may include:

- key emergency contacts
- site mapping with locations of water supply, wind turbines, meteorological monitoring towers and transmission lines (this information should be sourced available from wind farm operators)
- surrounding vegetation types and the location of fuel modified buffer zones
- access information, e.g. route, gates and locks
- safety considerations and procedures
- procedures for dealing with turbine fires or collapse, collision or damage to turbines agency response protocols and procedures.

Accessibility to the wind farm during bushfire operations may require prior coordination with landowners to ensure access is not constrained.

Wind farm operators, land owners and fire and land management agencies should consider maintenance of access routes and control lines, including vegetation management, in planning for their bushfire preparedness activities.

#### Response

In the event of a bushfire in and around an existing or planned wind farm facility, fire and land management agencies should follow any relevant incident action plans and response protocols that have been developed. Fire and land management agencies should maintain close communications with designated key contacts for wind farm facilities.

Wind farm operators should be responsible for ensuring that the relevant emergency protocols and plans are properly executed in an emergency event. During an emergency, operators need to react quickly to ensure they can assist and intervene in accordance with their planned procedures.

The developer or operator should ensure that:

- liaison with the relevant fire and land management agencies is ongoing and effective
- access is available to the wind farm site by emergency services response for on-ground firefighting operations
- wind turbines are shut down immediately during emergency operations – where possible, blades should be stopped in the 'Y' or 'rabbit ear' position, as this positioning allows for the maximum airspace for aircraft to manoeuvre underneath the blades and removes one of the blades as a potential obstacle.

Aerial personnel should assess risks posed by aerial obstacles, wake turbulence and moving blades in accordance with routine procedures.

#### Recovery

In the period after an emergency event, wind farm operators should be actively involved in recovery activities. This may include supporting and communicating with emergency-affected communities and helping to coordinate the reconstruction of infrastructure as required.

Liaison with wind farm operators and energy industry representatives during and after bushfires should aim to ensure minimal disruption to generation capacity and rapid resumption of essential services to the community. Examination of any learnings should also be discussed with all parties, with any relevant updates to all emergency management plans and protocols to be implemented. Wind farm operators and fire and land management agencies may also wish to share learnings from the event with the wind farm and emergency management sectors as appropriate.

#### Case study: Waterloo Wind Farm, South Australia <sup>1</sup>

In January 2017, a bushfire started on a paddock near the Waterloo Wind Farm in South Australia. Fanned by gusty westerly and north-westerly winds, the fire quickly spread through the area and raced up the ridge where the wind farm was located.

200 Country Fire Service volunteers were involved in firefighting operations and were supported by three water bombing aircraft. By the time fire was declared under control in the early evening, approximately 50 hectares of grassland was burned, including land underneath turbines at the northern end of the Waterloo Wind Farm (Clean Energy Council 2017).

The wind farm operator confirmed that there was no damage to any wind farm infrastructure and no danger at any time to human life as a result of the fire.

However, a number of learnings for emergency management procedures and protocols in relation to wind farms and bushfires arose.

#### These included:

- the wind farm's access roads were beneficial in helping fight the bushfire on the ground and provided an effective firebreak
- the wind farm's turbines did not present a hazard to aerial firefighting and the turbines were clearly visible to the pilots involved in operations. However, transmission infrastructure, transmission lines and meteorological masts were difficult to see by pilots and did pose a safety risk
- to maximise air space for firefighting between the turbines, turbines should be locked in the 'Y' position
- improved communication protocols need to be in place between wind farm operators and fire and land management agencies to direct turbine shut-down procedures in an emergency situation and initiate emergency response plans
- wind farm operators should ensure that they have the capacity to respond to emergency events
- wind farm operators should ideally select turbines that can be rapidly shut down to the preferred position
- additional precautionary measures should be considered to allow for aerial identification of meteorological masts (measurement towers), guy wires and other infrastructure such as transmission lines that are not easily visible from air.

Normal wind farm operations resumed once the Country Fire Service advised the operator that it was safe to do so.

1 Clean Energy Council (2017) In Case of Fire: a real-life experience at a wind farm site.

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[Available at https://www.cleanenergycouncil.org.au/news/2017/october/In-case-of-fire.html- accessed April 10 2018]

Clean Energy Council (2018) Jobs and Investment in Large-scale Renewables.

[Available at https://www.cleanenergycouncil.org.au/cec/policy-advocacy/jobs-and-investment-accessed 22 June, 2018]



### The Hills of Gold Wind Farm Project



### **Information Sessions in Nundle**

- Commencing from January 2020, Mike Stranger from Someva will be in Nundle for two days
  of every month to meet with members of the community and talk about Wind Energy
  Partner's proposed Hills of Gold Wind Farm Project.
- Mike will be available to meet from <u>8AM to 8PM</u> on the <u>third Tuesday and Wednesday of</u> <u>every month.</u>
- We wish to meet with residents to listen to your concerns and answer your questions about the Project.
- Information sessions will be held at a location convenient for you, anywhere in Hanging Rock, Nundle or Crawney.
- Please email, call or text to arrange an information session.
- All members of the community are welcome to meet with us.
- Send us questions or concerns for discussion before the meeting, or just come and have a chat on the day.

### First Sessions 21st & 22nd January 2020, 8AM-8PM

**SOMEVA RENEWABLES PTY LTD** 

36-38 YOUNG STREET, SYDNEY, NSW, 2000, AUSTRALIA

Email mike.s@someva.com.au or call/text 0449 631 875 to book.





# Community Enhancement Fund Workshop

Hills of Gold Wind Farm Project

Hanging Rock, Nundle & Crawney





## Welcome & Introductions

## Agenda:

5:30 - 6

6 - 6:45

6:45 - 7

7 - 7:45

7:45 - 8

**CEF** information presentation

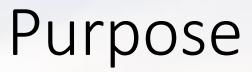
Group brainstorming exercises and discussion

Break

Group brainstorming exercises and discussion

Workshop Review/Summary and Finish







To present existing information and integrate views of the Hanging Rock, Nundle and Crawney communities into the key elements of the CEF, in order to develop a Draft CEF agreement design.

### Reminder - CCC Guidelines Code of Conduct - Key Points

- Respectfully engage
- Open and constructive participation and shared dialogue
- Communicate relevant concerns, interests and ideas;
- Make reasons for any disagreement clear in a constructive and thoughtful manner
- Actively work with the members of the committee to try and resolve any disputes that may arise during the committee's activities
- · Not interrupt when another member is speaking





# What tonight is about All the "C's"

Cohesion

Communicate

Community

Contribute

Consider

Create

Cooperate

Collaborate

## **CEF Timeline**



2017-2019

March 2018

2018

June 2019

September 2019

February 2020

February – April 2020

April/May 2020

May/June 2020

July/August 2020

CEF commitment incorporated into Landowner Agreements

WEP announcement of CEF to community

Community consultation feedback for CEF

Project benefits and CEF in CCC meeting

Preliminary CEF information and Workshop Proposal in CCC meeting

Where we are now

WEP Draft CEF Design

WEP Present Draft CEF Design to CCC

CCC feedback and further consultation

Finalize CEF Design for lodgment with DA

## CEF Consultation Results and Feedback – Community Events



- Nundle Go for Gold
- Great Nundle Dog race
- Country Picnic
- Art exhibition
- Australia day
- Xmas in July
- Nundle Pony Club
- Camp draft







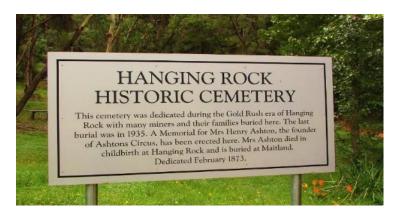


## CEF Consultation Results and Feedback – Community Buildings and Facilities



- The Nundle Sports and Rec Club
- Nundle swimming club/pool
- Community hydrotherapy pool could be done by upgrading Nundle Pool
- Nundle Memorial Hall
- Old Church Boutique
- Nundle preschool and primary school
- Nundle Bowling Club
- Hanging Rock hall
- Skate park
- Medical centre
- Aged care facilities
- Golf course
- Hanging Rock and Nundle Cemetery





## CEF Consultation Results and Feedback – Other Community Infrastructure and Services



- Minimising the impact of the project on the town
- Nundle Water Quality
- Water Security
- Mobile phone connection tower for Hanging Rock and Morrisons Gap area
- Hanging Rock and Nundle Fire brigade
- Sheeba and Chaffey dams



## CEF Consultation Results and Feedback – Community Programs and Initiatives



- Music education program
- Regenerative agriculture
- Environment and sustainability initiatives (recycling, reuse, water conservation and energy conservation, circular economy)
- Could Nundle become 100% renewable











## CEF Consultation Results and Feedback – Tourism



- Nundle Information Outlet
- Walking Tracks/Bike Tracks/Wind Farm Bus Tours
- Hanging Rock Lookout
- Promotion of Nundle and key attractions
- Mount Misery Museum
- Nundle Woollen Mill
- Free transport services to Tamworth and Quirindi









## CEF Consultation Results and Feedback – Other Comments and Considerations



- Interest in a community enhancement fund for those who wouldn't benefit from the increased business opportunities
- How can the community benefits offered through the community enhancement fund be ensured to be paid by the company
- Compensation for HOGPI in raising concerns of community
- Lots of community re-building to mend social division
- Greater consideration for Hanging Rock community
- Committee representative for Nundle Sport and Recreation Club



### **CEF Design Overview**

2 funding rounds per year:

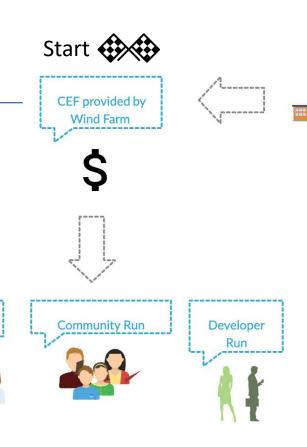
- \$2500 per year per turbine
- o 97 turbines

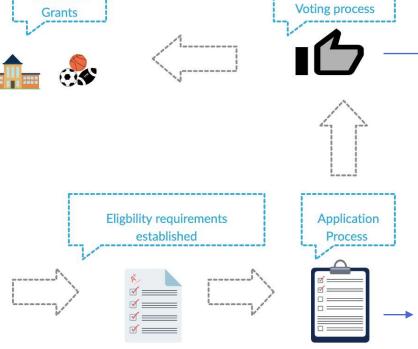
The CEF can be governed with three different approaches:

 Each approach involves a committee of members

Council Run

 This can be decided annually with an election process





Requirements could include:

- 20km radius allows priority funding
- Registered groups

Successful

The voting process can be opened up to the whole community or kept between the committee running the CEF

Potential application evaluation criteria:

- Project benefits
- Target community needs
- Availability of funding
- Project viability



### **CEF Design Overview**

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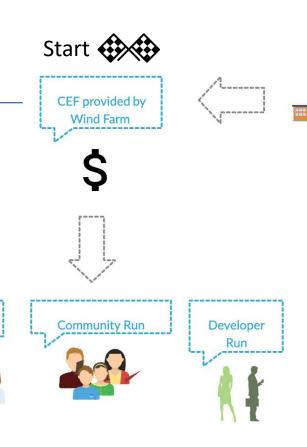
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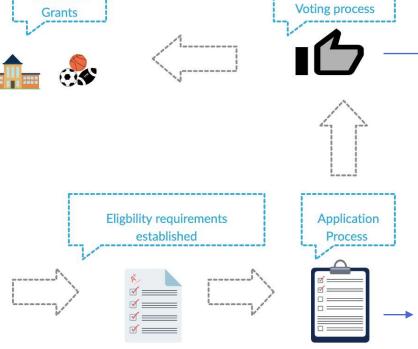
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- Target community needs
- Availability of funding
- Project viability

## Option 1 – CEF Discretionary



Advantages	Disadvantages		
<ul> <li>There is time saved on the initial phase of setting up a committee within the council or community</li> </ul>	<ul> <li>Doesn't provide confidence to the community of commitments (however can be contractually created)</li> </ul>		
<ul> <li>Allows collaboration between the developers, councils and local representatives</li> </ul>	<ul> <li>Broad representation of community voice is at the discretion of developers through either decision making and appointment of committee</li> </ul>		
	o It is not lead by the community		

### **Case Study: Crowlands Wind Farm Victoria, Pacific Hydro**

- The wind farm constructed in 2019 will invest \$2.2 million over 25 years into a community fund
- Located in Western Victoria's Pyrenees Shire Council
- Sustainable communities fund with a panel consisting of 3 community members, 2 local shire councils and Pacific Hydro representatives
- Expressions of interest advertised each year for community members to apply for the panel



Community members from Crowlands Wind Farm, (Pacific Hydro)

Example projects awarded funding

- 1. Crowlands Cemetery Trust Memorial
- 2. Elmhurst Public Hall Stove replacement
- 3. Project Platypus Landcare
- 4. Landsborough primary school School bus

## Option 2 – CEF Independent Trust



Ad	Advantages		Disadvantages			
0	Perception of Independence of the Trust Committee once established	0	Greater risk of breakdown without structure and responsibility of council to maintain its commitment to the governance and existence			
0	There is autonomy associated with the methods in which, the community advertises the fund	0	Effort required by Community to communicate funding processes and manage governance and reporting.			
0	Those impacted indirectly by the wind farm such as neighbours can have direct access to be a part of the committee	0	Complexity is establishing and operating with guidelines and administration to be established from scratch			

### Case Study: Snowtown Wind Farm, Tilt Renewables

- Located 5km west of Snowtown and 170km north of Adelaide
- Funds provided to the Lend a Hand Foundation in Snowtown that have members of the community who decide on, which projects to receive funding



Snowtown kids visiting tilt renewables wind farm, (Tilt Renewables)

"In the last two years we've provided funds for a weather station for the Snowtown Country Fire Service, supported the Bute Men's shed, and contributed to the Brinkworth history group for their museum and a reprint of their centenary book through grant funding." Alan Large, Snowtown resident and Lend a hand foundation committee member

## Option 3 – CEF S355 Committee



Advantages		Disadvantages				
0	Councils are already well established to commit to long term operation of the Fund. Create stability.	0	Councils focus on multiple issues facing its residents, which may not target the funding to those directly involved with the wind farm			
0	Long term institutions, democratically elected, transparent and audited financial systems, experienced in assessing, managing and reporting committees.	0	Councils have a significant amount of tasks and responsibility already and by assigning this extra role it could put more strain on other developments needed			
0	Has been the most common approach for wind farms. Tamworth and Nundle/Hanging Rock have strong framework and guidelines for S355 management.	0	Perception of council involvement in local community benefits			
0	Council network and channels to communication of application process, eligibility etc.					

### **Committee Structure:**

- Councillor delegate
- o 2+ community representatives who aren't associated landowners
- o A representative appointed by the company

## Case study: Boco Rock Wind Farm, CWP Renewables

- o 30km North of Bombala, NSW
- Fund delivers an annual contribution of \$77,500 to Bombala Council and \$90,000 to Monaro Council



Community Open Day, (Boco Rock Wind Farm)

## Group Brainstorming Exercise and Discussion - Format



Time: Approx. 20 minutes per Exercise

Groups: 4 x groups of 4-5 people (rotate after break)

Number: 4 x Exercises in Total

Exercise: 1. Review feedback and group discussion/responses to CEF questions (10 minutes)

2. One group presents and open forum discussion/input (10

## Exercise 1 – CEF Purpose and Objectives



- 1. What do we want the key funding priorities of the community enhancement fund to be?
- 2. What community projects, events, facilities, buildings, organisations, clubs, heritage sites, etc. should the community enhancement fund benefit?
- 3. Conversely, what should the CEF NOT be used for?
- 4. How do these priorities get decided?
- 5. How do we set parameters for where funds are spent i.e. geographic, municipalities, LGA's?

## Exercise 2 – CEF Establishment, Governance and Administration



- 1. How do we want the community enhancement fund to be governed and administered?
- 2. What will be the role and responsibilities of the committee?
- 3. What role will the council's play in the functioning of the fund?
- 4. Is there a preference for council administration via a S355 or independent trust or charity with a specific charter?

## Exercise 3 – CEF Establishment, Governance and Administration (cont'd)



- 5. How many committee members should there be and how do these committee representatives get nominated, elected or appointed?
- 6. How will monetary contributions be managed and by whom?
- 7. How often should the committee meet?
- 8. How should change be managed during the life of the CEF?

## Exercise 4 – Fund Eligibility Criteria



- 1. What types of recipients would be eligible for grants from the fund?
- 2. How do the decisions be made on how the funds are spent?
- 3. What framework can be setup to ensure the fund operates as per its mandate?

### Feedback from Community Enhancement Fund Workshop

#### (a) Exercise 1 – CEF Purpose and Objectives

## 1. What do we want the key funding priorities of the community enhancement fund to be?

- No individuals
- Not maintenance functions ordinarily performed by council
- Charter -> enhances wellbeing and lifestyle for members of community
- Merit system
- Representation from Nargeroo on committee
- Council representation with authority to liaise with
- Structure of committee, applicant could present
- Non-voting -> 3 council representation
- Administration -> Council function
- GST, quarterly financial reports, payments, acquittal processes
- 7 committee members

1x Nargeroo?

2x Nundle

2x Hanging Rock

2x Timor / Crawney

3x Non-voting LGA members

- Project programs or facilities that are located within or provide a service to the local community
  - Biannual funding rounds
  - Optional presentation by applicant
  - Application process needs to be accessible and simple
  - Justification of community benefit/need
  - Not S355 Committee
  - Strong group as community
  - Hanging Rock + Nundle as one
  - Not 20km
  - Old Nundle shire, Dungowan, Woolomin, Dunant Creek, Goonoo
  - Workers in and out of roads
  - Camp draft and people from Dungowan + Woolomin
  - Barry, Crawney, Timor

#### 2. What community projects should the community enhancement fund benefit?

- Social environment improvement
- Whole of community benefit
- 30km radius from project
- Upgrades to the community
- Education aspect
- Natural environment
- Charity groups

· Landowners should not benefit,

#### (b) Exercise 2: CEF establishment, Governance and Administration

## 1. How do we want the community enhancement fund to be Governed and Administered?

- Includes body with a model constitution with strong financial and administrative support with appropriate involvement of council
- If funding is comparatively minimal council would be the preferred 'lead' on the fund
  - If sufficient pool of money 2 rounds per year but this structure needs to be flexible
  - Available skillsets + volunteer burn out
- Process of decision making for trust representation CCC to choose? Who decides?

#### 2. What will be the roles and responsibilities of the committee?

- Robust governance impeccable financials
- Need for transparency + integrity of members
- Must stand test of time
- Provision of funding out of overall 'pot' to ensure good governance e.g. Audited statements potentially done by the council
- Responsibility of trust members must be clearly understood e.g. Public liability, professional indemnity insurances
  - Responsibility for administration costs
  - Communication costs (Advertising, newsletters)
  - Trends of declining volunteering
  - Structure of committee is important (skills)
  - Need for certainty of funding available
  - Will potentially influence the ultimate model
  - Issue -> Overall footprint of the development is currently unknown.

#### 3. What role will the council play in the functioning of the fund?

- Trust model has worked well historically
- Nundle has approx. 26 committees
- Trust facilitates better equity across impacted communities
- Greater transparency
- Representative of broader community need
- Ability to bring specific skillsets 'to the table'
- Trust is able to be more flexible and agile

#### Accounting and admin/finance

- Company secretary
- Assessment + recommend
- Chair

- Marketing
- Agenda
- -> Existing projects
- -> Budget Update
- -> Funding rounds
  - 6/9 votes achieve a consensus
  - Scholarships
  - Council to remain involved for safe keeping and governance
  - What happens if trust falls over?
- Key to addressing falling over concern is council agreeing with condition that it must fund if the committee requires it.
  - Conflicts of interest in voting

## 4. Is there a preference for council administration via a S355 or independent trust or charity with a specific charter?

Potential council involvement in trust model

- Resolution of disputes
- Secretariat
- Non-voting (council)
- Council advice on strategic planning
- Potential rotation of council staff over different CGA's
- Distribute minutes to each council

## 5. How many committee members should there be and how do they get nominated?

- No active S355 committee currently exists
- Independent trust
- S355 delegating to a group activity
- Broad representation, across the Hanging rock, Nundle and Crawney region
- Code of conduct to guide behaviour and principles
- Founding members of the committee and then rotation of members
- Once set up establish running costs
- Accounts to be audited by an independent body and transparent around every motion

#### 6. How will monetary contributions be managed and by whom?

- The three coal mines only provided \$100,000 each over the lifetime of the whole project to the communities
  - Council to provide administration assistance but paid for by the fund
  - Flexibility within the fund's structure is important
  - Having the right structure is critical
  - JK if host land owner increases rates
  - Council to provide certainty that rates won't be affected by host landowner
  - Also adjust council funding commitments
  - Community would like free power as part of the community enhancement fund

## 7. How often should the committee meet and how should change be managed during the life of the CEF

- -> 1 x council member (from each council, through voting)
- -> 5x community (voting)
- -> 1x owner
- 3-year term for each committee
- If more than 5 people go to vote
- Should be a requirement to live within 20-30km of project
- Ballot to community to decide committee
- Committee to receive review and deeds
- There should be diverse representation across the community

#### (c) Exercise 4 – Fund Eligibility Criteria

#### 1. Recipients, decisions and frameworks

- Priority to those most impacted
- -> footprint of project, e.g. noise, traffic and environmental
  - Should not subsidise state / federal government organisations
  - Should not benefit individuals
  - Not for profit groups to be the priority
  - Should not benefit individual business interests
- Should not be used for general council obligations and responsibilities e.g. road maintenance and upgrades
  - Application process subject to meeting eligibility criteria
  - Budgets ensuring capability for project delivery by community organisations
  - CPI increases accommodated
  - Consensus / voting
  - Strong funding guidelines that incorporates flexibility
  - Councils provided with a designated seat at the table
  - Sitting fees + admin costs
  - Exclusion of landowners / interest management

## 2. How are decisions made and how can a framework be set up to ensure the fund operates as per its mandate?

- 6/9 to secure certainty
- Absentee votes
- CWA, P & C, NTDE, lions group
- Volunteering may dilute
- This will be agreed with council
- Independent audit whether council or independent body
- Those responsible of funds should have a set of skills, this lends itself to council with its governance structures.

LX 4

Within an arbitrary radius ~

of the footprint

2. Based on criteria

-built, social + natural environment

-NFPs, local instituitions

2/3 votes for to gain approval for granting funds.

3. Quorum of 6 for funding to take place Independent auditing of funds

## 1. Governance + Administrations

- Inc. body with model obustitution with strong financial & administrative support with appropriate involvement of Council.
- "If funding is minimal Council would be comparatively.
  The preferred lead on the fund.
- If sufficient pool of money 2 rounds per year but this structure needs to be flexible
- · Available skillsets + Volunteer burn out
- · Process of decision making for Trust representation - CCC to choose? Who decides - major risk.

No Individuals - not maintenance functions ordinarily performed

- not maintenance functions ordinarily performed

- charte: enhances well being & Lifestyle for

- continuently wars of facilities community. - Mert Syskm. -representation from Nurgeroo on committee -community - communing
- council rep with authorsty to leise with
- shutted of committee, applicant counted possess - Non-votting - 5 councils - adrinstation - govern? forction, - C. ST, autertaly paintencial reports. payments aquital process, -7 Committee members
2 Number
2 Number 7 Hoying Rock. 2 Timer Kronney. 3-non-volting Last members.

4. STRUCTURE

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· Nundle has approx. 26 Commi Hers

· Trust facilitates better equity across impacted communities.

· Greater transparency

· Representative of broader community need.

· Ability to bring specific skillsets to the table '

· Trust is able to be more flexible + 'agile'

· Potential Council involvement in Trust Model

eg. resolution of disputes · Project suppost

· Conduit to broader

· Non-voting (Council)

· Council advice on strategic planning · Potential rotation of Council state was different · Cats · Cits · Distribute minutes to each Council. 5. See 01

6. Money held by Council + managed by the

7. Monthly minimum

\* needs to have a code of conflict a conduct
re: conflicts of interest

- Independent Trust, administered by the Trust 2: elected committee
-council reps - community - Cracinet, Non
5 members (maximise diversity)
- if more than 5 community members nominate, then
a vote takes place Council(s) to play a role in forming the Trust A2: Roles: G-accept applications + decide on those requiring funding
- "Marketing", building avareness of what can be funded

Emance Chair | Treasurer | Secretary | Marketing
- 6 Yotes for project to go ahead. Be Support services Potentially administer funds Independent Trust

- Not 5355

- Harging group and community

- Harging Rock + Nurdle as one

- Not 20 km

- Old Nurdle Shine - Deingonam, Og my//b

Wolomin, Duneant Creek, Coores, Coombered

- review in and our of roads.

- Camp draft han people from Dangonam throlomin.

- Barry, Crambey, Timor.

projected programs or facilities that an located within or provide a Service to the local community.

- Biannual funding rounds.

- optional presentation by applicant.

- place application process needs to be accessible t simple. Justification of community benefit pred.

Madrermales 1. RECIPIENTS? 2 DECISIONS 3. FRAMINOSK · Priority to those Most impacted 2 footprint of project eg noise, traffic, envilonmental · Should not subsidice state (federal gov) mailsoinaper · Should not benefit individuals. · Not for profit tocus. . Should not benefite individual business · Should not bessel be used for general Council obligations + responsibilities. eg. road Maintenance + upgrades. · Application process subject to meeting · Budgets - ensuring capability for project delivery

by community enganisations

cortinereases accommodated

Consensus · Consensus voting · Strong funding guidelines - flexibility · Councils provided with a scatcht the table? · Exclusion of land molders premiery interest management

## 2. Roles of Responsibilities

- "Kobust governance impercable financials
- · Need for transparency & integrity of
- · Must stand test of time.
- · Provision of funding out of overall pot to ensure good governance eg. audited Stokements etc. Potential role for Council - extra.
- · Responsibility of trust must be clearly understood eg. public liability, professional indemnity insurances.
- · Responsibility of for administration costs.
- 6 Communication costs. (advertising, newsletters)
- Trends of declining volunteering
- Structure of Committee is important (shills).
- · Need for certainty of funding available
- will potentially influence the ultimate model
  - is currently unknown.



Someva Pty Limited
36-38 Young St
Sydney
NSW 2000
Australia

Hills of Gold Preservation Inc. 24<sup>th</sup> of January 2020

Dear HOGP Inc.

#### RE: CCC Meeting Tabled Document Tuesday 10th December 2019 – Someva Renewables response

We appreciate the feedback regarding concerns that Hills of Gold Preservation Inc. have raised on support from the community for the Hills of Gold Wind Farm Development. We aim to continuously engage with the community to ensure that the outcomes are suitable for all and accurate information is available to those concerned.

We understand that there is misunderstanding and inaccurate information regarding the proposed wind farm. We have subsequently increased our consultation within the past few months through surveys, one-on-one meetings and phone calls, and learnt that these concerns are general in nature and common misunderstandings of wind farm proposals. The community questions Hills of Gold Preservation Inc tabled in the September CCC meeting support this.

The National Wind Farm Commissioner's 2018 report states it is more complaints are received for wind farms proposed or in construction than operating - suggesting the understanding of impacts prior to operation is disproportionate to the reality. Further it should be noted that no complaints in the 2018 report were received for operating projects in NSW, suggesting a rigorous assessment process in determining appropriateness of proposed wind farms to community concerns.

Wind Energy Partners remain committed to further consultation and have recently announced monthly availability at convenient locations to the community for information sessions. This information was posted to residents and announced through the email database recently. The initiative commenced in January 2020, and a number of meetings were held with concerned local residents There will be further opportunity for consultation during upcoming February visits for the CCC site tour and Community Enhancement Fund workshop.

Wind Energy Partners takes seriously its' responsibility to ensure accurate information is available. As part of ensuring specific concerns learnt through expert assessments can be considered by the community, WEP are committed to sharing interim results through CCC meetings and information sessions to consult and avoid or mitigate potential negative impacts the project may create, and also highlight project benefits.

We note that at this point in time, there is a need to provide detailed and accurate information through the development of the Environmental Impact Statement (EIS), the broader facts of wind power appropriately explained and the project in the context of state and federal energy infrastructure planning and policy. This includes the presentation of preliminary visual montages in April and the noise and vibration studies in October, which we understand to be the basis for opposition in the community petition sited by the Justice of the Peace. We hope that by offering information sessions between experts and the community, interested people can come forward and learn more.

It is the view of Wind Energy Partners that the completed EIS and further consultation will help those concerned with the development make an informed decision regarding their concerns. We request that those concerned with the development continue to engage directly with Wind Energy Partners and wait for detailed information regarding the project to be presented through interim presentation of various technical studies and the full EIS when submitted to the Department of Planning, Industry and Environment.

As previously offered we would welcome the opportunity to meet with executive members and representatives of Hills of Gold Preservation Inc. and offer the time of our experts to provide technical responses to methodologies and interim results as they become available.

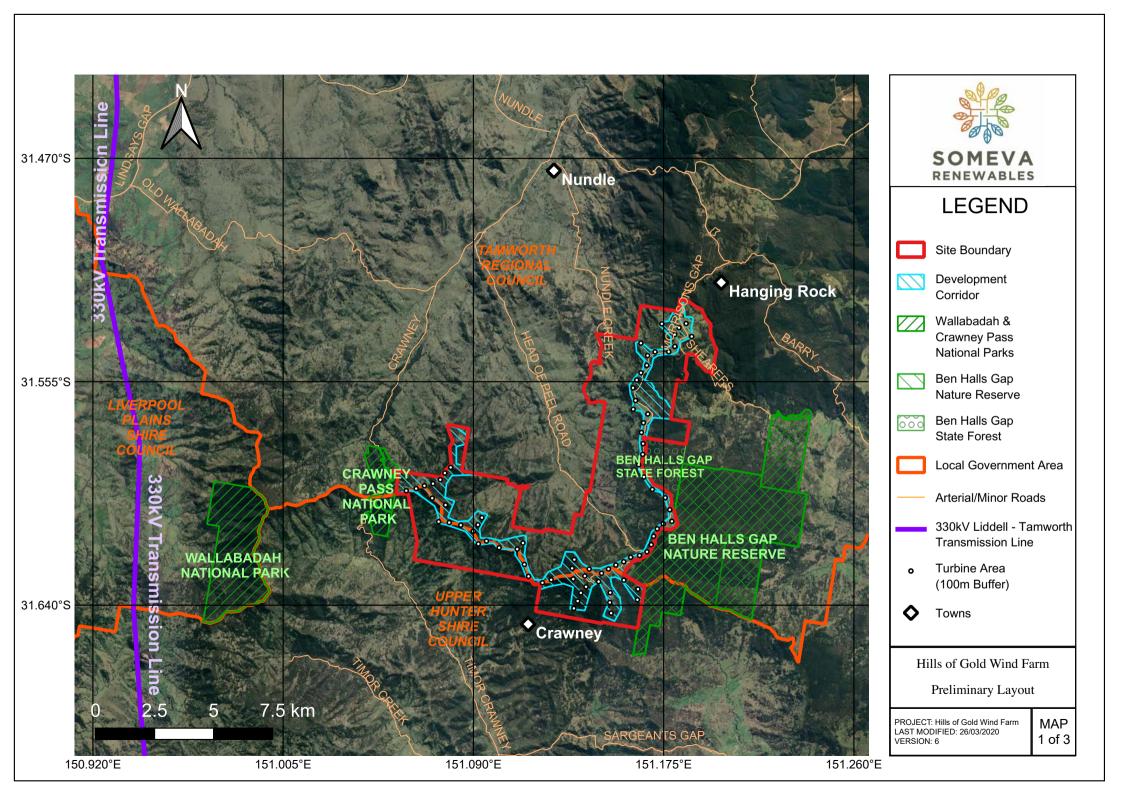
Sincerely,

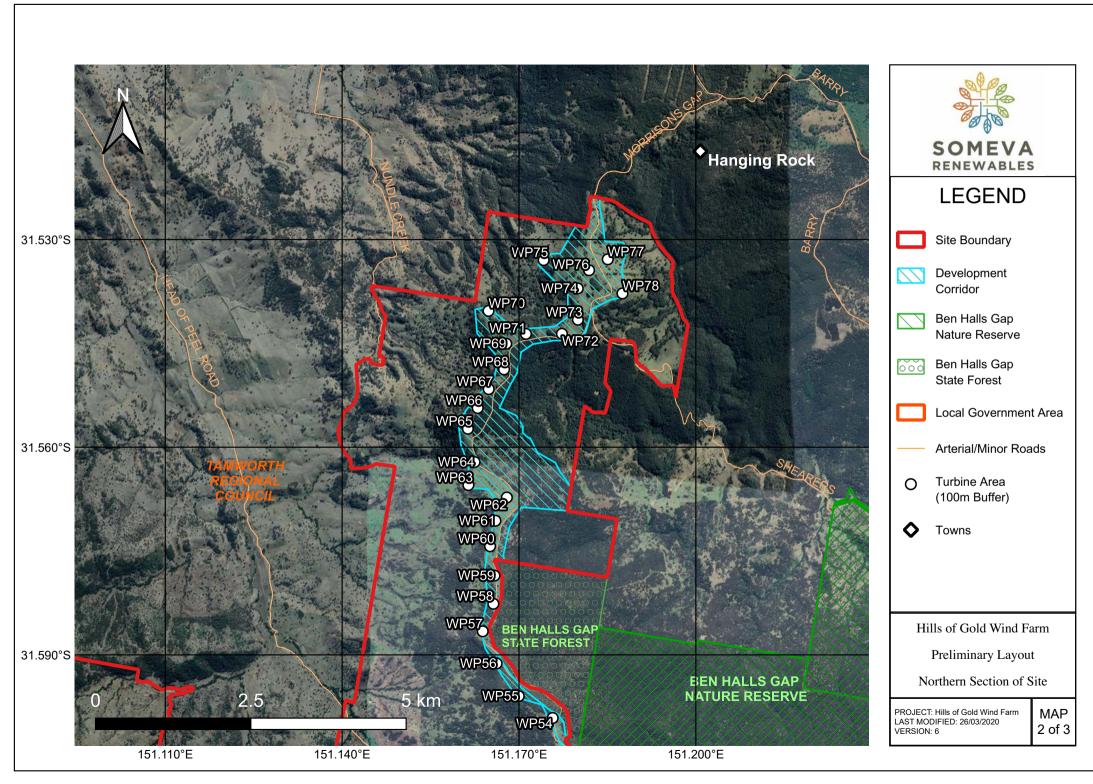
Jamie Chivers

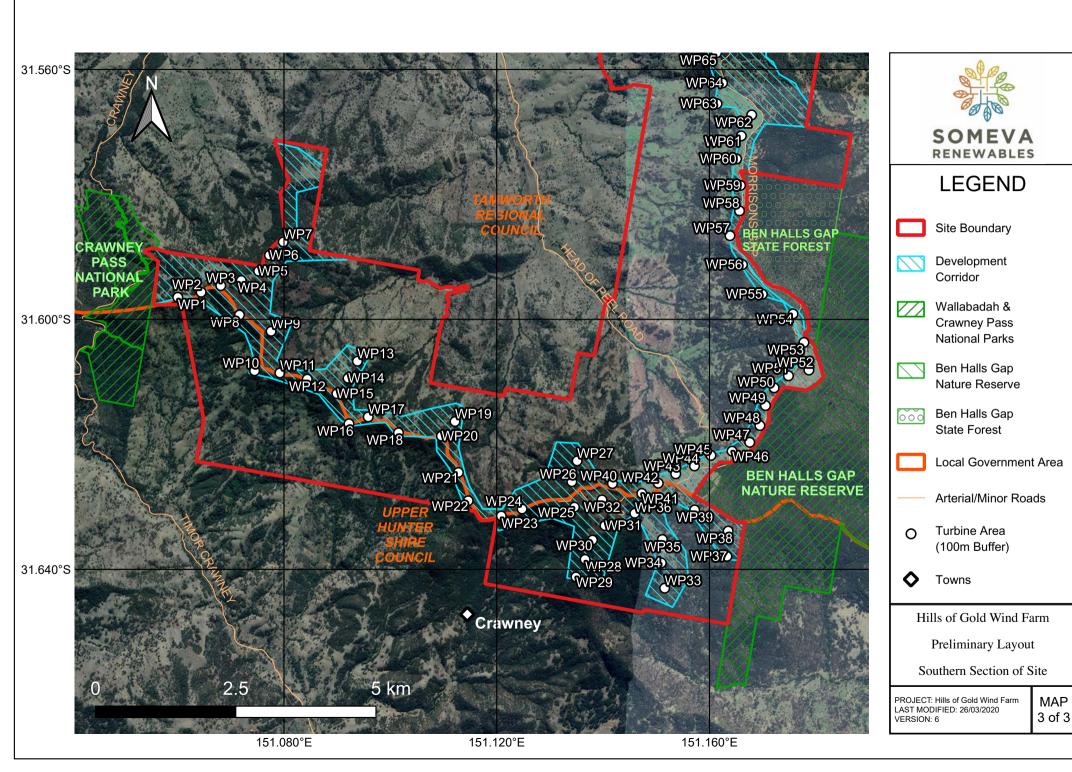
Managing Director – Wind Energy Partners

jamie.c@someva.com.au

+61 423 336 345 36-38 Young St Sydney NSW 2000









#### HILLS OF GOLD PRESERVATION INC. 87 JENKINS STREET NUNDLE NSW 2340

#### March 17, 2020

Dear Mike and Jamie,

HOGP Inc members would like to make an official complaint with regards to the Socio-Economic Assessment and the Preliminary Visual Impact Assessment against the timing and delivery of Turbine Layout.

A number of HOGP Inc. members were approached by SGS Economics and Planning on Friday 13 March 2020 to schedule in private meetings to conduct a Socio-Economic Impact Assessment on the proposed Hills of Gold Wind Farm project on Wednesday 25 March and Thursday 26 March 2020.

HOGPI members are disappointed and believe that timing for such an assessment is inappropriate as WEP has failed to provide our community with solid and concrete information regarding the proposed wind farm project to date. Our members believe that in order for SGS to to conduct an accurate Socio-Economic Impact Assessment, the community would first need to understand the following:

- Proposed turbine placement location
- Proposed transmission line route
- Proposed transport route
- Water/hydrological studies
- Ecological and Biodiversity studies on all areas affected
- Heritage and Cultural Assessment
- Aviation and Communications Assessment
- Visual Montages and Shadow Flickers
- Hazard and Risk Assessments
- Proposed Community Enhancement funds amount and how the funds will be administered.

Without knowledge on any of these facts, members believe that the community is not properly informed and are unable to address their concerns appropriately and accurately.

A few Members have also been contacted today by WEP that a Preliminary Visual Impact Assessment will be conducted this week based upon the updated turbine layout as outlined in the December CCC. Members are aware that the new turbine placements are to be presented at the upcoming CCC meeting on Wednesday 25 March 2020. Members are confused as to why such an assessment is taking place this week with outdated information.

The recent proposal for Socio-Economic and Visual Impact Assessments by WEP is perceived by the community as a box ticking exercise and not performed in a manner where there is genuine concern by WEP to gain accurate assessment results for its upcoming EIS lodgement. The lack of concern for accuracy on these impact studies findings is disappointing to the members of our community.

We look forward to your response on the above matters.

Yours sincerely,

Teresa Eather

Executive member - Hills of Gold Preservation Inc.





Hills of Gold Preservation Inc. 14th<sup>th</sup> April, 2020

Dear HOGP Inc.

RE: Socio-Economic Assessment and Visual Impact Assessment - Hills of Gold Energy Wind Farm

Thank you for your patience in providing this response to your concern on the Socio-Economic Assessment and Visual Assessment for the Hills of Gold Wind Farm, in reference to the timing and delivery of the updated preliminary layout and other technical assessments.

SGS Economics and Planning (SGS) have been engaged by Wind Energy Partners (WEP) to undertake the socio-economic assessment as part of the project Environmental Impact Statement (EIS). Prior to receipt of your email, we were advised by SGS that several stakeholders they had approached had expressed their preference to meet with SGS following the release of the updated turbine layout. To accommodate these requests, SGS re-scheduled the consultation meetings to be held via teleconference in the week commencing 30th March 2020. The updated turbine layout was delivered to the CCC and broader community on the 25th March 2020, and the CCC Meeting held on 1st April. At the time of writing, we can confirm that SGS has held 10 consultation meetings with stakeholders, and this includes those stakeholders preferring to have meetings with SGS following the turbine layout and CCC meetings. Other stakeholder meetings are scheduled and may occur in the future as part of SGS's assessment.

In instances where stakeholders were approached by SGS Economics and Planning, Wind Energy Partners first consulted with stakeholders to confirm interest in participating in the assessment, and provided the attached memorandum for background information on SGS, their business and what the scope of their assessment was. Where we understood a stakeholder had concerns about their participation in SGS's assessment being represented as support for the project, we advised that participation was voluntary and that stakeholders may discuss their concerns in participating and publication of personal information directly with SGS.

Addressing the issue more broadly about the timing and delivery of the stakeholder consultation phase of SGS's socio-economic assessment and the development schedule, we provide the following information in response and for your consideration:

- The socio-economic assessment must be completed as part of the EIS and in accordance with the Secretaries Environmental Assessment Requirements (SEAR's) provided by the Department of Planning, Industry and Environment (DPIE). The lodgement of an EIS is currently scheduled in November/December 2020, and this has been communicated to HOGP Inc members and the community in CCC meetings, newsletters and other communication forms;
- SGS were selected in January 2020 to undertake the assessment due to the significant experience and technical expertise they have in assessing, quantifying and explaining the social and economic impacts of infrastructure projects. Following engagement, SGS requested specific information related to the project from Wind Energy Partners, in order

for them to perform the socio-economic assessment in accordance with the project SEAR's;

- Upon request, SGS were also provided information and contact details of local businesses
  and other stakeholders who were identified during community consultation. Whilst we
  assisted in this regard, SGS were at liberty to consult with other project stakeholders as
  they considered appropriate to complete the stakeholder consultation phase of the
  assessment;
- From consultation completed to date, we have received feedback from that further information and opportunity for consultation is needed in order for stakeholders and community members to make an informed decision on the project. In response to this, we announced a Timeline in the December 2019 CCC Meeting whereby the results of socio-economic, transport, hydrological, cultural & heritage, visual montage and shadow-flicker and a number of other technical assessments, as you outlined in your list below, were agreed to be presented to the community in August 2020. This is a commitment to ensure the information learned from these assessments is available for the community to review and consult with WEP prior to lodgement of an EIS and further concerns to be addressed. We have been working closely with our technical consultants since the COVID-19 travel and social distancing restrictions came into effect in the last month, to understand and mitigate where necessary any disruptions to this Timeline and are working towards delivering on this commitment as planned;
- The scope of the stakeholder consultation phase of the socio-economic assessment as provided in the attached memorandum, is to "conduct targeted consultation with stakeholders to better understand the current economic and social function of the area." The scope of this assessment is thus about understanding the existing socio and economic setting in Hanging Rock, Nundle and other municipalities close to the project now, and the social and/or economic opportunities or concerns that stakeholders have in consideration of the project in the future if constructed;
- Whilst we acknowledge and agree that access to information within the technical assessments and EIS is necessary for the community to make an informed decision on the proposal, this is not prohibitive for SGS to perform the scope of their stakeholder consultation phase of the socio-economic assessment in understanding the current local business, tourism, social, etc. functioning and context of the proposal in the area.

With regards to HOGP Inc members being contacted by WEP as part of a preliminary visual assessment, ERM and Moir Landscape Architecture have been engaged to undertake the landscape and visual assessment in accordance with the SEAR's and NSW Wind Energy: Visual Assessment Bulletin (DPE, 2016). Specialists from Moir Landscape Architecture attended public viewpoint locations in Hanging Rock, Nundle, Crawney and the areas surrounding the project to conduct a landscape and character assessment in the week commencing 16th March 2020. Part of this included a photographic survey from several key public viewpoint locations, in order to prepare preliminary visual photomontages based on the updated preliminary turbine layout. A number of local residents who had expressed concern on the visual impact of the proposal were contacted during this time, to consult directly with Moir as the technical consultants undertaking the landscape and visual assessment for the project. There will be further opportunities at a later stage for additional residents to consult with Moir on visual impact concerns as part of the landscape and visual assessment.

Finally, recent consultation in the form of SGS contacting local community stakeholders as part of their socio-economic assessment, or Moir Landscape Architecture meeting with local residents on the concerns they have on the visual impact of the proposal from their property, is an integral part of the scope of these individual assessments required to be completed as part of the SEAR's, the applicable legislated guidelines the assessments must follow, and to inform the development of EIS. As such, we

disagree on the assertion it is a box-ticking exercise or that there is a lack of genuine concern in undertaking these tasks as part of the assessments, and posit that this is genuine and necessary consultation required for the project, to ensure the community are engaged and involved at all stages of the design phase and development of the EIS. We will continue to engage and work with HOGP Inc and its members to resolve their concerns on the accuracy of these impact studies going forward, and look forward to presentation of preliminary visual photomontages later this month to obtain further feedback from the community on the updated preliminary layout.

Sincerely,

**Jamie Chivers** 

Managing Director – Wind Energy Partners

jamie.c@someva.com.au

+61 423 336 345 38 Young St Sydney NSW 2000

## **MEMO**

То:	Someva Renewables			
From:	From: SGS Economics & Planning			
Date:	25/02/2020			
Subject:	Hills of Gold			

#### Hi Sandra

As discussed at the meeting yesterday, please find attached a one-page profile of SGS explaining our role in the project and the background on the company.

Regards

Rowena



MEMO



SGS Economics & Planning has been commissioned by Someva Renewables to complete a socio-economic assessment for the proposed Hills of Gold Wind Farm, near Nundle NSW. SGS has extensive expertise in assessing, quantifying and explaining the social and economic impacts of infrastructure projects.

As part of the socio-economic assessment, SGS will conduct targeted consultation with stakeholders to better understand the current economic and social function of the area.

#### **About SGS Economics & Planning**

SGS is an Australian college of professionals that is collectively owned and operated by its employees. We have major offices in Melbourne, Sydney, Canberra and Hobart with regional presences in New South Wales and Victoria. We have been in operation for almost 30 years, https://www.sgsep.com.au/

Our purpose is to help shape more sustainable places, communities and economies. SGS specialises in:

- Strategic land use planning
- Land market analysis
- Economic and employment analysis and forecasting
- Demographic and economic profiling
- Economic development policy and strategy formulation
- Sustainability.

SGS has a team of over 60 professionals including urban economists, econometricians, town planners, transport analysts, geographers, urban designers and infrastructure specialists. Together, we provide a full suite of technical skills and experience across a broad range of services and industries.

SGS team members take pride in contributing to good decision-making through rigorous research, analysis and advice. We aspire to continuously learn and create new knowledge to constructively contribute to policy debates in both urban and regional areas of Australia.

#### SGS OFFICIALLY CERTIFIED AS A B CORP

In October 2017, SGS was officially certified as a B Corp. Becoming a B Corp demonstrates that, as an organisation, we live and breathe our values by applying them to our decision making every single day.

Certified B Corporations are leaders of a global movement of people using business as a force for good. B Corps have committed to meeting the highest standards of overall social and environmental performance, transparency and accountability, and aspire to use the power of business to solve social and environmental problems.

SGS is proud to join more than 2,300 Certified B Corporations worldwide as we progress our purpose of shaping policy and investment decisions to achieve sustainable places, communities and economies, while also contributing to the unifying goal of all B Corps — to redefine success in business.



# Calling all residents in the community.

# IT IS TIME TO HAVE A VOICE

## You are invited to our farm TO SAY OUR TOWN WANTS AND NEEDS A WIND FARM

The Land Paper will be here next Thursday or Friday(to be advised) come and stand with us.

Meet us at the "Malonga" cattle yards on Morrison's Gap Road at Hanging Rock. Turn right after the dam and keep driving until you reach the yards.

We want and need a thriving town that is self sufficient. We want more people to want to live in our community. We need more jobs, better services and Facilities for the children and the elderly.

### **Dream and Imagine and then Create**

The community in our village of Hanging Rock and Nundle are getting older. With the money donated from the wind farm \$2,500 per turbine per year for the next 25 to 35 years. Imagine the self sufficient community we could build.

Could some of that money go towards building a retirement village in Nundle so our older community members could live in this town for their whole lives and stay close to their family and friends and get the care that they need with a doctor and health care service available at that village.

We could build a smaller indoor swimming pool that could be heated all year round for exercise and swimming lessons for the little ones.

At Sheba Dam - Build a playground and include a jumping pillow, flying fox and swings that go into the dam.

**Keep Using your imagination** 

### A Family Tourist and adventure park at the wind farm

Which will create long term employment for people

- A possible 300 to 400 metre snow ski run in winter
- · Toboggan rides down the hill
- Mountain bike riding
- · Horse trails
- · walking trails and buggy tour rides
- Inflatable ball rides down the air strip.
- Inflatable ball rides across a dam
- · trout fishing
- · cabins
- · paddle boats
- An indoor family fun centre with a rock climbing wall and ninja warrior course.

Could you please forget about the visual affect of the wind farm for a minute and imagine the benefits that can be gained from it.

DON'T BE AFRAID TO SPEAK UP AND PLEASE USE YOU IMAGINATION.

## Commonwealth Department of Agriculture, Water and the Environment assessment requirements

Guidelines for preparing assessment documentation relevant to the *Environment*Protection and Biodiversity Conservation Act 1999 (EPBC Act) for proposals being assessed under an Accredited NSW Assessment Process

#### Hills of Gold Wind Farm (EPBC 2019/8535) (SSD 9679)

#### **Introduction**

- 1. On 23 December 2019, a delegate of the Federal Minister for the Department of Agriculture, Water and the Environment (formerly Department of Environment and Energy) determined that the Hills of Gold Wind Farm Project was a controlled action under section 75 of the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act). The EPBC Act controlling provisions for the proposed action are:
  - i. listed threatened species and communities (sections 18 and 18A)
  - ii. listed migratory species (sections 20 and 20A)
- 2. The proposed action will be assessed in accordance with the *NSW Bilateral Agreement relating to* environmental assessment 2015 and as such, is required to be assessed in the manner specified in Schedule 1 to that Agreement including, addressing the matters outlined in Schedule 4 of the *Environment Protection and Biodiversity Conservation Regulations 2000* (EPBC Regulations).
- 3. The proponent must undertake an assessment of all protected matters that may be impacted by the development under the controlling provision identified in paragraph 1. The Commonwealth Department of Agriculture, Water and the Environment considers that the proposed action is likely to have a significant impact on threatened species and communities and migratory species listed in Appendix A.
- 4. The proponent must consider each of the protected matters under the triggered controlling provisions that may be impacted by the action. Note that this may not be a complete list and it is the responsibility of the proponent to undertake an analysis of the significance of the relevant impacts and ensure that all protected matters that are likely to be significantly impacted are assessed for the Commonwealth Minister's consideration.

#### **General Requirements**

#### Relevant Regulations

5. The Environmental Impact Statement (EIS) must address all matters outlined in Schedule 4 of the EPBC Regulations and all the matters outlined below in relation to the controlling provisions.

#### **Project Description**

- 6. The title of the action, background to the action of the action and current status.
- 7. The precise location and description of all works to be undertaken (including associated offsite works and infrastructure), structures to be built or elements of the action that may have impacts on Matters of National Environmental Significance (MNES).
- 8. How the action relates to any other actions that have been, or are being taken in the region affected by the action.

9. How the works are to be undertaken and design parameters for those aspects of the structures or elements of the action that may have relevant impacts on MNES.

#### *Impacts*

- 10. The EIS must include an assessment of the relevant impacts of the action on the matters protected by the controlling provisions, including:
  - i. a description and detailed assessment of the nature and extent of the likely direct, indirect and consequential impacts, including short term and long term relevant impacts;
  - ii. a statement whether any relevant impacts are likely to be unknown, unpredictable or irreversible;
  - iii. analysis of the significance of the relevant impacts; and
  - iv. any technical data and other information used or needed to make a detailed assessment of the relevant impacts.

#### Avoidance, mitigation and offsetting

- 11. For <u>each</u> of the relevant matters protected that are likely to be significantly impacted by the action, the EIS must provide information on proposed avoidance and mitigation measures to manage the relevant impacts of the action including:
  - i. a description, and an assessment of the expected or predicted effectiveness of the mitigation measures,
  - ii. any statutory policy basis for the mitigation measures;
  - iii. the cost of the mitigation measures;
  - iv. an outline of an environmental management plan that sets out the framework for continuing management, mitigation and monitoring programs for the relevant impacts of the action, including any provisions for independent environmental auditing;
  - v. the name of the agency responsible for endorsing or approving each mitigation measure or monitoring program.
- 12. Where a significant residual adverse impact to a relevant protected matter is considered likely, the EIS must provide information on the proposed offset strategy, including discussion of the conservation benefit associated with the proposed offset strategy.
- 13. For <u>each</u> of the relevant matters likely to be impacted by the action the EIS must provide reference to, and consideration of, relevant Commonwealth guidelines and policy statements including any:
  - i. conservation advice or recovery plan for the species or community,
  - ii. relevant threat abatement plan for a process that threatens the species or community
  - iii. wildlife conservation plan for the species
  - iv. any strategic assessment.

[Note: the relevant guidelines and policy statements for each species and community are available from the Department of Agriculture, Water and the Environment Species Profile and Threats Database. http://www.environment.gov.au/cgi-bin/sprat/public/sprat.pl]

#### Key Issues

#### Biodiversity (threatened species and communities and migratory species)

#### <u>Assessment Requirements</u>

- 14. The EIS must identify <u>each</u> EPBC Act listed threatened species and community and migratory species likely to be impacted by the action. For any species and communities that are likely to be impacted, the proponent must provide a description of the nature, quantum and consequences of the impacts. For species and communities potentially located in the project area or in the vicinity that are not likely to be impacted, provide evidence why they are not likely to be impacted.
- 15. For <u>each</u> of the EPBC Act listed threatened species and communities and migratory species likely to be impacted by the action the EIS must provide a separate:
  - a. description of the habitat (including identification and mapping of suitable breeding habitat, suitable foraging habitat, important populations and habitat critical for survival), with consideration of, and reference to, any relevant Commonwealth guidelines and policy statements including listing advice, conservation advice and recovery plans;
  - b. details of the scope, timing and methodology for studies or surveys used and how they are consistent with (or justification for divergence from) published Australian Government guidelines and policy statements;
  - c. description of the relevant impacts of the action having regard to the full national extent of the species or community's range; and
  - d. description of the specific proposed avoidance and mitigation measures to deal with relevant impacts of the action;
  - e. identification of significant residual adverse impacts likely to occur after the proposed activities to avoid and mitigate all impacts are taken into account;
  - f. description of any offsets proposed to address residual adverse significant impacts and how these offsets will be established.
  - g. details of how the current published NSW Biodiversity Assessment Methodology has been applied in accordance with the objects of the EPBC Act to offset significant residual adverse impacts; and
  - h. details of the offset package to compensate for significant residual impacts including details of the credit profiles required to offset the action in accordance with the NSW Biodiversity Assessment Methodology and/or mapping and descriptions of the extent and condition of the relevant habitat and/or threatened communities occurring on proposed offset sites;
    - [Note: For the purposes of approval under the EPBC Act, it is a requirement that offsets directly contribute to the ongoing viability of the specific protected matter impacted by a proposed action and deliver an overall conservation outcome that improves or maintains the viability of the MNES i.e. 'like for like'. Like-for-like includes protection of native vegetation that is the same ecological community or habitat being impacted (preferably in the same region where the impact occurs), or funding to provide a direct benefit to the matter being impacted e.g. threat abatement, breeding and propagation programs or other relevant conservation measures.
- 16. Any significant residual impacts not addressed by the NSW Biodiversity Assessment Methodology may need to be addressed in accordance with the Environment Protection and Biodiversity Conservation Act 1999 Environmental Offset Policy.

http://www.environment.gov.au/epbc/publications/epbc-act-environmental-offsets-policy.

#### Other approvals and conditions

17. Information in relation to any other approvals or conditions required must include the information prescribed in Schedule 4 Clause 5 (a) (b) (c) and (d) of the EPBC Regulations 2000.

#### Environmental Record of person proposing to take the action

18. Information in relation to the environmental record of a person proposing to take action must include details as prescribed in Schedule 4 Clause 6 of the EPBC Regulations 2000.

#### **Information Sources**

19. For information given in the EIS, the EIS must state the source of the information, how recent the information is, how the reliability of the information was tested; and what uncertainties (if any) are in the information.

#### **REFERENCES**

- Environment Protection and Biodiversity Conservation Act 1999 section 51-55, section 96A(3)(a)(b), 101A(3)(a)(b), section 136, section 527E
- Environment Protection and Biodiversity Conservation Regulations 2000 Schedule 4
- NSW Assessment Bilateral Agreement (2015) Item 18.1, Item 18.5, Schedule 1
- · Matters of National Environmental Significance Significant impact guidelines 1.1 (2013) EPBC Act
- Environment Protect and Biodiversity Conservation Act 1999 Environmental Offsets Policy October 2012

#### Appendix A

#### Proposed site

Based on the information in the referral documentation, the location of the action, species records and likely habitat present in the area, there are likely to be significant impacts to:

- · White Box-Yellow Box-Blakely's Red Gum Grassy Woodland and Derived Native Grassland ecological community listed as **critically endangered**.
- Regent Honeyeater (Anthochaera phrygia) listed as critically endangered.
- Swift Parrot (Lathamus discolor) listed as critically endangered.
- · Booroolong Frog (Litoria booroolongensis) listed as endangered.
- · Fork-tailed Swift (Apus pacificus) which is listed as migratory.

In addition, there is some risk that there may be significant impacts on the following matters and levels of impact should be further investigated.

- · Small Snake Orchid (*Diuris pedunculata*) listed as **endangered**.
- · Blackbutt Candlebark (Eucalyptus rubida subsp. barbigerorum) listed as vulnerable.
- · Fragrant Pepperbush (Tasmannia glaucifolia) listed as vulnerable.
- · Austral Toadflax (*Thesium australe*) listed as **vulnerable**.
- Spotted-tailed Quoll (Dasyurus maculatus maculatus) (SE mainland population) listed as endangered.
- Koala (*Phascolarctos cinereus*) (combined populations of Qld, NSW and the ACT) listed as **vulnerable**.
- · White-throated Needletail (*Hirundapus caudacutus*) listed as **vulnerable**.
- · Euphrasia arguta listed as critically endangered.

#### **Transport route**

Further information is required during the assessment stage to determine the extent of potential impacts to the following protected matters from impacts associated with transporting project components to the proposed site:

- New England Peppermint (Eucalyptus nova-anglica) Grassy Woodlands ecological community listed as critically endangered.
- Lowland Rainforest of Subtropical Australia ecological community listed as critically endangered.
- · White Box-Yellow Box-Blakely's Red Gum Grassy Woodland and Derived Native Grassland ecological community listed as **critically endangered**.
- Regent Honeyeater (Anthochaera phrygia) listed as critically endangered.
- Euphrasia arguta listed as critically endangered.
- · Small Snake Orchid (*Diuris pedunculata*) listed as **endangered**.
- Zieria lasiocaulis listed as endangered.
- · Diuris eborensis listed as endangered.
- White-flowered Wax Plant (Cynanchum elegans) endangered.

- Milky Silkpod (Parsonsia dorrigoensis) endangered.
- Grevillea guthrieana listed as endangered.
- · Craven Grey Box (Eucalyptus largeana) listed as endangered.
- · Solanum sulphureum listed as endangered.
- · Blackbutt Candlebark (Eucalyptus rubida subsp. barbigerorum) listed as vulnerable.
- · Koala (*Phascolarctos cinereus*) (combined populations of Old, NSW and the ACT) listed as **vulnerable**.
- · Earp's Gum (Eucalyptus parramattensis subsp. decadens) listed as vulnerable.
- · Austral Toadflax (Thesium australe) listed as vulnerable.
- · Greater Glider (*Petauroides volans*) listed as **vulnerable**.
- · Leafless Tongue-orchid (Cryptostylis hunteriana) listed as vulnerable.
- · Fragrant Pepperbush (*Tasmannia glaucifolia*) listed as **vulnerable**.
- · Narrow-leaved Peppermint (*Eucalyptus nicholii*) listed as **vulnerable**.
- Long-nosed Potoroo (SE Mainland) (Potorous tridactylus tridactylus) listed as vulnerable.
- · Tall Velvet Sea-berry (Haloragis exalata subsp. velutina) listed as vulnerable.
- Hakea archaeoides listed as vulnerable.

**Note**: uncertainty around the extent and number of protected matters that may be impacted will need to be resolved through the assessment process once final alignment and construction plans have been completed.

**Note**: this may not be a complete list and it is the responsibility of the proponent to ensure any protected matters under these controlling provisions are assessed for the Commonwealth decision-maker's consideration.

#### Good morning David

I attach a link to an Independent Planning Commission Submission for White Rock Wind Farm MOD 6 regarding support for aircraft detection aviation lighting system to balance the adverse impacts of hazard lighting on area residents.

"The adverse visual impact of the aviation lighting on specified turbines within Sapphire Wind Farm is an unfortunate reality for Danthonia Bruderhof's residents."

 $\frac{\text{https://www.ipcn.nsw.gov.au/resources/pac/media/files/pac/project-submissions/2019/08/white-rock-wind-farm-mod-6/20191014t140212/20191014-cca-submission-to-the-independent-planning-commission-re-wrwf-mod-6.pdf}$ 

Also, minutes from Sapphire Wind Farm CCC. Reading through all the minutes of Sapphire Wind Farm CCC aviation lighting is a recurring issue. A few excerpts:

6th February, 2018 <a href="https://www.sapphirewindfarm.com.au/wp-content/uploads/2018/03/Finalised-minutes-SWF-CCC">https://www.sapphirewindfarm.com.au/wp-content/uploads/2018/03/Finalised-minutes-SWF-CCC</a> -6-February-2018.pdf

"The lights have been turned on and complaints have already been received from neighbours on the impact that they are having on the amenity of the area."

"Not all turbines have to be lit if there is a distance of 900m between them. However, 41 towers on the Sapphire site will have red flashing lights on them."

3rd May 2018 <a href="https://www.sapphirewindfarm.com.au/wp-content/uploads/2018/05/Finalised-minutes-SWF-CCC">https://www.sapphirewindfarm.com.au/wp-content/uploads/2018/05/Finalised-minutes-SWF-CCC--3-May-2018.pdf</a>

"To date there has been eight complaints."

"..Danthonia community...have voiced their significant concerns as well as representations from the Swan Vale representative on behalf of her community."

 $3rd\ July\ 2018\ \underline{https://www.sapphirewindfarm.com.au/wp-content/uploads/2018/07/Finalised-minutes-\underline{SWF-CCC-}\ -3-July-2018.pdf}$ 

"...Vesta's Intellight system, which is able to be retrofitted to the existing project at a cost of \$1.5-\$2M. Unfortunately, the funds were not budgeted for and none are available."

"CASA acknowledges that the lights are obtrusive and offensive, it insists that the turbines will create a risk if thay are not light."

"...there have been 13 formal complaints about the lights of which 3 are follow up complaints."

"AS enquired whether the lighting issue had been included in the neighbour agreements."

30th October, 2018 <a href="https://www.sapphirewindfarm.com.au/wp-content/uploads/2019/03/Finalised-minutes-SWF-CCC">https://www.sapphirewindfarm.com.au/wp-content/uploads/2019/03/Finalised-minutes-SWF-CCC-</a> -30-October-2018.pdf

"AA has requested DPE provide clarity around this issue with a definitive condition, ie review prior to construction, as it's not good enough to occur after construction.

It was agreed that the community were not aware of the potential lighting issue. PM confirmed that the information was contained with the EIS, however, was reliant on the comments from CASA."

 $22nd\ January\ 2019\ \underline{https://www.sapphirewindfarm.com.au/wp-content/uploads/2019/03/Finalised-minutes-SWF-CCC-22-January-2019.pdf}$ 

"All committee members stated that the only acceptable outcome for Sapphire would be "no" lights."

30th April, 2019 <a href="https://www.sapphirewindfarm.com.au/wp-content/uploads/2019/05/11-Finalised-Minutes-from-SWF-CCC-30-4-19.pdf">https://www.sapphirewindfarm.com.au/wp-content/uploads/2019/05/11-Finalised-Minutes-from-SWF-CCC-30-4-19.pdf</a>

"Whilst the lights at the reduced illumination of 10% is an improvement, all feedback received at the CCC to date is consistent that the community are opposed to any lighting being seen. Clearly - the community don't want them turned down – they want them off."

Thank you, MT Minutes: Minutes of the 5<sup>th</sup> Meeting of the Hills of Gold Windfarm Community Consultative Committee (CCC)

Wednesday, 6 May 2020

Held VIA Dial-in Teleconference

Members Present: Jamie Chivers (Wind Energy Partners); Mike Stranger (Wind Energy Partners); Sandra Agudelo (Wind Energy Partners); Bruce Moore; 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)

**Apologies:** Corinne Culbert

**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 outlined the ground rules for running the meeting via teleconference. Before asking questions, please pause to prevent unnecessary interruptions. When asking a question, firstly identify yourself.	
	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 4 <sup>th</sup> meeting that the Previous Minutes were true and correct.	
	Business Arising from Previous Meeting	55
	David observed that all actions had been responded to.	DR to attach the previous minutes with the upcoming meeting
	Community Member – Action Item 14 – WEP to respond to email dated 11 October 2019 between Jamie and HOGPi about holding a workshop / information session around the EPBC ACT referral. Member felt it was an important meeting and that all members of the community should have been invited to attend. It is not that HOGPi did not want to meet with you but felt it was more valuable for the whole community to meet. WEP have taken on notice.	agenda.
4.	Another community member observed that what was asked for at the last meeting wasn't just the photo montages in the preliminary – they'd like to see a list of all 25. The community would like to see what the montages are.	
	Jamie – Yes, we will be developing 25 photos. We needed to provide you with the locations – which we've now presented. My apologies if you expected the full 25 as we only knew of the 7 locations. Those locations will continue to be worked up as we go through the assessment. We can certainly inform you as they are finalised. Jamie also noted in response to a question that the assessors chose the locations by the specific locations of where the community chose the locations. We will be happy to provide more locations on an ongoing basis and interested to hear more feedback.	WEP to provide more montage locations on an ongoing basis.

Agenda Item	Discussion	Action/By Whom
	Correspondence	
5.	Committee agreed to discuss correspondence, tabled by members, in General Business.	
	Update on Proposal – Neighbour Benefit Sharing Program	
	Jamie noted that the intent of the Program was to ensure that the benefits of the wind farm are to be shared more directly with neighbours. The objective is to engage neighbours in the consultation process to ensure there is a clear way to solve concerns raised. Neighbours who live within 5km of the proposed turbine are eligible. Other Windfarms have in place — are 2.5 to 5 km but we've taken the outer range. Agreements are voluntary and do not include restrictions on objecting. Reimbursements of legal fees incurred by the neighbour up to a reasonable level.	
	We are happy to talk about people's concerns. We've started contacting neighbours and expect that to happen during the month.	
6.	Community member asked if WEP intended to approach and compensate rural properties that are going to be impacted by the windfarm (agriculture / lifestyle blocks who are going to be in that area). Will you discuss with those landowners a method of compensation and how they work with these tall structures? Jamie responded that it is residential dwellings that are covered and it doesn't pick up rural properties without dwellings. He noted that if there are any concerns however we are open to discussion and understanding concerns to determine whether compensation is appropriate. Not saying that it'll be agreed to but it certainly needs to be discussed and assessed.	
	Community member wanted to know that WEP are going to genuinely talk to landowners who don't have a dwelling on the property including those that may not be within 5 km but will still be impacted? WEP responded that they are open to discussing with anyone in the local community who believe they will be impacted and encourage members of the community to contact WEP.	WEP to create a map
	A member noted that it would be great for Nundle to see a map of where the 5km may fall. Agreed to by WEP.	of 5 km radius and upload to their website
	Locations and Photo Montages	
	An extensive discussion was held on the process for selecting locations for the photo montages. Members questioned some of the locations used as well as some locations that were absent from the montages. Mike noted that many of the locations selected were from the 2018 ARUP Preliminary Visual Impact Assessment. The responses to the recent community survey that were also considered. Specifics from the survey included Hanging Rock Look out, a public viewpoint	

Agenda Item	Discussion	Action/By Whom	
	near the Dag, southern edge of Nundle as well as a location near the junction of Lindsay Gap and Nundle Roads and, as tourists come into town, that's what they'll see. We are still processing surveys that are being received on an ongoing basis. Cemetery was included but wasn't in the PVIA, as it was requested in community consultation and survey results. It has a viewpoint – greater exposure over other premises. Photos were taken at locations that didn't have vegetation or screening to ensure maximum exposure to the project.		
	Community member mentioned that Moir took shots at Dag Sheep Station. Took image from up the hill. Curious – why the one down the road facing the pub was included? Why not at the southern end of town where the library is and the war memorial. Why not from the turn off from Lindsay Gap Road – New England Highway – where you'll see most of the range? Why only seven?  Mike observed that there has been a lot of conjecture re the photo showing the pub and there has been talk as to whether the turbines could be seen from the pub. Visual impact for Nundle was an important area WEP received feedback to provide assessment from. Jamie mentioned that there was a montage taken from the southern end of Jenkins St.		
	Community member understood that but noted that the windfarm isn't actually in Nundle. Residents were angered by this as it isn't just about the village but rather the community that lives within this whole region. Keep reflecting from the pub or the village – it lacks recognition of the community who live outside the village. Jamie observed that the montages have been provided in order to be transparent and trying to create more information and a clearer understanding. These locations have been assessed in accordance with the guidelines as assessed by our consultants, Moir. We want to ensure that they are representatives – we have no problems with challenges to our consultants. We will take those questions and talk to the consultants about that.		
	Jamie noted that, at the moment, we are seeking feedback as part of consultation with the community. The process of creating montages – consulting firstly, where are sensitive areas – then we undertake the photos. There will be another trip up to Nundle and more meetings with landowners. Once photos are taken – wire frame mesh – topography overlay mesh – turbines then brought forward in that image. Sky, colours – we are open to hearing those concerns. Please let us know for future.	WEP to provide montages when available for the Dag wool shed landing	
	Community Member asked when they would be providing the photo for the wool shed landing? Also, the landing overlooking the range – so I can get it out and what it'll look like in my business. Jamie advised that they'll get back to him on that.	photo	
	Community member also expressed concern that she's getting emails from people who have communicated with the wind company about the photos and haven't had a response. And there are people on the western side that would like to request a visual assessment. What's the best way to do that – emailing you Mike? There is also a family at Hanging Rock		

Agenda Item	Discussion	Action/By Whom
	seeking visual and noise assessments and have had no response. Landholders who have requested and still waiting. A list of four families were provided to WEP to make contact regarding visual consultation. WEP advised they were in contact with some of them already.	
	Mike noted that yes, people can text him. Specific people that you mention may have a perception that they have missed the boat – but that's not the case – there will be at least one more trip by Moir. We've not been able to commit to a date until we have a bit more of an opportunity to travel in future weeks due to COVID 19 restrictions. I've been in communication with a number of people that you mentioned in the list of four families. We will continue to be in contact with them at another time that is suitable.  Mike noted that WEP doesn't have contact details for one of the families at Hanging Rock in their records. He was very curious when the family had tried to contact WEP. We've received surveys and would like more detail on that front.	Community member to provide WEP with family's contact details so WEP can make an appointment to see them.
	A community member observed that the Scottish Natural Heritage Visual document had clear guidelines for montages like the date and time that the photography was taken. Also, the turbines – can we have a number reference – identification matches with the updated turbine layout so we can see which turbines are being referred to. Photos need more interpretation to be fully in line with those guidelines. The range is not in focus – that's disappointing to me as a photographer as I know what's possible. As well as the wire frames as part of the photo montages – I think that would be useful too.	WEP to consider Scottish Natural Heritage Guidelines as per community requests.
	David reiterated that Action 5 from Previous Minutes will remain open – while montages are created for other locations. Community members also requested that a montage be created for the junction of Lindsay's Gap and Nundle Roads as well as the southern side of Crawney Range. Jamie accepted that it is important to develop a montage further up Jenkins Street as well as on Crawney Road and for the methodology to be clarified	WEP to investigate an additional 8 <sup>th</sup> photomontage from corner of Lindsay Gap Rd and Nundle Rd.
	David sought comments from across the committee on the visual impact assessment study. A community member observed that the images of the wind turbines are not particularly visible on the montages like other structures. We have power lines which we've all grown used to of course. Down Jenkins Street – all you can see is power lines carrying electricity. Zoom down to the main buildings – the hills between the DAG and the ridge - there would be no turbines to be seen. I do appreciate some of the negative aspects – especially the people who are closest to the turbines. The position has a negative impact.	
	Another community member observed that people have commented to them that the turbines are not half as bad as the power poles, are majestic looking and add character while another member observed that they generate all their own electricity with wind turbines and solar which blows out to the broader community. They have paid for themselves.	

Agenda Item	Discussion	Action/By Whom
	Furthermore, they believed that it reduces greenhouse gases because we don't have to use coal or non-renewal energy. Some of the community see the benefits and are supportive. A community that wants to go forward – with the drought – this is something our local community can get behind.	
	In contrast, another member observed that, looking at the hills, it will be industrial looking and they are sickened by that.	
	A community member asked when an aviation montage can be expected? Mike responded that WEP's expectation is that the remaining montages will be included with the EIS and development application.	
	WEP were asked about the term "Mountain Top Removal". How will the profile of the mountain be changed? How will it impact hydrology and meteorology? Jamie asked if the question could be put in writing and then the WEP consultants can respond.	WEP to respond to "Mountain Top Removal" impacts once member provides explanation in writing
	General Business	
	Committee member read out an email to Jamie by a member of the wider community. The letter expressed concern with respect to Jamie's interview on ABC radio. In particular, the community member took exception to Jamie's comment about the "vocal minority". The author of the letter observed that more than half the community are absolutely against this project and WEP will alienate them.	
	Jamie noted that he will take the comments on board and appreciates where he's coming from.	
7.	A community member also mentioned that questions have just been sent through (as the meeting commenced) for tabling. David accepted these questions for tabling but, noting that they had just been received, WEP could respond to them with the other actions.	WEP to reply to 11 questions tabled
	Community member asked what Mike's actual role is and if he's a shareholder? Mike indicated that no, he's not a shareholder. He is the Assistant Development Manager, Land and Community. Sandra is responsible for the environmental side of the proposal although Mike also has environmental qualifications.	
	Community member raised community concerns about current land clearing and that complaints were lodged in March 2018. Requested assurance that no land clearing will occur in the Development corridor in preparation for this proposal – especially the western side. Jamie observed that there has been no land clearing in preparation of this site.	

Agenda Item	Discussion	Action/By Whom	
	Community member mentioned at the last meeting there was talk about the site layout and terms of boundaries and that Wind Energy Partners said they will be done after construction. Member expressed concern that the survey should be undertaken prior to the EIS and the DA being lodged – the community could be misled about the number of turbines. The member asked for the survey to be done before the EIS – see how many turbines are physically and legally possible. Jamie responded that WEP can't build turbines if the land doesn't belong to a landowner we have an agreement with. He assured the CCC that WEP can't put turbines where we don't have rights to. We don't have tenure, then we can't use the land, especially if we don't do a survey.	Community member to discuss survey with DPIE WEP to discuss survey with ERM and respond	
	Community member asked about the noise monitoring equipment and correspondence from three landowners. Communication is not working out as there have been missed emails – offence taken from the noise monitor installer. This could have been handled better. Mike observed that there had been contact with a number of landowners re hosting loggers. The consultant representative was under a tight schedule – he had the 1 week to do it and then had to go and self-isolate when they returned to South Australian. It appears that the concerned member from the wider community did not received the communications that had been sent in order to coordinate the timing. The consultant and WEP needed to arrange alternatives and make decisions. Essentially there will be more responses from the landowners and provide a bit more explanation.		
	In response to a question, Mike committed that WEP will include an assessment of aviation lighting impacts in the EIS. Furthermore, Mike confirmed that he was aware of some of the Aerial Agricultural Association of Australia (AAAA) policies and protocols that were tabled by a member (particularly, the policy for the association and also the large tower). The community member observed that businesses, including our own, will be impacted negatively by this. AAAA is opposed to all wind farms in agricultural areas. Mike responded that WEP appreciate there may be concerns for fertiliser contractors, for example. Aviation Safety will be assessed in the risk assessment within the EIS in great detail.		
	A community member asked WEP whether they still be around to pay this compensation in the future. If the French company goes belly up – who is going to guarantee to the Nundle community and who will look after the project then? Jamie noted that WEP will be responsible.		
	Next Meeting		
8.	General discussion about next date for August. David proposed 24 or 27 August but will come back to the committee to confirm. Need to discuss with Corinne as well.	David to diverse 22	
	Community member mentioned that the majority of the information will have to come at the next meeting. Jamie responded that there will be a number of meetings – there is public exhibition and submissions can be made.	David to discuss with WEP about the next meeting.	

Agenda Item	Discussion	Action/By Whom
	Meeting closed 8.50 pm.	
	Note after the meeting was completed, it is proposed that the next meeting take place on Monday 24 <sup>th</sup> August.	

#### **Appendix 1: Actions**

Page No	Action No	Description	Date Raised	
2	1	DR to attach the previous minutes with the upcoming meeting agenda.	6 May 2020	
2	2	WEP to provide more montage locations on an ongoing basis.	6 May 2020	
3	3	WEP to create a map of 5 km radius and upload to their website.	6 May 2020	
4	4	WEP to provide wool shed landing photo.	6 May 2020	
5	5	Community member to provide WEP with family's contact details so WEP can make an appointment to see them.	6 May 2020	
5	6	WEP to consider Scottish Natural Heritage Guidelines as per community requests.	6 May 2020	
6	7	WEP to respond to "Mountain Top Removal" impacts once member provides explanation in writing.		
6	8	WEP to reply to 11 questions tabled.		
6	9	Community member to discuss survey with DPIE.		
6	10	WEP to discuss survey with ERM and respond.		
7	11	avid to discuss with WEP about the next meeting.  6 May 2020		



## 1. Business arising from previous meeting



Action No	Description	Date Raised	Status of Action
1	WEP to advise correct Lot numbers as part of EPBC Act Referral.	1 April 2020	Updated Lot numbers provided. List of lot numbers were provided in a separate email as they relate to the transmission line investigation area identified within the EPBC Act Referral. It should be noted that:  1. WEP have not reached an agreement with all landowners of these lots and the lots are part of investigations including social and environmental studies, and; 2. Majority of these lots will not be pursued based on the study outcomes.
2	DR to change agenda template so that numbers 4. & 3. are swapped around.	1 April 2020	ТВА
3	DR to attach the previous minutes with the upcoming meeting agenda.	1 April 2020	TBA
4	WEP to respond to letter from HOGPI by this time next week.	1 April 2020	Response provided to HOGP Inc on 14 <sup>th</sup> April and distributed to CCC Members.
5	WEP to advise CCC of list of photo montage locations.	1 April 2020	As per update provided on 30 <sup>th</sup> April, the preliminary photomontages are from the following locations:  1. Nundle Road 2. Jenkins Street 3. Crawney Road 4. Nundle Cemetery 5. Point Street 6. Hanging Rock Lookout 7. Morrisons Gap Road
6	WEP to provide hard copy of future presentations to a member	1 April 2020	Presentation and photomontages provided.
7	WEP to mark-up the site layout where the concrete batching, substations, battery storage facility and transmission line route as well as accommodation will be located.	1 April 2020	The requested amendments relating to Hanging Rock and Crawney map label locations and ancillary infrastructure inclusions have been made and circulated to the CCC.  The newest version of the preliminary updated layout is available on the Hills of Gold Website.
8	WEP to extend the survey deadline.	1 April 2020	Survey deadline extended to 30th April 2020. Hills of Gold Website updated 16th April and email notification distributed to subscribers.
9	Further Site Visit to be considered when possible.	1 April 2020	Open for discussion.
10	WEP to review map for accuracy.	1 April 2020	The requested amendments relating to Hanging Rock and Crawney map label locations and ancillary infrastructure inclusions have been made and circulated to the CCC Members.  The newest version of the preliminary updated layout is available on the Hills of Gold Website.
11	WEP to review whether the watershed is affected.	1 April 2020	The technical assessment and information related to any impacts to the soil and hydrology of the catchment/watershed will be presented to the CCC meeting in August 2020, for further consultation prior to the lodgment of the EIS.
12	WEP to provide feedback on when surveys were undertaken.	1 April 2020	There may have been a minor misunderstanding here. Land area surveys to delineate land ownership boundaries have not been performed at this stage of the development phase.  Land area surveys will be performed prior to construction, to ensure wind farm infrastructure is constructed only on land in which it has a right to under an agreement with a landowner. This will ensure any inconsistencies in where existing fence lines, roads, etc. are located - versus where they were planned to be - are captured prior to construction.
13	WEP to confirm timeline for contact under "Neighbour Program".	1 April 2020	As per update released on the Hills of Gold website, the Neighbour Benefit Sharing Program has been announced to the community and WEP have commenced consultation with neighbouring landowners eligible for participation in the program.
14	WEP to respond to email dated 11 October 2019 between Jamie and HOPG.	1 April 2020	WEP offered to hold a workshop/information session on the EPBC Act Referral submission. Per the email correspondence, the purpose of this suggested workshop/information session was "to provide further detail to HOGPI members on the EPBC Act Referral, upcoming biodiversity surveys and also to provide a reconciliation of the threatened fauna species list that was presented in the CCC with what is listed in the EPBC Act Referral." This was a genuine to assist HOGPI members understanding of these subjects and offer an opportunity to take feedback on the submission. No acceptance of the invitation was registered, and therefore a meeting with HOGPI members was not pursued further.
15	David to contact Council's about alternate options to	1 April 2020	TBA

## 1. Neighbour Benefit Sharing Program



The benefits of the wind farm to be shared more directly with Neighbour's

Compensating Neighbour's for their time in helping us understand their concerns



Neighbour's who live within 5 km of a proposed turbine are eligible.

The distance is measured from the base of the tower of the wind turbine generator to the nearest wall of the main dwelling

Neighbour benefit programs have become best practice in the renewable energy industry, especially with wind farms

#### **Reports used for reference**







Annual Report

to the Parliament of Australia

AANUAL REPORT Year Ending: 31 December 2018

- ☐ Neighbour agreements negotiated on basis of proximity to the wind farm
- ☐ The programs can involve direct annual payment or one-off payments to landowners
- ☐ Agreements are voluntary and do not include restrictions on objecting
- ☐ Reimbursements of legal fees incurred by the Neighbour up to a reasonable level
- ☐ Programs should be tailored to the local community surrounding the boundaries of the project.

The objective is to engage Neighbour's in the consultation process to ensure there is a clear way to solve concerns raised

## 1. Preliminary Photomontages



Discussion and feedback sought on preliminary photomontages:

Please download preliminary photomontages from:

https://www.hillsofgoldenergy.com/news-andupdates



Attachment A - Email from John Krsulja to David Ross and HoG CCC Members (Dated 5th May)

Attachment B – Scottish Natural Heritage Visual Representation of Wind Farms Guidance

Attachment C - CCC Meeting 06.05.20 Nick Bradford

Attachment D - CCC Meeting Wednesday 06.05.20 Questions

Attachment E - CCC Meeting Wednesday 06.05.20 Questions\_WEP Response

**Attachment F - AAAA Policy Documents** 

Attachment G - HOGPI Facebook Comments on Montages

**Attachment H - Nundle NSW Facebook Comments on Montages** 

**Attachment I - Land and Environment Court Photomontages Policy** 

#### Email from John Krsulja to David Ross and HoG CCC Members (Dated 5<sup>th</sup> May)

Hi David.

I have a problem with WEP's response to page 6 Action RE: WEP to respond to email dated 11 October 2019 between Jamie and HOPG..

WEP offered to hold a workshop/information session on the EPBC Act Referral submission. Per the email correspondence, the purpose of this suggested workshop/information session was "to provide further detail to HOGPI members on the EPBC Act Referral, upcoming biodiversity surveys and also to provide a reconciliation of the threatened fauna species list that was presented in the CCC with what is listed in the EPBC Act Referral." This was a genuine invitation to assist HOGPI members understanding of these subjects and offer an opportunity to take feedback on the submission. No acceptance of the invitation was registered, and therefore a meeting with HOGPI members was not pursued further.

Please note:

CCC Meeting Tuesday 10th December:-

Page 40-41-42 <a href="https://796c1f1b-8d2c-4ac4-8f04-72bdcc88e7e2.filesusr.com/ugd/ddde62">https://796c1f1b-8d2c-4ac4-8f04-72bdcc88e7e2.filesusr.com/ugd/ddde62</a> 74c3173bf9144f5d972ba654484bead8.pdf

#### 03.11.19 – John Krsulja to Jamie Chivers

From: John Krsulja Sent: Sunday, 3 November 2019 2:00 PM To: Jamie Chivers Cc: Mike Young (DPE-DASP); Nicole Brewer; Anthony Ko; Mike Stranger; Sandra Agudelo Subject: Re: Jim Robinson

Hi Jamie, Hills Of Gold Preservation Inc held a General meeting on Thursday 31st October to discuss community concerns, including your email and the matters included, hence the delayed response.

With regard to WEP's invitation to hold a workshop/information session to provide further detail on the EPBC Act Referral.

- HOGP members felt that such an important issue would be better served if ALL members of the Nundle/Hanging Rock community were invited to a Town Hall meeting that offered the chance for discussion.
- HOGP would like to inform WEP that some of our HOGP members wish to remain anonymous due to fear of intimidation.
- As the EPBC Act Referral has been lodged, HOGP members also questioned if the timing was inappropriate or obsolete, given community members have had no chance for genuine input, or to provide valuable input and local knowledge to WEP submission.

Regards John Krsulja





## **CONTENTS**

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Annexes Annex A: Information on limitations of visualisations

Annex B: Standard requirements which all visualisations should

comply with

Annex C: Summary of visualisation requirements

Annex D: Earth Curvature and Refraction of Light

Annex E: Verification of images

Annex F: Taking good photographs

# **1 Introduction**

- 1 'Pictures speak louder than words'. Images are a powerful way of conveying information, illustrating options and capturing our imagination. They also form an important part of planning applications and Environmental Statements. The landscape and visual assessment of wind farms, however, involves much more than just looking at visualisations.
- This guidance is aimed at landscape practitioners, those involved in producing visual representations of wind farms and at planning officers or decision makers involved in the planning process. A condensed version aimed at members of the public is also available on our <u>website</u>. The visualisations described are designed for use by **all** stakeholders within the planning process.
- Visualisations are very useful in communicating information, but they can never tell the whole story. They cannot replicate the experience of seeing a wind farm in the landscape, whether they are photographs, maps, sketches or computer-generated visualisations, prepared using the highest specification and skill possible. They are an aid to decision making which must be considered alongside further information.
- 4 Experience gained since this guidance was first published in 2006 has led to a better understanding of how to represent proposed wind farm developments in a more accessible and realistic way. The revised methodology provides visualisations which are easier for both the public and decision makers to use. New sections on offshore wind farms and repowering have also been included, and there are additional points on turbine lighting.
- Nonetheless, anyone using visualisations should be aware of their limitations, and these are explained throughout the text and in Annex A. It is recommended that the standard text in Annex A should be inserted into the Environmental Statement and made available at public exhibitions.
- All wind farm applications requiring a Landscape and Visual Impact Assessment as part of an Environmental Impact Assessment should conform with the requirements set out within this document. Applications which do not require an EIA should follow a proportionate approach agreed with the determining authority. Different landscapes, types of wind farms and conditions in other countries may require different approaches. SNH cannot offer advice on applications outside Scotland.
- Smaller scale wind farm proposals (up to 3 turbines) and single turbine applications do not usually require the same level of visual representation. A tailored, proportionate approach is required which is likely to include fewer viewpoints (2-3 will generally be sufficient) and fewer visualisations per viewpoint. This should be determined on a case-by-case basis. Wirelines may be relatively unhelpful in flat landscapes for example, other than during the design stage or in conjunction with other, photographic, visualisations. However, we recommend that the same methodology (camera, lens, image presentation) is used for small scale applications for consistency and ease of understanding by decision makers and members of the public.

  Viewpoints immediately adjacent to small scale proposals tend to less useful than those a few

- kilometres away which show more context. Our <u>guidance on assessing small scale wind</u> farms should be referred to.
- 8 Some aspects of this guidance are **prescriptive and must be complied with**. A summary of these requirements is provided in **Annex B**. Other aspects include options, and it is for the landscape assessor to choose the most appropriate approach for the site in question, agree it with relevant consultees, and justify these choices in the ES.
- 9 Some planning authorities have also produced specific guidance for wind farms and single turbines. Early engagement with authorities is encouraged to establish their information requirements. SNH will require visualisations which meet the requirements of this guidance for all applications we are consulted on.

### Landscape and Visual impact assessment

- Landscape and visual impact assessment (LVIA) is the method used to identify and assess the effects of, and the significance of, change resulting from development on both the landscape and on people's views and visual amenity (see Guidelines for Landscape and Visual Impact Assessment, 3<sup>rd</sup> edition, 2013 (GLVIA)). Visual analysis forms just one part of a Visual Impact Assessment (VIA), the process by which the potential significant effects of a proposed development on the visual resource are methodically assessed. In turn, VIA forms just one part of a Landscape and Visual Impact Assessment (LVIA) and the wider process of Environmental Impact Assessment (EIA).
- 11 It is essential that a wind farm proposal is assessed within its wider landscape and visual context. For those who visit the viewpoints described, the context will be visible in the field. However, many people, including members of planning committees and other decision makers, may not be able to visit all of the viewpoints for themselves. It is therefore essential that visualisations which demonstrate the wider landscape and visual context are provided to all audiences throughout the development process. The combination of images in this guidance seeks to achieve this.

## Stages in the planning process

12 Different types of visualisations (plans, maps, wirelines, photographs, photomontages) will be used at different stages in the process. Flexibility is required to provide the right information to the right audiences at each stage in the process. An indication of likely requirements is provided below.

### Pre application

13 Prior to the application being submitted, draft wirelines and Zone of Theoretical Visibility (ZTV) maps will be most useful for the designer, assessor, planning authority and consultees such as SNH. Draft photomontages, which comply with the standards set out in section 4, may also be useful for public exhibition. It is important that draft images are clearly labelled as such so that it is clear to everyone that the design of the wind farm is likely to change prior to the submission of the application.

### Submission of the planning application

14 A combination of images will be required to support the planning application, and these are described in more detail in section 4. All images submitted alongside the application should conform with this guidance and be as accurate as possible in terms of turbine height and turbine locations, noting that these may alter through the decision-making process.

#### Decision making

- Whether the application is determined by the planning authority, or by an appeal or inquiry, or by Scottish Ministers, it is for the decision-maker to determine which images to use to inform their decision. In some cases a detailed examination of all the images may be required, including visits to viewpoints. In others it may be possible to reach a determination on the basis of a selection of images. Either way, the purpose of this guidance is to generate a suite of images that all decision makers, consultees and members of the public can use to inform their judgement. Each individual image serves a different purpose and it is important decision makers use the correct image for the correct purpose. **Annex C** provides a summary of when each of the images should be used.
- In all cases it is important that decision makers consider the proposal within the wider landscape and visual context, ideally by visiting the viewpoint or by viewing suitable panoramas. Zone of Theoretical Visibility maps should also be referred to.

### **Visiting viewpoints**

17 It is important that key viewpoints are visited in order to assess likely effects. To facilitate this, we now recommend that all visualisations are folded to A3 and provided in a ring binder for ease of use.

## **Cumulative Landscape and Visual Impact Assessment (CLVIA)**

As the number of proposed wind farms increases, cumulative impacts become more prevalent. Separate <u>guidance</u> from SNH describes how to assess cumulative impacts. The methodology in this guidance takes account of the need to illustrate cumulative effects and recommends the use of additional tools to do so.

### Scope of this guidance

This guidance is focussed on the production of visualisation-related materials to be included within an Environmental Statement (ES) LVIA, made available to the public and to inform decision making. Other methods of visualisation using computer animation and video montage are not covered in this guidance. These methods may be helpful to illustrate the effects of the proposal, in some situations adding value to the decision making process, although the outputs are difficult to verify. These methods are not currently considered appropriate as a replacement for hard copy visualisations in the ES, although advances in technology may facilitate this in the future. This guidance applies to both **onshore and offshore** wind farms. Slight differences in the methodology apply to offshore wind farms and these are described in Section 5.

## Glossary of key terms

**Cylindrical projection** A method used to map a panorama onto a curved surface using software. The arc of curvature in degrees is equal to the overall horizontal field of view.

**DTM** Digital Terrain Model. A 3D model of the topography within the study area.

**Environmental Impact Assessment (EIA)** The evaluation of likely significant effects on the environment of development proposals.

Focal Length Refers to the focal length of the lens used to take the photograph(s).

**Landscape and Visual Impact Assessment (LVIA)** This is the professional and methodical process by which assessment of the effects of a proposed development on the landscape and visual resource is undertaken. It comprises two separate but related parts - Landscape Impact Assessment and Visual Impact Assessment.

**Landscape Impact Assessment** This is the process by which assessment is undertaken of the effects of a proposed development on the landscape as a resource, including its character and quality; and the significance of the likely effects.

**Panorama** An image covering a horizontal field of view wider than a single 50mm frame. Wirelines and photomontages may also be produced as panoramas.

**Photomontage** A visualisation which superimposes an image of a proposed development upon a photograph or series of photographs.

**Planar projection** A method used to map a panorama onto a flat surface using computer software. The result is the same as the way in which a camera lens creates an image on the flat film or sensor.

**Principal distance** The perpendicular distance from a printed image at which the exact perspective 'as seen by the camera' is reconstructed.

**Scoping** The process of identifying the likely significant effects of a development on the environment which are to be the subject of assessment.

**Visual impact assessment** The professional and methodological process used to identify and asses the visual effects, and their likely significance, of a proposed development. Visual effects are effects on specific views and on the general visual amenity experienced by people.

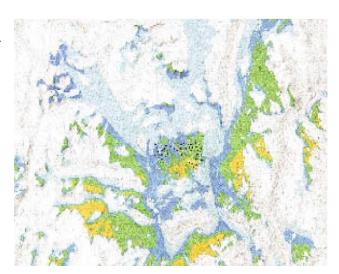
**Visualisation** A computer simulation, photomontage or other technique to illustrate the predicted appearance of a development. This includes photographs, wirelines and photomontages, but not Zone of Theoretical Visibility (ZTV) maps.

**Wirelines** These are also known as **wireframes** and **computer generated line drawings**. These are line diagrams that are based on DTM data and illustrate the three-dimensional shape of the landscape in combination with additional elements such as the components of a proposed wind farm.

**Zone of Theoretical Visibility (ZTV)** Previously known as **Zone of Visual Influence (ZVI).** This represents the area over which a development could theoretically be seen, based on a DTM. The ZTV usually presents a 'bare ground' scenario – i.e. a landscape without screening structures or vegetation.

## 2 Zone of Theoretical Visibility Maps

- 20 The term 'Zone of Theoretical Visibility' (ZTV) is used to describe the area over which a development can theoretically be seen, based on a Digital Terrain Model (DTM) and overlaid on a map base. This was previously known as a Zone of Visual Influence (ZVI), however the term ZTV is preferred for its emphasis of two key factors:
  - the maps indicate theoretical visibility only that is, the areas within which there may be
    a line of sight, but the proposal may not
    actually be visible in reality due to localised
    screening which is not represented by the
    DTM: and
  - they do not convey the nature or magnitude of visual effects, for example whether visibility will result in positive or negative effects, and whether these are likely to be significant or not.



- 21 Production of ZTVs is usually one of the first steps in LVIA, helping to inform the selection of the study area in which impacts will be considered in more detail. ZTVs provide the following information:
  - from where wind turbines are most likely to be visible;
  - how many of the wind turbines are likely to be visible;
  - how much of the wind turbines is theoretically visible (if separate ZTVs are produced showing theoretical visibility to blade tip height, and also theoretical visibility of the hub or nacelle); and
  - a means of identifying the extent and pattern of theoretical visibility.

ZTV maps are a powerful tool, but require careful interpretation. The number of ZTV maps should be kept to the minimum required to enable proper assessment of the proposal.

- In combination with a site visit, possibly with initial wireline diagrams, this information enables the landscape architect or experienced specialist assessor to identify a provisional list of viewpoints (see Section 3). It also allows the determining authority and consultees to judge how representative these are of the range of likely landscape and visual receptors and whether they include particularly sensitive vantage points. Information such as designated landscapes and popular walking / scenic routes can also be included.
- 23 Importantly, **ZTVs indicate areas from where a wind farm is theoretically visible within** the study area, but they cannot show what it would look like, nor indicate the nature or magnitude of landscape or visual impacts.

### **USES OF ZTVs**

- A ZTV gives a good indication of the broad areas from where wind turbines might be seen and can help identify the LVIA study area
- The ZTV can be used to help identify viewpoints from where turbines may be visible, enabling an assessment of these with the aid of visualisations
- A ZTV is a useful tool for comparing the relative theoretical visibility patterns of different wind farms or different wind turbine layouts and heights

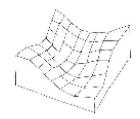
### **LIMITATIONS**

- A ZTV is only as accurate as the data on which it is based and the algorithm used in its calculation
- A ZTV alone cannot indicate the potential visual impacts of a development, nor show the likely significance of impacts. It shows theoretical visibility only
- It is not easy to test the accuracy of a ZTV in the field, although some verification will occur during the assessment from viewpoints

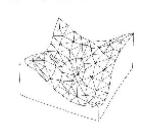
## **ZTV** preparation

## ZTV height and/or terrain data

- 24 A ZTV is produced using a specialised software package. Several of these are commercially available and most wind farm design packages, and many Geographical Information System (GIS) packages, have this facility. However, operation of even the most user-friendly package requires a high level of expertise and understanding of all the specific features and assumptions applied by the software. The name and details of software used should be noted in the ES and on the ZTV itself, including the version and the date of the data used.
- 25 ZTV production begins with a DTM that represents the ground surface as a mesh of points. This may form a regular grid of squares when seen on plan, known as a Square Grid DTM; or an irregular network of triangles, known as a TIN (Triangulated Irregular Network).



Square grid DTM



TIN

- A Square Grid DTM cannot represent terrain features smaller than the cell size, for example a small knoll or outcrop. Such features are either lost between grid points or represented by one point only. A TIN can, in principle, illustrate finer detail than a Square Grid DTM, as it can represent all the detail shown by contours. However, in practice, a Square Grid DTM with a suitably chosen cell size will represent almost as much detail, and it may also interpolate better between contours on less steeply sloped land.
- 27 Both formats are acceptable. The choice between them is most likely to depend on the software being used, and the source of the data. It is common practice for a Square Grid DTM to be chosen if OS data is to be used, while a TIN is used when based on independent and/or detailed survey data, enabling high and low points to be better represented.

- The Ordnance Survey (OS) supplies data in two formats gridded, which has already been interpolated into a Square Grid DTM, and as contours, which is the usual starting point for constructing a TIN. The OS Square Grid DTM product, 'Terrain 5', uses a 5m cell size and is interpolated from a TIN maintained by Ordnance Survey. 'Terrain 50' (which is part of the OpenData initiative and therefore free) uses a 50m cell size and is derived from the same TIN.
- The Terrain 5 DTM provides a more precise representation of topography than its Terrain 50 counterpart. Although they are interpolated from the same TIN, the smaller cell size of Terrain 5 allows smaller features of landform to be represented.
- The recommended preference is for OS Terrain 5 data especially on ridge crests or in "rough" terrain where small-scale undulations have a significant effect on visibility. However, OS Terrain 50 is considered acceptable, especially if the terrain comprises hills or mountains with well-defined slopes. Legacy datasets, such as Landform Profile or Landform Panorama, may also be appropriate depending on the characteristics of the site and the availability of data.
- 31 Although considered adequate for the purposes of LVIA (given that ZTVs are just one part of the process), the accuracy of most DTMs is limited and they do not include accurate representation of minor topographic features and may not represent areas of recent topographic change, such as opencast coal mines, spoil heaps and road cuttings. Known significant discrepancies between the DTM and the actual landform should be noted in the ES text. If survey information on recent topographic change is available, together with the necessary software to amend the DTM, it may be useful to include it. Any changes to the DTM should also be noted in the text.
- 32 The OS provides accuracy figures for each of its data products (expressed statistically as root-mean-square error in metres). Where the DTM is obtained from another source, the accuracy can also usually be obtained from the data supplier. These accuracy figures should be stated within the ES.
- 33 ZTV production also requires accurate data on the locations and heights of the proposed wind turbines. For the purposes of ZTV calculation, it is sufficient to represent each proposed turbine as a single point in space, located directly above the centre of the proposed base of the turbine. The height specified is usually that at either hub or nacelle height, or at a blade tip pointing straight up, but can be at any other point on the turbine depending on the ZTV analysis required.
- 34 It is recommended that separate ZTV calculations are run for the overall height (to blade tip) and for the height of the turbine to its hub (representing the nacelle that houses the generator on top of the tower). This is a useful comparison that helps to identify areas where turbine blades may be visible, but not the tower. These separate ZTVs will also be helpful for proposals involving turbine lighting, as lights are usually sited on the nacelle.
- In some cases it may be useful to provide alternative ZTVs showing different turbine heights to enable comparison of the effects on wind farm design. Creating a draft ZTV for different

portions of the wind farm can also aid wind farm design, particularly for large applications on complex terrain.

#### **ZTV** calculation

- 36 Some software packages offer both a standard and 'fast' option for ZTV calculation. 'Fast' implies the use of mathematically approximate methods in order to speed up the computation, which tends to result in a more generalised pattern of visibility. It is recommended that this is only used to obtain a provisional result which will be later superseded by a more comprehensive calculation for presentation in the ES. It is also important that users of ZTV software are clear about the technical limitations inherent in their chosen package.
- 37 Visibility is affected by earth curvature and the refraction (bending) of light through the atmosphere, particularly at greater distances. The effect of earth curvature should be included in the ZTV calculation as its absence will tend to overestimate visibility. **Annex D** describes this issue in more detail and includes a table of the vertical difference introduced by earth curvature and refraction with distance. At 10km, the vertical difference is enough to hide a single storey house and it increases thereafter.
- These limitations, inherent in the data and in the method of calculation, should always be acknowledged and, if possible, quantified. Note that these limitations may either over or under-represent visibility. As a general rule, **ZTVs should be generated to err on the side of caution, over-representing visibility**.
- 39 A ZTV usually represents visibility as if the ground surface were bare. It takes no account of the screening effects of intervening elements such as trees, hedgerows or buildings, or small scale landform or ground surface features. In this way, the ZTV can be said to represent a 'worst case scenario'; that is, where the wind farm could potentially be seen given no intervening obstructions, and in favourable weather conditions (while accepting that the DTM data can sometimes understate visibility at the very local level). To assess how this might be affected by typical visibility conditions within a particular area, Meteorological Office data on visibility conditions can be obtained.

### Taking account of surface screening

- 40 Some software allows the use of more sophisticated datasets, enabling some screening effects to be taken into account. One example is the application of different "thicknesses" to various land uses such as forestry and urban areas. When doing this the results will be closely tied to the specifications used, for example the height of trees; as a consequence, these should be noted within the ES. Another example is the use of digital surface data obtained from laser-based aerial surveys which represent the tops of vegetation and buildings.
- 41 For most projects these datasets do not make a significant difference to the pattern of visibility and they tend to be quite expensive (though some datasets such as VectorMap are free); therefore, their use should be limited to specific projects and viewpoints where the benefits will be notable. For example, it may be used to examine visibility in detail within a property listed in

the Inventory of Gardens and Designed Landscapes, or other key natural or cultural heritage assets.

- 42 Care needs to be taken when assessing ZTVs which take screening into account, as their accuracy is limited by data availability and the constant change in landscape conditions. Particular care is required when representing forestry, which will be felled and replanted on varying timescales, and should not be considered a permanent screening feature. If these techniques are used too simplistically they can lead to turbines being indicated as visible from the roofs of buildings, and the top of woodland canopy, which may be correct but is unrealistic for the person on the ground.
- In some situations, it might be useful to map other characteristics such as the number of wind turbines seen against the skyline, or what proportion of the horizontal field of view is likely to be occupied by the visible part of a wind farm known as the 'horizontal array angle' or 'horizontal subtended angle'. This information is particularly useful for considering the impact of a very large wind farm, or several wind farms where they would be seen together within panoramic views. However, for most wind farms the width of view can usually be more simply judged by considering the distance to the development in combination with wireline diagrams from specific viewpoints.
- Any analyses that calculate characteristics other than simple visibility over bare ground should be produced **in addition to bare ground visibility**, not as an alternative to it. Although these currently have various limitations, improvement and development of these kinds of datasets is likely to occur in the future.

### Viewer height

Viewer height in a ZTV map is generally set at 2m above ground level. This is higher than the camera height recommended for photographic visualisations (1.5m) to compensate for potential inaccuracies in digital terrain data and to ensure that the 'worst case' is represented. There may, however, be specific circumstances when an alternative viewer height is more appropriate (such as a very extensive flat landscape). Where this is the case it should be explained in the ES.

## **Extent of ZTV**

A ZTV map illustrates locations within a study area from where a development would potentially be visible. However, just because a development can be seen, it does not automatically follow that this will result in likely significant landscape and visual impacts. This creates a circular process of decision-making. The final distance of a ZTV should extend far enough to include all those areas within which significant visual impacts of a wind farm are likely to occur (LVIA "study area"); yet the significance of these landscape and visual impacts will not be established until the VIA has been completed; and the LVIA process needs to be informed by the ZTV. As part of this cycle of assessment, the distance recommendations given within the table below act as a starting point.

- The extent of ZTV required may need to be adjusted inwards or outwards according to the specific characteristics of a landscape and/or proposed development. The extent of the final ZTV should be discussed and agreed with the determining authority and consultees. In some situations where cumulative effects are being assessed the ZTV may not be circular in shape, but may be extended to include a specific transport route, for example.
- 48 The table below recommends the initial ZTV distance for defining the study area based on turbine height. Greater distances may need to be considered for the larger turbines used offshore.

Height of turbines including rotors (m)	Recommended initial ZTV distance from nearest turbine or outer circle of wind farm (km)
up to 50 <sup>1</sup>	15
51-70	20
71-85	25
86-100	30
101-130	35
131-150	40
150+	45

- 49 If a wind farm is very small and concentrated in layout, typically 5 wind turbines or fewer, it may be reasonable to measure the extent of the ZTV from the centre of the site. However this should always be agreed with the determining authority and consultees.
- The purpose of the ZTV is to illustrate theoretical visibility (within reasonable limits), not significant effects. Wind turbines can be visible at considerably greater distances than 30km and, regardless of likely significance, potential visibility should be illustrated on the ZTV to an agreed radius. The reasons for establishing the eventual radius of a wind farm ZTV for use in an ES should be clearly documented.

#### **Cumulative ZTVs**

- 51 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.
- Presenting cumulative ZTVs in a sequence of pairs or trios can help avoid confusion. A maximum of three sites per ZTV is recommended. Where there are large numbers of combinations of ZTV it may be helpful to present the various iterations in digital format, enabling users to switch on and switch off the various layers of visibility on screen. It may also be helpful in some locations to treat multiple wind farms which are closely clustered together

<sup>&</sup>lt;sup>1</sup> See <u>Assessing the impact of small scale wind farms on the natural heritage (2016)</u>

as a single wind farm to reduce the number iterations. If this approach is taken only the main ZTVs need to be provided in hard copy within the ES.

### Presentation of ZTV information

### Base map

- A ZTV should be presented on a single piece of A1 paper folded within the ES, using OS 1:50,000 as the base map. For a ZTV to be clear and legible when overlain with colour shading the base map needs to be in greyscale. This is to prevent confusion of overlays: for example a yellow overlay upon blue coloured lochs will appear green, and this could be confused with woodland. To maximise legibility it is also important that the base map is of a high quality resolution and not too light or dark.
- Feedback suggests that some users find it useful to see the ZTV data beyond the agreed maximum radius shown on the ZTV. We therefore recommend that the ZTV layer is shown on the full A1 page and is not clipped to the agreed radius shown on the map.
- Each individual wind turbine should be clearly marked upon the ZTV, usually shown as a small circle or dot, depending on the base map against which it has to be distinguished. It is recommended that the ES includes a map that shows individual turbine numbers and their grid coordinates, and that the ZTV should include reference to this map. However, it is better not to include this information on the ZTV itself to keep this map as clear as possible.
- Numbered viewpoint locations should also be shown on the main ZTV and it is important to label these carefully to avoid obscuring vital ZTV information.
- 57 For ease of legibility it is recommended that the ZTV shows concentric rings to indicate different distances from the proposed development, for example 10, 20 and 30 km. The areas encircled by these rings should not be shaded or coloured as this may imply a direct relationship between distance and relative visibility or visual impact that would be misleading. To maintain legibility, the number of rings should also be limited.
- Comparing two ZTVs that separately show visibility at blade tip and hub height will indicate where only the turbine blades, or part-blades, may be visible from. Where this is required, the ZTVs should be clearly labelled:
  - Blade tip ZTV; and
  - Hub height (or nacelle) ZTV.

### **Colour Overlays**

Areas of potential visibility should be illustrated by a colour overlay. This should be transparent so that the detail of the underlying map can be seen clearly. The level of overlay transparency chosen should ensure that the detail of the base map remains clearly discernible and no single colour appears more prominent than another.

- 60 If a range of colours is to be used, the shades and tones should be chosen carefully. Darker colours tend to read as portraying greater visibility than lighter colours, whilst several colours of similar tone tend to convey information of equal importance. Using different shades of only one colour should generally be avoided, as the distinctions between bandings usually appear merged and this can also imply a gradation of impacts represented by the decreasing shades that is misleading. Legibility of a ZTV map tends to decrease with greater numbers of colours. Seven colours should typically be the maximum used on any one map, and it is recommended that these are bright and strongly contrasting.
- When choosing a colour palette, it is also important to consider colour blindness. It is estimated that around 7-8% of males and 0.4-1% of females in Britain have some form of colour blindness. To them, legibility of maps depends on the type of colour blindness they have, the shade and brightness of the colour, and on the contrast and combinations of colours used. This requires careful consideration and is not just about avoiding the juxtaposition of red and green.
- While it would be useful to specify a standard range of colours consistently legible to colour blind people, it is impossible to develop this without also standardising computer screens and colour printer reproduction. It is recommended that individual maps shown within each ES are checked for colour blind legibility using a quick clarification tool such as Vischeck.
- One of the most important considerations is how the same colour will be represented differently according to the specification of different computer screens and/or printers. It is recommended that practitioners always print out draft copies to check that any discrepancy between these still produces a clearly legible map, and then print out all the final copies on the same printer.

### **Visibility bands**

- The theoretical visibility of different numbers of wind turbines (within a single development, or between different wind farms within a cumulative ZTV) is usually distinguished upon a ZTV as different coloured bands. These bands only differentiate between the visibility of different numbers of wind turbines. They are not intended to imply that greater numbers of turbines will necessarily result in higher levels of visual impact. These bands are particularly useful for identifying potential viewpoints where the visibility of the wind farm varies considerably within an area.
- The number of visibility bands should be high enough for each band to represent just a small range of turbine numbers, but low enough to avoid the need for too many colours which can appear confusing. For example, with 30 turbines, it is better to have 6 bands each covering 5 turbines (1-5, 6-10, etc) rather than 3 bands of 10 turbines which would provide limited resolution, or 10 bands of 3 turbines which would appear confusing. It is recommended that no more than 7 colour bands should be used upon a ZTV.

66 Where equal banding is impossible (for example 11 turbines), then the widest band size chosen should apply to the lower end of the scale - for example 1-3, 4-5, 6-7, 8-9, 10-11, as greatest resolution is then retained where proximity is greatest. In cumulative assessments a single set of bands should be applied consistently to all maps to allow comparison if this is possible.

## **Recording ZTV information**

67 It is vital to include information on all the key assumptions made in ZTV production, and to summarise these within the LVIA. This should include the following information:

1	The DTM data from which the ZTV has been calculated, including date, original cell size and whether this has been "down sampled" (note down sampling is not acceptable for 50m resolution data)
2	Confirmation that it is based on a bare-ground survey; where additional non-bare-ground
	ZTV(s) are included, provide information on the specifications of further land-use data if this has been incorporated
3	The viewer height used for the ZTV (generally 2m)
4	Confirmation that earth curvature and light refraction has been included
5	The extent of the ZTV overlay as a minimum distance from the development, in addition to the frequency of any distance rings shown
6	The numbers of wind turbines represented for each colour band
7	The height used for the turbine and whether this is to hub or blade tip
8	Confirmation that the ZTV software does not use mathematically approximate methods

## **3 Viewpoints**

- The term 'viewpoint' is used within VIA to define a place from where a view is gained, and that represents specific conditions or viewers (visual receptors). A number of representative viewpoints are chosen in order to assess:
  - the existing visual resource
  - the sensitivity of this resource and visual receptors to wind farm development
  - the proposed design (incorporating mitigation measures to minimise any adverse impacts); and
  - the predicted appearance of the proposed development

This section addresses the selection of viewpoints and the information that should be provided for them.

- 69 It is important to stress that **viewpoint assessment forms just one part of LVIA**. Because of the powerful nature of viewpoint images and the widespread recognition of some of the locations from where these are taken, there is often over-emphasis of their role. However, LVIA also includes assessment of the following:
  - the extent and pattern of visibility throughout the study area (considering those areas from where a wind farm would not be seen, as well as those areas from where it may);
  - views of the proposed wind farm from areas of potential visibility other than the selected viewpoints; and
  - · sequential views.
- 70 Separate assessment of impacts on residential properties is increasingly common. The production of visual materials for individual properties may be appropriate to assist this, but they will not normally form part of the LVIA.

#### **USES OF VIEWPOINTS LIMITATIONS** · Carefully chosen viewpoints enable Whilst the choice of viewpoints is very important, the LVIA representation of a range of views within a study should also be based on other aspects. Over-emphasis area on viewpoint assessment may create the erroneous assumption that this is the only aspect of LVIA · Carefully chosen viewpoints enable representation of a range of viewers who There may be a tendency to focus on the particular experience the landscape in different ways characteristics of specific viewpoints, rather than considering these as being broadly representative of a wider area. It is inappropriate to make design • Viewpoints enable consultees to assess specific modifications to change the visual effects of the proposed views from important viewpoints, for example settlements, tourist attractions and mountain tops wind farm from a single viewpoint because this may have negative 'knock-on' effects from other viewpoints. A more holistic approach considers the wind farm from a range of · By considering a range of views at different viewpoints in relation to the design objectives. viewpoints, the designer can consider how the wind farm would vary in appearance, informing design development

- Views from several viewpoints can be assessed to determine sequential effects that occur as one moves through the landscape
- By assessing viewpoints in combination with ZTV maps, it is possible to consider the potential pattern of visibility for a wind farm in 3 dimensions
- Viewpoints which show no actual visibility of the proposal should not be shown in the ES (unless there is good reason to do so) – the rationale for this should be given in the supporting text of the ES

- A viewpoint is by its very nature static whilst views tend to be experienced on the move as well as when stationary
- Some viewpoints are difficult to access and some people
  might not be able to assess the viewpoint on site. They
  will therefore rely on the landscape architect or
  experienced specialist assessor's assessment and
  visualisations to indicate predicted visual effects. It is
  therefore essential that sufficient landscape and visual
  context is provided on visualisations
- Due to the limitations of DTM data several provisional viewpoints may need to be visited to find a suitable location
- The exact location and conditions of individual viewpoints are required to be able to create accurate visualisations
- Some requested viewpoints might be judged inappropriate for formal visualisations due to unacceptable health and safety risks

## **Selection of viewpoints**

- 71 Viewpoint selection is informed by the ZTV and other maps, fieldwork observations, and information on relevant issues such as access, landscape character, designations and popular views (see GLVIA 3 for more detail). These datasets enable a provisional list of viewpoints that can be later refined through further assessment, consideration of provisional wireline diagrams and discussions with the determining authority and consultees. Interested members of the public, and in particular Community Councils, can also advise on sensitive local vantage points at public meetings and/or exhibitions held by the applicant.
- 72 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.
- 73 A ZTV is very useful in focussing upon those areas with potential visibility of a proposed development, but the ZTV is only one source of information used to inform the selection of viewpoints. Over-reliance on a ZTV to identify viewpoints can result in concentration on open locations with the greatest visibility of a site, which may be far from the proposed development. This may be at the expense of potential viewpoints where visibility is less extensive, but from where views of the site are more typical.
- During early consultations regarding the provisional list of viewpoints it is essential that the determining authority and consultees are provided with a copy of the draft ZTV at the

- appropriate scale and A1 size. A selection of provisional wireline diagrams may also be helpful to give an impression of possible effects from viewpoints.
- Wirelines are used to inform the design development of the proposed wind farm during the initial stages of the LVIA. Some of the viewpoints will be described and assessed within the main ES report; however, others may ultimately be omitted, for example because they show very similar results to another viewpoint. Details regarding these original viewpoints should be included within the ES appendices if they have informed the design process. Likewise, during the LVIA process, it may be found that some of the original viewpoints will not have a view of the wind farm due to local screening or changes to the wind farm design. These should also be documented within the ES.
- The range of issues that influence the selection of viewpoints is listed in the table below. The aim is to choose a range of viewpoints from where there are likely to be significant effects and those which are representative of views within the study area. Local knowledge will greatly assist this process. It is desirable to choose viewpoints which represent several of the issues described below from the same location as this will reduce the overall number of viewpoints. These issues are discussed in more detail in the GLVIA 3 paragraphs 6.16-23. It is preferable not to include too many viewpoints as this can distract attention from the key significant effects.

View type	Settlements and visual amenity
	Various landscape character types and areas (separate and in combination)
	<ul> <li>Areas of high landscape, scenic or recreational value – for example views to and from designated areas; wild land; long distance routes; view points; tourist routes, local amenity spaces</li> </ul>
	Various distances from the proposed development
	<ul> <li>Various directions and aspects (viewpoints from all around the development should be considered; views to the north will result in a different effect to those facing south; for design in particular)</li> </ul>
	Various elevations
	<ul> <li>Various extents of wind farm being visible, including places where all the wind turbines will be visible as well as places where partial views of turbines occur</li> </ul>
	Sequential along specific routes
	Cultural heritage including the wider setting of the heritage asset
Viewer type	<ul> <li>Various activities, for example those at home, work, travelling in various modes or involved in recreation</li> </ul>
	<ul> <li>Various modes of transport, for example those moving through the landscape by road, train, ferry, bicycle or on foot (note, in some cases it may be desirable to choose an alternative camera height to represent typical views. If so, this should be noted in the ES)</li> </ul>

77 The assessment of viewpoints should not involve unacceptable risks to health and safety. Examples of these situations include viewpoints from motorways, railway lines, scree slopes or cliffs.

- Viewpoints within the local area surrounding the wind farm are particularly useful in understanding and developing the wind farm layout and design. They also represent the likely effects on residents living, travelling and working within the nearest area. Local residents will experience the wind farm on a regular basis (often daily) in different weather, lighting and seasonal conditions. It is important that these effects are considered and that the assessment recognises the varying conditions in which residents will experience the wind farm.
- When identifying viewpoints it is important to consider whether a CLVIA is also required as part of the ES. If it is, the choice of all viewpoints should be informed by the cumulative ZTV as well as the individual ZTV. In most parts of Scotland many of the viewpoints chosen will be used to represent cumulative effects. Although it is possible to add supplementary viewpoints as part of a cumulative LVIA, it is preferable to use the same viewpoints for both the individual and cumulative LVIA to enable direct comparisons to be made.
- 80 Likewise, it is also useful to choose viewpoints already used for other wind farm LVIAs in the surrounding area. This allows direct comparison and also assists the determining authority, consultees and the general public who are already familiar with these viewpoints. Some planning authorities have standard viewpoint lists and these should be referred to at an early stage.
- The reasons for selection or omission of viewpoints recommended by consultees should be clearly justified and documented within the ES. It is essential that a final list is agreed with the determining authority. Not all viewpoints will require a photomontage. Distant viewpoints and those where there are no significant effects may be better illustrated by wirelines only.

## **Number of viewpoints**

- The number of viewpoints for different projects will vary depending on the scale of the proposal, the sensitivity of the receiving landscape and / or visual receptors, and how many are required to represent likely significant effects from the range of views and viewers of a development. The initial list of provisional viewpoints will probably be high. This is necessary to enable identification of the required viewpoints during the early stages of the LVIA, and to ensure that no key viewpoints have been omitted.
- This process will involve the production of wirelines, as one will need to be produced for each layout and design option, including alternative turbine heights where these are being considered. However, these iterations are only likely to be helpful from several 'design viewpoints' and it is not necessary to provide these from all of the viewpoints agreed, or to include them in the ES.
- After reducing the number of viewpoints to those that are required to illustrate the ES, it is common for there to be around 10-25 viewpoints within a LVIA in Scotland. However, this number will vary depending on the specific circumstances of a proposal. Over-provision of viewpoints can be as unhelpful as under-provision. This is because an excessive number of

viewpoints may distract attention from the smaller number of viewpoints where impacts may be significant. An appropriate balance must be struck through the LVIA consultation process to agree a proportionate number of viewpoints.

- Feedback gathered by our research project and steering group suggests that there are still too many viewpoints being represented in applications. We therefore encourage all applicants and consultees to further scrutinise the list of viewpoints selected and reduce these where possible. A final list of agreed viewpoints to be illustrated in the ES should be agreed pre submission with the planning authority. Some viewpoints may be dropped during the assessment process if the effects are assessed as not significant, or if two viewpoints illustrate similar effects, with the agreement of the planning authority.
- 86 Statutory consultees should provide a brief rationale for each viewpoint requested. A summary of the viewpoints considered throughout the process, with the reasoning behind the final viewpoint list, should be included within the ES.

### **Viewpoint siting**

- 87 Following agreement on the general location of viewpoints through consultation, the selection of the precise viewpoint site should be considered carefully. If, on visiting a potential viewpoint, it is apparent that there will be no view of the proposed development, for example due to localised screening, this location should be amended or withdrawn and the reason recorded in the ES.
- 88 The siting of viewpoints needs to balance two key factors:
  - · the likely significance of impacts; and
  - how typical or representative the view is.

For example, in choosing a viewpoint along a stretch of main road it may be difficult to choose one location to represent the range of views experienced. It may also be difficult to find a safe location for the viewpoint. Laybys and junctions are often used but may not always represent the 'worst case' views, or the first sight gained of the wind farm. Where this is the case it should be noted in the ES. In all cases, judgement needs to balance these factors, and the decision-making process must be documented.

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.

90 Viewpoints should be free from any avoidable foreground objects and other obstructions such as fences, walls, gates, roadways, road furniture, summit cairns and unnecessary foreground, trees, shrubs or foliage unless these are typical of the view. It is also important that viewpoints are publicly accessible, for example not within private property.

### **Recording viewpoint information**

91 It is important to record the field conditions in which a viewpoint is photographed, as well as the camera details including the information listed in the table below.

Viewpoint	Specification required
Precise location	12 figure OS grid reference, measured in the field, ideally using GPS or a large-scale map and a photograph of the tripod location.
Viewpoint altitude	Viewpoint altitude in metres Above Ordnance Datum (m AOD) (usually better interpolated from map or DTM than relying on GPS height).
Field of view	Horizontal field of view (in degrees).
Distance to wind farm	Approximate distance (in km) to the nearest turbine
	Compass bearings to distinctive elements in the view that will assist with the placement of the turbines in some circumstances (plus optional sketch of the view with these elements marked if appropriate).
Conditions:	Date
	Time
	Weather conditions and visual range
Camera:	Camera type, Lens focal length and make
	Spacing between the frames

- 92 This information is essential to allow others to visit precisely the same viewpoint and make onsite checks or assessment. It also helps others to understand the conditions under which professional judgements have been made.
- 93 All viewpoints should be numbered and their location shown upon separate maps as follows:
  - detailed ZTV map(s) based upon a greyscale 1:50,000 OS base and printed at A1.
     Viewpoints should be marked using symbols and numbering that avoid obscuring or confusing the ZTV information.
  - Each visualisation should include a short description to make it easy for members of the public to find the exact viewpoint location.
- 94 It is recommended that the original viewpoint numbers are retained until all the viewpoints are finalised and agreed and the LVIA has been completed, to keep track of which viewpoints have been added or withdrawn during the LVIA process. At this point they can be re-numbered in a continuous and logical manner. Where material developed during the early stages of the LVIA process information is included this should show both the original and new numbering so these can be easily cross-referenced. If an extension is proposed, using the same numbering of viewpoints as in the original application will allow consultees to compare the impacts of the new proposal more easily. The same applies if different wind farms are proposed concurrently within a district. Viewpoint numbering needs to be clear.

## 4 Visualisations

- 95 Visualisations are illustrations that aim to represent the appearance of a proposed development. Visualisations of wind farms most commonly comprise photographs, wireline diagrams, photomontages, sketches and diagrams. However, it is important to stress that visualisations represent just one source of information that informs a LVIA.
- Onsiderable debate on visualisations in the past has revolved around making them 'true to life'. Visualisations, whether they are hand drawn sketches, photographs or photomontages can <u>never</u> exactly match what is experienced in reality. They should, however, provide a representation of the proposal that is accurate enough for the potential impacts to be fully understood.
- 97 The assessor, consultees, decision-makers and any interested parties or members of the public **should ideally visit the viewpoint(s)** where visualisations can be compared to the 'real life' view. It is acknowledged this is not always possible time, weather and accessibility will restrict the number of viewpoints which can be visited.
- Interpretation of visualisations must take account of additional information specific to the proposal, viewpoint and landscape which cannot be shown on a single 2-dimensional image. Factors include variable lighting, movement of turbine blades, seasonal differences and movement of the viewer through the landscape. Visualisations in themselves can never provide the full picture in terms of potential impacts; they only inform the assessment process by which judgements are made.

# **Key issues affecting visualisations**

- In order to see sufficient detail the photograph must have high resolution. Contrast also has a great influence on how well detail can be seen. Against a white background a black line is easier to see than a grey one. A key limitation of photographs in replicating the visual experience is that it is generally impossible to reproduce the full contrast range visible to the human eye.
- 100 On a bright day outdoors we may experience a brightness ratio of 1000:1 between the brightest and darkest shades, whereas a good quality computer monitor is only likely to achieve a ratio of about 100:1, and a printed image is only likely to manage 10:1. This is one reason why holiday snaps of mountain ranges often look disappointing when viewed on screen or as printed photographs neither the screen nor the printed image can capture the contrast or depth you see in real life.
- 101 This has an effect on the representation of both the detail in the scene and the way in which contrast usually decreases with distance ('aerial perspective'). This has been a challenge since the beginning of photography. The methodology set out below seeks to ameliorate the lack of contrast and depth in printed images to ensure that they provide the best representation of the wind farm proposal but it can never replicate the real life view.

### Viewing distance

- 102 In the previous (2006) version of this guidance it was recommended that images should be viewed at a correct "viewing distance" to recreate the correct perspective geometry of the view. However, viewing printed images at a 'correct viewing distance' is not easy, especially when provided as a cylindrical projection (which should be viewed curved). More importantly, experience has shown that geometrically correct printed images, viewed at a theoretical viewing distance, do not necessarily portray the view as experienced by people in reality<sup>2</sup>.
- 103 The method described below results in significantly larger images, for which an accurate viewing distance is less important. The images are enlarged and this provides a better representation of the real view, at a comfortable viewing distance.
- 104 As a result, it is recommended that photomontages are simply viewed at a comfortable arm's length. This will vary depending on the length of the viewer's arms and their eyesight. However, the difference in viewing distance which results will have little impact on the impression of scale / depth in the image due to the increased size of the images. An instruction to view images at a 'comfortable arm's length' should be included on all visualisations produced. They should also be viewed flat as they are in planar projection.
- 105 Planar projection has been chosen for the photomontages as it is easier to use both in print and on screen (a computer screen cannot be curved to view a cylindrical image). Both planar and cylindrical projections have limitations. The main limitation of planar projection is that, if viewed incorrectly, it can slightly increase the scale of turbines at the edge of the image<sup>3</sup>.

  Ideally the viewer should view the image with their eyes in the centre however, in practice the difference in scale in most images will be difficult to perceive.
- 106 Some technical users of the visualisations may still wish to know the principal distance of the image. This should be included on all images to allow technical comparison if required. It is not necessary, however, for members of the public or decision makers to view the images at this distance and it should **not** be referred to as the viewing distance.

### Making visualisations more accessible to the public

107 It is essential that decision-makers and consultees are provided with, and that members of the public have access to, a colour paper copy of the visualisations, printed at the correct size.

### Using all the tools available

108 Visualisations are complementary to ZTVs and vice versa, and neither can be interpreted satisfactorily without the other. A visualisation simulates a photograph of the wind farm from a particular location, but gives no indication of whether this is characteristic of views over a

<sup>&</sup>lt;sup>2</sup> For a detailed discussion of this issue see 'Windfarm visualisation: Perspective or Perception ?' by Alan Macdonald (2012), Whittles Publishing.

<sup>&</sup>lt;sup>3</sup> Conversely, if a cylindrical projection image is viewed incorrectly the turbines at the edges will appear too small

wider area or is peculiar to a specific location. Used carefully together, a ZTV and a set of visualisations can provide information on all of these aspects.

USES OF VISUALISATIONS	LIMITATIONS
Visualisations give an impression of a proposed wind farm	Visualisations provide a tool for assessment that can be compared with an actual view in the field; they should never be considered as a substitute to visiting a viewpoint in the field
Used carefully in the field, a visualisation can be used to inform assessment	Neither photographs nor visualisations can replicate a view as seen in reality by the human eye.
Visualisations can aid development and appraisal of the wind farm layout and design	Visualisations are only as accurate as the data used to construct them
Visualisations can help illustrate the location and nature of a proposed wind farm	Visualisations can only represent the view from a single location at a particular time and in particular weather conditions
	Static visualisations cannot convey the effect of turbine blade movement

# **Photography**

## **Objectives**

- 109 Undertaking photography for visualisations requires high quality specification and skill. This is because the perspective geometry of the resulting photographic image must be known in order to use software to generate an image with <a href="mailto:exactly">exactly</a> matching perspective. This requires considerable care in the selection and use of appropriate photographic equipment.
- 110 Representing landscape conditions through photography (and thus photomontages) has limitations and, while some of these effects can be ameliorated and/or compensated for by using presentation techniques discussed in the following section, other effects are less easy to counteract. One of the most significant difficulties of photographing wind farms, in contrast to other types of development, is that they often appear on the skyline where there can be little contrast between the light-coloured turbines and a light-coloured sky. It is therefore essential that all baseline photographs are taken in good visibility.
- 111 This will generally mean clear skies, in suitably clear air to allow sufficient contrast between the different elements within the landscape. This is particularly important for long-range views where poor light and atmospheric conditions such as haze or cloud can reduce the clarity of the view, or for views where the turbines are predominantly viewed against the sky. In most circumstances, clear skies are preferred. However, in some locations, especially where the turbines will be predominantly backclothed, photographs taken in cloudy conditions can also be used to illustrate the effects. The key requirement is that the turbines are rendered with sufficient contrast against the backdrop (whether this is the sky or the landform).

#### Field of view

- 112 The term 'field of view' is used to describe the width and height of a view as represented by an image. These constitute the horizontal field of view and vertical field of view and are expressed as angles in degrees (the terms 'angle of view', 'included angle' and 'view cone angle' are all equivalent, but they can be ambiguous in some contexts).
- 113 The photomontages to be included in the ES (described further below) have a horizontal field of view of 53.5 degrees and a vertical field of view of 18.2 degrees<sup>4</sup>. In most situations this will capture the whole wind farm and provide sufficient landscape and visual context. In some situations, however, it may be necessary to provide a wider horizontal field of view. These include:
  - Viewpoints which are very close to the wind farm;
  - Very large wind farms
  - Locations where cumulative effects require detailed representation (e.g. two wind farms on the same ridge).

Where these necessitate the use of a wider horizontal field of view which will not fit on an A1 width page, it may be necessary to print on slightly longer paper (folded in the ES), or to print several panoramas on separate sheets (with the wind farm shown on the central sheet) if the paper length becomes unwieldy, or distortion affects the edges of the image. Where separate sheets of paper are required to cover an exceptionally large angle of view, each section should be re-stiched from the baseline photography to avoid distortion effects as the horizontal field of view increases.

- 114 To ensure that the photographs (which may be taken by someone other than the landscape architect or experienced specialist assessor) can accommodate the required horizontal field of view to assess cumulative effects, a series of photographs should be taken from each viewpoint to include the entire width of view. It is recommended to take 360° at each viewpoint to ensure this can be achieved.
- 115 Photographs should generally be taken in landscape format. However, in some circumstances, such as a steep sided valley or viewpoints which are very close to the proposal, it may be necessary to use portrait format to capture the full vertical extent of the wind turbines and/or landscape. Where this is necessary an alternative format of image will be required and this should be agreed with consultees.
- 116 There may be circumstances where it is necessary to illustrate the full 360° view on the baseline panorama. If an obstruction (such as a summit cairn) makes it difficult to capture the full 360° view, it is acceptable to move the camera tripod to an alternative location to capture

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<sup>&</sup>lt;sup>4</sup> NB – this applies to the photomontage, not the baseline panorama which will have a horizontal field of view of 90°, 180°, 270° or 360° as required

the obscured view. This will make the production process more complex, but will result in clear, unobstructed views. Ideally, the alternative tripod location should only be used for one of the 90° segments of the view, with this noted on the visualisations.

### **Verification**

117 In some cases the determining authority may wish to verify the accuracy of the image produced. This is possible using the original image data recorded by the camera (to check camera format and lens used) and a simple template (to check that the image dimensions have been correctly adjusted (by cropping and then enlarging)). This process is described in **annex E**. Camera metadata should be provided by the applicant on request.

## Choice of camera and camera height

- 118 A high quality **digital camera** with a **full frame sensor** is required to produce satisfactory results for ES purposes. Note that full frame sensors can also vary slightly in size this is discussed in more detail in **Annexes E and F**.
- 119 A **50mm fixed focal length** camera lens is required. Note even fixed focal length lenses can vary slightly in their geometry; this and various other technical considerations are discussed in more detail in **Annex F**. Lenses need to be of high quality both in terms of resolving power (the ability to capture detail) and in freedom from excessive distortion.
- 120 The use of a fixed focal length reduces the scope for error in establishing the perspective geometry of the photographic image and reduces variables in the method used. Such lenses have less distortion than alternatives and are currently used as standard by most practitioners. It also facilitates the verification process set out in **Annex E.**
- 121 In some circumstances it may be necessary, or beneficial to use an alternative lens or camera. Where this is the case it should be agreed with the determining authority and a clear justification should be included in the ES.
- 122 The camera should be **1.5m** above ground level, unless there are good reasons to adjust this (such as a hedge, tree, summit cairn or similar obstruction). If an alternative camera height is used this should be marked on the visualisation and explained in the ES.

# Post-photographic processing

## **Turbine image**

123 The turbines shown on a visualisation should represent reasonably faithfully the shape of the intended turbines for a project. They should, at least, have the correct hub height and rotor diameter. This will allow the proportions of the turbines to be appreciated from the visualisation.

- 124 Some practitioners prefer to depict all turbines with the rotors set with one blade pointing straight up; whereas others prefer these set at random angles, helping to simulate more realistically the fact that the turbine blades will be moving. The disadvantage of setting blades at random angles is the risk of 'losing' turbines behind the landform because the blade angle happens not to place a tip high enough in its arc to be seen. On the other hand, having all the blades at the same angle can produce a very 'regimented' effect that appears less realistic.
- 125 It is recommended that, for all wireline diagrams (especially those used by the assessor), turbines are always shown with one blade positioned straight upwards, while photomontages, as illustrations, can show turbines at random positions. All the wind turbines that could potentially be seen from a viewpoint must be shown within the photomontage, even if their highest blades are on the diagonal. The rotors of every turbine in the proposed development should face the same direction, forwards towards the viewpoint (note this may not be necessary on photomontages, see paragraph 162).

### Image enhancement

- 126 Enhancement of images is an inherent part of photographic production. Photographic processing involves judgements there is no process by which a 'pure' photograph can be produced without the application of human decision-making, from exposure timing to the specification of the camera, and whether this is applied manually or automatically.
- 127 Although enhancement, for example to maximise clarity, has traditionally occurred within the photographic darkroom, this practice has often raised concern with regards to producing photomontages. This may be because it is difficult to quantify the level of enhancement in a way that is easy to understand, raising the suspicion that an image has been 'enhanced', and is consequently misleading. In reality there is no way to avoid a photograph being enhanced as this is an integral part of photography and photomontage production.
- 128 Enhancement must be done to acceptable standards and this requires extreme care by a suitably experienced professional. The extent of enhancement must be limited to that which would conventionally occur in a darkroom to improve the clarity of an image, not change its essential character. For example, it is important that any enhancement, such as sharpening elements within a view, is carefully balanced throughout an image, not just the wind turbines, otherwise other features may seem less prominent in comparison.
- 129 Sharpening an image slightly can also help to make fine details, visible in the field, also be visible on printing. This operation works by identifying areas of high contrast in the image, which correspond to the detail we see, and locally further increasing the contrast so that the detail becomes more apparent. However, this operation must be applied carefully as oversharpened images can result in a hard dark line that appears at the skyline, with a corresponding light edge to the sky above it, while miniscule details can appear unrealistically prominent. Overall, there should be a minimum of post-processing image enhancement.

### Other considerations

### Information to provide on the visualisations

130 Information provided on the visualisation should be sufficient for the user to understand the basis of the visualisation, but not so much as to be overwhelming. Each image should also include a small thumbnail location map, either located beneath the image or on a fold out at the right hand side of the page. The information provided on the visualisation should include:

Viewing instructions, including standard text in <b>Annex A</b>	
Figure number and viewpoint number	
Information on viewpoint location, altitude and both vertical and horizontal fields of	
view	
Direction to centre of photograph as a bearing	
Distance to nearest visible turbine in kilometres	
Principal distance (mm), Camera make, Lens, Camera height	
Date and time of photograph	

## Paper and printing

- 131 There is an extremely wide variety of printers and paper types available. To obtain the best results in relation to the size and type of visualisation, it is recommended that advice is sought from specialist providers.
- 132 The quality of a printed visualisation will depend significantly on the printing process and setup. Colour inkjet printers tend to show more detail than other machines because of their higher colour range and resolution. However, it is generally difficult to produce large numbers of pages in this way so colour laser printing may be necessary. Whichever method is used a good quality, photo equivalent finish is essential. A matt finish is preferable and good quality paper should be used.

# Constructing the visualisations required in the ES

- 133 Three visualisations are required as standard within the ES and these are described in turn below:
  - 1) Baseline panorama and matching wireline

## Construction of baseline panorama

- 134 The first image required from each viewpoint is a baseline panorama. This shows the **existing view** and captures the overall landscape and visual context. This information is essential to underpin the LVIA and to provide those who cannot visit the viewpoint with an understanding of the wider context within which the wind farm would sit.
- 135 In most cases 180° should be sufficient. In some cases (such as a popular Munro summit or viewpoint, or to illustrate cumulative effects) it may be necessary to provide a 360° baseline

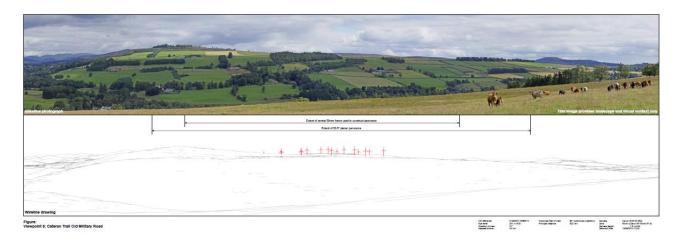
- panorama. In a few cases (such as a narrow view down a glen) a reduced field of view of 90° may be adequate.
- 136 To construct the panorama a series of frames should be taken which cover the full 360° from each viewpoint. The decision whether to present 90°, 180°, 270° or 360° can be taken later by the assessor.
- 137 The images should be stitched together by a competent professional using suitable software. Each 90° image should be presented on a single A1 width page as shown in **figure 1** below. The size of the image will be 820mm by 130mm. To accommodate 90° horizontal field of view the vertical field of view will be 14.2°. Additional images (up to 4 for 360°) should be provided on separate A1 sheets as required.
- 138 To present images with this wide field of view **cylindrical projection** is required however, it is not important to view this image in a curve, as they are provided to illustrate the wider landscape and visual context only. **The wind farm proposal should not be represented on this image**, in order to avoid confusion.
- 139 To facilitate the verification process described in **annex E**, the horizontal extent of the central 50mm frame should be indicated on the image, along with the extent of the 53.5° panorama. An example of these markings is provided in the pdf version of the image available on our website. The following text should be included: "**This image provides landscape and visual context only.**" More detailed guidance on wireline production is provided below.
- 140 In some locations it may be useful to annotate key features (such as hilltops, key routes and popular destinations) on the baseline panorama where these are not easily identifiable.

### Construction of matching wireline

- 141 A wireline with matching dimensions and geometry should be constructed for either 90°, 180°, 270° or 360° horizontal field of view as required. The resulting vertical field of view will be 14.2°. The image will be 820mm by 130mm. The wireline will be particularly helpful to show cumulative effects, which cannot be captured in the illustration described below. It should also be provided in cylindrical projection, to match the baseline panorama. **The wind farm proposal and all other wind farms included in the cumulative assessment (including existing wind farms) should be illustrated on the wireline** but not the baseline panorama which is an illustration of the current landscape.
- 142 Turbines at different stages in the planning process (i.e. existing, consented, proposed) should be shown in different colours to make it clear what the baseline is and what is proposed. Potential scenarios of development, depending on which applications receive approval and are constructed, can therefore be assessed.
- 143 It can also be helpful to show the horizontal extent of each wind farm with a small bar at the top of the image, particularly when there are multiple wind farms in the same angle of view. In

some cases it will be difficult to annotate the wind farm(s) on the wireline, especially if the viewpoint is close to the proposal and the turbines fill the vertical field of view. In these circumstances, labelling should be included on a separate wireline image or the individual wind farms (or turbines) identified on a key.

Figure 1 90° Baseline panorama and matching wireline



## 2) Wirelines

#### Use of wirelines

- 144 Wirelines are computer generated line drawings, based on a Digital Terrain Model, that indicate the three-dimensional shape of the landscape in combination with additional elements. They are a valuable tool in the wind farm LVIA process as they allow the assessor to compare the position and scale of the turbines to the existing view of a landscape.
- 145 Wirelines are particularly useful to the landscape architect or experienced specialist assessor as they portray objective data. This means that, by comparing wirelines with the views on site, the assessor can make judgements on the likely visual impacts in a variety of environmental conditions, safe in the knowledge that the wirelines have not been subject to manipulation that cannot be quantified. They can also reveal what would be visible if an existing screening element, for example vegetation or a building, were removed.

### Data

- 146 The accuracy of a wireline depends on the accuracy of the data used to create it. In general, this data will be the same as that used for calculation of the ZTVs, commonly the OS Terrain 50 or Terrain 5 DTM products, or the older 'Landform' products.
- 147 It is important that sufficient DTM data is used to enable the full landform background to the turbines to be appreciated and thus easily matched to a view on site or photographs of the

- existing landscape. For some views, DTM data may need to extend further than the LVIA study area because the distant horizon extends beyond this.
- 148 In some locations, such as very flat landscapes with few features, achieving a good fit with the digital terrain model will be difficult. The use of artificial features such as a meteorological mast or other infrastructure may be required to position the image.

## Geometrical properties

149 To allow direct comparison (and reduce confusion) wirelines should be provided using the same perspective geometry and image height as the photomontage. They should also be presented in **planar projection** to provide a consistent representation of the wind farm.

### **Drawing style**

- 150 Wirelines consist of little more than simple line-drawings of the DTM and the wind farm. However, there are a range of graphic styles used to depict these which can affect the clarity and legibility of the finished image. A number of options are acceptable; however it is important that the same format is used throughout a single ES.
- 151 The DTM is most commonly drawn as a mesh seen in perspective. While this is a faithful depiction of the landform as represented by the DTM, it can often result in the more distant parts of the scene becoming unreadable as the grid lines get closer together, eventually merging into solid colour. This is not helpful and in these circumstances **grid lines should**, **if possible**<sup>5</sup>, **be removed to maintain a simple image**. Only the outline of the topographic features in the scene, approximating to the lines one might draw as a sketch of the scene, should be shown.
- 152 Colour is useful to highlight the wind turbines in contrast to the landform lines, especially in distant views where the effect of merging lines noted above often occurs, and where some turbines may only just be visible against the landform. There are a number of options, such as those listed below:
  - Green turbines on a black DTM
  - Red turbines on a black DTM
  - Black turbines on a grey DTM
  - Blue turbines on a grey DTM
  - Grey turbines on a green DTM

The use of pale colours, such as yellow, is not recommended as these have insufficient contrast with the white paper background and cannot be seen clearly.

153 Using the same colour and/or shade for the turbines and DTM is not recommended due to the lack of distinction between them. All the other options listed above are acceptable with the

<sup>&</sup>lt;sup>5</sup> It is noted that some wind farm visualisation software does not have this function at present, hopefully this will rectified in due course. In the meantime it is accepted that some practitioners may not have the ability to easily remove all grid lines.

- caveat that care must be taken to ensure that the type of colouring does not produce an illusion that the turbines are closer (or further away) than the landform on which they are sited.
- 154 Varying colours of turbines should be used to distinguish different wind farms within a view or existing turbines from proposed turbines planned as an extension.
- 155 Turbines should be numbered so that the individual turbines can be directly referred to a layout plan also showing the turbines numbered<sup>6</sup>. Unless the wind farm comprises a small number of turbines, however, this information will usually take up a large amount of space upon the wireline image and, similar to any other labelling, may distract from the wireline image itself. It is preferable to label duplicate wirelines within an appendix (a selection of key viewpoints may suffice, if agreed during consultation). For cumulative wirelines, only the turbines relating to the proposal need to be numbered.
- 156 Features other than wind turbines can also be modelled into the wireline, depending on the software being used. Existing landscape features can be shown, such as pylons or distinctive buildings, which will help direct comparison with the photograph of the existing view (as long as these do not obscure the wind turbines). This can be particularly helpful for offshore sites where platforms and other existing infrastructure can be useful. Other elements of the wind farm development can also be shown, such as access tracks and other permanent ancillary infrastructure.

### Construction of wireline

157 The production of wireline images is well understood, using standard software, so detailed guidance is not provided here. The key objective is to provide a wireline of the same geometry and image height as described for the photomontage below. **Planar projection** is required. The wireline should be 260mm by 820mm wide. The horizontal field of view should be 53.5° and the vertical field of view should be 18.2°.

Figure 2: Example wireline

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<sup>&</sup>lt;sup>6</sup> NB, not for offshore wind farms as this is likely to be impractical

## 3) Photomontages

## The use of photomontages

- 158 The basic concept of photomontage is simple: it combines a photograph of an existing view with a computer-rendered image of a proposed development. In this way, **photomontages** are used to illustrate the likely view of a proposed development as it would be seen in a photograph (not as it would appear to the human eye in the field).
- 159 Although photomontages are based on a photograph of the existing landscape, it is important to stress that they are not a substitute to visiting a viewpoint in the field. They are only one tool to aid assessment. They provide a two-dimensional image that can be compared with an actual view of the landscape to provide information, such as the scale and potential appearance of a proposed development; but they cannot show other qualities of the landscape experience that can only be appreciated in the field.
- 160 Given the limitations of depicting turbines in photomontages, their production will usually be of most value for views within 20km of a wind farm site, for turbines up to 150 metres high to blade tip<sup>7</sup>. At distances greater than this it can be difficult to represent the turbines well on a photomontage. However, this will depend on issues such as the specific wind farm design and environmental conditions, so this parameter, and which viewpoints require photomontage, should be discussed and agreed with the determining authority and consultees.

### Rendering of photomontages

- 161 In order to address the difficulty of representing wind farms clearly within photos, it is common practice to exaggerate the prominence of the turbines to ensure that they stand out in the finished photomontage. When done poorly, this results in a level of predicted visibility unwarranted by the conditions seen in the photograph. However, where done sensitively, this can improve the clarity of an illustration, comparable to the conventional processing of photographs within a darkroom. It is recommended that the rendering of photomontages is carried out extremely carefully by a suitably experienced professional. The nature of any enhancement should also be noted within the ES.
- Where a project involves an extension to an existing wind farm it is important that the existing wind farm appears clearly in the photographs. If this is not achievable the existing turbines have sometimes been 'painted out' in the baseline photograph and re-montaged back in, so that the images of both existing and proposed turbines match. An accurate representation of the baseline conditions is important and we therefore prefer good photographs of the existing development. However, in some conditions it may be necessary to enhance the depiction of existing turbines if they are not clear in the photographs taken (for example due to weather conditions, or because the rotors are oriented perpendicular to the viewpoint).

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<sup>&</sup>lt;sup>7</sup> For turbines larger than 150m the distances should be discussed with SNH

- 163 Enhancement and rendering cannot compensate for photographs that have been taken in poor light or weather conditions. In these circumstances, the photographs should be retaken.
- 164 It is important to use turbine locations, dimensions and heights which are as accurate as possible. The location and height of turbines in visualisations can be verified using the process set out in **Annex E**. The production process should be documented within the ES to enable this.

### Accuracy of match to photography

- 165 In order to create a photomontage, the geometry of the overlain rendered image of the wind farm must match as exactly as possible that of the base photography. The viewpoint location, height and direction of the view must be **identical**, as must the horizontal field of view. Both the resulting panoramic photograph and the rendered image must be **planar projections**. In some cases, to achieve an accurate match, the images will need to be produced in cylindrical projection, thus allowing a much wider horizontal field of view and providing more features to achieve a match. Once a good match is achieved, the image should then be converted to planar projection for presentation in the ES.
- 166 The most reliable method of obtaining an accurate match is to generate a wireline image that matches the photograph. If the wireline can be accurately overlaid onto the photograph, then the fit is good. However, where there are few landform features, this process may require the matching of specific structures identified and mapped on site. A transparency copy of the image can also be used to check this on site.
- 167 An accurate GPS position, taken when the photography was carried out, is almost always sufficient for wind farm applications. Viewpoint location errors usually manifest as a mismatch in the horizontal position of elements in the photograph and wireline and are always more apparent in closer objects or landscape elements. If it is impossible to obtain a simultaneous match on both near and distant landform features, then the viewpoint position is incorrect and will need to be either re-measured on site or identified through iteration.
- 168 In certain landscapes, where there are few distinctive topographic features, it is necessary to use man-made features such as masts, pylons or buildings. Even when these types of features are clearly visible in photographs, it is often difficult to identify them accurately on the map. Where there is no view of a distant skyline a hand-level or, better, a surveyor's level, can assist in setting the correct vertical alignment of panorama and wireframe. Without this one may be reliant solely on the leveling of the camera.
- 169 Adjustments should be made until a satisfactory match between topographic features in the wireline and the photograph are achieved across the whole width of the panorama, to ensure that there are no errors of scale. If this cannot be achieved, then the fields of view do not exactly match and the parameters must be adjusted further. It is often the case that a small rotation needs to be applied to the panorama to compensate for residual errors in levelling the camera.

170 Once a satisfactory match has been achieved, it is possible to use the parameters for the wireline as perspective parameters for rendering the turbines for photomontage. Many packages combine wireline and rendering and some also include the facility to overlay the wireline on the photograph while adjusting parameters. However, the best quality is usually obtained using a separate computer program designed for high-quality rendering. Most rendering programs do not include the effect of the earth's curvature, so it may be necessary to make vertical adjustments to the turbine positions before rendering. The rendered wind farm should be overlaid on the photograph using a matched wireline for reference, to ensure that the position is correct.

## Accuracy of lighting

171 The lighting model used to render wind farm images for photomontages should be a reasonably faithful match to the lighting visible in the base photograph. Consequently, the date and time that the photographs were taken should be recorded by the photographer or assessor to enable an exact sun direction to be calculated. In practice, however, as long as the direction of light is correct to within about 10 degrees, a convincing match can be obtained. The effect of light and shade on wind turbines is an important aspect of their visual character and should be represented well.

### Associated infrastructure and land use change

- 172 Wind farm proposals include elements other than wind turbines, such as access tracks; borrow pits, crane pads, site compounds, cabling, and a substation. A wind farm development may also be both directly and indirectly responsible for vegetation and land use change. If these elements are likely to result in permanent significant impacts (for the duration of the consent), either individually and/or collectively, they should be included in photomontages where this is practical.
- 173 Some of these components may be difficult to model well, particularly changes in vegetation. In these circumstances it may be necessary to "paint" them directly onto the photomontage, guided by a wireline or other computer generated image to ensure that the positioning, perspective and scale of these elements is represented as accurately as possible.

## **Turbine lighting**

- 174 In some circumstances it may be necessary to provide lighting on turbines if this is required to address military and/or civil aviation requirements. We recommend that where turbines are proposed in excess of 150m SNH are consulted on the requirement for night time visualisations. It is difficult to illustrate turbine lighting well in visualisations, although some recent examples which use photographs taken in low light conditions (just before or after sunrise / sunset) have been more useful. We encourage applicants to explore new techniques to do this, and emphasise the importance of early dialogue.
- 175 Where an illustration of lighting is required, a basic visualisation showing the existing view alongside an approximation of how the wind farm might look at night with aviation lighting may be useful. This is only likely to be required in particular situations where the wind farm is likely to be regularly viewed at night (eg from a settlement, transport route) or where there is a

particular sensitivity to lighting (eg in or near a Dark Sky Park or Wild Land Area). **Not all viewpoints will need to be illustrated in this way**. The visualisation should use photographs taken in low light conditions<sup>8</sup>, preferably when other artificial lighting (such as street lights and lights on buildings) are on, to show how the wind farm lighting will look compared to the existing baseline at night. It is only necessary to illustrate visible lighting, not infrared or other alternative lighting requirements.

- 176 We have found that approximately 30 minutes after sunset provides a reasonable balance between visibility of the landform and the apparent brightness of artificial lights, as both should be visible in the image. It is important that the photographs represent the levels of darkness as seen by the naked eye at the time and the camera exposure does not make the image appear artificially brighter than it is in reality. It can also be helpful to note the intensity of other lights in the area to enable comparison (e.g. television transmitters) as this can aid the assessment process. SNH may prepare further guidance on assessment of lighting in due course.
- 177 The developer should attempt to formally agree the lighting requirements with the aviation authorities in advance of the application. Where this is not possible the visualisations should illustrate the lighting as described in the current legislation.

### Image requirements

178 Production of the photomontage requires care to ensure that an accurate image is created.

The section on constructing visualisations is prescriptive and images must comply with these requirements. This will avoid concerns over the 'accuracy' of images or the method by which they have been produced.

## **Construction of photomontages**

- 179 The photomontage should be formed from several 50mm photographs stitched together by a competent professional using suitable software. The information that should be included on the photomontage is described in paragraph 130.
- 180 The panorama should be printed on A1 width paper<sup>9</sup> 10 in **planar projection**. The image size should be 260mm high by 820mm wide. The horizontal field of view should be 53.5° and the vertical field of view should be 18.2° in the centre of the image. The image will have a principle distance of 812.5mm.
- 181 A clear viewing instruction should be included on the photomontage as follows: "View flat at a comfortable arm's length. If viewing this image on a screen, enlarge to full screen height".

  To address concerns about the viewing instruction not being clear enough, this should be printed in larger font than the example below.

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<sup>&</sup>lt;sup>8</sup> The health and safety considerations of low light photography should be taken in to account but should not, in themselves, be used as a reason to avoid the production of night time visualisations.

<sup>&</sup>lt;sup>9</sup> Unless a wider Horizontal Field of View is required

<sup>&</sup>lt;sup>10</sup> Folded to A3, see paragraph 184

Figure 3: Panoramic photomontage



### **Presentation of visualisations**

- 182 It will usually be appropriate to present the photograph, wireline and photomontage such that the proposed wind turbines are centred in the horizontal field of view. However, at certain viewpoints it may be appropriate to centre the view on an alternative feature, or part way between two or more foci. These additional foci may or may not be wind farms. In these circumstances, it is important that the proposed wind farm does not appear at the far edge of the image. This is because sufficient context or horizontal field of view needs to be provided for each of the foci.
- 183 Paper and electronic copies of all ES materials will be required by the Planning Authority and SNH. Where possible, images from each viewpoint should be saved in to one pdf for ease of use, and be clearly named. The number of copies should be agreed for each application. Additional loan copies for members of the public will also need to be provided, and these should be made available at accessible locations throughout the study area. Typical locations include local libraries, Council offices and village halls. The number of loan copies should be agreed with the Planning Authority.
- 184 The A1 length visualisations **should be folded to A3 size** in the ES. This is to allow ease of use and transport. The visualisations should be provided in a ring binder so that users can remove individual sheets easily and we recommend these are limited to 10 viewpoints per binder to make this easier to transport.

## **Public Exhibition display**

185 Stakeholder engagement is extremely important and exhibitions provide an important opportunity to present visualisations to the public. It is recommended that **the same visualisations**, printed at the same size, should be used for public exhibitions. The limitations of visualisations should be clearly marked on all of the material, and the information in **Annex A** clearly displayed at the exhibition.

# Presentation to council planning committee

- 186 It is for the Planning Authority to determine which images are presented to the committee but it is important that those who are unable to visit viewpoints are provided with a suitable panorama to provide landscape and visual context. All hard copy images should be printed in colour at the correct size.
- 187 Projection of a selection of the visualisations on PowerPoint slides, or similar, may be helpful to the planning officer and committee members. However, it is essential that members are also provided with hard copies of the images, printed at the right size to aid their decision-making and that they read the supporting text assessment in the ES. Visualisations on their own cannot substitute for the assessment of likely effects.
- 188 Committee members should ideally **visit a representative selection of viewpoints** as part of the decision-making process, especially where there are differing opinions on the likely effects.

# **Optional visualisation techniques**

# Viewpoint pack

- 189 In some cases the planning authority may find the provision of a viewpoint pack helpful.

  These should be provided on thicker A3 paper for durability and ease of use in the field.

  Images contained within the pack should be loose leaf and should have a detailed location map printed on the reverse side to make it easier for users to find the exact viewpoint location.

  A brief description of how to find the viewpoint should also be included.
- 190 The pack should contain images from a set of key viewpoints, to be agreed with the determining authority. It may not be necessary to provide them for every ES viewpoint. SNH do not require viewpoint pack images.
- 191 Each image should be clearly labelled: "This image is intended only for use at the viewpoint. Further information in the ES should also be referred to."

Construction of A3 single frame photomontages in the viewpoint pack

192 The images should be prepared from the same baseline photography and using the same process for rendering turbines<sup>11</sup>. The image height should be 260mm by 390mm wide. The horizontal field of view should be 27° and the vertical field of view should be 18.2°. The image will have a Principal Distance of 812.5mm.

Figure 4: A3 single frame for use in viewpoint pack



Using the viewpoint pack

- 193 The pack holder or title page should be clearly labelled "Images for assessment only at the identified viewpoints" along with the name of the wind farm and supplementary information. It should include a map showing the location of each viewpoint and detailed grid references to help users find the viewpoint location in the field.
- 194 It is important to get as close to the precise viewpoint location as possible. The viewpoint map, grid reference and photograph of the tripod location can all be used to achieve this. The

viewpoint map should be easy to find and use, showing recognised landmarks, roads or buildings, for example, for the user to identify the viewpoint. A short description of the viewpoint may also be helpful.

- 195 In poor weather the use of an A3 Perspex holder, or document wallet, can help keep the images dry and reduce the effect of wind. Planning officers and other users who visit viewpoints regularly should consider purchasing a holder for this purpose and in particular for presenting images to the planning committee in the field (when it is often not possible to choose optimal weather conditions). These are widely available at low cost and can also be used to hold folded A1 length images.
- 196 The Viewpoint Pack should only be used at the viewpoint location, or by those who have previously visited the viewpoint (such as on a Committee site visit). At viewpoints which are very close to the wind farm it may be necessary to take the larger panoramas or wireframes as it is unlikely that the whole wind farm will be captured on the single frame. It is not necessary to produce multiple single frames to cater for this situation though if turbines are missing this should be clearly noted on the single frame image.

# **Hand-drawn illustrations**

- 197 Drawings and paintings have been used for centuries to illustrate proposed landscape or architectural changes. However, digital photography has resulted in radical changes to the way images are conventionally presented, with an associated demand for these to be based on technical data for which accuracy can be measured.
- 198 There are instances when hand-drawn illustrations remain an invaluable tool in the process of visual analysis and the illustration of impacts within an ES. This is because they can offer:
  - clarity of image, by omitting some of the distracting details that might be prominent within a photograph but which are overlooked on site;
  - an element of interpretation by highlighting prominent focal features; and,
  - their limitations are obvious they are clearly not trying to replicate an exact view as it would be seen.
- 199 However, for these same reasons, hand-drawn illustrations also have disadvantages, chiefly that their quality is closely linked to the abilities of the illustrator and they may be distrusted for incorporating 'artistic licence'.

# Diagrammatic sketches and annotated visualisations

200 Diagrammatic sketches allow the key elements of the composition to be drawn out and highlighted. This may be in relation to the landscape or the wind farm development, highlighting the main characteristics and principles of design. The advantage of using this medium is that important points can be stressed without them being clouded by insignificant details.

<sup>&</sup>lt;sup>11</sup> The single frame can be extracted from the panoramic photomontage, as long as it is cropped from the centre of the panorama.

# **Animation**

- 201 Wind turbines are intrinsically dynamic objects, with large moving parts and variable orientation, so static images are in many ways a poor illustration. Computer animation, videomontage and virtual-reality techniques are being used to some extent to address this issue.
- 202 To date, most animation and videomontage has been used principally as a means of conveying a general impression of a development to the determining authority and the public, rather than as a tool for carrying out VIA or as part of an ES. However, considerable scope exists for their use in the future as various techniques are developed and presented, and then tested against wind farms once these have been built (similar to the scrutiny applied in the past to wirelines and photomontages). At present, the application of these techniques requires specialist contractors.
- 203 The provision of animation may assist in the decision making process. However, it cannot replace the need for professionally produced photomontages and wirelines from selected viewpoints. SNH will conduct further research on the use of digital visualisations in 2017-18.

# Additional techniques for cumulative assessment

204 Additional guidance on further techniques to illustrate cumulative effects is provided in our guidance on <u>Assessing the Cumulative Impacts of Wind Farms</u>. The presentation of sequential effects as bar charts or on coloured maps is increasingly common. Video and virtual reality simulations of journeys have also been used with varying success. All such approaches should be carefully considered and discussed with the determining authority. Care is required not to use technology for technology's sake, nor to overburden the ES and decision-makers with additional information.

# **5** Offshore wind farms

- 205 Offshore wind farm visualisation presents different challenges to onshore situations. As well as having different environmental factors to consider, developments may be significantly larger in turbine size and number.
- 206 In general terms, given good meteorological conditions, visibility is higher on the coast than inland; periods of exceptional visibility occur in north and west Scotland. However, in the coastal and marine environment, light quality and weather conditions change more rapidly and are more variable than onshore, so it is difficult to represent these varying conditions in a single image. Practitioners should aim to prepare visualisations representing the specific time of day and season when there is optimum visibility and clarity. The reasoning and background to choosing this seasonal or diurnal 'window' should be explained, for example by supporting Meteorological Office data. Note that there may be some additional requirements for visualisations to illustrate other light conditions such as sunrise or sunset.

# Specific photographic requirements

- 207 It is difficult to judge the distance of an object when it is out at sea. It can also be difficult to judge the scale of a single turbine, or of a wind farm, where there is no scale indicator giving a familiar, comparative size. Thus, it is essential to include local landmarks or familiar features within a photograph where at all possible 12. Where existing offshore features, such as oil platforms, existing turbines or lighthouses are present, they may aid in estimating the scale of the turbines, as well as the overall size and extent of the wind farm.
- 208 Most requirements will be for visualisations from onshore viewpoints looking out to sea but in some instances there may be a need for photography at sea to illustrate views back to shore, for example from ferry routes. Such photography can be difficult to undertake because of wave action, so in some instances relaxation of photographic standards to reflect this may be appropriate, provided they are supported by wirelines. In some locations, especially those which are difficult to access, wirelines may be the only feasible approach.
- 209 Scotland's east and west coasts differ in terms of their light, aspect, weather and coastal character. This needs to be considered when planning photography and visualisations. The direction of sunset and sunrise are also a key consideration from sensitive viewpoints and should be illustrated in some circumstances.
- 210 There is limited evidence to support an alternative 'focal length' for offshore wind farms. A report by the DTI<sup>13</sup> recommended using a 70 or 80mm 'focal length'. **To maintain** consistency with the approach used onshore, the same methodology and image specification is recommended for offshore wind visualisations. Note - as for the images described in section 4 above, this should be cropped and enlarged from a photograph taken

Longer than A1 paper lengths may be requiredGuidance on the assessment of the impact of offshore wind farms: Seascape and Visual Impact Report, DTI, (2005)

with a **50mm fixed focal length lens**. This will be kept under review and determining authorities may chose an alternative focal length if circumstances support this.

# Use of design envelopes

211 To date, most offshore wind farm applications have been submitted on the basis of a design (or "Rochdale") envelope, with assessment carried out on the basis of a realistic "worst case" scenario, with the final design not confirmed until after consent. SNH has provided guidance on the landscape and visual aspects of this process<sup>14</sup>.

# Viewpoint choice for offshore wind farms

212 Viewpoint selection will depend on factors including the size and scale of the wind farm, its distance from shore, proximity to other development or projects, and the extent of visibility (particularly on land). Viewpoints will be agreed between Marine Scotland, the relevant planning authority and SNH. If a design envelope is used, key "design viewpoints" will also be identified, from which a range of design options will need to be illustrated.

213 Factors affecting viewpoint choice include, but are not limited to:

- Choosing key viewpoints to illustrate design options and evolution adequately
- Use of inland viewpoints to see offshore proposals in the context of onshore foreground
- Inclusion of appropriate features or foreground to help the location and scale of the wind farm to be appreciated
- Choosing viewpoints that represent recognised circulation routes, such as ferry routes
  (reflecting the type of boat and therefore viewing height from which the view will be seen),
  beaches, onshore roads and footpaths, cruising routes, popular sailing competition areas
  and other sea users, even if these may not be the most easily accessible points
- Including a range of elevations of viewpoints, where relevant
- Importance of representing land to sea, sea to land, and sea to sea views, including the coastal, sea and land interfaces
- · Representing a variety of lighting conditions, e.g. side-lit, back-lit and front-lit
- There may also be a need to choose viewpoints to show tidal differences if inshore locations are proposed for development.

In all cases it remains essential that the number of viewpoints remains proportionate to the assessment.

# Elevation of viewpoint

214 The horizon is the most distant point seen on the sea surface – this distance increases with the elevation of the viewpoint, and decreases the lower your position (because of the curvature of the earth). Under special weather conditions, on many days of the year from high

<sup>&</sup>lt;sup>14</sup> Offshore Renewables – guidance on assessing the impact on coastal landscape and seascape; please refer to Annexe 2

points, it is possible to see the horizon up to 80+km distance<sup>15</sup>. On a clear day, viewed from a beach, the horizon is of the order of three nautical miles (approximately six km) distant. This means that the nature of views of offshore wind farms will vary significantly according to the elevation of the viewer, and any visual assessment should examine a range of viewpoints from different elevations.

# Photomontage for offshore wind farms

215 In the production of offshore wind farm photomontages:

- It is important to recognise that the greater distances involved are a technical challenge. There may be a need to 'zoom in' for detailed design assessment.
- It is often difficult to represent turbines on the horizon in photomontages as this zone is generally hazy. The horizon may need to be rendered back in to the image in such situations, and wireframes will be particularly helpful.
- A key factor is achieving sufficient contrast between the sky and the sea so that the horizon is clear.
- It may be necessary to prepare images wider than 180° to capture landscape and visual context.
- It will be necessary to show the visual impacts of any ancillary infrastructure (including offsite implications), such as offshore substation platforms, on-shore grid connections, converter stations, associated tracks, access routes or buildings, fencing, car parks, lighting, borrow pits and service platforms. Additional colouring on the turbines (such as coloured foundation jackets) should be represented on the photomontage where possible.

# Wirelines for offshore wind farms

216 The use of wirelines is especially useful in offshore visualisation where producing photomontages may be very difficult, and these will replace photomontages in some instances.

# Turbine lighting

217 All offshore and inshore wind energy development will require lights for marine navigation and aviation safety. It is often one of the major visual issues relating to this type of development. Generally, the turbines are proposed in areas currently characterised by their darkness. Reflection of lights on the water surface can also increase the effects of lighting in some conditions.

218 Precise lighting requirements are not known at pre-application stage and are only agreed post-consent via a "Lighting and Marking Plan". This is due to the wide spectrum of different design variations (the use of the 'Rochdale Envelope' in planning schemes) which make it difficult to finalise CAA, MoD and Northern Lighthouse Board requirements. Nevertheless, it is important to assess and illustrate likely lighting effects. Paragraphs 174-177 provide further guidance on this.

<sup>&</sup>lt;sup>15</sup> An assessment of the sensitivity and capacity of the Scottish seascape in relation to wind farms. SNH Commissioned Report 103 (2005), p 12

# **6 Repowering**

- 219 Repowering involves the replacement of the old turbines with new ones and a new planning application. In most cases this will require a new LVIA and new visualisations.
- 220 Our guidance on assessing repowering applications is in preparation and we will consult on this later in 2017. In the meantime, we are scoping the assessment of repowering applications on a case by case basis. As a starting point we advise that visualisations for repowering schemes are prepared as follows:
  - The baseline panorama should show the baseline landscape with the existing wind turbines removed
  - An additional visualisation which compares the existing wind farm with the proposed new one should be provided. This should follow the same format as recommended for the baseline panorama, with the existing wind farm at the top of the image and the new proposal below.

# Annex A Information on limitations of visualisations.

Visualisations of wind farms have a number of limitations which you should be aware of when using them to form a judgement on a wind farm proposal. These include:

- A visualisation can never show exactly what the wind farm will look like in reality due
  to factors such as: different lighting, weather and seasonal conditions which vary
  through time and the resolution of the image;
- The images provided give a reasonable impression of the scale of the turbines and the distance to the turbines, but can never be 100% accurate;
- A static image cannot convey turbine movement, or flicker or reflection from the sun on the turbine blades as they move;
- The viewpoints illustrated are representative of views in the area, but cannot represent visibility at all locations;
- To form the best impression of the impacts of the wind farm proposal these images are best viewed at the viewpoint location shown;
- The images must be printed at the right size to be viewed properly (260mm by 820mm);
- You should hold the images **flat at a comfortable arm's length**. If viewing these images on a wall or board at an exhibition, you should stand at arm's length from the image presented to gain the best impression.
- It is preferable to view printed images rather than view images on screen. If you do view images on screen you should do so using a normal PC screen with the image enlarged to the full screen height to give a realistic impression. Do not use a tablet or other device with a smaller screen to view the visualisations described in this guidance.

# Viewing instruction to be provided on every image

To minimise the risk of images being viewed incorrectly on screen, every photomontage should contain the following instruction: "View flat at a comfortable arm's length. If viewing this image on a screen, enlarge to full screen height". The correct paper size and image size should also be provided.

# Annex B Standard requirements which all visualisations should comply with

# Checklist

Photography	Camera	Full Frame Sensor Size	
	Lens	50mm fixed focal length	
	Camera	1.5m (unless alternative height can be	
	height	justified, in agreement with planning	
		authority)	
	Location	Grid reference, relevant location map, and	
		photograph of tripod location provided	
Photomontage	Image	Clear of foreground objects	
	Conditions	Visibility sufficiently good	
	Baseline	Cylindrical projection 90, 180, 270 or 360	
	panorama and	degrees printed on A1 length sheet(s).	
	wireline	Image size for both the baseline panorama	
		and wireline should be 820mm by 130mm	
	Wireline	Planar projection, image size 260 by 820mm	
		on A1 sheet. HFOV 53.5° and VFOV 18.2°	
	Panorama	Planar projection, image size 260 by 820mm	
		on A1 sheet. HFOV 53.5° and VFOV 18.2°	
	Principal	Printed on visualisations	
	Distance		
Maps	Viewpoint	To include overall viewpoint location map	
	map	(combined with ZTV). Thumbnail location	
		map provided on each panorama	
Methodology		Statement of methodologies used to	
		produce visualisations including ZTVs and	
		software used	

HFOV = Horizontal field of view VFOV = Vertical field of view

# Annex C Summary of visualisation requirements<sup>16</sup>.

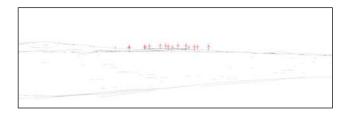
# Baseline panorama and wireline

The purpose of the baseline panorama and wireline is to provide wider landscape and visual context to help the viewer understand where development sits within the wider landscape. The wireline also illustrates cumulative effects and provides the viewer with the full cumulative context. The baseline panorama is not intended to represent how large or small the turbines will appear in reality or how close they will appear to the viewer.



# Wireline

Wirelines are very useful in the design stages and can used to illustrated changes to the proposal quickly and effectively. They illustrate 'bare ground' visibility and a provide a clear view of the wind farm to inform the assessment.



# A1 Panorama

The A1 panorama is intended to provide the best impression of the apparent size of the turbines and the distance to the development from the viewpoint location. Only images at this scale<sup>17</sup>, held at a comfortable arms length, should be used when trying to understand the size of the development and its distance from the viewpoint.



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<sup>&</sup>lt;sup>16</sup> Note – it is not always necessary to produce all 3 images. In some cases a wireline may suffice, for example, if agreed by the determining authority and consultees

<sup>&</sup>lt;sup>17</sup> The horizontal and vertical fields of view define the scale of this image which is <u>equivalent</u> to the image which would be captured with camera lens of a focal length of 75mm on a full frame camera. Images produced which have an equivalent focal length of less than 75mm will make the development appear smaller and further away than it would in reality, regardless of viewing distance.

# **Annex D Earth Curvature and Refraction of Light**

Ordnance Survey co-ordinates are not fully 3-dimensional. The northing and easting define a point on a plane corresponding to the OS transverse Mercator map projection, and the altitude above OS datum is measured above an equipotential surface passing through the OS datum point at Newlyn. In reality, the earth is curved so a correction has to be made in order to position geographical features correctly in three dimensions for ZTV calculation and for visualisations.

If it were not for the presence of the Earth's atmosphere, a simple allowance for curvature would be sufficient. The formula for this can be worked out quite easily from Pythagoras' theorem:

$$c^2+r^2=(r+h)^2$$
  $h$  is very small in comparison with  $r$ , so the formula can be approximated with: 
$$c^2+r^2=r^2+2rh+h^2$$
 
$$c^2=2rh+h^2$$
 
$$=2(r+h)h$$
 
$$c=\sqrt{2(r+h)h}$$
 
$$\sqrt{2rh}=c$$
 Rearranging for  $h$ , we get: 
$$2rh=c^2$$
 
$$h=\frac{c^2}{2r}$$

In practice, rays of light representing sightlines over long distances are also curved downwards as a result of refraction of light through the atmosphere, allowing one to see slightly beyond the expected horizon. (The atmosphere reduces the vertical correction due to curvature alone by about 15%.) The standard formula used in surveying work is modified from the one derived above as follows:

$$h = \frac{c^2(1-2k)}{2r}$$
 Where:  $h$  is the height correction in metres  $h$  is the distance to the object in metres  $h$  is the refraction coefficient  $h$  is the radius of the Earth in metres

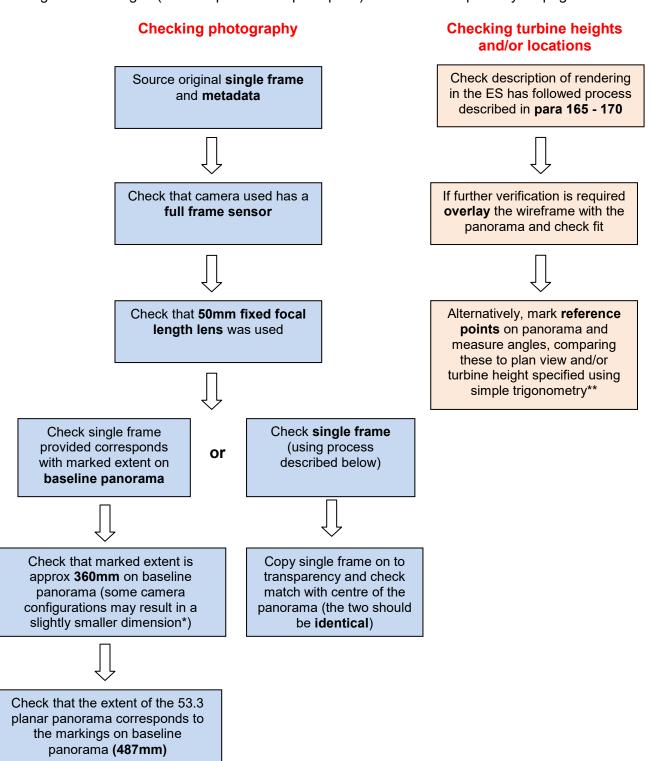
The parameter  $\mathbf{k}$  is not constant but varies with temperature and barometric pressure (and therefore also with altitude). For precise geodetic surveying work both these quantities would have to be measured at both ends of a line of sight. Visualisation and visibility analysis do not require such precision; therefore a representative value may be used. 0.075 is a reasonable average for inland upland observations, but very slightly different values may be found quoted in surveying or navigation textbooks. ( $\mathbf{k}$  is a numerical coefficient and therefore has no units.) Taking  $\mathbf{k} = 0.075$  and  $\mathbf{r} = 6,367,000$ m (a representative radius for the UK), the following example values are obtained:

Distance c	Vertical correction for Earth curvature and atmospheric refraction h	
5 km	1.7m	
10 km	6.7m	
15 km	15.0m	
20 km	26.7m	
25 km	41.7m	
30 km	60.1m	

# **Annex E Verification of images**

Some users of visualisations may wish to 'verify' the images provided. The following methods can be used. The first is provided to check that the photographs have been taken on the correct camera and lens and then enlarged appropriately. The second is to test that the turbines have been placed in the correct locations and at the correct size.

There are two ways to check the A1 panorama, both are described below. The verification of single frame images (for the optional viewpoint pack) is described separately on page 51.



# Single frame images

The single frame image provided in the viewpoint pack (if this is requested by the Planning Authority) can be verified using a similar process. A simple template can be used to check that the correct portion of the 50mm image has been cropped and then enlarged\*. To check this:

- Obtain original 50mm photograph with metadata. Check full frame sensor camera and 50mm fixed focal length lens used
- print the original 50mm photograph on A3 at 390mm wide by 260mm in height
- overlay a **template** to check that the correct proportion of the image has been cropped (an example is available on our <u>website</u>). The template should include two rectangles, one at 390mm by 260mm, and one at 260mm by 174mm as shown on the example.
- the cropped area should then be printed at **390mm** wide by **260mm** in height and this can be measured on the image submitted.
- \* **Note** not all full frame sensors are <u>exactly</u> the same size. Very slight variations in sensor size and lens focal length may affect this measurement / comparison by a few mm. However, the difference is small enough that the horizontal field of view can be verified with sufficient confidence.
- \*\* **Note** if measuring turbines on the image, make sure that you measure the full height of the turbine i.e. check that the base of the turbine is not obscured either by vegetation, screening or topography.

# **Annex F Taking Good Photographs**

This appendix is not intended to be a general manual of photography, there are plenty of good books available on that subject. It sets out briefly the main issues relating to photography aimed at constructing panoramas suitable for photomontages and ES work.

#### Camera and lens

A good quality camera is essential. A digital camera with **full frame sensor** is required to capture sufficient information and produce a verifiable image. A **fixed focal length 50mm** lens should be used to produce photomontages. A fixed focal length a) reduces the risk of inaccuracies and b) enables easy verification of the image should this be required. A full frame sensor also provides a verifiable reference point and a higher resolution than most alternative sensor sizes (depending on the camera).

Note, however, that sensor size varies slightly on most 'full frame sensor' cameras and that even high quality fixed focal length lenses can vary in their geometry. The precise sensor size and geometry of the lens should be recorded, where available. Any significant variation from 36x24mm sensor size or 50mm focal length should be recorded and, if significant, corrected for.

# Tripod

A stable tripod is essential. As a minimum, a head with independent tilt adjustments for both pitch and roll should be used (ball-head tripods are more difficult to level satisfactorily). A panoramic head should be used, allowing a single adjustment to be made for an entire panorama. Camera height should be 1.5m (unless an alternative height is required). A photograph of the tripod in situ should be taken.

# Levelling

In order to obtain photographs which will splice together satisfactorily to form the baseline panorama, it is essential that the camera is levelled accurately. A simple, cheap spirit level will do this quite satisfactorily and, with care, can produce images levelled to an accuracy of about 0.2°. A tripod head with a built-in sprit level and adjusting screws is better.

## Focus

The camera lens should always be focussed on infinity. On auto-focus lenses, the focussing should be set to manual or locked on infinity.

# Aperture and Exposure

If at all possible, the exposure should be metered once for a complete panorama and then used for all frames either by using a manual setting or by locking the exposure.

For greatest depth of field in the images, the aperture should be set to the minimum available on the lens (typically f/16 or f/22). If it is necessary to obtain slightly more resolution, it may help to use a slightly wider aperture: f/5.6 or f/8 are often the optimum settings. However, the photographer should use professional judgement to achieve the best results.

Shutter speed should be selected to obtain the correct exposure consistent with the aperture selected. If there are existing wind turbines in the view, the shutter speed will affect the degree of blurring seen in the photograph due to the movement of the blades.

From: Nick Bradford - Nundle Woollen Mill [mailto:nick@nundle.com]

Sent: Wednesday, 6 May 2020 9:21 AM

To: 'Jamie Chivers' < jamie.c@someva.com.au >

Subject: ABC Interview

Hi Jamie,

I just had a listen to your interview on ABC radio. While most of your response was expected from a developer point of view, I really take exception to your comment about the "vocal minority". You pride yourself on being factual and balanced but this is a blatant lie. You know that more than half the community are absolutely against this project. This information has been tabled at a CCC meeting in the form of a petition. At our first meeting with John Wilcox, he said if the majority of the community don't want this project, it won't go ahead. The majority of the community don't want this.

Can I please suggest that in future interviews, you don't refer to those who speak against this project as the "vocal minority". You know this is not the case. You tell us that you are trying to engage with the community in a meaningful way, this is not the way to do it. You alienate those who are against the project further, maybe that it is your end game.

Kind regards, Nick

Nundle Woollen Mill nundle.com nundle.store

35 Oakenville St Nundle, NSW, 2340 AUSTRALIA

Tel: 1300 N-U-N-D-L-E (1300 686 353)

Tel: + 61 2 6769 3330 Mob: 0409 239 665

# Correspondence:

- Letter to WEP by Nick Bradford.

# Questions by community

- 1. What is Mike Strangers current role within Someva?
- 2. Is Mike Stranger a Share Holder of either Someva or Wind Energy Partners?
- 3. Is Mike Stranger the Development Officer or Environment Representative?
- 4. Regarding Audio & Visual Assessments, when will Someva respond to Community members requests to be included in Noise & Visual Assessments?
- 5. Wind Energy Partners has mentioned on several occasions that any community member can request to be included to have their property assessed for a Visual Impact Montage, members would like to know when this will happen and how can they register?
- 6. Wind Energy Partners have stated two Wind Monitoring Masts were commissioned in July 2019, members of the community have asked what is the date the first Wind Monitoring Mast was installed on site before these two?
- 7. What is the date when was the first Wind Monitoring Mast removed?
- 8. Regarding Aviation Lighting requirements, a member of the community has asked, Do the lights flicker in sequence or offset?
- 9. Would the Turbines be visible at night due to reflection from light from the moon?
- 10. The movement of the wind turbine blades can cause serious degradation in the reception of television signals. These effects are almost permanent, declining only in periods when turbines do not work. When can the community members expect to know if their TV reception will be interfered with due to radio line of sight and transmitter interference?
- 11. Community members are concerned there is an open investigation into alleged illegal Land Clearing of State Forest and Ben Halls Gap Nature Reserve, several members of the community have now come forth to advise they have lodged complaints in March 2018. AS no information or result has come forth to date from the Department investigating, members want assurance that no land clearing will occur in the Development corridor in preparation for this proposal. Can Wind Energy Partners and Someva ensure that a Moratorium to land clearing in preparation for this development be adhered to within the development corridor, especially the Western end of the proposal and all lands they wish to Lease?

# Correspondence:

Letter to WEP by Nick Bradford. Jamie Chivers provided the below response to Nick Bradford on 7<sup>th</sup> May 2020.

# "Hi Nick

Thank you for your feedback. This was discussed at the CCC last night by a member of the CCC and it was acknowledged by Wind Energy Partners.

If you have any comments on the Preliminary Photomontages or any other aspect of the project, please feel free to contact me.

# Jamie"

Questions by community

1. What is Mike Stranger's current role within Someva?

Mike Stranger is the Assistant Development Manager – Land and Community for Someva and on the Hills of Gold Wind Farm project

2. Is Mike Stranger a Share Holder of either Someva or Wind Energy Partners?

No, Mike Stranger is not a shareholder of either Someva or Wind Energy Partners.

3. Is Mike Stranger the Development Officer or Environment Representative?

As discussed in the CCC meeting, Sandra Agudelo is the Senior Development Manager for the Hills of Gold Project and responsible for delivering the Environmental Impact Statement and is the environmental representative on the CCC. This notwithstanding, Mike Stranger has environmental qualifications and is responsible for liaising with community members and their concerns on the project, including those related to environmental management.

4. Regarding Audio & Visual Assessments, when will Someva respond to Community members requests to be included in Noise & Visual Assessments?

Responses have been and continue to be provided to community members on the subject of noise and visual assessments. As the noise and visual assessments are being undertaken by technical consultants, it is important to consult with these technical consultants prior to providing responses to community members due to the nature of advice. This can take a little longer depending on the nature of the question.

5. Wind Energy Partners has mentioned on several occasions that any community member can request to be included to have their property assessed for a Visual Impact Montage, members would like to know when this will happen and how can they register?

Any community member is welcome and encouraged to discuss with us the visual impact concerns of the project and register their interest in having a visual assessment completed from their private residence. WEP will liaise and consult with individual members of the community who are interested in an assessment at their property. Community members can contact Mike Stranger, or email <a href="mailto:info@hillsofgoldenergy.com">info@hillsofgoldenergy.com</a> to express their interest in a home visit.

6. Wind Energy Partners have stated two Wind Monitoring Masts were commissioned in July 2019, members of the community have asked what is the date the first Wind Monitoring Mast was installed on site before these two?

The first meteorological mast was installed in the wind farm development corridor for the Hills of Gold Wind Farm project in November 2010.

7. What is the date when was the first Wind Monitoring Mast removed?

The original met mast was decommissioned in May 2015.

8. Regarding Aviation Lighting requirements, a member of the community has asked, Do the lights flicker in sequence or offset?

Typically, per guidance provided by the Civil Aviation Safety Authority and the Department of Planning, Industry and Environment (DPIE), and where lighting has been recommended by CASA to reduce risk to aviation safety, lighting installed on wind turbines should flash simultaneously and be turned on and off simultaneously <sup>1</sup>. However, the requirement and design of obstacle aviation lightning is still to be determined for the project and will completed as part of the Hazard and Risk assessment component and in accordance with the Secretaries Environmental Assessment Requirements (SEAR's). This will be provided as part of the Environmental Impact Statement at the time of lodgement of a Development Application, and we will continue to consult with the community during the design phase of the project on their concerns with regards to aviation lighting.

9. Would the Turbines be visible at night due to reflection from light from the moon?

Wind turbine generators may be visible at night insofar as other features of the landscape are visible at night when light reflected from the moon enables features of the landscape to be visible. The landscape and visual assessment component of the EIS will include further detail on the likelihood of visibility of the wind turbines at night.

10. The movement of the wind turbine blades can cause serious degradation in the reception of television signals. These effects are almost permanent, declining only in periods when turbines do not work. When can the community members expect to know if their TV reception will be interfered with due to radio line of sight and transmitter interference?

Safeguarding Framework Principles and Guidelines, Guideline D - Guideline D: Managing the Risk of Wind Turbine Farms as Physical Obstacles to Air Navigation.

<sup>&</sup>lt;sup>1</sup> National Airports

Effects to telecommunications systems, including radio and television signals and reception, must be assessed as part of the communications assessment and Hazard/Risk assessment process, including identifying measures to avoid any disruption to these systems if there is determined to be a potential impact. This will be detailed in the Environmental Impact Statement, scheduled for lodgement with the DPIE at the end of 2020.

11. Community members are concerned there is an open investigation into alleged illegal Land Clearing of State Forest and Ben Halls Gap Nature Reserve, several members of the community have now come forth to advise they have lodged complaints in March 2018. AS no information or result has come forth to date from the Department investigating, members want assurance that no land clearing will occur in the Development corridor in preparation for this proposal. Can Wind Energy Partners and Someva ensure that a Moratorium to land clearing in preparation for this development be adhered to within the development corridor, especially the Western end of the proposal and all lands they wish to Lease?

As per discussion in the May CCC meeting and as the minutes record, no land clearing has been performed by Wind Energy Partners in preparation for the project.

# AAAA Tall Structures Policy

Last Revised: February 2017



# Introduction

Tall structures—such as radio masts—are a direct threat to aviation safety – and especially aerial application. In an already hazardous low-level environment, tall structures impose additional operational costs onto aerial applicators in addition to increased risk.

AAAA has developed this policy so as to inform regulators, tall structure developers and operators alike of the need for action on their part to fulfill their duty of care to Australia's aerial applicators.

# AAAA Tall Structures Policy

As a result of the potential safety and economic impact of tall structures and supporting infrastructure on the sector, AAAA opposes all tall structure developments in areas of agricultural production or elevated bushfire risk unless the developer is able to clearly demonstrate they have:

- 1. consulted honestly and in detail with local aerial application operators
- 2. sought and received an independent aerial application expert opinion on the safety and economic impacts of the proposed development that is acceptable to local operators
- clearly and fairly identified that there will be no impact on the aerial application industry from either safety or economic perspectives and
- 4. if there is an identified impact on local aerial application operators, provided a legally binding agreement for compensation over a fair period of years for loss of income to the aerial operators affected.
- 5. Adequately marked any tall structures and related infrastructure and advised pilots and operators of its presence.

AAAA believes that the above processes should also apply for all tall structures that have already been approved or erected.

While it is not AAAA policy to provide specific comment on particular development proposals

due to resource limitations, AAAA notes that tall structures can have far-reaching footprints that can remove significant amounts of land from treatment for a considerable distance from the tall structure vicinity.

Operational implications of each development will vary enormously depending on the site, the positioning of the tall structure, orientation of affected paddocks relative to the tall structure, the type of aerial application taking place, the aircraft used, the pilot's experience, the meteorological conditions, the site elevation, the position of any airstrip relative to the tall structure and a range of other variables.

However, it is clearly unacceptable that one industry can impose significant safety threats on another industry.

# AAAA believes that:

- All tall structures—including guy wires and infrastructure—must be clearly marked to assist pilots to see them
- All tall structures and associated infrastructure must be required to be removed when no longer in use.
- The Commonwealth Government should establish and maintain a mandatory Tall Structures Reporting and Advice System, based on a real-time GIS system available on the internet to all bona-fide low level airspace users.

#### Recommendations to Government

# Land Planning

AAAA recommends that the Commonwealth, States and Territories cooperate so as to make the NASAG processes binding on all government jurisdictions when they consider development applications for tall structures.

AAAA recommends that the Commonwealth expand its work under the NASAG process to include a new Guideline for the development of tall structures away from airports, including considerations of existing land use, known aerial application activity, notification and marking of tall structures.

The aim of such a Guideline, in addition to enhancing aviation safety, should be to ensure that tall structure developments do not adversely affect known aviation activities or aviation safety, and are compatible with existing land-use patterns.

AAAA recommends that the Commonwealth provide coordinated and comprehensive information to all tall structures developers on their responsibilities for aviation safety, including raising the duty of care requirements established under *Sheather v Country Energy* (NSW Court of Appeals) for owners of assets that pose a known threat to aviation activities to provide for suitable marking and other safety initiatives.

The Commonwealth should establish a head of power to regulate tall structure developments away from airports to protect aviation safety. This should include mandatory marking and notification of tall structures and the power to veto proposed developments where they interfere with aviation safety.

The Commonwealth should develop a national tall structures web-based database that is accessible in real time by all low-level aviation pilots and which captures all tall structures. The database should also capture other threats to low-level aviation including wind monitoring towers and powerline mapping systems.

CASA should set a much lower than previously used height trigger for notification of tall structure developments - down to 50 feet in an area of known aerial application activity—or use a risk assessment based approach.

CASA should work with Airservices Australia and any other relevant agencies to ensure that tall structures are included on suitable aviation mapping including WAC charts and topographic maps in a more timely manner.

# Legal Responsibilities of Developers

AAAA's view is that the case of *Sheather v Country Energy* (NSW Court of Appeals) clearly established that anyone with infrastructure posing a threat to aviation must consider the risks that infrastructure poses to aviation safety and respond appropriately through marking or other measures to safeguard aviation operations.

While the requirement of marking of towers and notification to the RAAF Tall Structures Database is covered to some degree by the CASA regulations, this is based on what AAAA believes is a flawed approach to risk management and some towers may be excluded from the requirements because of the height threshold.

The Federal and State governments have undertaken significant work in this area through the National Safeguarding of Airports Working Group - <a href="http://www.infrastructure.gov.au/aviation/environmental/airport\_safeguarding/nasf/index.aspx">http://www.infrastructure.gov.au/aviation/environmental/airport\_safeguarding/nasf/index.aspx</a> - AAAA believes the Commonwealth should make compliance with these guidelines mandatory as a first step in improving aviation safety.

In particular, AAAA have identified unmarked and un-notified wind monitoring towers as a safety threat to legitimate low level aviation—one that significantly increases the liability of developers should an accident occur. AAAA suggests tall structure developers should consider AAAA evidence to the Senate Windfarm inquiry and the death of an agricultural pilot in the US from hitting an unmarked, unnotified tower which has since resulted in significant legal and legislative action in the US - <a href="http://www.aph.gov.au/hansard/senate/commttee/S13670.pdf">http://www.aph.gov.au/hansard/senate/commttee/S13670.pdf</a>

# Powerline Mapping and Marking

No pilot goes to work intending to hit a wire, so we must assume that pilots are doing their best to manage an extremely difficult operational task that would be significantly supported by mandatory national requirements for the provision of electricity network mapping information to pilots and operators and the visual marking of 'high risk' powerline spans - such as those that have already been hit and those assessed by pilots and operators as posing a significant risk.

Safety awareness in the aerial application industry is already extremely high and backed by a range of strong risk management systems and AAAA education and training initiatives.

AAAA has a long history of working positively with Essential Energy in NSW (formerly Country Energy) and this has led to the provision of mapping of networks to low level airspace users, and the placement of over 1200 markers on dangerous powerlines throughout NSW.

The key issue with marking systems is that they must be able to be fitted 'live line' by qualified electricity company staff. This brings the cost down from the traditional \$2-3000+ for a single large orange ball marker (as the line must be isolated / turned off for fitting and several crews are involved) to about \$100 per modern marker supplied and fitted. This puts the costs of marking well within the reach of electricity companies, landholders and others.

Essential Energy also works cooperatively with AAAA on information campaigns - see for example:

# https://www.essentialenergy.com.au/asset/cms/pdf/safety/AerialSafety.pdf

AAAA has also sought to work with other electricity companies in other States. Unfortunately, that work has not resulted in mapping or marking systems being widely adopted, mainly due to the way information can be provided, but also a lack of interest in engaging on this critical safety issue.

AAAA is hopeful of improved software removing this current impediment to the national availability of powerline mapping.

However, the power of a national mandatory requirement for the provision of this already existing data should not be underestimated in terms of ensuring powerline companies contribute to safer aviation.

# Review of Australian standard AS 3891 - Air Navigation - Cables and their supporting Structures - Safety and Marking Requirements - Part 2

The Australian Standard AS3891 on wire marking is currently being reviewed and both AAAA and CASA have been asked to participate on that review committee.

AAAA chaired the previous review of the standard some years ago and was frustrated in achieving any substantive changes to marking thresholds by concerted resistance from electricity network owners.

However, the previous review of the Standard did permit the use of new types of markers that are able to be placed during live-line work and are consequently far cheaper to install and even more visually effective than the traditional large 'ball' markers.

AAAA hopes that the upcoming review will similarly improve the Standard in terms of being less restrictive on innovative marker types (of which several are now available but which have difficulty conforming to the current Standard).

AAAA is also hopeful that the current hard triggers for marking of powerlines with significantly long spans (up to 1500 metres) and very high clearances above ambient vegetation (up to 90 metres) will eventually be addressed to be set at more realistic and safer - ie shorter and lower - distances.

AAAA notes that the Australian Standard does not appear to be binding or mandatory for electricity network owners and would strongly support its mandating by regulation.

# **Operational Impacts**

The following potential impacts on aerial application should be considered by all tall structure developers:

- positioning of tall structures may affect local aerial application operations, depending on the particular site.
- impacts could vary from affecting flight lines to treatment height and accuracy, maneuvering areas and possibly take-off and landing splays if an airfield is nearby (see for example, CASA CAAP 92-1 for agricultural airstrips – <a href="https://www.casa.gov.au">www.casa.gov.au</a> – search for CAAP 92-1.)
- it may not be the land or farm that the tall structure is to be situated on that will be affected. Neighboring farms, especially any with borders close to the tall structure site, may suffer significant impacts by imposed limits on the maneuvering areas of aerial application aircraft.
- a key impact may not be the tall structure itself, but the positioning of any powerline that would lead from the tall structure. Any supporting powerline should be put underground. If this is not possible, any above-ground cable must be adequately marked.

# AAAA Activities to date

AAAA has done a lot of work to make it easier to mark tall structures, guy wires and powerlines through amendment of the national standard on marking of wires so as to use a marker developed by Essential Energy (NSW) with the cooperation of AAAA.

There is now little practical reason why tall structures and guy wires should not to be clearly marked.

AAAA also passes on information to members that has been provided to it by developers on the physical location of some tall structures. However, only a few developers provide this information and again there is little doubt that many tall structures are going up unmarked and unknown until hopefully spotted by pilots during pre-application planning and inspections.

More comprehensive safeguards must include a mandatory national system of communication of the position of all tall structures towers and the inclusion of this on a national database accessible by low level pilots.

# AAAA Windfarm and Tall Structures Notification Process

Despite extremely limited resources, AAAA tries to assist aviation safety by advising those of our members on our email lists of the position of tall structures if advised by developers.

While AAAA has very limited resources, tall structure developers are encouraged to provide these details by email to AAAA.

AAAA will pass that information on to our members in that State on the basis of no assumed liability.

AAAA points out clearly that this in no way absolves the tall structure developer from the need to mark the masts so as to contribute to a dis-

charge of their due diligence and duty of care to pilots.

AAAA provides this facility on the basis of it being information of a general nature only and the understanding that the information, for a range of reasons (including email failure, not all members being covered by email, or non-use by members, or operational shortcomings) will not provide any guarantees of aviation safety.

AAAA accepts no liability in terms of the accuracy of information provided, and makes no representations as to the use of the information provided or the likely actions of members.

Tall structure notifications to AAAA should include, in the following order:

- State
- Distance and direction relative to the nearest significant town (eg 10 miles SE of xxxx)
- Latitude and longitude
- Location—eg top of hill
- Height to top
- Type—eg lattice tower / monopole and guys
- Footprint eg guys 45 metres from pole
- Date of erection
- Marking—eg painted orange/white / strobe
- Any other relevant information

# **FURTHER INFORMATION**

If you would like more information on the vital and responsible role the aerial application industry plays:

www.aerialag.com.au
Ph: 02 6241 2100
Email: phil@aerialag.com.au

PO BOX 353 Mitchell ACT 2911



# **Aerial Agricultural Association of Australia**

# Windfarm Policy



# March 2011

# Introduction

Windfarms and their pre-construction wind monitoring towers are a direct threat to aviation safety – and especially aerial application. They also pose an economic threat to the industry where the costs of windfarm development—including those of compensation for loss of income—are externalized onto other sectors such as aerial application.

AAAA has developed this policy so as to inform regulators, asset developers and operators alike of the need for action on their part to fulfill their duty of care to Australia's aerial applicators.

# AAAA Windfarm Policy

As a result of the overwhelming safety and economic impact of windfarms and supporting infrastructure on the sector, AAAA opposes all windfarm developments in areas of agricultural production or elevated bushfire risk.

In other areas, AAAA is also opposed to windfarm developments unless the developer is able to clearly demonstrate they have:

- 1. consulted honestly and in detail with local aerial application operators
- sought and received an independent aerial application expert opinion on the safety and economic impacts of the proposed development
- 3. clearly and fairly identified that there will be no short or long term impact on the aerial application industry from either safety or economic perspectives and
- 4. if there is an identified impact on local aerial application operators, provided a legally binding agreement for compensation over a fair period of years for loss of income to the aerial operators affected.
- 5. Adequately marked any wind infrastructure and advised pilots of its presence.

AAAA believes that the above processes should also apply for all windfarms that have already been approved or erected, especially the establishment of long-term (for the life of the windfarm or until it is removed, whichever is the longest) binding compensation arrangements for affected aerial application companies.

While it is not AAAA policy to provide specific comment on particular development proposals due to resource limitations, AAAA notes that windfarms can have far-reaching footprints that can remove significant amounts of land from treatment for a considerable distance from the windfarm boundary.

Operational implications of each development will vary enormously depending on the site, the positioning of the turbines, orientation of affected paddocks relative to the turbines, the type of aerial application taking place, the aircraft used, the pilot's experience, the meteorological conditions, the site elevation, the position of any airstrip relative to the turbines and a range of other variables.

However, it is clearly unacceptable that one industry can impose significant safety threats on another, longer established industry with impunity.

# AAAA believes that:

- All wind monitoring towers—including guy wires—must be clearly marked to assist pilots to see them
- All wind turbines, wind monitoring towers and associated infrastructure must be required to be removed when no longer in use. A mandatory bond should be levied on all developments to ensure the site can be remediated.

# Recommendations to Government

# Moratorium & National Policy

AAAA recommends to all Governments the establishment of a moratorium on windfarm developments until a national COAG policy on windfarms is established that requires the following to be considered before approval:

- Competing land uses for the particular site.
- Priority for existing long-term land-uses.
- Economic and safety impacts on contracting industries such as aerial application, including the broader implications for thresholds of sustainability for contractors.
- Independent life cycle analysis of windfarms and their overall environmental impact.
- Impact on aviation safety.
- Impact on bushfire preparedness and aerial firefighting.
- Impact on visual pollution / amenity/ tourism.
- Other sources of sustainable energy.

# Transparency

AAAA recommends that any 'special' or 'fast-track' planning processes established for wind-farm developments be removed. All windfarm developments should be subject to the full planning processes and community consultation in each State and Territory, including appeal of decisions.

Governments should require public disclosure on a register of payments to landholders made before approval of the windfarm. This will allow other landholders and contractors to be aware of developments.

# **Aviation Safety**

AAAA recommends that government provide better information to all windfarm developers on their responsibilities for aviation safety, including raising the duty of care requirements established under *Sheather v Country Energy* (NSW Court of Appeals) for owners of assets that pose a known threat to aviation activities to provide for suitable marking and other safety initiatives.

The Commonwealth should establish a head of power to consider and regulate windfarm developments to protect aviation safety. This should include mandatory marking and notification of wind infrastructure and the power to veto proposed developments where they interfere with aviation safety.

CASA should set a much lower than previously used height trigger for notification of tall structure developments - down to 50 feet in an area of known aerial application activity—or by using a

risk assessment based approach.

CASA should work with Airservices Australia and any other relevant agencies to ensure that completed windfarms are included on suitable aviation mapping including WAC charts and topographic maps.

CASA should develop a national tall structures web database that is accessible in real time by all low-level aviation pilots and which captures all wind-monitoring towers as well as completed windfarms. The database should also capture other tall structures such as radio masts etc.

# Background

CASA does not have a clear head of power or a pathway for windfarm developers to ensure the risks their developments are posing are appropriately managed so as to protect legitimate activities of low-level aviation operators.

In particular, previous CASA efforts to address this issue by requiring marking and lighting of certain towers above a certain height and within a certain distance of an airport misses the main risk to aviation and this is the wind monitoring towers as they are frequently lower than the height trigger, but still a threat to legitimate lowlevel aviation.

Wind monitoring towers are very tall in relation to aerial application operations, are erected within very short timeframes, are extremely difficult for any pilot to identify from the aircraft and are often not notified to aviation users because of the lack of a Government-mandated notification system and the desire of the developers to keep their positions a secret because of commercial issues.

There are two quite distinct issues arising from windfarms that affect aerial application:

- safety of the aircraft and pilot and
- economic impact on aerial applicators.

# Safety Impacts

AAAA's view is that the case of *Sheather v Country Energy* (NSW Court of Appeals) clearly established that anyone with infrastructure posing a threat to aviation must consider the risks that infrastructure poses to aviation safety and respond appropriately through marking or other measures to safeguard aviation operations.

This precedent is of critical relevance to windfarm developers although not apparently widely known to them or acted upon.

# **Economic Impacts**

Safety is not the only consideration that is imposing additional risk and consequences on the aerial application industry.

The placement of wind farms in areas of highly productive agricultural land is leading to reductions in treatment areas of aerial application companies with no compensation for this externalization of costs by wind farm developers.

For example, placement of a wind farm may affect flight lines and application height or even whether the application can be conducted at all-leading directly to either an increase in cost or a reduction in income - and sometimes both - for aerial application operators.

As windfarm developments increase in number and scale of footprints, the threshold of non-viability of aerial application in an area may be reached where it is simply not economic to base an aircraft there. In a highly seasonal industry such as aerial application, operations may already be close to this threshold and windfarm footprints may compromise the availability of a critical service.

The need to manage spray applications to ensure they are safe may mean that pest outbreaks such as locusts may not be able to be effectively controlled. Windfarms may create significant gaps in large scale treatment plans—leading to a breakdown of an overall campaign against locusts, cereal rust, noxious weeds or other pests with massive economic implications for farmers and the economy.

In particular, AAAA is concerned that not enough consideration is being given through the State planning approval processes to the impacts of windfarms on productive agricultural land and the aerial application industry, remembering that it may not only be the land footprint where the windfarm is sited, but also land surrounding that for some kilometers where aircraft may have to maneuver to conduct aerial application.

At the very least, windfarm developers should be required to pay compensation to aerial applicators where it can be reasonably established that there will be an economic impact imposed on the aerial application company by the wind farm developer.

# **Operational Impacts**

The following potential impacts on aerial application should be considered by all windfarm developers:

- positioning of wind farms may affect local aerial application operations, depending on the particular site.
- impacts could vary from affecting flight lines to treatment height and accuracy, maneuvering areas and possibly take-off and landing splays if an airfield is nearby (see for example, CASA CAAP 92-1 for agricultural airstrips – <a href="www.casa.gov.au">www.casa.gov.au</a> – search for CAAP 92-1.)
- it may not be the land or farm that the wind farm is to be situated on that will be affected. Neigbouring farms, especially any with borders close to the windfarm site, may suffer significant impacts by imposed limits on the manouvering areas of aerial application aircraft.
- a key impact may not be the turbines themselves, but the positioning of any powerline that would lead from the windfarm substation back to the grid, or any other above ground powerline that would be put in to support the development. Any sections of above ground cable should be adequately marked.
- economic impacts could include increased costs due to longer flight times required to manouver heavily laden aircraft around wind towers, a loss of accuracy due to being required to fly higher for safety reasons, an increase in liability due to the reduction in accuracy, or the complete loss of application jobs due to the landholder not wanting the area covered by windfarms to be treated.

# AAAA Activities to date

AAAA has done a lot of work to make it easier to mark guy wires and powerlines – including on wind monitoring towers – through amendment of the national standard on marking of wires so as to use a marker developed by Country Energy (NSW) with the cooperation of AAAA.

There is now little practical reason why wind towers and especially wind monitoring towers should not to be clearly marked.

In addition, AAAA has attempted to provide relevant information to developers through the Wind Energy Association, but this process/advice is voluntary and consequently will not provide coverage of all developers.

AAAA also passes on information to members that has been provided to it by wind farm developers on the physical location of wind monitoring towers. However, only a few developers provide this information and again there is little doubt that many towers are going up unmarked and unknown until hopefully spotted by pilots during pre-application inspections.

More comprehensive safeguards must include a mandatory national system of communication of the position of all wind monitoring towers and the inclusion of this on a national database accessible by low level pilots.

This is a very real issue for topdressing and firebombing operations - as wind monitoring increases, so does the threat to legal aviation activities.

# AAAA Windfarm Notification Process

AAAA tries to assist aviation safety by advising those of our members on our email lists of the position of wind monitoring towers and also wind turbines when they are under construction and finally constructed, if advised by windfarm developers.

Windfarm developers are encouraged to provide these details (in lats and longs by email to AAAA) so that AAAA can pass them on to those members.

AAAA provides this facility on the basis of it being information of a general nature only and the understanding that the information, for a range of reasons (including email failure, not all members being covered by email, or non-use by members, or operational shortcomings) will not provide any guarantees of aviation safety.



# **FURTHER INFORMATION**

If you would like more information on the vital and responsible role the aerial application industry plays:

www.aerialag.com.au

Or contact us on: 02 6241 2100 ph.

phil@aerialag.com.au

AAAA PO BOX 353 Mitchell ACT 2911

# Aerial Agricultural Association of Australia

# National Windfarm Operating Protocols



**Adopted May 2014** 

# Introduction

Windfarms and their pre-construction wind monitoring towers are a direct threat to aviation safety – and especially aerial application. They also pose an economic threat to the industry where the costs of windfarm development—including those of compensation for loss of income—are externalized onto other sectors such as aerial application.

There are two distinct phases in the relationship between aerial applicators and wind farms:

- 1. Development approval
- 2. Operation once built

AAAA has a detailed policy available from its website – www.aerialag.com.au/resourcecentre/policy – that covers its views and the safety risks inherent in windfarm operations and the costs that are likely to be externalised onto the aerial application industry by the windfarm industry.

At the development stage, AAAA remains **strongly opposed** to all windfarms that are proposed to be built on agricultural land or land that is likely to be affected by bushfire. These areas are of critical safety importance to legitimate and legal low-level operations, such as those encountered during crop protection, pasture fertilisation or firebombing operations.

However, AAAA realises that some wind farm proposals may be approved in areas where aerial application takes place. In those circumstances, AAAA has developed the following national operational protocols to support a consistent approach to aerial application where windfarms are in the operational vicinity.

# Developer's Design/Build Considerations

Where possible, the developer should commit to:

- placement of turbines in straight lines
- setback of turbines at least 100 metres from any boundary
- all powerlines to be underground
- all MET towers are marked in accordance with NASAG Guidelines and notified to the local aerial applicators – see Appendix I to these Protocols

# Developer's Operational Considerations

- Wind farm locations, including any attendant MET towers, have been notified to local aerial applicators.
- The wind farm developer/operator is to develop an agreed set of protocols with the local aerial applicators for all relevant operational issues, including notification of applications.
- Wind farm operators are to stop blades during application operations and align them as required by the aerial operator.
- MET towers are marked in accordance with NASAG guidelines and notified to local aerial applicators.

# Pilot/Aircraft Operator's Operational Considerations

Once a wind farm has been built, the following protocols are to apply:

- The operator or pilot will conduct a risk assessment of the block to be treated as per usual considering tower hazards / placement etc including for operations that require treatment within the wind farm area with operating at normal spray height underneath the blades to be acceptable.
- The risk assessment is to result in an aerial application management plan in accordance with the principles of an application management plan as outlined in the AAAA publication, the Aerial Application Pilots Manual. An overview of an aerial application plan is to be found at Appendix II.
- The aerial applicator is to notify the windfarm operator of application operations at least by 9 pm the night before via an agreed notification method.
- **Economic compensation**

The following national protocols are suggested by AAAA as a starting point for the payment of economic compensation to aerial applicators:

- operational costs to the aerial applicator for treatment of an area that either neighbours or is the host property for the windfarm, then the windfarm company will compensate the aerial applicator directly for reasonably calculated additional costs.
- Such costs would include, but not be limited to:
  - Additional administration required for notification, liaison, planning
  - Additional treatment costs (additional flying time calculated at the normal charge out rate of the aircraft to be used) due to flight lines that are not

- the 'normal' or most efficient treatment.
- Costs related to additional product to be applied to compensate for any increase in height or loss of accuracy of the application to avoid towers.

Appendix I – National Airports Safeguarding Advisory Group - NASAG -Guidelines for Marking of Wind Turbines

See—http://www.infrastructure.gov.au/aviation/environmental/airport\_safeguarding/nasf/

Appendix II – AAAA Aerial Application Pilots Manual – excerpts on planning.

# Appendix I

# **NASAG Guideline D**

# NATIONAL AIRPORTS SAFE-GUARDING FRAMEWORK

Wind Turbine Guidelines

# **Purpose of Guideline**

This document provides guidance to State/ Territory and local government decision makers, airport operators and developers of wind farms to jointly address the risk to civil aviation arising from the development, presence and use of wind farms and wind monitoring towers.

# Why it is important

The Principles for a National Airports Safeguarding Framework acknowledge the importance of airports to national, state/territory and local economics, transport networks and social capital.

Wind farms can be hazardous to aviation as they are tall structures with the potential to come into conflict with low flying aircraft. Temporary and permanent wind monitoring towers can be erected in anticipation of, or in association with, wind farms and can also be hazardous to aviation, particularly given their low visibility. These structures can also affect the performance of Communications, Navigation and Surveillance equipment operated by Airservices Australia (Airservices) and the Department of Defence (Defence).

# How it should be used

Some States/Territories already have planning guidelines or polices in place and this document provides guidance for review. For those without policies in place, these Guidelines (in addition to the associated Safeguarding Framework) will provide input to new polices.

These guidelines provide general information and advice to:

- proponents of wind farms (including single wind turbines); and
- planning authorities with jurisdiction over the approval of such structures.

These guidelines also provide specific advice on measures to reduce hazards to aviation, and how to implement them.

The guidelines are intended to provide information to proponents of wind farms and planning authorities to help identify any potential safety risks posed by wind turbine and wind monitoring installations from an aviation perspective.

The guidelines rely on an approach of risk identification and management to ensure risks to aviation are minimised in the most effective and efficient manner possible. It is not the intention to adopt an overly restrictive approach to wind farm development, rather to ensure risks are identified early and mitigation measures are able to be planned and implemented at an early stage.

# **Roles and Responsibilities**

State/Territory and local governments are primarily responsible for land use planning in the vicinity of all airports.

Australia's 19 major airports are under Australian Government planning control and are administered under the Airports Act 1996 (the Airports Act). Planning on other airports is undertaken by State, Territory Governments and Local Governments or private operators.

Commonwealth airports are protected from tall structures in the vicinity of airports based on standards established by the International Civil Aviation Organization (ICAO). These standards have been implemented in Australia by the Airports Act 1996 and the Airports (Protection of Airspace) Regulations 1996 which apply at leased Commonwealth airports, and by the Defence (Areas Control) Regulations 1989 which apply at Defence airports.

This legislation can be used to ensure wind farms hazardous to aviation are not erected in the vicinity of Commonwealth airports. The implementation of these guidelines will have the outcome of conferring a similar level of protection to non-Commonwealth airports.

Australia is a signatory to the Convention on International Civil Aviation. Signatories are obliged to implement ICAO Standards unless they lodge a formal difference. ICAO Annex 14 specifically addresses the issue of wind turbines. In summary,

ICAO has recommended the need for lighting of wind turbines if determined to be an obstacle.

Annex 14 includes a provision for an aeronautical study as to the need, or otherwise, for marking and/or lighting. This is consistent with provisions in Australia for risk-based assessments of potential hazards to aviation safety. These guidelines are consistent with ICAO Annex 14.

# Key considerations for managing risks to aviation safety of wind turbine installations (wind farms)/wind monitoring towers

The guidelines apply to:

- (a) a single wind turbine;
- (b) a group of wind turbines, referred to as a wind farm, which may be spread over a relatively large area; and
- (c) wind monitoring towers.

The height of a wind turbine is defined as the maximum height reached by the tip of the turbine blades at their highest point above ground level. The marking and lighting described in this document addresses aviation requirements only. For offshore wind farms, in addition to these requirements, separate lighting and marking may be required for the safety of marine navigation.

Implementation of the guidelines will have the additional benefit of being applicable in areas away from airports to address the risk posed by wind farms to air navigation in those areas.

Adoption of the guidelines will ensure that aviation safety agencies can examine and address the risk to aviation safety from proposed wind turbine farms at the planning stage. This will enable the use of wind energy to continue to grow, while protecting aviation safety.

Wind farm operators should check if proposed wind turbines and wind monitoring towers will be located near areas where low flying operations are likely to be conducted, and if so, consider their duty of care to such activities.

# GUIDELINES FOR LAND USE PLANNERS AND DEVELOPERS TO MANAGE THE RISK TO AVIATION SAFETY OF WIND TURBINE INSTALLATIONS (WIND FARMS) /WIND MONITORING TOWERS

When wind turbines over 150 metres above ground level are to be built within 30 kms of a certified or registered aerodrome, the proponent should notify the Civil Aviation Safety Authority (CASA) and Airservices. If the wind farm is within 30km of a military aerodrome, Defence should be notified.

CASA should be notified through the nearest CASA Regional or Field Office. Location and contact details of CASA Aerodrome Inspectors may be obtained by calling CASA on 131 757. Airservices should be notified through the Airports Relations Team on 02-6268-4111. Defence should be notified through the Defence Support Group on 02-6266-8191.

The Aeronautical Information Service of the Royal Australian Air Force (RAAF AIS) maintains a database of tall structures in the country. The RAAF AIS should be notified of all tall structures meeting the following criteria:

- 30 metres or more above ground level for structures within 30km of an aerodrome; or
- 45 metres or more above ground level for structures located elsewhere.
- The contact details for the RAAF AIS are: Tel- 03-9282-5750; ais.charting@defence.gov.au.

Operators of certified aerodromes are required to notify CASA if they become aware of any development or proposed construction near the aerodrome that is likely to create an obstacle to aviation, or if an object will infringe the Obstacle Limitation Surfaces (OLS) or Procedures for Air Navigation Services —Operations (PANS-OPS) surfaces of an aerodrome. Operators of registered aerodromes should advise CASA if the proposal will infringe the OLS; CASA will ask Airservices to determine if there is an impact on published flight procedures for the aerodrome.

Note: Obstacle Limitation Surfaces are a complex of virtual surfaces associated with an aerodrome. They are designed to protect aircraft flying in good weather conditions from colliding with tall structures. PANS-OPS surfaces are designed to protect aircraft flying in poor weather conditions from colliding with tall structures. Aerodrome operators can provide details for their particular aerodrome.

#### Consultation

Consultation with aviation stakeholders is strongly encouraged in the early stages of planning for wind turbine developments. This should include:

- early identification of any nearby certified or registered aerodromes;
- immediate consultation with any nearby aerodrome owners;
- preliminary assessment by an aviation consultant of potential issues;
- confirmation of the extent of the OLS for any nearby aerodromes;
- registration of all wind monitoring towers on the RAAF AIS database;
- consultation with local agricultural pilots and nearby unlicensed airstrip owners; and
- consultation with CASA and Airservices.

#### Risk assessment

Following preliminary assessment by an aviation consultant of potential issues, proponents should expect to commission a formal assessment of any risks to aviation safety posed by the proposed development. This assessment should address any issues identified during stakeholder consultation.

The risk assessment should address the merits of installing obstacle marking or lighting. The risk assessment should determine whether or not a proposed structure will be a hazardous object. CASA may determine, and subsequently advise a proponent and relevant planning authorities that the structure(s) have been determined as:

- (a) hazardous, but that the risks to aircraft safety would be reduced by the provision of approved lighting and/or marking; or
- (b) hazardous and should not be built, either in the location and/or to the height proposed as

- an unacceptable risk to aircraft safety will be created; or
- (c) not a hazard to aircraft safety.

If CASA advice is that the proposal is hazardous and should not be built, planning authorities should not approve the proposal. If a wind turbine will penetrate a PANS-OPS surface, CASA will object to the proposal. Planning decision makers should not approve a wind turbine to which CASA has objected.

In the case of military aerodromes, Defence will conduct a similar assessment to the process described above if required. Airservices or in the case of military aerodromes, Defence, may object to a proposal if it will adversely impact Communications, Navigations or Surveillance (CNS) infrastructure. Airservices /Defence will provide detailed advice to proponents on request regarding the requirements that a risk assessment process must meet from the CNS perspective.

# Marking of wind turbines in the vicinity of an aerodrome

During the day, large wind turbines are sufficiently conspicuous due to their shape and size, provided the colour of the turbine is of a contrasting colour to the background. Rotor blades, nacelle and upper 2/3 of the supporting mast of wind turbines should be painted white, unless otherwise indicated by an aeronautical study. Other colours are also acceptable, unless the colour of the turbine is likely to blend in with the background.

# Lighting of wind turbines in the vicinity of an aerodrome

Siting of wind turbines in the vicinity of an aerodrome is strongly discouraged, as these tall structures can pose serious hazards to aircraft takingoff and landing. Where a wind turbine is proposed that will penetrate the OLS of an aerodrome, the proponent should conduct an aeronautical risk assessment. The risk assessment, to be conducted by a suitably qualified person(s), should examine the effect of the proposed wind turbines on the operation of aircraft. The study should be made available to CASA to assist assessment of any potential risk to aviation safety.

CASA may determine that the proposal is:

(a) hazardous and should not be built, either in the location and/or to the height proposed,

- as an unacceptable risk to aircraft safety will be created; or
- (b) hazardous, but that the risks to aircraft safety would be reduced by the provision of approved lighting and/or marking.

# Lighting of wind turbines not in the vicinity of an aerodrome, with a height of 150m or more Where a wind turbine 150m or taller in height is proposed away from aerodromes, the proponent

should conduct an aeronautical risk assessment.

The risk assessment, to be conducted by a suitably qualified person(s), should examine the effect of the proposed wind turbines on the operation of aircraft. The study must be submitted to CASA to enable an assessment of any potential risk to aviation safety. CASA may determine that the proposal is:

- (a) hazardous, but that the risks to aircraft safety would be reduced by the provision of approved lighting and/or marking; or
- (b) not a hazard to aircraft safety.

# Obstacle lighting standards for wind turbines

When lighting has been recommended by CASA to reduce risk to aviation safety, medium-intensity obstacle lights should be used. Where used, lighting on wind farms should be installed:

- (a) to identify the perimeter of the wind farm;
- respecting a maximum spacing of 900m between lights along the perimeter, unless an aeronautical study shows that a greater spacing can be used;
- (c) where flashing lights are used, they flash simultaneously; and
- (d) within a wind farm, any wind turbines of significantly higher elevation are identified wherever located.

To minimise the visual impact on the environment, obstacle lights may be partially shielded, provided it does not compromise their operational effectiveness. Where obstacle lighting is provided, lights should operate at night, and at times of reduced visibility. All obstacle lights on a wind farm should be turned on simultaneously and off simultaneously.

Where obstacle lighting is provided, proponents should establish a monitoring, reporting and maintenance procedure to ensure outages, including loss of synchronisation, are detected, reported and rectified. This would include making an arrangement for a recognised responsible person from the wind farm to notify the relevant CASA office, so that CASA can advise pilots of light outages.

# Alternatives to fixed obstacle lighting

In some circumstances, it may be feasible to install obstacle lights that are activated by aircraft in the vicinity. This involves the use of radar to detect aircraft within a defined distance that may be at risk of colliding with the wind farm. When such an aircraft is detected, the wind farm lighting is activated. This option may allow aviation safety risks to be mitigated where obstacle lighting is recommended while minimising the visual impact of the wind farm at night.

# Marking and lighting of wind monitoring towers

Before developing a wind farm, it is common for wind monitoring towers to be erected for anemometers and other meteorological sensing instruments to evaluate the suitability or otherwise of a site. These towers are often retained after the wind farm commences operations to provide the relevant meteorological readings. These structures are very difficult to see from the air due to their slender construction and guy wires. This is a particular problem for low flying aircraft including aerial agricultural operations. Wind farm proponents should take appropriate steps to minimise such hazards, particularly in areas where aerial agricultural operations occur. Measures to be considered should include:

- the top 1/3 of wind monitoring towers to painted in alternating contrasting bands of colour. Examples of effective measures can be found in the Manual of Standards for Part 139 of the Civil Aviation Safety Regulations 1998. In areas where aerial agriculture operations take place, marker balls or high visibility flags can be used to increase the visibility of the towers;
- marker balls or high visibility flags or high visibility sleeves placed on the outside guy wires;
- ensuring the guy wire ground attachment points have contrasting colours to the surrounding ground/vegetation; or

a flashing strobe light during daylight hours.

# Reporting of structures less than 150m in height

There is no requirement for CASA to be notified if a proposed wind turbine or wind monitoring tower is less than 150m in height and does not infringe the OLS of an aerodrome. However, they should still be reported for inclusion in the national database of tall structures maintained by the Royal Australian Air Force (RAAF). Information on reporting of tall structures may be found in an advisory circular issued by CASA 'AC 139-08(0) Reporting of Tall Structures'.

# Voluntary provision of obstacle lights

CASA's regulatory regime for obstacle lighting provides an appropriate level of safety for normal aircraft operations. Certain flying operations, by their nature, involve lower than normal flying, for example aerial agricultural spraying, aerial mustering, power line inspection, helicopter operations including search and rescue, some sports aviation, and some military training. Pilots conducting such operations require special training and are required to take obstacles into account when planning and conducting low flying operations.

In making decisions regarding the marking and lighting of wind farms and wind monitoring towers, wind farm operators should take into account their duty of care to pilots and owners of low flying aircraft.

# **Turbulence**

Wind farm operators should be aware that wind turbines may create turbulence which noticeable up to 16 rotor diameters from the turbine. In the case of one of the larger wind turbines with a diameter of 125 metres, turbulence may be present two kilometres downstream. At this time, the effect of this level of turbulence on aircraft in the vicinity is not known with certainty. However, wind farm operators should be conscious of their duty of care to communicate this risk to aviation operators in the vicinity of the wind farm. CASA will also raise awareness of this risk with representatives of aerial agriculture, sport aviation and general aviation.

# Appendix II

# **Aerial Application Plan Guide**

#### **AERIAL APPLICATION MANAGEMENT TOOLS**

# **Application Management Plan (AMP)**

An application management plan provides the aerial applicator with a generic application management tool.

Some application management plans are developed by the client in consultation with the applicator and agronomist before the season commences. This is the case with those growers who participate in Cotton Australia's 'Best Management Practice Program'.

In some situations a pre-season meeting with each regular client will be the best way of developing such a plan.

In other cases, especially top-dressing, this may simply be impractical or unachievable, but nonetheless, every application should have a plan.

# Planning an application

The key components of an AMP are:

- a. recent confirmed map, with special attention paid to power lines, other hazards, dwellings, public roads, environmentally sensitive areas and susceptible crops downwind.
- **b.** the map is checked against the standard application order form.
- c. contingencies for different wind directions.
- d. chemical label or product advice checked to ensure the application is legal and can be carried out in the current conditions.
- **e.** equipment required (droplet size needed) to ensure control of drift.
- **f.** other considerations such as the possibility of workers in the field, neighbours etc.

Operational planning then follows. This includes the safety issues raised in this manual, such as potential 'escape' routes, position of the sun etc.

Establish an awareness zone around every paddock – potential problems can often be some distance away.

There are CASA requirements, as well as laws in many states and on some labels, regarding mandatory buffers, no-spray zones and neighbour notification, especially around schools and dwellings.

The AMP is used in conjunction with the agricultural chemical label, the completed standard spray order form and a detailed map to ensure the application can take place safely, legally and effectively.

# An accurate map is essential

The importance of an accurate and up-to-date map cannot be over-emphasised.

Prior warning of the existence of hazards and all other relevant information pertinent to the application is the lynch-pin of sound planning and risk management.

If, for whatever reason, you are operating without a good map you are really leaving your future to chance. Maps must be as comprehensive as possible and must be checked before each application to ensure they are a true reflection of what really exists. This can only be achieved by interrogating the client or their representative as to any changes that might affect the application.

Pilots should also consider other tools now available, such as GIS information or Google Earth to help them create a mental picture of the job and build situational awareness.

# **Pre-Application Aerial Inspection**

The last opportunity to ensure safe operations is the pre-application aerial inspection, conducted from a safe height.

The pilot conducting the aerial inspection should confirm all hazards on the map, and then look for any additional hazards or relevant issues that did not make it onto the map. Only by constantly checking and rechecking can the conscientious application pilot be comfortable that they have

taken all the necessary precautions to ensure a safe job.

# Your Key Aerial Application Checklist

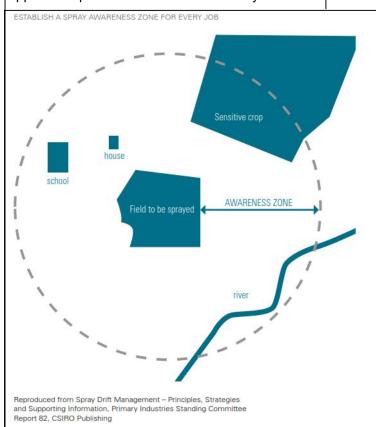
The following key aerial application checklist has been used for many years and incorporates the issues you must check before proceeding with an application task, during an application, and when returning to an application after reloading, refuelling or some other break, no matter how short.

Many of the items in 'WISHSTANDE' can be completed at the planning stage of an application, in order to free up maximum attention by the pilot. If you have already dealt with many of these issues at the planning stage, you will be better able to focus on the matters that are critical to safety during the execution phase of an application.

W wind direction and strength

- I Identification of treatment area
- S sun position and possibility of glare
- H hazards, wires, obstruction, turbulence
- S susceptible crops
- T terrain, surface, slope, contour banks
- A application equipment, alignment (gps)
- N nuisance to stock and occupied buildings
- **D** direction of treatment
- E emergency landing areas

**EXTRA** the extra treatment area safety inspection after refuelling or reloading.





# Aerial Agricultural Association of Australia

# **Powerlines Policy**



### March 2011

#### Introduction

Powerlines present a threat to legal low-level aviation including aerial application—one that has caused the majority of aerial application accidents and the deaths of many pilots.

AAAA has developed this policy so as to inform regulators, asset developers and operators alike of the need for action on their part to fulfill their duty of care to Australia's aerial applicators.

#### AAAA Powerlines Policy

#### AAAA recommends:

- The Commonwealth mandate a powerline safety program for all owners and operators of powerlines that would minimize the risks to legitimate low-level aviation and which would feature:
- The mandatory marking of powerlines in areas of aerial application and firebombing activity
- A national web-based database and mapping system, accessible by pilots, that would accurately identify the position of all powerlines and relevant infrastructure.
- The placement either underground, or aligned with paddock boundaries or road easements, of all new powerlines and powerlines being repaired in areas of aerial application and firebombing activity.
- Electricity network owners and operators should not be able to refuse the aerial agricultural industry permission to operate around powerlines, including flying under them where appropriate, as this is often the safer option.
- Electricity network owners and operators should be required by legislation to consult with landholders and aerial operators when proposing to construct a new powerline in farming areas, and to pay compensation to the farmer where this results in increased costs of aerial application as a result of forcing changes to flight paths.

• If unable to put powerlines underground, electricity network owners and operators should be required to mark powerlines in farming areas so as to make them more easily identifiable to pilots..

#### Background

Most agricultural land in Australia is criss-crossed with powerlines and aerial application companies and pilots put enormous effort into managing these hazards safely, generally using a risk identification, assessment and management process in line with Australian Standard AS4360/ISO 30000.

The agricultural pilot curriculum mandated by CASA includes training for the safe management of powerlines and AAAA has been active in providing ongoing professional development for application pilots that includes a focus on planning, risk management and a knowledge of human factors relevant to managing powerlines in a low-level aviation environment.

AAAA runs a specific training course for aerial application pilots entitled 'Wire Risk Management' to address these issues.

Every aerial application mission is planned to take account of the threat of powerlines and to manage then as safely as possible while still applying the essential chemicals to protect the crop.

In terms of due diligence, the aerial application industry is doing everything it can to reduce the risk of hitting powerlines. This is in stark comparison to the very lax, on occasions hostile attitude of powerline companies to the threat their powerlines pose to aviation operations being conducted legally and under the regulation of CASA.

In some cases, the powerline companies' ongoing refusal to provide to aerial application companies the detailed mapping of the position of their network or to mark their wires to make them easier to see, is negligent.

Certainly, the courts (*Sheather v Country Energy*, NSW Court of Appeals) have found that powerline companies do owe a duty of care to all pilots and should mark their powerlines where they are an obvious threat to aviation safety.

AAAA has worked very successfully with one powerline company with coverage of most of NSW - Country Energy - on the development of a cheap and simple powerline marker that can help pilots keep visual contact with the position of powerlines in and around treatment areas.

Unfortunately, these markers are not used in other States, although AAAA notes that Ergon Energy, with coverage of much of Queensland, has recently introduced the same markers and this may improve safety, although take-up rates are still very low.

AAAA's was involved in the Australian Standards Committee for the review of AS 3891 - Marking of Cables and their Supporting Structures.

Unfortunately, it was not possible to secure a significantly improved approach to the marking of powerlines, especially in relation to low level aviation and lowering any thresholds for the mandatory marking of powerlines, such as long spans across valleys etc that have previously caused fatalities. However, a useful risk management approach was included in the standard to encourage landowners to consider the marking of wires in areas of known low level aviation activity. The key aim of the review was achieved however, and that was to permit the markers developed by Country Energy to be use legitimately under the Australian Standard which previously had no provision for them.

Agricultural areas and areas of probable bushfire activity would be two obvious places where powerline companies should be exercising their court-defined duty of care and marking powerlines so as to assist aerial agricultural and fire-bombing pilots manage another risk in an already hostile aviation environment.



#### **FURTHER INFORMATION**

If you would like more information on the vital and responsible role the aerial application industry plays:

www.aerialag.com.au

Or contact us on: 02 6241 2100 ph.

phil@aerialag.com.au

AAAA PO BOX 353 Mitchell ACT 2911

#### Hills Of Gold Preservation Facebook Page - May 1st 2020

I am so disturbed by seeing these images - our ridgeline is home to so many rare and protected species, not to mention a precious water catchment and heritage sites. These photomontages do not depict the land clearing that would be involved in constructing these turbines - meaning it's only going to look worse!

From day 1 I have been able to visualise wind turbines on the range, but this is worse than anything I imagined. Please help us protect this environment.

For such a significant proposal, these are such poor quality!! And how much can you lighten the sky and fade the detail to try to make the turbines look less imposing? Unfortunately, the community won't be able to edit looking at them in real life

The DAG Sheep Station is saddened and sickened at the thought of the desecration of this magnificent range.

Renewable Energy Developments need to be sensitively placed, the anger and hurt to our wonderful community continues to cut deep.

Please watch Planet of the Humans. Michael Moore's new documentary, it blows the lid off "green renewables" as the biggest scam of the 21st century. It is an absolute must and it will give Nundle people some ammunition to send these a/holes packing back to the city.

The impact is even greater than I expected, even with these washed out images! "You won't see them from Nundle" the supporters said. Well, Nundle is more than a few streets and Hanging Rock is more than a few hectares.

How badly out of focus can you make a picture to still be one??

How pathetic the portrayal of how many trees will still be left standing around the turbines. (2) (2) (2) take a look at Crookwell NSW

Yep, straight out of a 1970,1980 photo album. You know, the ones with the cellophane leaves and the sticky white mounting cardboard backing.

Oh no!.we'll be looking straight at them.

Horrendous!

Devastating

Disgraceful

why in the hell are they going to ruin this area!

Photos produced by Dodgy Bros Inc if the quality/clarity is anything to go by.

Thank you for the information. We are about to start building our home in Nundle and want to start understanding and becoming involved in the community. Though we will be coming and going over the next few months.

Wind Farms kill birds.

Nundle NSW (Nundle Business Tourism and Marketing Group Inc) Facebook comments on Preliminary Visual Montages 5.5.20

To be added to

The DAG Sheep Station is saddened and sickened at the thought of the desecration of this magnificent range.

Renewable Energy Developments need to be sensitively placed, the anger and hurt to our wonderful community continues to cut deep.

my humble view is that this will spoil a beautiful area even more than the bickering already has..Years of animosity and division then years of noisy construction and dangerous traffic to complement the logging trucks and the noisy saw mill . Therefore my feedback for the developers record is that the badly presented photos and the comments from supporting hosts do not persuade me that this is a great idea....

People will know how small a village Nundle is. The route these turbines with the accompanied heavy vehicle concrete carriers etc etc will be constantly moving through the crossroad right in the centre of town. The noise and pollution will be unbearable. How will retirees in their wheelchairs cope? Children will no longer have the freedom to skateboard or cycle in the street. The school will suffer from the fumes. Tourists won't want to sit out having their lunch or a quiet drink. This for an estimated two years. Is it any wonder most residents are against it? It would be catastrophic in my opinion. The people that would benefit from this project don't take that scenario into account.

Wrong place, have them along the highway! I can hear a car approaching a good ten minutes before it arrives, quad bikes echo throughout the valley, at least that noise stops. The noise from the wind farm will be constant, this will destroy the peace and sanctuary that many have enjoyed for generations

I am all for renewable energy generation and don't object to turbines in general, in fact I'm a fan of them. But there's no way they should be plastered all over the hills in view of Nundle and visible from the hanging rock lookout. It would spoil the natural beauty and damage tourism. The intrinsic value of nature and economic benefits of tourism have to be considered. Fight your hardest Nundle, there are better places to put a wind farm.

I am all for renewable energy and it's generation... but...

Why can we not value what we can not replace or create (beautiful natural country) over grotesque man made structures... that could be built anywhere...

The almighty \$ driving shortsighted planning and supposed progress again...

why not use solar? Why these ugly towers that stop fire fighting? Oh it's the yearly bank account top up hey?

would be a lot more sensible to just not have them at all.

Looking forward to this project going ahead and entering the next phase. I've no doubt that all environmental concerns will be tightly handled and overcome. Great opportunity for the establishment of sustainable, long term employment for the area. Small towns need diversified employment and industrial opportunities - can't rely on tourism alone.

Disgusting outlook if this goes ahead destroying a natural habitat let alone the amount of our high flying birds like eagles, kites etc being chopped up by the blades. This has to be stopped at all cost before it's too late. The developer/s don't care about the environment, it's all about money to them.

Nundle receives many visitors every year, people who visit for a myriad of reasons. Maybe they are bush walkers, bird watchers, fossickers, bike riders, car club members, maybe they just want a break away from the hustle & bustle of daily life. They choose Nundle, Hanging Rock and the Hills of Gold because it is a step back in time, a reminder of their youth, a reminder where they grew up. Converting the Hills of Gold to an industrial landscape of wind turbines, along some of the most sensitive ridge line of the Great Dividing Range is so sad. I hope it doesn't happen.

Myself and my family absolutely love Nundle. It's a beautiful town not too far away but still offers an escape from the fast paced life in the bigger cities. I have always had plans to one day buy property in the area, although I definately would not if this goes ahead. Please don't ruin the picturesque views from both the town of Nundle and Hanging Rock.

Bob Brown once said that flooding the Franklin River for a hydroelectric dam would be like putting a scratch across the Mona Lisa. Hanging Rock and the surrounding mountains may not be as significant nationally but for me it seems that once built you cant unsee them. Our family were born, lived and died in those lovely pristine mountains. We no longer own any property there so arent a direct stakeholder but it is sad that this maybe the future view that residents and visitors will have. What price for progress. Is this a scratch across your ( van Gogh's) Starry Night?

We come to Nundle for the peaceful beauty of the area and friendly people. The destruction which will happen to have these installed along with the maintenance they require not only the ugliness on the beautiful hills. Sad that such ugly installations could even be contemplated. We are regular visitors to the area.

I wonder how they would go trying to put wind towers in a national park. I think not very far. This are of Nundle may not be national park area. But it is unique beauty part of the world that doesn't need that eyesore.

We recently traveled from Tamworth to Perth. These things are everywhere and if you think they look awful in a photo wait until you see a real wind farm. Incidentally probably half of them were shut down because the grid couldn't handle the power fluctuations.

I'm all for renewable energy. However when it comes at the cost of losing that old world country town feel I am completely against it. Surely there are many other places they can be placed out of sight of such an historical town.

Please reconsider this decision.

So much energy goes into creating turbines, they're not efficient and they can't be recycled. Yes it will be a terrible eye sore on the area

Does everyone get free power after this sad violation of OUR POSSIBLY UNIQUE world In the ENTIRE UNIVERSE?

I was physically shaking with shock and nauseous with anxiety to see these images. The photomontages are worse than expected. It is an unacceptable impost to the environment and the majority of the Nundle/Hanging Rock/Crawney community. Timor has barely been consulted, yet will be impacted from the southern side. I understand that some families will gain significantly financially from this proposal, and that they support the project. Compensation has been offered in a Community Enhancement Fund and payment to neighbours within 5km. I would rather our family's existing enjoyment of our modest house, land, and community of 21 years, which is priceless, and will be destroyed by this proposal. Just because humans and machines can conquer the landscape it doesn't mean they should. Not all wind farms are needed, and not all should be built. I look forward to this wind farm being rejected by the State Government.

When the trees are bent from the wind they get a lot between willow tree and merriwa on the mountain a better spot but no money comes into play get real go todal no to noisy turbines Nundle and hanging rock are geat places and money is going to stuff it up

Would be awesome to see all those turbines with snow on them

almost like the old modeling days to soften the picture's edges they put vaseline on the lens. Ask them is this what they did to achieve this look or did another Indian company produce the pictures to save on money?

So good bye to what once was a beautiful landmark of the pioneers who worked with the land, sadly to go down in history as yet another political blunder, to the greedy politicians.

Nundle is such a rare and magnificent place. Destroying these beautiful hills for a wind farm would be an absolute tragedy. I want my children and grandchildren to enjoy exploring those beautiful hills and enjoy the timelessness of the quiet little town, just as we frequently do. It's a big NO from us!!

Would love to move there permanently

Oh dear, I don't like the thought of this happening to the village of Nundle. Haven't lived there for years. I wouldn't want the beautiful hills and valleys destroyed by the sight of a wind farm.

They look majestic and no pubs are being removed to facilitate their installation, even better

You don't want it, it doesn't work

Dont do it Nundle......They are bigger and noisier than you will be told

Doesn't show all the trees knocked down to get the parts in either

I think it's good

Ew

Best way to destroy the very essence of what nundle is about . Disgusting outlook

geez i guess we should all go back to burning coal so you can stop complaining about how the view is spoiled by all those terrible windmills, meanwhile rest of planet goes down the gurgler. get a grip

#### **Use of photomontages**

The following requirements for photomontages proposed to be relied on as or as part of expert evidence in Class 1 appeals will apply for proceedings commenced on or after 1 October 2013. The following directions will apply to photomontages from that date:

#### Requirements for photomontages

 Any photomontage proposed to be relied on in an expert report or as demonstrating an expert opinion as an accurate depiction of some intended future change to the present physical position concerning an identified location is to be accompanied by:

#### **Existing Photograph.**

- a) A photograph showing the current, unchanged view of the location depicted in the photomontage from the same viewing point as that of the photomontage (the existing photograph);
- b) A copy of the existing photograph with the wire frame lines depicted so as to demonstrate the data from which the photomontage has been constructed. The wire frame overlay represents the existing surveyed elements which correspond with the same elements in the existing photograph; and
- c) A 2D plan showing the location of the camera and target point that corresponds to the same location the existing photograph was taken.

#### Survey data.

- d) Confirmation that accurate 2D/3D survey data has been used to prepare the Photomontages. This is to include confirmation that survey data was used:
  - i. for depiction of existing buildings or existing elements as shown in the wire frame; and
  - ii. to establish an accurate camera location and RL of the camera.
- 2. Any expert statement or other document demonstrating an expert opinion that proposes to rely on a photomontage is to include details of:
  - a) The name and qualifications of the surveyor who prepared the survey information from which the underlying data for the wire frame from which the photomontage was derived was obtained; and
  - b) The camera type and field of view of the lens used for the purpose of the photograph in (1)(a) from which the photomontage has been derived.

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 from BAG sheep station residence and woodshed.	Community member to
	A committee member confirmed a response from the Department of Planning Industry and Environment regarding the	provide a copy to
	need for land boundary surveys prior to development application.  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 written response 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 and Compulsory acquisition rights to 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 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 the Visual Assessment 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 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 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 discuss Agreement 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 watch again and 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 of the letter to David who will distribute to 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	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 No	Description	Date Raised	WEP Response
1	DR to attach the previous minutes with the upcoming meeting agenda.	6 May 2020	N/A
2	WEP to provide more montage locations on an ongoing basis.	6 May 2020	Updated photomontages from public viewpoints will presented to the September CCC.  Shadow flicker results will be presented in this meeting as per the agenda.
3	WEP to create a map of 5 km radius and upload to their website.	6 May 2020	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 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 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 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 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 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 2020	Response from Community Member required.
10	WEP to discuss survey with ERM and respond.	6 May 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 2020	Discussions have been held and further details on scheduled CCC meetings will be forthcoming.

# 6. Project Update



Noise and Vibration Assessment	Complete
Shadow Flicker Assessment	Complete
Hazards and Risks – Blade Throw	Complete
Hazards and Risks – Electromagnetic Frequency	Complete
Aviation	In Consultation

Complete

**Updated Layout** 

## 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**

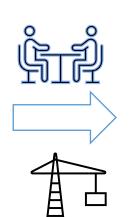
- Updated layout finalised over multiple iterations
- Consultation with key environmental agencies
- Key actions taken documented for submission in the development application to present impacts of changes made

### **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**

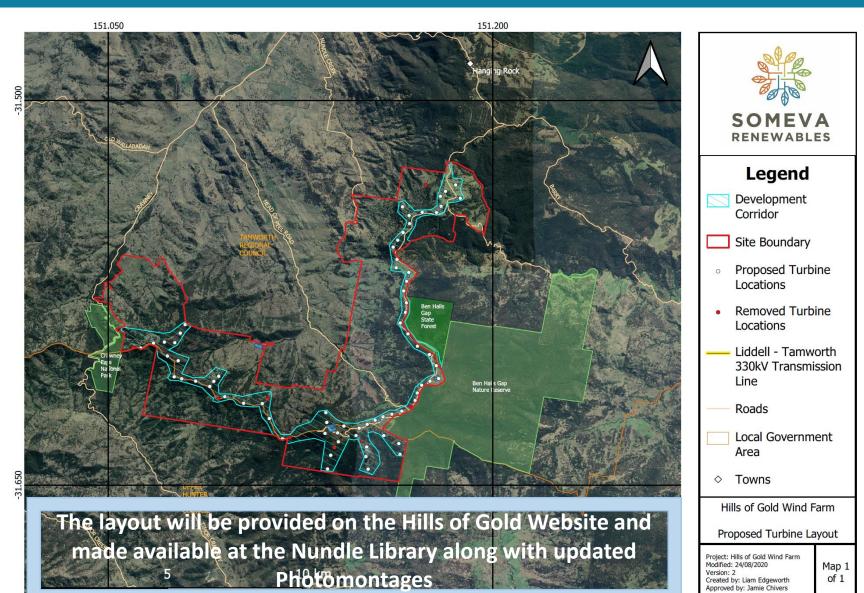
- Relocating and reorienting hardstands and roads
- Removing blade storage to reduce hardstand footprint
- Removal of 8 turbines
- Pre workshop 78 WTG, post workshop 70 WTG
- 19 turbines hardstands reduced to accommodate just in time construction methodology and reduce clearing of vegetation





## **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)
- 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

#### 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**

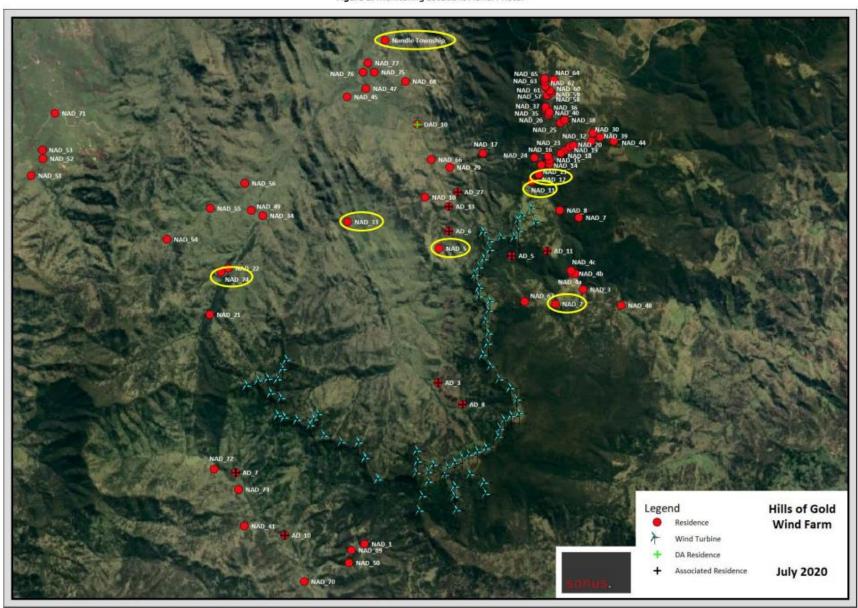


- Recorded in 10 min intervals
- Calibrated at the beginning and end of monitoring period
- Recording device established about 1.5m from ground level with wind shield of 150mm thick
- Correlated wind speeds to met masts recording wind data across the site

# 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 Laureign	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

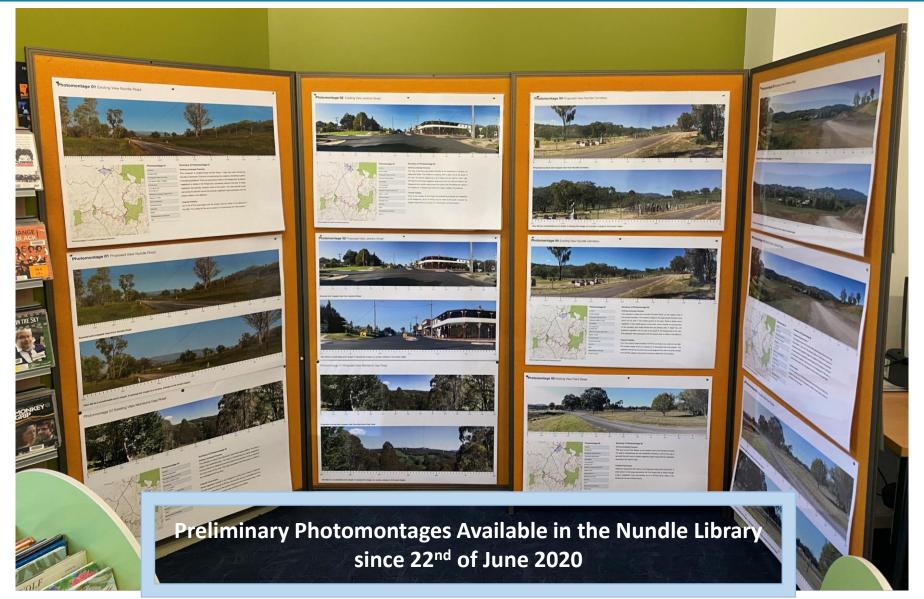
- Uungula Wind Farm (NSW)
- Cherry Tree Wind Farm (Vic)
- Crudine Ridge Wind Farm (NSW)
- Lakeland Wind Farm (QLD)

#### 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

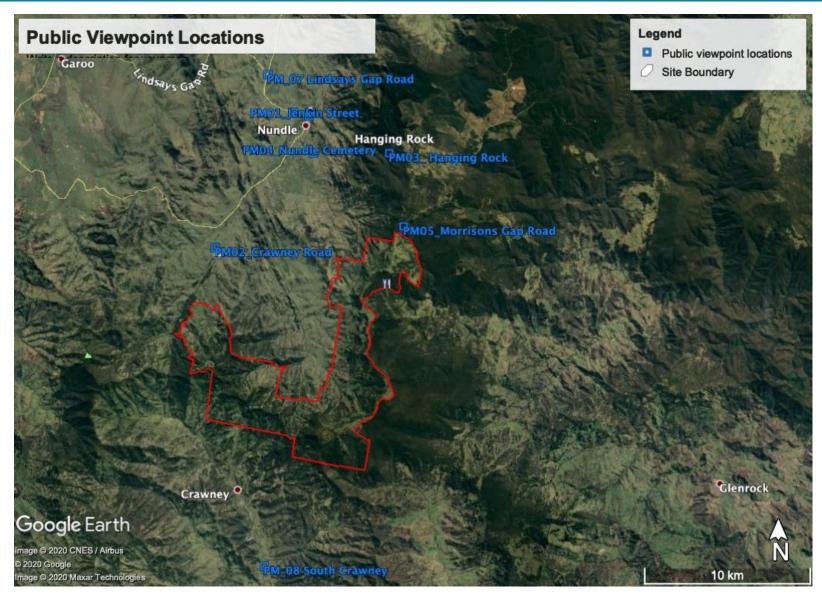
# Visual Assessment Update - Public Viewing





# 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?

Minutes: Minutes of the 7<sup>th</sup> Meeting of the Hills of Gold Windfarm Community Consultative Committee (CCC)

Wednesday, 22 September 2020

**Meeting Venue:** Held at the Nundle Memorial Hall

Members Present: Jamie Chivers (Wind Energy Partners) – via video conference; Sandra Agudelo (Wind Energy Partners); Aref Taleb (Wind Energy Partners); Ian

Worley; Michael Chamberlain; Megan Trousdale (Nundle Business Tourism & Marketing Group Representative); John Krsulja (Hills of Gold Preservation Inc Representative); Donna Ausling (Liverpool Plains Shire Council); Christine Robinson (Upper Hunter Shire Council); Bruce Moore;

Megan Carberry (alternate member); David Ross (Chair); Debbie Corlet (Secretary).

Apologies: Margaret Schofield; Peter Schofield; Kay Burns (Tamworth Regional Council)

Independent Chair: David Ross Secretary: Debbie Corlet

Agen	nda 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
1.	Introduction and Apologies – Meeting commenced at 6:32 pm. David welcomed everyone to the meeting.	
	After discussing the apologies, David appreciated that there had been some concern from within the committee and alternates when members did not inform of their inability to attend. It had been believed that many interested people were therefore missing out on contributing. David noted that, overall, this CCC has good attendance and when temporarily replacing a member who is an apology, takes a "like for like" approach as he has stated from the committee's beginning. While this may frustrate some people, this approach was taken in order to maintain a diversity of views.	
2.	Declaration of Pecuniary or Other Interests	
	David advised that he was paid a fee to chair the meeting as is Debbie for taking the meeting minutes.	
3.	Previous Minutes	Jamie – To upload Q &
	It was agreed by all in attendance that the Previous Minutes were true and correct.	A to the website and provide to the CCC
	Community Member – request the link for the article regarding the proposed partnership to be placed back into the minutes. With respect to questions arising from the media – requested that these be attached to the August minutes. Jamie noted that some may need input from advisers, so will seek those answers and then provide a response.	members.
	Community member asked how long WEP had to answer these questions and David advised that it is normally 28 days. Community member to provide the date the questions were first submitted.	
4.	Business Arising from Previous Meeting	
	David observed that all actions had been responded to. Community member asked about the Dag sheep station residence and woolshed photo montages which was due by the end of July. Jamie advised that they haven't received them yet but as soon as they are available, they will be sharing them. He confirmed that they will be received before the submission.	
	Community Member also advised that they had forwarded a second media link – re seeking investors which needs to be included as Business Arising.	David – get second media link from CCC member
5.	Correspondence	
	David had received a question from the community to WEP seeking clarification as to whether the community would receive free electricity (as some have thought)? Jamie responded that the proponent has not offered free electricity.	David to write to community member with Jamie's input

Agenda Item	Discussion		
	Community member said that questions like these need to be clarified to stop them circulating in the community. An		
	update in the regular newsletter was suggested to clarify questions that have circulated in the community.		
	Jamie – can provide clarification in the newsletters to the facts of the project. But best way is through the consultation that		
	is coming up.		
6.	Update on Proposal by WEP		
	Sandra and Jamie discussed the PowerPoint presentation which has been emailed to all CCC members. Slides discussed:		
	Social and Economic Assessment – slides covered Socioeconomic Profile, Policy Context, Literature Review, Community		
	Engagement, Social Impact Assessment, Economic Impact Assessment, Net Community Benefit Assessment.		
	Community member asked if there were a range of primary production type businesses contacted, not just in the town	WEP to check wha	
	itself but further afield as well. Jamie – will need to check but it will be a cross-section of different businesses.	types of businesse were contacted	
	Community member asked what's "socially acceptable outcome" as mentioned in the presentation? Jamie advised that	were contacted	
	this is based on the specific concern raised during consultation and literature review in the assessment of longer term		
	outcomes associated with experiences on other wind farms and community perceptions through time.		
	Community members asked how will you quantify that and how is the outcome measured? Jamie discussed WEP will		
	undertaken greater consultation during public exhibition with all information and context available for the public to review.		
	The public exhibition process will explain more and then it is up to the community members to make comment on the		
	application and submit all their questions to the Department of Planning.		
	Community member discussed that they were called and that they gave their opinion. There were agreed montages and		
	we've been given 6 from public viewpoints. There was discussion on when the individual resident assessments would be		
	provided and particularly the photo-montages. There were a lot of community members who had assessments undertaken		
	and have yet to receive the montages.		
	A question was raised about how the social and economic assessment could say there would be a low impact when the		
	montages have not been produced yet.		
	Jamie explained that this is not designed to replace the community's opinion or the technical assessment that will be		
	provided in the Landscape and Visual Assessment Report. The assessment provided today is based on the literature		
	reviews and experiences on perceptions to visual impact over the longer term.		

Agenda Item	Discussion	Action/By Whom
	Concern was raised that community surveys were taken over the phone due to COVID restrictions and how could they assess the impact without understanding the context of the project in the community. Many of us think it could be quite dangerous up on this ridge.	
	Jamie explained that there is obviously a lot more in the reports, factoring the impact pre and post mitigation.  Community member asked WEP to consider with respect to the social and economic assessment for an analysis of reduced green-house emissions to be factored in. That has reduced impact on global warming – reduced carbon.  Jamie confirmed that it is covered in the EIS – significant amount of CO2 would be reduced from the proposal – renewables. Need to do more by replacing with more renewables.	
	A council representative asked for the assessment to consider how are workers going to be retrained and attract skills where shortage exist – beyond the construction phase – how it's going to happen with educational institutions / schools.	
	Community member mentioned the wild dog due diligence and that the impact should be minimised. This project and the severity of it to the local community – there are more positives than negatives.	
	Community member mentioned Nundle and / or Hanging Rock housing is a major concern – we don't have enough housing – there are limitations to the amount of housing and you would be limited to under a dozen. We are at capacity at Nundle and Hanging Rock. So, what are the benefits? Another community member mentioned that there are lots of farms with more than 1 house on them.	
	Aviation Assessment – Project Background, External Context, Internal Context, Consultation, Aviation Impact Assessment, Hazard Lighting and Marking, Accident Statistics, Risk Assessment and Conclusions & Recommendations	
	Community member asked if aviation lights will be required and Jamie replied that a report is detailed and recommends they will not but this may change depending on consultation with CASA and final conditions placed on the project if approved.	WEP to confirm if Aerial Application Association of Australia were
	Community member asked about raising the minimum sector altitude from 6300 ft above mean sea level (AMSL) to 6400 ft and to the airlines to do that? Jamie – we don't know whether there is a cost associated to airlines however WEP will need to pay the AirServices Australia for making changes to any routes or heights. Jamie mentioned there is a procedure to follow to do that. Flying higher burns less fuel.	consulted  WEP to confirm where the 3 airfields are located and clarify about impact if blades

Agenda Item	Discussion	Action/By Whom
	Community member mentioned the wild dog control by helicopters dropping bate and that they didn't see a problem flying in the vicinity. If the reasons for the helicopter usage impacted upon the community – there is a list of best practices to control wild dogs.	have to be turned off at any time
	Community member asked about the stakeholders being consulted about direct impacts. Aerial Application Association of Australia should be consulted – can I ask why weren't they consulted and why can't they be?  Jamie is confident they were consulted but will report back to the next meeting to confirm either way.	WEP to provide more detailed graphs for telecommunication
	Community member asked where the 3 airfields are located. It says there is no impact but where are they located and if the blades have to be turned off – that means there is impact. Jamie to find out exact locations and report back to David who will provide to all CCC members.  Telecommunication Assessment – Overview, Electromagnetic Interference effects of wind turbines, Wind turbine effects on radiocommunication, Existing situation / environment and Conclusion	impacts further south and east of what was provided
	Community discussion about the graph showing the radio links in the vicinity of the project site (a line crosses above a dwelling). What about all the people that live south. 50kms around? They don't go towards Scone. I'd like to see the assessments for those that may live a lot higher than those dots on the ridge. So, please include telecommunications going south and east (rather than just north and west). Sandra – the assessment involves a 50 km radius from around each single turbine.	
	Electromagnetic Frequency Assessment – Overview, Standards and Guidelines, Risk Assessment, Mitigation Measures, Conclusion. No questions on these slides.	
	Water and Soil Assessment – Soil and water assessment, Impact Assessment, Management and mitigation strategy, Water demand and Water supply options	
	There were questions about the extracting water from a landowner bore option and whether this would have an impact on adjacent bores. Council confirmed that, under licensing agreements, only so much can be extracted. This is licensed through WaterNSW.	
	Jamie also advised that regarding the existing bore option, no particular bore has been identified as yet. Community member mentioned that after so many years in drought 2 Nundle bores have dried up and Nundle is down to 1 bore. Another community member mentioned staff from Tamworth Regional Council had explained about water consumption and how the water is divided up – it was doing extremely well and looks like it had plenty in the bore. Jamie advised that the water payback will be very quick compared to other types of fossil fuel generation that requires water for cooling.	WEP to fix graph to explain better what the land and soil capabilities are – explain what 1 to 8 actually means

Agenda Item	Discussion	Action/By Whom
	A community member, when considering the total anticipated water usage for the proposal, observed that this would be very close to the current daily water flow into Chaffey Dam. This daily inflow was, at the time of the meeting, 31 ML as recorded by Water NSW.	
	David also mentioned that over the last couple of years, the State Government has rolled out a requirement that all major water users are to install monitoring to check water usage.	
	Lots of discussion from members then centred around the slide "Assessment / Existing Conditions" seeking clarification—the colour legend needs to be itemised and clearer but Sandra observed that 3 is good for agriculture and 8 is not good for cropping farming (has a low capability for agricultural cropping). Community members wanted to explore this further with regard to what this means for the project area.	WEP to explain better the erosion and real impact
	David suggested that, as the next meeting would not have as much content to consider, soil and water considerations should continue in October.	
	Jamie responded that WEP provide more after a discussion after we talk with ERM and we will consider bringing in one of the experts on biodiversity who can talk us through water and soil. This approach was agreed to by the committee.	
	Community member noted that they have a number of questions for that meeting about the concrete batching plant.  Jamie invited the member to submit the questions beforehand and then ERM can respond to them at the next meeting.	Community Member to provide David with the questions
7.	General Business	
	David explained the process for the EIS once it is submitted in order to give the CCC some expectation of what happens and the time before a determination is made. If the EIS gets submitted in November, it must be put on exhibition for at least 4 weeks (statutory obligation). This is the point when you can make a submission one way or another from what's in the EIS. Submission are then considered by the Department of Planning, Industry and Environment. If they see any gaps in the EIS from what was provided by the community – DPIE will provide these submissions for WEP to respond to. There are no statutory timeframes regarding when WEP must respond.	
	After WEP responds back to the Department, they develop an Assessment Report. Depending on how many submissions are made, the Department will decide if they make a determination or, if there are more than adverse submissions made, the Independent Planning Commission, IPC, will make a determination. Should the IPC get involved, they now have 12 weeks within which they make the determination from when they receive the Assessment Report. Within those 12 weeks they hold hearings via video conferencing.	

Agenda Item	Discussion	Action/By Whom
	HoGPI has accepted Jamie's offer to meet with them and are suggesting Thursday 22 October with the venue to be confirmed. Jamie would like to have some questions provided – so he can adequately prepare. Community member confirmed that some questions can be provided but generally "the floor" wants to be able to ask open questions at the time of that meeting.	WEP and Hills of Gold Preservation Committee to set up a meeting
	Community member noted that they had approached Engie about the Financial Review article discussed at the last CCC meeting to enquire whether it was accurate. Engine noted that, "The article was not written by ENGIE or Mitsui and reflects the opinions of others. ENGIE will make public comments on these matters when it is appropriate to do so."	Community member to provide copy of the article for distribution
	Community member – the process of the Neighbour agreements has stalled in some areas and neighbours are getting concerned about the time getting away. Jamie believes that the meetings have accelerated over the last few weeks. Anything we can do – we'd like to know who that is so we can action asap. The Community Member clarified that it was one resident who was concerned and that they would speak to them regarding whether they would like more information.	Community member and Jamie to discuss residents seeking meeting
	Community member also mentioned that the Nundle Tourism and Marketing meeting is on Tuesday, 27 October at 8:30 am if Jamie wanted to attend that meeting, he is more than welcome to attend first up.	
	Community member asked about the design of the power poles as there was an episode on Land Line from 2017 on Mount Fairy about a crow hitting a power line and causing a massive fire which burnt down about 30,000 hectares. Is that classed as a foreseeable risk – are the power poles insulated as this is bushfire area. Will we see the design of the power poles and will they be insulated? Jamie advised that he would like to understand that more as well. That would be under technical specifications and there is probably a regulation to the Australian Standard – I'll have to dig into.	WEP to provide more information about the Australian Standards in regard to bush fires
	David – should it be approved – we will try to cover this issue and that of the footings (as discussed in our August meeting) in the first meeting after determination.	
	Community member asked if there is a plan for another visit to the western part or a community Open Day at the site. Jamie advised that it is possibly, perhaps during the exhibition period, but will have to think about it due to COVID / distancing issues etc plus it also requires landowner consent.	WEP to consider another site visit
	Community member asked where is the substation located as it looks like it has moved? They would like a visual montage on the substation and also asked about the lighting. Jamie advised that the substation is to the south of the site – up high. The community member would like a montage for it and asked how many square metres it is. Jamie advised that they	WEP to ensure the substation is included in the visual impact assessment and

Agenda Item	Discussion	Action/By Whom
	already have elevation drawings from it but it's not a rendered version of the substation but shows the design and profile – a layout of where it is located.	
	Community member mentioned the noise and vibration map on page 21 of the Minutes – 7 residences missing from that map. Community member will forward the names of the residents missing to Jamie.	
8.	Next Meeting	
	Next meeting is scheduled for Thursday, 29 October 2020 at 6:30 pm.	
	Meeting closed 9.20 pm.	

#### **Appendix 1: Actions**

Page No	Action No	Description	Date Raised
2	1	DR to attach the previous minutes with the upcoming meeting agenda (ongoing)	6 May 2020
2	2	WEP to provide photo montage asap	24 August 2020
2	3	Jamie – To upload Q & A to the website and provide to the CCC members.	22 September 2020
2	4	David – get second media link from CCC member	22 September 2020
2	5	David to write to community member with Jamie's input	22 September 2020
3	6	WEP to check what types of businesses were contacted	22 September 2020
4	7	WEP to confirm if Aerial Application Association of Australia were consulted	22 September 2020
4	8	WEP to confirm where the 3 airfields are located and clarify about impact if blades have to be turned off at any time	22 September 2020
5	9	WEP to provide more detailed graphs for telecommunication impacts further south and east of what was provided	22 September 2020
5	10	WEP to fix graph to explain better what the land and soil capabilities are – explain what 1 to 8 actually means	22 September 2020
5	11	WEP to better explain the erosion and real impact	22 September 2020
6	12	Community Member to provide David with the questions	22 September 2020
6	13	WEP and Hills of Gold Preservation Committee to set up a meeting	22 September 2020
6	14	Community member to provide copy of the article for distribution	22 September 2020
6	15	Community member and Jamie to discuss residents seeking meeting	22 September 2020
7	16	WEP to provide more information about the Australian Standards in regard to bush fires	22 September 2020
7	17	WEP to consider another site visit	22 September 2020
7	18	WEP to ensure the substation is included in the visual impact assessment and include the size as well as the visual / footprint	22 September 2020
7	19	CCC member to forward missing names to Jamie	22 September 2020



## 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
  - 1. Social and Economic
  - 2. Aviation
  - 3. Telecommunications
  - 4. Electro-Magnetic Frequency
  - 5. Water and Soil
- 7. General Business
  - a. DPIE Assessment Process
- 8. Next meeting



4. Business arising from previous meeting				
Action No	Description	Date Raised	WEP Response	
1	DR to attach the previous minutes with the upcoming meeting agenda. (ongoing)	6 May 2020		
			The photomontages are currently being finalised and will be	

development application

David

member

5

6

Community member to provide a copy to

regarding Liddell and Bayswater and

days prior to each CCC meeting

turbines on the montages.

Jamie to provide a written response questions

Compulsory acquisition rights to alternate

WEP to provide the presentation at least 2

WEP to talk to Moir about labelling the

WEP to provide updated public provided once they are complete. 24 Aug photomontages as a priority and private 2020 photomontages shortly after but prior to the

24 Aug

2020

24 Aug

2020

24 Aug

2020

24 Aug

2020

Requires community member response.

the CCC on 16th September 2020.

Presentation will be provided 2 days before.

This has been included in the September Newsletter and a

response has been provided to David Ross to be shared with

This comment was passed onto Moir Landscape Architecture

on 2<sup>nd</sup> of September 2020. We are awaiting their response

and will confirm once we have a response from them.

WEP to present on the aviation lights when

WEP to provide example of Australian operating

WEP to read the document and confirm back at

WEP and member to watch again and discuss

Member to give a copy of the letter to David

who will distribute to CCC members

available including info about shielding /

wind farm using aviation light shields (if

WEP – To have a look at this Neighborhood

WEP and member to discuss Agreement

the next CCC what is actually factual

flashing / sensor lights.

possible)

Agreement

further

implications offline.



4. Business arising from previous meeting SOMEV					
7	Discuss CEF at the October meeting	24 Aug 2020	The community enhancement fund will be discussed in the October CCC.		
8	WEP to present on the technology update in a meeting after the DA submission.	24 Aug 2020	We are on track to provide this after the DA submission.		
9	WEP to advertise when the Visual Assessment updated public photomontages are at the library	24 Aug 2020	This will be completed when the photomontages are made available and are at the library.		

24 Aug

2020

This information will be provided in the October CCC.

progress signing agreements with neighbours.

clarifications on the neighbour agreement.

presentation of the Hills of Gold Wind Farm.

visual impact assessment.

Letter has been received.

This will be provided in the October CCC and is being included in the

We have reviewed the Neighbour Agreement and continue to

There is a meeting organised with the landowner interested in

This will be taken up with the CCC member as per the action point 7

above so that it is clear to them what the neighbour agreement says.

We have watched the documentary again and are clear on the content presented. The documentary has been widely discredited, is not a

representation of what is proposed and is propagating misinformation

about renewables generally and certainly in the assessment and

10

11

12

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16

## 6. Update on Proposal



Noise and Vibration Assessment	Complete
Shadow Flicker Assessment	Complete
Hazards and Risks – Blade Throw	Complete
Hazards and Risks – Electromagnetic Frequency	Complete
Aviation	In Consultation
Updated Layout	Complete
Social and Economic	Complete
Telecommunications	Complete
Water and Soil	Complete

## 6.1 Social and Economic Assessment





SGS Economics and Planning has been engaged to do the social and economic assessment. They have extensive expertise in assessing, quantifying and explaining the social and economic impacts of a range of projects including renewables.

enewable

- Silverton Wind Farm,
- The Pallamana Solar Farm, SA
- Baringhup Solar Farm, VIC
- The Ararat Wind farm, VIC
- Tweed Hospital
- Clyburn Industrial Precinct
- future expansion of Melbourne Airport
- Canberra Light Rail
- Bendigo Industrial Land Demand Study

**SEARs** – 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 and impacts to tourism.

## Scope of the Study

- 1 Socioeconomic profile
- 2 Policy Context
- 3 Literature Review
- 4 Community Engagement
- 5 Social Impact Assessment
- 6 Economic Impact Assessment
- 7 Net Community Benefit Assessment

# 6.1 Social and Economic Assessment Socioeconomic Profile



- There has been a decline of the regional NSW economy in recent decades.
- Consistent periods of drought and climate change are impacting on the agricultural industry and regional communities.
- As a result it is pertinent to explore and consider other industries (such as wind energy) that could contribute to regional economies and provide employment

- All three LGAs have a significant proportion of resident population working in Industrial related jobs (this includes jobs types such as manufacturing, transport and utilities employment).
- The skillsets of these residents may be beneficial for the construction of a renewable energy development in the region.
- Local job opportunities may be welcomed by local residents

The New England North region experienced low population growth compared to the neighboring Hunter Valley region (Excluding Newcastle and Between 2006 and 2016).

 Large regional development projects

**Key findings/conclusions** 

<u>can be one way of attracting more</u> <u>people, and a younger workforce, to</u> <u>live and work in a region</u>.

- Both Tamworth LGA and the Upper Hunter Shire LGA had more visitors to the region for the purpose of a 'holiday' over 'visiting friends and relatives'.
- Tourist attractions to cater to these visitors may be of value to the region.

# 6.1 Social and Economic Assessment Policy Context



Vision for Regional NSW

- It was found that local government policy in the New England region has clearly identified renewable energy as an opportunity area.
- New England is to become a 'renewable energy hub' within NSW; that energy efficiency projects should be implemented; and that this is underlined by the community's view that achieving a sustainable future is an imperative.
- State and local government policy also supports local economic development and growth of local employment opportunities



# 6.1 Social and Economic Assessment Literature Review / Case Study



### Hallett, South Australia

The Hallett Wind Farms consist of four closely located wind farms in the mid-north region of South Australia (167 turbines). The wind farms are located within 20km of the small townships of Hallett and Mount Bryan



Source: shorturl.at/cyRS8

- The development demonstrated the need to assess the visual impact of a wind farm to create a **socially acceptable outcome**.
- The development included the establishment of a community benefit fund.
- One study of the Hallett wind farms indicated that an average of 98 construction workers had been employed at any given time from 2005 to 2010. It was estimated that the wind farms created up to 2400 full time 'job years' throughout construction and operation (as of 2010).
- Indirect benefits accrued to service providers and providers of accommodation in neighboring towns of Burra, Jamestown and Clare.

# 6.1 Social and Economic Assessment Economic Impact Assessment



Based on SGS assessment, the HoG wind farm, in the short-term (construction phase), would have a **significant positive economic impact** with guaranteed financial gains.

- In the longer-term (operation phase), the project would continue to have a positive economic impact on the local economy.
- The project is expected to include capital expenditure in the local regional economy of \$370 million with ongoing operational expenditure of around \$18.5 million not including financing costs.
- The project is expected to produce nearly \$154m (\$104M discounted) in value-add (e.g. wages and profit) during the construction phase.







	Stimulus
Capital Expenditure (total)	\$750 million
Capital Expenditure (local region)	\$370 million
Annual Operational Costs	\$19 million
Total Operational Costs *	\$100 million
Turbines constructed	70

<sup>\*</sup> Discounted OPEX 25 yr. at 6% rate

# 6.1 Social and Economic Assessment Economic Impact Assessment



## Employment

	Construction Phase			Operation Phase		
Industry Type	Direct Jobs	On-flow jobs	Total	Direct Jobs	On-flow jobs	Total
Construction	120	256	376			
Professional, Scientific & Technical Services	96	174	270	31	53	84
TOTAL	216	430	646	31	53	84

- 646 Full Time Equivalent (FTE) jobs created across both years of construction phase.
- Ongoing employment is estimated to increase by <u>84 ongoing FTE</u> jobs including on-flow jobs.
- Around 80-85% of the economic benefits will occur in either the Tamworth Regional or in Newcastle City LGA.

## 6.1 Social and Economic Assessment Some Key Results of the Assessment



Socio-economic
Aspects

## Literature Review Findings

## Proponent mitigation Actions

Post-mitigation Rating

Community attitudes and sense of community

- Residents tend to be more receptive to a wind farm development if they have been consulted.
- Collaboration is therefore, considered an important component of a wind farm development process.
- Wind Energy Partners has collaborated and engaged community, particularly in the area of road safety, visualizations and benefits the project could bring.

Post-mitigation Rating: Neutral

Visual amenity of the surrounding natural landscape

- Literature suggests that a person's perception of the visual impact can be subjective influenced by their attachment to place, history of the place, length of time since installation, and the scale and size of the installation.
- Wind Energy Partners has been collaborating with the community to provide several agreed visual montages to clarify the visual impact of the project.

Post-mitigation Rating: Low Neg

# 6.1 Social and Economic Assessment Some Key Results of the Assessment



Post-mitigation Rating: Medium positive

Socio-economic Aspects	Literature Review Findings	Proponent mitigation Actions Post-mitigation Rating
• Local safety	Wind farms compared to other renewables, have vastly improved safety standards and outcome.	<ul> <li>The proponent is preparing a traffic and transport assessment and has consulted with residents to ensure a balanced distribution of benefits.</li> <li>Post-mitigation Rating: Low positive</li> </ul>
• Creation of education opportunities	The literature review indicated there are examples of links made between educational institutions and wind farms(e.g., Tilt Renewables, Dundonnell Wind Farm project (Victoria).	<ul> <li>There is potential for educational stakeholders to collaborate in the future to develop educational opportunities.</li> <li>Post-mitigation Rating: Low positive</li> </ul>
• Local financial gain •	Wind turbines can be located on existing farms, which in turn benefits local landholders and the economy. Farming families can continue to work their land with wind turbines taking only a small site on the property.	<ul> <li>Community Enhancement Fund Charter has been created to ensure proper management of funds and a spread across the community</li> <li>The Neighbour Benefit Sharing Program has been established.</li> </ul>

## 6.1 Social and Economic Assessment Some Key Results of the Assessment



Socio-economic
Aspects

## Literature Review Findings

## Proponent mitigation Actions

Post-mitigation Rating

Job creation and value add

- The literature review indicated that Wind farms can create employment through direct jobs indirect employment benefits.
- The proponent has performed economic modelling.

Post-mitigation Rating: Medium positive

**Tourism** 

- The literature review indicated that Wind farms can attract tourism but do have the potential to conflict with other tourism features, therefore wind farms should be managed carefully to enhance acceptance.
- The proponent has performed a socioeconomics profiling which indicated there are visitors coming to the region for the purpose of a 'holiday', additional tourism attractions incorporating the wind farm in the region may be of value

Post-mitigation Rating: Neutral

## 6.2 Aviation Assessment



## **AVIATION PROJECTS**

Aviation Projects were engaged to undertake the Aviation Impact Assessment (AIA). They have a comprehensive understanding of how wind farms, wind turbines and wind monitoring towers pose potential aviation impacts and how to mitigate these.

The below map shows the locations of wind and solar farms that Aviation Projects have provided expert assistance.



### **Overview of the Guidelines**

- Environmental Planning and Assessment Act 1979;
- NASF Guideline D: Managing the Risk to aviation safety of wind turbine installations (wind farms)/Wind Monitoring Towers; and
- Secretary's Environmental Assessment Requirements (SEARs) SSD 9679.

Location of nearby certified aerodromes



# 6.2 Aviation Assessment Report Breakdown



### **Contents of Report**

- 1 Project Background
- 2 External Context
- 3 Internal Context
- 4 Consultation
- 5 Aviation Impact Assessment
- 6 Hazard Lighting & Marking
- 7 Accident Statistics
- 8 Risk Assessment
- 9 Conclusions & Recommendations

- The external context examines impact on aircraft for council, private, military, agricultural, firefighting and emergency purposes.
- The internal context is a review of the project site and infrastructure and included a site visit on the 10<sup>th</sup> of June 2020.
- Stakeholders consulted
  - · Airservices Australia;
  - · aircraft operators;
  - aerodrome operators;
  - Department of Defence;
  - Liverpool Plains Shire Council;
  - NSW National Parks and Wildlife Service;

- · NSW Rural Fire Service;
- Royal Flying Doctor Service;
- · Tamworth Regional Council;
- Upper Hunter Shire Council; and
- Westpac Life Saver Rescue Helicopter Service
- Local residents consulted
- The AIA assesses the potential aviation impacts, provides aviation safety advice in respect of relevant requirements of air safety regulations and procedures, and informs and documents consultation with relevant aviation agencies.
- Based on the risk assessment in the report it has been concluded that hazard lighting and marking is not required for WTGs and WIMTs
   however ongoing consultation will continue with relevant
   stakeholders.

## 6.2 Aviation Assessment

## SOMEVA RENEWABLES

## Aviation Impact Statement Key Findings

- Based on the proposed Project layout and overall turbine overall blade tip height limit of 230 m AGL, the blade tip elevation of the highest wind turbine, which is WP20, will not exceed 1646 m AHD (5400 ft AMSL).
- This AIS concludes that the proposed Project:
  - will not penetrate any OLS surfaces;
  - will penetrate PAN-OPS surfaces;
  - will have an impact on nearby designated air routes;
  - will not have an impact on the grid LSALT;
  - will not have an impact on prescribed airspace;
  - is wholly contained within Class G airspace; and
  - is outside the clearance zones associated with aviation navigation aids and communication facilities.
- No impact on the use of the 3 of the nearest agricultural airfields, however it is recommended that ongoing consultation
  and a potential plan agreed which may include suspending the relevant wind turbine's operation (dependent on wind
  direction and wind speed) for the period that the agricultural airfield is in use for take-off and landing.
- Penetration of PAN-OPS surfaces at Scone airport (impact on lowest safe altitude flight path on one of the Scone runways) and nearby designated commercial flights paths can be mitigated through a standard process to seek amendmend.
- Consultation ongoing with National Parks and Wildlife Service, Forestry Corporation, Defence, CASA amongst other agencies.
- Aviation Projects has undertaken a safety risk assessment of the Project and concludes that wind turbines and met masts will not require obstacle lighting to maintain an acceptable level of safety to aircraft.

# 6.2 Aviation AssessmentAviation Impact Statement Key Findings



### Item 1:

- The project will penetrate PAN-OPS surfaces to Scone Airport
  - PAN-OPS stands for Procedures for Air Navigation Services Aircraft Operations. They are
    procedures that allow aircraft to land and take off safely when only instruments can be used, i.e. in
    low visibility weather conditions.

### **Potential mitigation strategies**

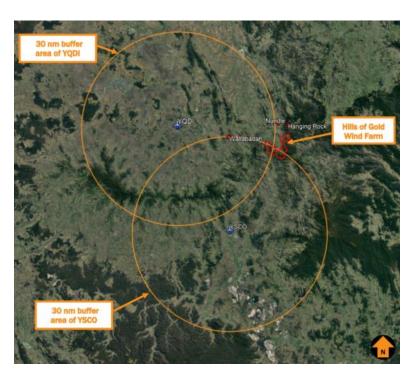
- Scone Airport (YSCO) will require an increase in the minimum sector altitude from 6300ft above mean sea level (AMSL) to 6400ft AMSL
- Quirindi Airport and Tamworth requires no change to PAN-OPS surface.

#### Item 2:

The project will have an impact on nearby designated air routes

### **Potential mitigation strategies**

 Two air routes, H99 LSALT and W130 LSALT, are recommended to be increased by 300ft and 200ft respectively, to a total of 6400ft AMSL.



## 6.3 Telecommunication Assessment



### Lawrence Derrick & Associates

Lawrence Derrick & Associates were responsible for the Telecommunication Assessment. The assessment considers the potential electromagnetic and communication effects that the project may have.

## Scope of the Assessment

- 1 Overview
- **2** Electromagnetic Interference effects of wind turbines
- Wind Turbine effects on radiocommunication
- 4 Existing situation/environment
- **5** Conclusion

## Overview of the guidelines

#### **SEARs**

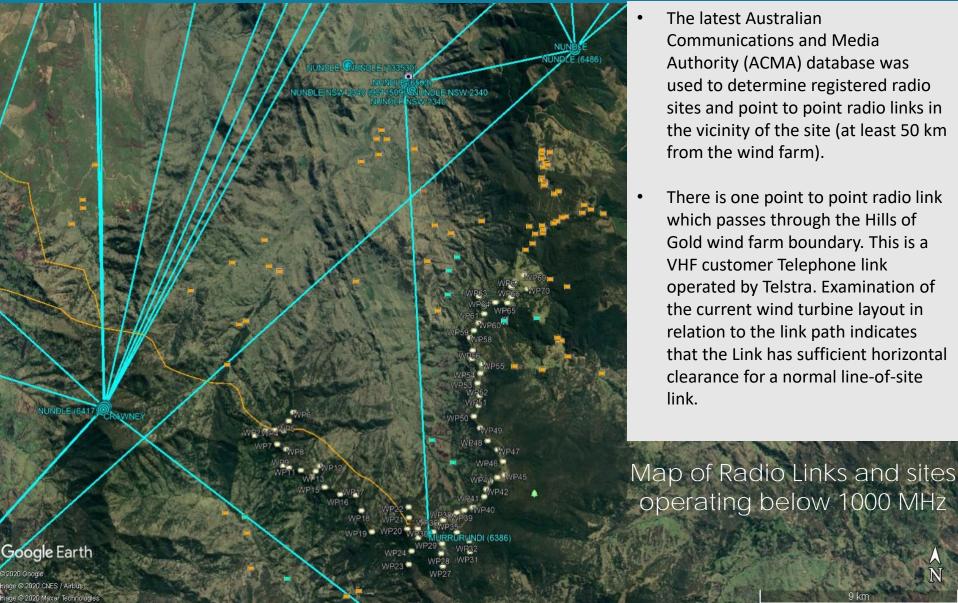
"Identify possible effects on telecommunication systems, assess impacts and mitigation measures including undertaking a detailed assessment to examine the potential impacts as well as analysis and agreement on the implementation of suitable options to avoid potential disruptions to radio communications services; which may include the installation and maintenance of alternative services."

## The NSW Governments Wind Energy Guideline (2016)

"The consent authority will give consideration to the risk of electromagnetic interference with telecommunication services in the area, and the adequacy of the measures proposed to ensure the level of service is maintained".

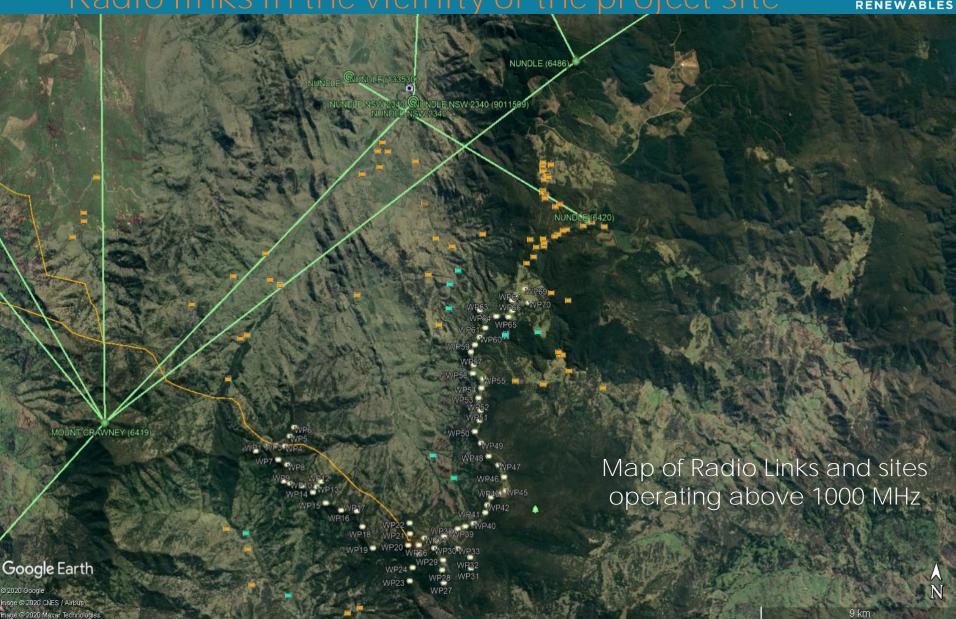
# 6.3 Telecommunication Assessment Radio links in the vicinity of the project site





# 6.3 Telecommunication Assessment Radio links in the vicinity of the projection





## 6.3 Telecommunication Assessment Conclusions



- Radiocommunications systems and radio links in the vicinity of the project were investigated and any potential impact was determined.
- There is <u>one point to point radio</u> link which passes through the wind farm boundaries and the wind turbine layout indicates that the link will have sufficient horizontal clearance.
- The Tamworth AM and FM stations are predicted to serve the area around the wind farm with transmitters about 110 km and 86 km respectively from the nearest turbine. It is considered that the turbines will not have any impact on the general coverage of these stations. Reception at dwellings in the vicinity of the wind farm are unlikely to be affected due to the robust nature of the turbine technology.
- The proposed 330 kV TL being constructed as part of the project is seen as a low risk for interfering with AM FM and TV reception at dwellings in the vicinity of the power lines.

## 6.4 Electromagnetic Frequency Assessment





ERM have undertaken the Electromagnetic Frequency Assessment. The assessment considers the potential hazards and risks associated with Electro Magnetic Fields (EMF)

## **Scope of the Assessment**

- 1 Overview
- (2) Standards and Guidelines
- 3 Risk Assessment
- 4 Mitigation Measures
- 5 Conclusion

#### **Overview of the Guidelines**

## 1. Secretary's Environmental Assessment Requirements (SEARs)

"Health – consider and document any health issues having regard to the latest advice of the National Health and Medical Research Council (NHMRC), and identify potential hazards and risks associated with electric and magnetic fields (EMF) and demonstrate the application of the principles of prudent avoidance".

#### 2. The NSW Governments Wind Energy Guideline (2016)

"Health – consider any health issues having regard to the latest advice of the NHMRC and consider potential hazards and risks associated with electric and magnetic fields and demonstrate the application of the principles of prudent avoidance".

## 6.4 Electromagnetic Frequency Assessment



#### **EMF and Wind Farms**

- The available evidence at large does not find EMF from wind turbines or power lines required for distribution to be a likely causative agent for negative health effects in the community (Knopper, et al., 2014).
- "The results suggested that there is nothing unique to wind farms with respect to EMF exposure; in fact, magnetic field levels in the vicinity of wind turbines were lower than those produced by many common household electrical devices and were well below any existing regulatory guidelines with respect to human health" (McCallum, et al., 2014)

#### **Electric Fields**

 Magnetic fields are often described in terms of their flux density which is commonly measured in units of Tesla (T) or the older unit of Gauss (G).

Source	Distance	Microtesla (μΤ)	Miligauss (mG)
Computer	Normal user distance	0.2 - 2	2 - 20
Electric Kettle	Normal user distance	0.2 - 1	2 - 10
Hair Dryer	Normal user distance	1 - 7	10 - 70
Distribution Line (street powerlines)	Directly underneath	0.2 - 3	2 - 30
Substation	At substation fence	0.1 - 0.8	1 - 8

Source: ARPANSA 2020c

## 6.4 Electromagnetic Frequency Assessment Conclusions



- The broadly accepted guideline in both Australia and overseas is to implement a
  prudent avoidance approach which WEP has adopted in the design of the
  Project, as well as other relevant standards and guidelines as outlined in this
  document.
- Due to the low exposure likely to be generated from the proposed activity and the findings of the scientific community, it is concluded that no adverse impacts are expected due to EMF.

## 6.5 Water and soil Assessment





ERM is a leading global provider of environmental, health, safety, risk, social consulting services and sustainability related services. It has extensive experience in navigating projects through the NSW planning system including project in evolving industries such as the Australia Renewable Energy Sector.

- Dundonnell Wind Farm, VIC
- Cherry Tree Wind Farm, VIC
- Stockyard Hill Wind Farm, VIC
- Ararat Wind Farm, VIC
- Hawkesdale Wind Farm, VIC
- Ryan Corner Wind Farm, VIC
- Crowlands Wind Farm, VIC
- Coopers Gap Wind Farm, Qld
- Cathedral Rocks Wind Farm, SA.

#### **Overview of Guidelines**

- Managing Urban Stormwater: Soils & Construction (Landcom)
- Guidelines for Controlled Activities on Waterfront Land (DPI Water)
- Water Sharing Plans (DPI Water)
- Guidelines for Watercourse Crossings on Waterfront Land (DPI Water)
- Soil and Landscape Issues in Environmental Impact
- Assessment (OEH) Landslide Risk Management Guidelines (AGS)

## **SEARs requirements**

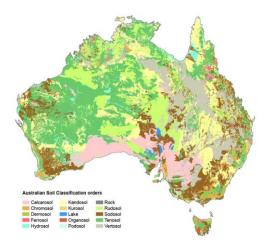
- Quantify water demand.
- Identify water sources (surface and groundwater)
- Impact Assessment (quality and quantity)
- Mitigation assessment

## 6.5 Water and soil Assessment



## Scope of the Study

- 1 Soil and water assessment
- 2 Impact assessment
- Management and mitigation strategy
- (4) Water demand
- 5 Water supply options



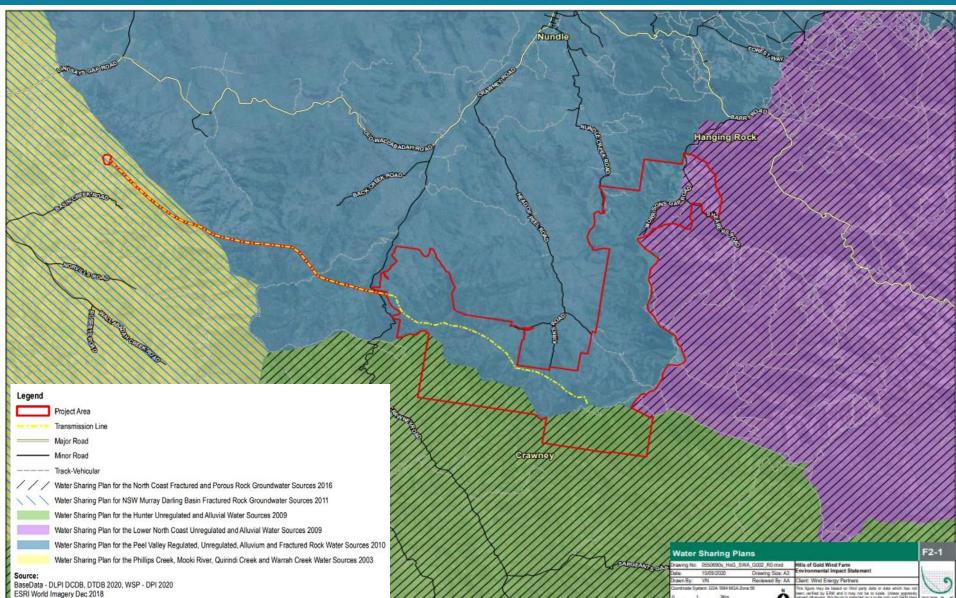
### **Consultation requirements**

During the preparation of the EIS, consultation is required with relevant local, State and Commonwealth Government authorities, service providers, community groups and affected landowners:

- NSW department of industries (Agriculture and fisheries).
- NSW office of water.
- NSW Natural Resource Access Regulator.
- NSW Division of Resources and Geoscience.
- Local Land Services (North West and Hunter Regions).
- Tamworth Regional Council.
- Upper Hunter Shire Council.
- Liverpool Plains Shire Council.
- Environment Protection Authority.

## 6.5 Water and soil Assessment Water Licensing / water sharing plans





## 6.5 Water and soil Assessment Water Sourcing / Water Demand



The Project has **four viable options available** to source water, being:

- Council water supply, in agreement with the relevant Council(s);
- Extraction from an existing nearby landowner bore, in agreement to use their allocation;
- Extraction from a new groundwater bore, which will require a license in consultation with WaterNSW;
- Extraction from a surface water source (e.g. Chaffey Dam), which will require a license in consultation with WaterNSW.
- Confirmation of the proposed source will be determined following detailed design.

## **Project Total Water Demand** during construction

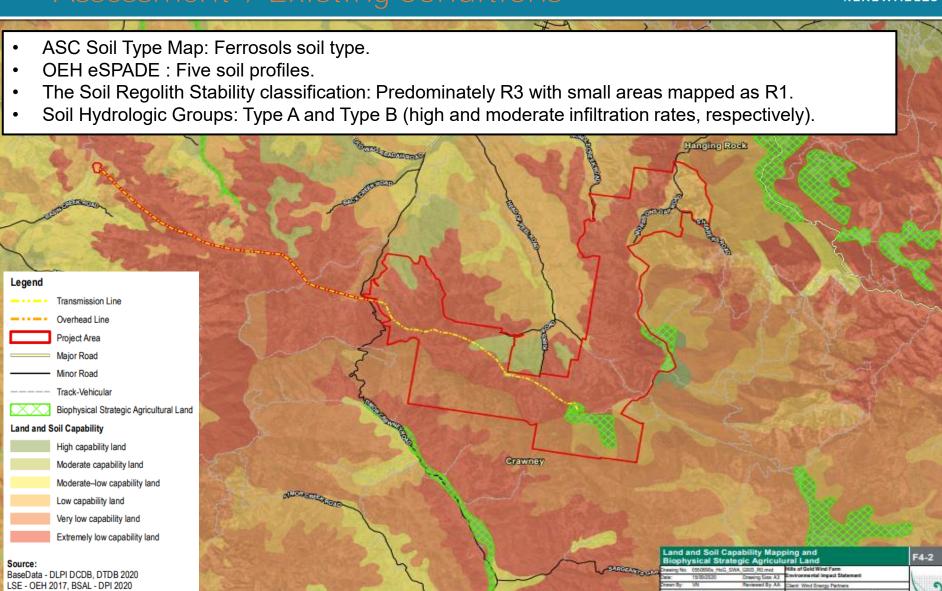
Activity	Water Requirement
Concrete production (batching plant);	3.5 ML
Construction of roads and hardstands	24ML
Dust suppression	5.5 ML
Total	33ML

Given the total requirement for all Project activities is limited to the 24-month construction period is approximately 33 ML, it could be possible to permit water abstraction for the Project without impacting environmental flows.

# 6.5 Water and soil Assessment Assessment / Existing Conditions

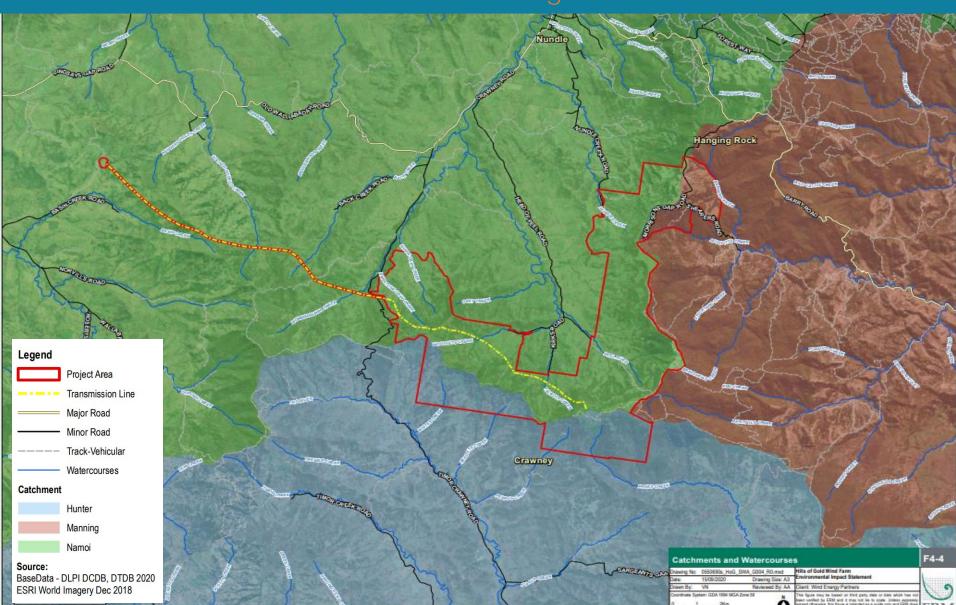
ESRI World Imagery Dec 2018





# 6.5 Water and soil Assessment Surface water and water crossing





## 6.5 Water and soil Assessment Risk Assessment Results



A qualitative risk assessment suggests that <u>overall potential risks to water and soils are relatively</u> minor.

- For the most part, pad sites and access road construction occur on relatively low-moderate gradient lands high up in the respective drainage catchments.
- construction sites within the Project Area present a <u>low erosion</u> hazard considering factors such as climate, soils and landform (RUSLE equation, Erosion hazard assessment based on five factors: rainfall erosivity; soil erodibility; slope length and gradient; soil cover and management practices).
- vegetated buffers lie between work areas and watercourses.
- <u>sustainable water supply</u> options will be pursued through consultation with landowners and relevant Government agencies. Licenses would be obtained as required.
- water flows are not anticipated to be affected during the construction of the Project, given the
  localised impacts are located upstream on the top of the ridgeline. Any potential impact
  downstream will be effectively managed at the source of works (i.e. velocity controls in areas
  with steep slopes) through the implementation of a progressive Erosion and Sediment Control
  Plan (ESCP).

## 6.5 Water and soil Assessment Management Plan / Mitigation Strategy



### Erosion and sediment control measures will be implemented

### **Staging of work**

Staging of works is one of the simplest and most effective forms of erosion and sediment control. By limiting the exposed area to the minimum possible at any one time, reduces the risk of soil loss.

Prior to disturbing an area the following management measures should be implemented:

- barrier or sediment fencing,
- Installation sediment fence downslope and boundary fencing/flagging.
- Installation upstream stormwater diversion drains and stabilise their outlets.
- Installation of sediment traps with stabilised outlets as shown in Progressive ESCPs.

- Erosion control
- Sediment control
- Stormwater management
- Site rehabilitation



**Sediment fencing** 



Sediment traps and basins

## 6.5 Water and soil Assessment Management Plan / Mitigation Strategy



### Some specific construction and activities mitigation.

#### **Pad sites**

- Refer to areas that may be cleared, levelled and then stabilised.
- Pad sites will be built in accordance to Erosion Sediment Control Plan (ESCP).

### **Trenching**

- Land disturbance minimization.
- Avoid trenching in locations concentrating water flow.
- Monitoring weather to avoid opening trenches prior to forecast rainfall.
- Topsoil and subsoil separation, topsoil is replaced on the surface.

### **Dewatering**

- Collecting of water stored in trenches, sediment traps and low-lying depressions.
- Reuse it on site for dust suppression on unsealed access roads and watering of rehabilitated areas

#### **Unsealed Internal Access Roads**

- Maintaining good stormwater drainage.
- Limit the clearing width to the minimum that is practicable.
- Strip and stockpile topsoil separately for use in rehabilitation

### **Concrete batching plant**

- Implementation of separate stormwater collection and drainage systems.
- Suitable washout locations.
- Monitoring stormwater discharges (pH and SS)

### **Site Monitoring and Maintenance**

 Effective system of sediment control devices (inspection, maintenance and cleaning program)

## 7. General Business



**DPIE Assessment Process** 

## 8. Next Meeting – October 29th, 2020



1. Cultural and Heritage		
2. Transport Assessment		
3. Biodiversity Assessment		



Attachment A: HOGPI CCC Meeting 22.09.20 Questions

Attachment B: Engie response 9.9.20

#### **CCC Meeting 22.09.20**

#### **Questions about Concrete Batching Plant:**

- 1. Where is it located?
- 2. Which landholders will be located downstream of concrete plant? Have WEP notified those landholders?
- 3. What does it mean "suitable wash out locations"?
- 4. There is no mentioning of the disposal plan for the concrete waste, will it be disposed of/ dumped on site or carted away?

#### **Questions on Water and Soil Assessment**

- 1. Has WEP conducted an extensive hydrological study to determine existing surface and sub-surface water flows?
- 2. Will this extensive study include a baseline study for monitoring operational impact?
- 3. Has WEP conducted a Hydrological study to assess impact of excavation and foundation construction on existing subsurface hydrology?
- 4. The development area would require baseline water quality and quantity study, has this been done by WEP?
- 5. Has there been an assessment of potential impact into Chaffey Dam inflows? (Tamworth water supply)
- 6. Have the assessments taken into account the location high in catchment close to escarpment in high rainfall area prone to land slips?

#### **Questions on Transmission Lines & Turbine Power Lines**

- 1. If this development was approved and built, will the transmission towers and power lines be taken down during decommissioning?
- 2. How high are the Transmission Line Towers?
- 3. How many Transmission Line Towers will be required?
- 4. How wide is the clearing below the towers and along the Transmission Lines?
- 5. How long is the distance required for Transmission Lines between the Sub Station and the Grid / New England Hwy?
- 6. Will the underground Turbine Tower connecting power lines be removed at decommissioning?
- 7. Who will be responsible for removing these underground power lines and regenerating the land?
- 8. How much concrete will be required per turbine?
- 9. What is the overall footprint of this proposed Wind Farm, including Batching Plants, Sub Station, access roads, footings, crane pads and transmission lines?
- 10. Has a battery storage facility been included in the assessment and if so how much area is required for the facility?

#### Questions forwarded by CCC member to Engie Senior Communications Adviser Andrew Turner on September 1. Response received September 9.

I tabled the following online article at last week's Hills of Gold Wind Farm Community Consultative Committee meeting. Is the article accurate?

The article was not written by ENGIE or Mitsui and reflects the opinions of others. ENGIE is investigating a range of financial models to support the development of renewable energy projects in Australia but will make public comments on these matters when it is appropriate to do so.

May the CCC please see a copy of the International Power (Australia) Holdings brochure sent to prospective investors?

Due to commercial confidences, we are unable to release the document.

What investors has ENGIE/Mitsui attracted for ventures in the past? Does the investment come from Australia or, if outside Australia, which countries?

ENGIE and Mitsui are both stock market-listed companies. You can find more details about their respective financials here: https://www.engie.com/espace-finance and here: https://www.mitsui.com/jp/en/ir/index.html



## 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

	To be presented by
6.1 ENGIE Update	Andrew Kerley from ENGIE
6.2 Water and Soil Assessment (Continued from previous meeting)	Murray Curtis from ERM
6.3 Cultural and Heritage Assessment	Jamie Chivers from Someva
6.4 Traffic and Transport Assessment	Murray Curtis from ERM
6.5 Bushfire Assessment	Murray Curtis from ERM
6.6 Visual Montages	Jamie Chivers from Someva
6.7 Biodiversity Assessment	Matt Davis from ARUP
6.8 Community Enhancement Fund Update	Jamie Chivers from Someva

- 7. General Business: Where to from here?
- 8. Next meeting



One photomontage from DAG residence sent

through as well as one photomontage from DAG

as uploaded to the Hills of Gold Energy website.

We can confirm that agricultural businesses where

surveyed as part of the community consultation for

CCC member completed action

the social and economic study.

DR completed action

This has been completed and sent to the CCC as well

4. B	neeting SOMEVA RENEWABLES		
Action No	Description	Date Raised	WEP Response
1	DR to attach the previous minutes with the upcoming meeting agenda (ongoing)	6 May 2020	DR completed action

24 Aug

2020

22 Sep

2020

22 Sep

2020

22 Sep

2020

22 Sep

2020

business.

WEP to provide photo montage asap

provide to the CCC members.

Jamie – To upload Q & A to the website and

David – get second media link from CCC

David to write to community member with

WEP to check what types of businesses were

2

3

5

6

member

Jamie's input

contacted

## 4. Business arising from previous meeting



**WEP Response** 

We can confirm that AAAA have been consulted.

below shows the location of nearby Agricultural

Airfields relative to the Project Area and a nominal 3

The graph was updated in the CCC presentation and

is available for viewing on the Hills of Gold Energy

nm area indicating that assessment is required of these airfields. Please note that only 3 airfields are within the 3km area that required assessment, ALA1.

This has been provided on the next slide.

ALA 2 and ALA5.

website.

Please see attached an image of the location of the 3 airfields assessed on the next slide. The details to the assessment of the use of airfields will be provided in the full report as part of public exhibition. The image

4. D	usiness arrsing nom pre	vious ii	neeting
Action No	Description	Date Raised	

22 Sep

2020

22 Sep

2020

22 Sep

2020

22 Sep

2020

WEP to confirm if Aerial Application

Association of Australia were consulted

WEP to confirm where the 3 airfields are

WEP to provide more detailed graphs for

telecommunication impacts further south and

WEP to fix graph to explain better what the

land and soil capabilities are - explain what 1

to be turned off at any time

east of what was provided

to 8 actually means

located and clarify about impact if blades have

7

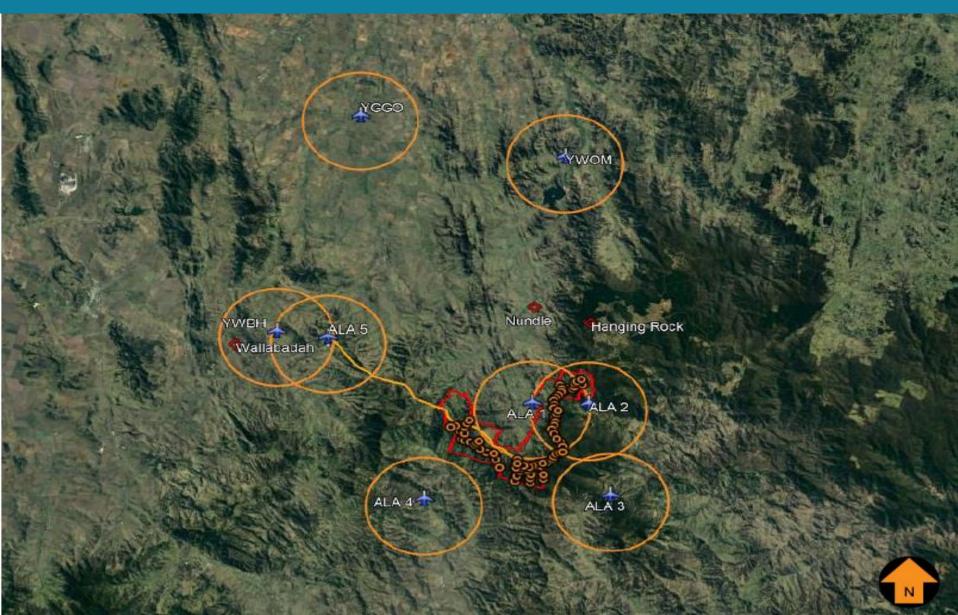
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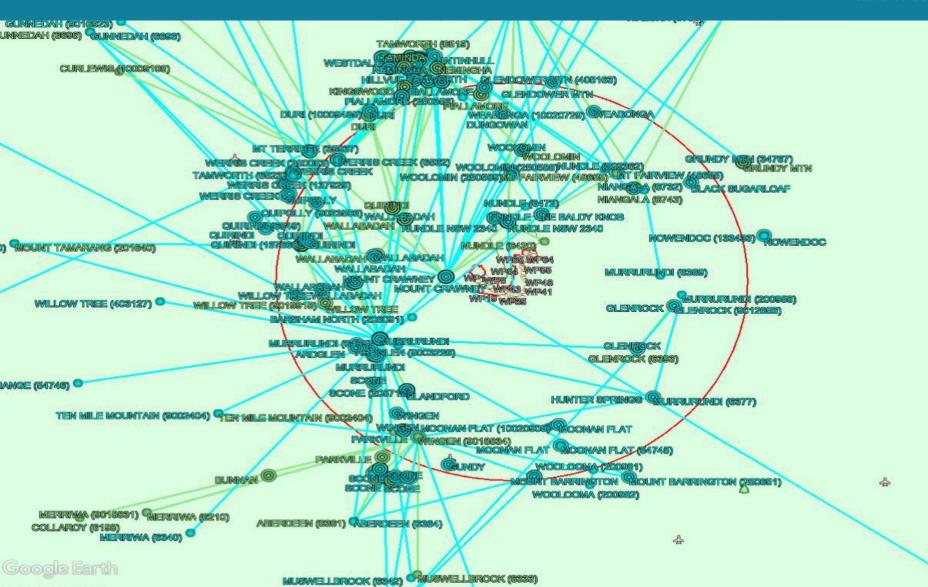
## CCC Action 8





## CCC Action 9





inage Landsat / Copernicus Data SIO, NOAA, U.S. Navy, NGA, GEBCO ® 2020 Google

MUSWELLEROOK (8337)



**WEP Response** 

A representative from ERM will be present at the 29<sup>th</sup>

This has been organised for Wednesday the 28th of

October at 5:30pm.

CCC member completed action

CCC member completed action

of October CCC and will be able to explain and

answer any questions that relate to erosion.

Action					Date		
4. Bus	siness	arising	from	pre'	VIOUS	meet	ing

٠.	Bu	siness	aris	ing	from	prev	vious i	meet	ir

**Description** 

WEP to better explain the erosion and real

Community Member to provide David with

Community member to provide copy of the

Community member and Jamie to discuss

WEP and Hills of Gold Preservation

Committee to set up a meeting

article for distribution

residents seeking meeting

No

11

12

13

14

**15** 

impact

the questions

4.	Business	arising fron	n previous	meeting

Raised

22 Sep

2020

## 4. Business arising from previous meeting

Description

size as well as the visual / footprint

**Action** 

No



**WEP Response** 

viewing when the project is on public exhibition.

16	WEP to provide more information about the Australian Standards in regard to bush fires	22 Sep 2020	The situation regarding the crow hitting the powerline is assessed in the Bushfire report and will be provided in the full impact assessment.
17	WEP to consider another site visit	22 Sep 2020	WEP will take this into consideration during the public exhibition period.
18	CCC member to forward missing names to Jamie	22 Sep 2020	Missing names were received from CCC member.
19	WEP to ensure the substation is included in the visual impact assessment and include the	22 Sep 2020	This will be included in the Landscape and Visual Impact Assessment, which will be available for

Date

Raised

## 6. Update on Proposal



	Noise and Vibration Assessment	Complete
	Shadow Flicker Assessment	Complete
<b>~</b>	Hazards and Risks – Blade Throw	Complete
	Hazards and Risks – Electromagnetic Frequency	Complete
	Aviation	In Consultation
	Updated Layout	Complete
<u>~</u>	Social and Economic Assessment	Complete
	Telecommunications Assessment	Complete
<b>Y</b>	Water and Soil Assessment	Complete

## 6. Update on Proposal



<b>/</b>	Biodiversity Assessment	Complete
<b>Y</b>	Cultural and heritage Assessment	In Consultation
<b>~</b>	Traffic and transport Assessment	Complete
<b>~</b>	Bushfire Assessment	In Consultation

## 6.1 ENGIE Update





ENGIE Australia & New Zealand

## **Our activities**

- Energy Management
- Operation and development of low-carbon energy assets and delivery of tailor-made energy solutions to a broad range of business customers
- e Services

Development of energy infrastructure and delivery of innovative multi-technical services and solutions that create better, safer and more efficient environments

Retail

Over 720,000 Australian customer accounts through Simply Energy



ENGIE is present in 30+ locations across Australia & New Zealand

# 6.2 Water and soil Assessment Water Sourcing / Water Demand



The Project has **four viable options available** to source water, being:

- Council water supply, in agreement with the relevant Council(s);
- Extraction from an existing nearby landowner bore, in agreement to use their allocation;
- Extraction from a new groundwater bore, which will require a license in consultation with WaterNSW;
- Extraction from a surface water source (e.g. Chaffey Dam), which will require a license in consultation with WaterNSW.
- Confirmation of the proposed source will be determined following detailed design.

## **Project Total Water Demand during construction**

Activity	Water Requirement
Concrete production (batching plant);	3.5 ML
Construction of roads and hardstands	41ML
Dust suppression	10.5 ML
Total	55 ML

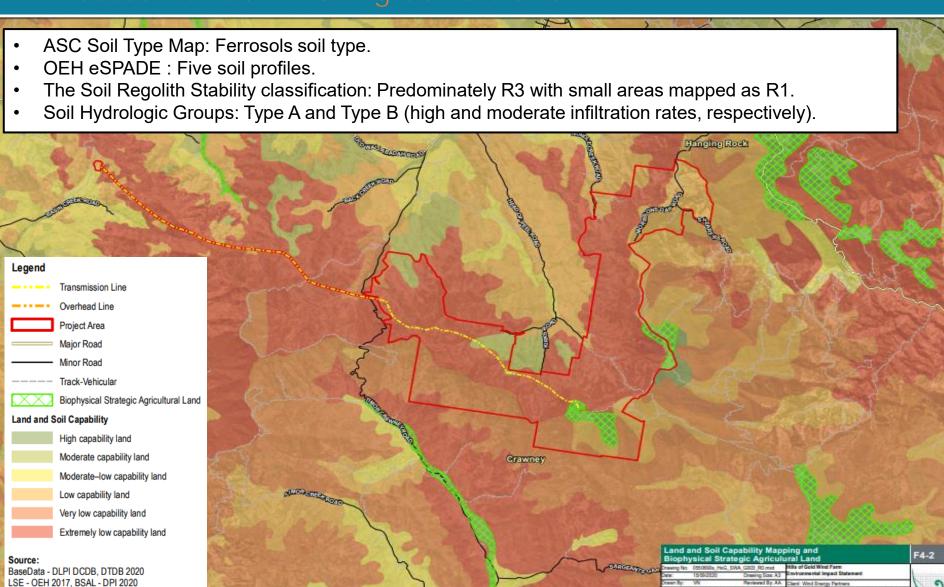
(Update from previous meeting)

Given the total requirement for all Project activities is limited to the 24-month construction period is approximately 55 ML, it could be possible to permit water abstraction for the Project without impacting environmental flows.

# 6.2 Water and soil AssessmentAssessment / Existing Conditions

ESRI World Imagery Dec 2018





# 6.2 Water and soil Assessment Risk Assessment Results



A qualitative risk assessment suggests that <u>overall potential risks to water and soils are relatively</u> minor.

- For the most part, pad sites and access road construction occur on relatively low-moderate gradient lands high up in the respective drainage catchments.
- construction sites within the Project Area present a <u>low erosion</u> hazard considering factors such as climate, soils and landform (RUSLE equation, Erosion hazard assessment based on five factors: rainfall erosivity; soil erodibility; slope length and gradient; soil cover and management practices).
- vegetated buffers lie between work areas and watercourses.
- <u>sustainable water supply</u> options will be pursued through consultation with landowners and relevant Government agencies. Licenses would be obtained as required.
- water flows are not anticipated to be affected during the construction of the Project, given the
  localised impacts are located upstream on the top of the ridgeline. Any potential impact
  downstream will be effectively managed at the source of works (i.e. velocity controls in areas
  with steep slopes) through the implementation of a progressive Erosion and Sediment Control
  Plan (ESCP).

# 6.2 Water and soil Assessment Management Plan / Mitigation Strategy



### Some specific construction and activities mitigation.

#### Pad sites

- Refer to areas that may be cleared, levelled and then stabilised.
- Pad sites will be built in accordance to Erosion Sediment Control Plan (ESCP).

### **Trenching**

- Land disturbance minimization.
- Avoid trenching in locations concentrating water flow.
- Monitoring weather to avoid opening trenches prior to forecast rainfall.
- Topsoil and subsoil separation, topsoil is replaced on the surface.

### **Dewatering**

- Collecting of water stored in trenches, sediment traps and low-lying depressions.
- Reuse it on site for dust suppression on unsealed access roads and watering of rehabilitated areas

#### **Unsealed Internal Access Roads**

- Maintaining good stormwater drainage.
- Limit the clearing width to the minimum that is practicable.
- Strip and stockpile topsoil separately for use in rehabilitation

### **Concrete batching plant**

- Implementation of separate stormwater collection and drainage systems.
- Suitable washout locations.
- Monitoring stormwater discharges (pH and SS)

### **Site Monitoring and Maintenance**

• Effective system of sediment control devices (inspection, maintenance and cleaning program)

# 6. 3 Indigenous Heritage





Kelleher Nightingale Consulting Pty Ltd

KNC is an Archaeological and Heritage Management that conducts both Aboriginal cultural heritage work and European cultural heritage work. KNC has worked on multiple projects in NSW and across Australia including renewable energy developments for wind and solar projects.

#### **Overview of Guidelines**

- Code of Practice for Archaeological Investigation of Aboriginal Objects in NSW (OEH 2010a);
- Guide to investigating, assessing and reporting on Aboriginal Cultural Heritage in NSW (OEH 2011); and
- Aboriginal cultural heritage consultation requirements for proponents 2010 (OEH 2010b).

#### **SEARs requirements**

- Assess the impact to Aboriginal cultural heritage impact under guidelines.
- Provide evidence of consultation with Aboriginal communities in determining and assessing impacts, developing options and selecting options and mitigation measures.

# 6. 3 Cultural and Heritage



### Scope of the Study

- 1 Aboriginal community consultation
- 2 Aboriginal heritage field survey
- (3) Cultural Heritage Assessment Report

# **Aboriginal Community Consultation Process**

The aim of consultation is to integrate cultural and archaeological knowledge and ensure registered Aboriginal stakeholders have information to make decisions on Aboriginal cultural heritage.

#### **Consultation Process**

- 1 Notification of Aboriginal persons
- Advertising for registered stakeholders in local print media Northern Daily Leader
- 3 Notification of closing date for registration
- 4 Record of registration of interest
- 5 Provision of project information
- Invitation to advise on Aboriginal cultural value of the study area
- 7 Provision of draft CHAR for review

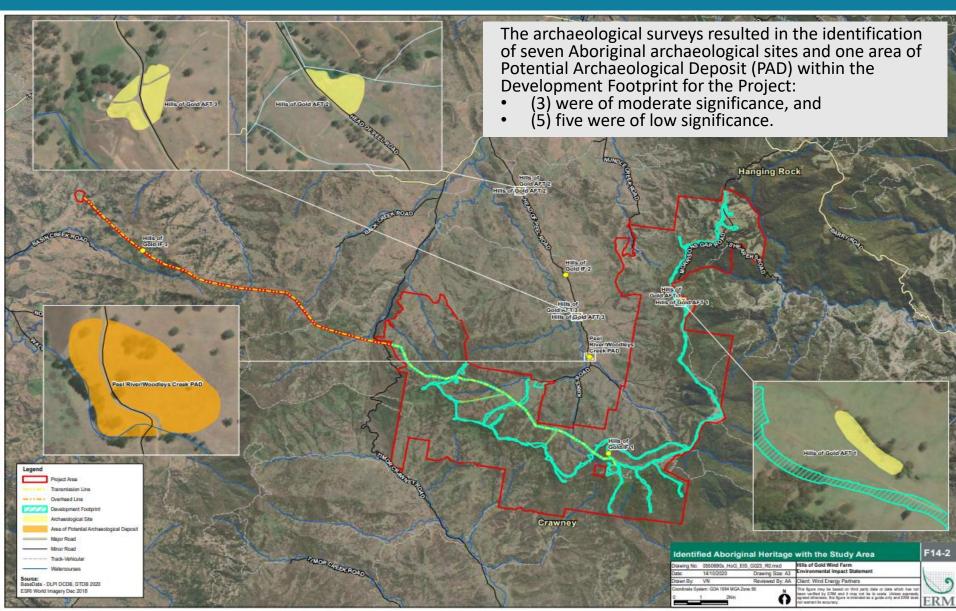
### 6. 3 Cultural and Heritage Previous Archaeology and Survey Approach



- 1 Previous archaeological investigations in the area have included:
  - Nundle Sawmill and Preservation Plant
  - Nundle Woolomin Optic Fiber Cable
  - Chaffey Dam Expansion
  - Chaffey Dam Safety Upgrades
- The survey included the whole wind farm development corridor, transport upgrades and all associated infrastructure.
- Based on the archaeological background and landform context of the Study Area, the survey closely inspected for:
  - Any areas of surface exposure for artefacts
  - Evidence of intact soils and subsurface archaeological potential
  - Any mature trees for evidence of Aboriginal bark removal.

# 6. 3 Cultural and Heritage Identify Aboriginal artefacts in the study area





## 6. 3 Cultural and Heritage Survey Findings and Mitigation Approach



Site Name	Significance	Mitigating Harm
Hills of Gold AFT 1	Moderate	This site has been avoided in design.
Hills of Gold AFT 2	Low	Collection of surface artefacts required prior to impact.
Hills of Gold AFT 3	Moderate	Archaeological salvage excavation c.25m <sup>2</sup> required prior to impact.
Hills of Gold AFT 4	Low	Collection of surface artefacts required prior to impact.
Hills of Gold IF 1	Low	Collection of surface artefacts required prior to impact.
Hills of Gold IF 2	Low	Collection of surface artefacts required prior to impact.
Hills of Gold IF 3	Low	Collection of surface artefacts required prior to impact.
Peel River/Woodleys Creek PAD	Moderate	Archaeological salvage excavation c. 50m <sup>2</sup> required prior to impact.

# 6. 3 Cultural and Heritage Conclusion



- The CHAR has identified that there are no existing AHIMS sites within, or near, the Project Area.
- The seven newly recorded sites and one PAD present were identified during the comprehensive field inspection of the Study Area.

If impact is unavoidable, salvage excavation would be required for two archaeological sites and one PAD

Surface artefact collection is recommended for low significance Aboriginal archaeological sites where surface artefacts were identified during the assessment

### 6. 4 Traffic and Transport Assessment





The Transport Planning Partnership (TTPP) was formed as a specialist traffic engineering and transport planning consultancy with the aim of providing high level specialist advice to government agencies and the private sector.

#### **Overview of Guidelines**

- Guide to Traffic Generating Developments (RMS)
- Road Design Guide (RMS) & relevant Austroads Standards
- Austroads Guide to Traffic
   Management Part 12: Traffic
   Impacts of Development

### **SEARs requirements**

- Assess the construction and operational traffic impacts of the development;
- Provide details of traffic volumes (both light and heavy vehicles) and transport routes during construction and operation, including traffic associated with sourcing raw materials (water, sand and gravel);
- Assess the potential traffic impacts of the project on road network function including intersection performance and site access arrangements and road safety, including school bus routes;
- 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) during construction and operation;
- Provide details of measures to mitigate and / or manage potential impacts including a schedule of all required road upgrades, road maintenance contributions, and any other traffic control measures, developed in consultation with the relevant road authority;

# 6. 4 Traffic and Transport Assessment



### Scope of the Study

- 1 Assessment of Existing Conditions
- 2 Assessment of Traffic Impacts
- (3) Mitigation Measures
- 4 Conclusions and Findings

### **Stakeholders Consulted**

Consultation was undertaken with key stakeholders to understand concerns and provide improvements and mitigation.

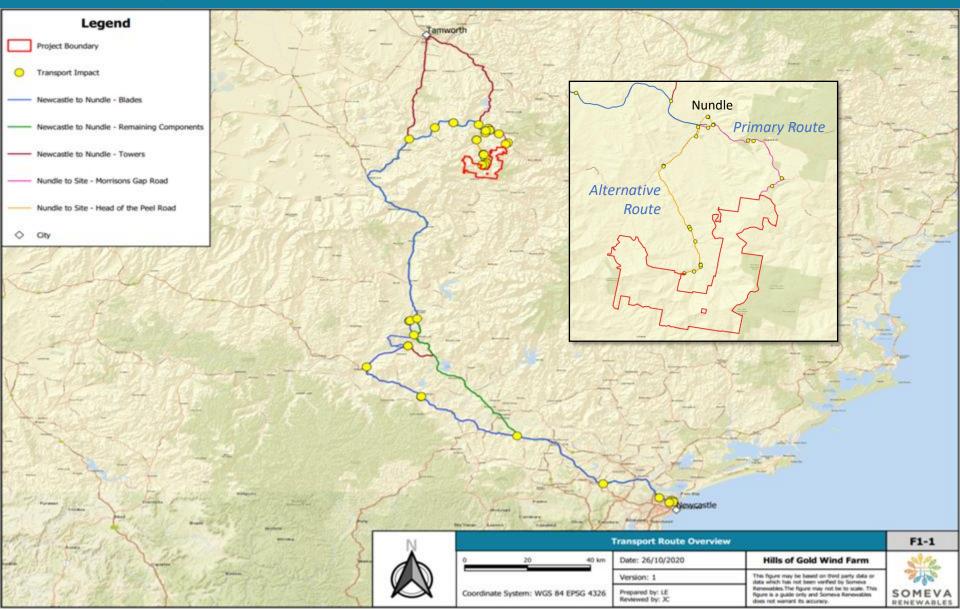
- o Tamworth Regional Council;
- Transport for NSW (TfNSW);
- Forestry Corporation NSW; and
- Muswellbrook Shire Council.

In addition, consultation was undertaken by TTPP with other local councils along the route:

- Liverpool Plains Council;
- Cessnock City Council;
- Newcastle City Council; and
- Upper Hunter Council.

# 6. 4 Traffic and Transport Assessment Transport Routes: From Port to Site





# 6. 4 Traffic and Transport Assessment



### Methodology of Assessment

- 1 Volume Capacity measure
- The volume capacity ratio indicates the level of congestion by comparing the forecast traffic volumes to the theoretical lane capacity
- 2 Level of service

The level of service is a measure of traffic efficiency.

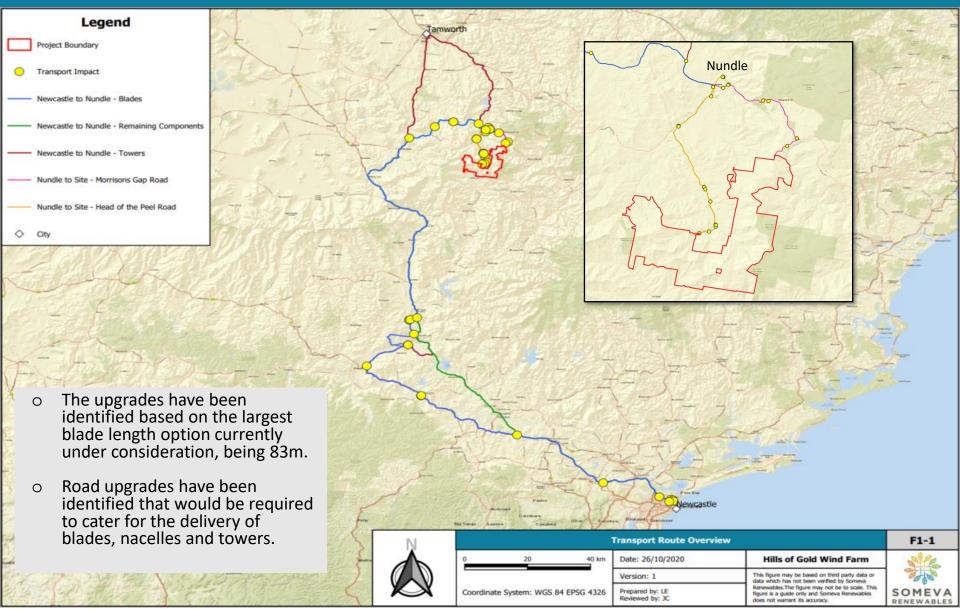
The Level of Service is a six-level rank (Level of Service A to F) which considers factors such as speed, volume of traffic, geometric features, traffic interruptions, delays and freedom to manoeuvre

2 Environmental capacity

The environmental capacity is an assessment of the impact on the amenity of an environment (e.g. acceptable level of noise)

# 6. 4 Traffic and Transport Assessment Roads Upgrades





# 6. 4 Traffic and Transport Assessment Mitigation Strategy



Oversized and over mass vehicles would will be governed by a detailed traffic management plan that will be developed before approval for transport is granted. The traffic management plan will include:

- Procedures for escorts of oversized and over mass vehicles;
- Traffic control plans for temporary road closures to allow vehicles to cross the carriageway;
- Location and use of rest stops and layovers along the journey;
- Communication strategy to affected communities;
- Notification and consultation of key stakeholders including:
- Contact details of foreman or project manager throughout operations to be shared with emergency services and road authorities;

- Timing of operations and measures to avoid commuter peaks and school peaks through populated areas;
- Consideration of cumulative impacts of other projects along the route including mine and forestry related transport;
- Upgrading the two bridges along Lindsays Gap Road would avoid the need to use Tamworth route for towers and mitigate impact along the Nundle Road;
- Layby proposed to alleviate concern for being stuck behind oversized vehicles going up Barry Road just before Devils Elbow;
- Project commitment to seal Morrisons Gap Road and improve safety along this road.

# 6. 4 Traffic and Transport Assessment Conclusions



- Estimates of Project related traffic generation were undertaken. Analysis shows that when these traffic volumes are added to the existing traffic volumes there would be adequate capacity in the road network.
- o The forecast traffic volumes are also expected to be less than the environmental capacity goals of 200 vehicles per hour on all roads during the peak of construction. During the operation of the site, the traffic volumes would be even less.
- A detailed traffic management plan would will be developed for the transportation of individual items.
- Road upgrades form part of the Project and will create ongoing benefits to the local community in terms of improved road safety and amenity.



### Scope of the Study

- Analysis of whether the Project Area is bushfire prone land and whether the Project was in compliance with guidelines;
- 2 Identification of the assets within and surrounding the Project Area requiring protection;
- Identification of the bushfire risk factors such as bushfire history and known bushfire behavior in the Project Area and within the surrounding lands;
- Consultation with key stakeholders to discuss the recent fires affecting the Project Area and immediate surrounds to gain a better understanding of the local fire conditions and to ensure that suitable management and mitigation measures are developed in consultation with the NSW RFS and the NSW NPWS;
- Identification infrastructure that may be subject to direct flame contact. Calculations of Bushfire Attack Levels (BAL) and flame length have been undertaken using Method 2 as outlined within Appendix B of AS3959; and
- 6 Produce risk mitigation and management treatments and satisfy PBP 2019 requirements.



# **Key Legislation and Guidelines Addressed within the Assessment**

- NSW Rural Fires Act 1997
- Planning for Bushfire Protection 2019
- Australian Standard 3959 2018 Construction of Buildings in Bushfire-prone Areas (AS 3959- 2018)
- o Biodiversity Conservation Act 2016
- Commonwealth Environment Protection and Biodiversity Act 1999
- Environment Planning and Assessment Act 1979



### **SEARs** requirements

The EIS must include an assessment of the following:

 identify potential hazards and risks associated with bushfires / use of bushfire prone land, including the risks that a wind farm would cause bush fire and any potential impacts on the aerial fighting of bush fires and demonstrate compliance with Planning for Bush Fire Protection 2006 (if located on bushfire prone land)."

"include flame length modelling for all turbines, ancillary buildings, internal roads and transmission lines and identify required vegetation management practices to achieve asset protection zone standard that will prevent flame contact on the proposed infrastructure components."



### **Key Consultation**

To inform the preparation of this bushfire risk assessment, ERM and the Proponent consulted with key local stakeholders to discuss the recent fires affecting the Project Area and immediate surrounds to gain a better understanding of the local fire conditions and to ensure that management and mitigation measures are developed to meet the needs of those on the ground

- 1 NSW National Parks & Wildlife Service
- 2 Liverpool Range Rural Fire Service (District)
- (3) Tamworth Rural Fire Service (District)
- (4) NSW Fire and Rescue
- 5 Hanging Rock Rural Fire Service (local)
- 6 NSW Rural Fire Service

### Mitigation Strategy

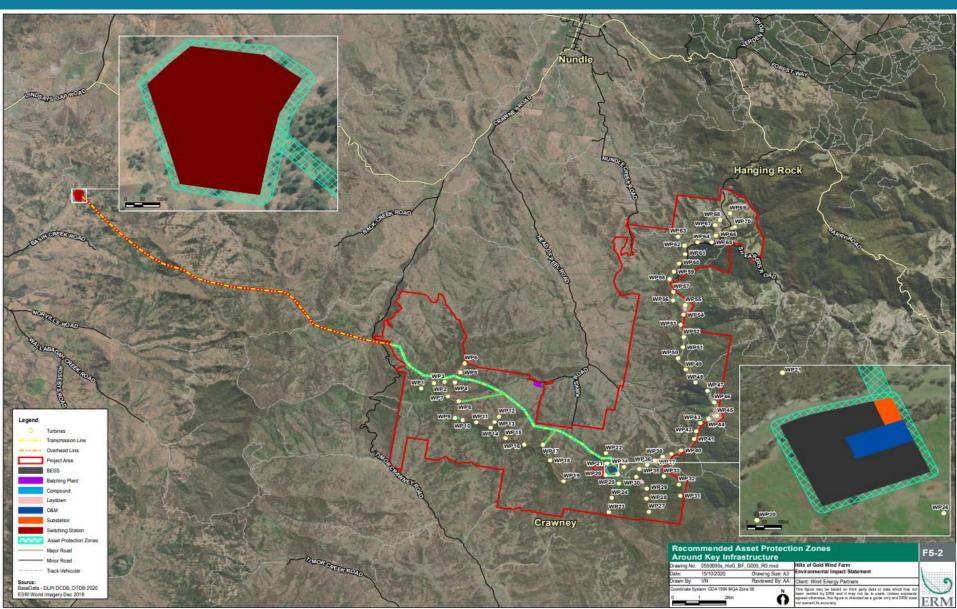


Bushfire mitigation strategies and recommendations are guided by the following factors that contribute to bushfire risk:

- Fuels, weather, topography and predicted fire behavior including the calculated flame length;
- Suppression resources (air and ground), access (roads, tracks) and water supply;
   and
- Values and assets.
- Establishment of Asset Protection Zone (APZ)
- An extended strategic Fire Advantage Zone (SFAZ)
- Some infrastructure will be microsited out of the flame zone.
- visible markers will be installed on all masts to minimise risks during aerial firefighting operations.
- Site access points will be constructed to enable safe access and egress for residents attempting to leave the area at the same time that emergency service personnel are arriving to undertake firefighting operations.
- Preparation of a Bushfire Emergency Management and Operations Plan.
- Water supply will be maintained such that existing water resources remain available to firefighting the area.

# 6. 5 Bushfire Assessment Mitigation Strategy: APZ





### Conclusions



- The risk that the wind farm itself will cause a fire is minimal.
- A Bushfire Emergency Management and Operations Plan will be prepared in conjunction with relevant stakeholders, including NSW RFS, NSW Fire and Rescue, NPWS, NSW Forestry, adjoining property owners and employees
- Access road is already located within the flame zone and the proposed windfarm assets will not increase this existing hazard.
- The improved access and water sources will be an advantage to both the local RFS and the NPWS for back burning down the slopes in advance of the fire front as was undertaken in 2019 and successfully stopped the Pages Creek Road Fire along this ridgeline.

#### Conclusions



- It is recommended that assets such as the switching station, substation, BESS and O&M buildings are all located outside of the flame zone and have adequate defendable space all sides.
- The detailed mitigation measures outlined in the bushfire risk assessment have been developed in consultation with key stakeholders including NSW RFS and NPWS to ensure that the windfarm development does not present any increased risk of widespread fire across the landscape. These mitigation measures will be applied for the life of the project.













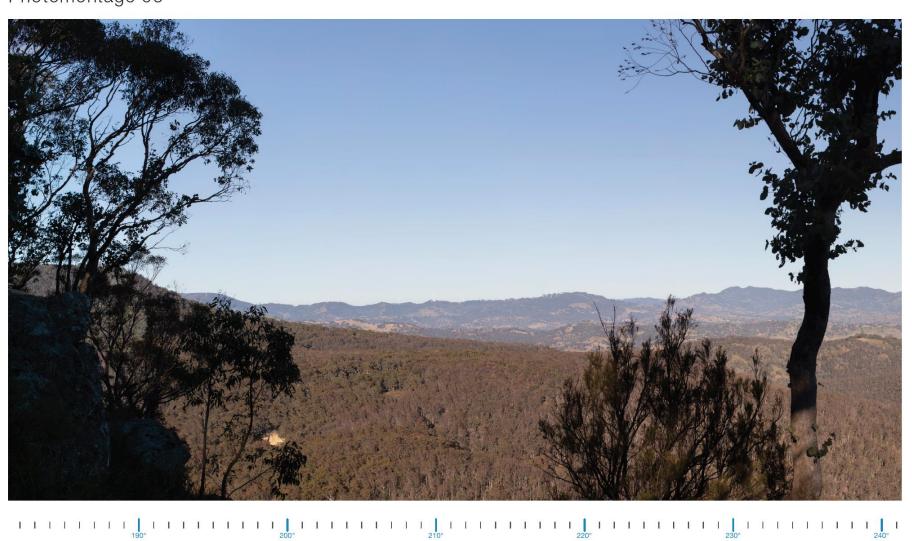






















# **ARUP**

Arup is a multinational professional services firm which provides engineering, architecture, design, planning, project management and consulting services for all aspects of the built environment. It has extensive experience in navigating projects through the NSW planning system including projects in the Australia Renewable Energy Sector.

- Darlington Point Solar Farm EIS, NSW
- Coffs Harbour Bypass EIS, NSW
- Cultana Pumped Hydro, SA

#### **Overview of Guidelines**

- Biodiversity Conservation Act 2016 (BC Act);
- Biodiversity Conservation Regulation 2017;
- Biodiversity Assessment Method (BAM) (OEH 2017) which applies to the Project under the transitional provisions in clause 6.31 of the Biodiversity Conservation Regulation 2017; Environment Protection and Biodiversity Conservation Act 1999 (Cth) (EPBC Act).

### **SEARs requirements**

- Assess biodiversity values and the likely biodiversity impacts of the development.
- Provide a detailed description of the proposed regime for minimising, managing, and reporting on the biodiversity impacts of the development over time.
- Provide a strategy to offset any residual impacts of the development.
- Assess the impact of the project on birds and bats from blade strikes, low air pressure zones at the blade tips (barotrauma), and alteration to movement patterns resulting from the turbines and considering cumulative effects of other wind farms in the vicinity.
- Department of Agriculture, Water and Environment (DAWE) determined the project was a controlled action under section 75 of the EPBC Act.



### Scope of the Study

- 1 Impacts to native vegetation, including threatened ecological communities listed under the BC Act and the EPBC Act
- Impacts of blade strike on birds and bats, with specific focus on listed threatened bats and raptors observed in accordance with Natural England Technical Information Note TIN051 (as advised by BCD);
- Impacts associated with development near to National Parks or State Reserves, including the adjacent Ben Halls Gap Nature Reserve in accordance with the Guidelines for Development Adjoining Land and Water Managed by DECCW (OEH, 2010);
- 4 Management of identified impacts (including details of adaptive management protocols and biodiversity offsets); and
- Measures to avoid, mitigate and offset impacts, with the objective of an overall 'improve or maintain' environmental outcome for the project.

### **Consultation requirements**

- 1 DPI- Fisheries
- Department of Planning and Environment Biodiversity Conservation Division.
- Department of Agriculture, Water and Environment (DAWE).

### Design layout process



A multidisciplinary 'freeze design' workshop was undertaken in May 2020 with the Project ecologists, community consultants, civil engineers and wind modellers to confirm optimal WTG layout and ancillary infrastructure locations to avoid impacts to significant biodiversity features such as fauna habitat and microbat breeding areas

# Pre-Workshop • Wanted to move pad out of PCT Habitat • Realigned road and pad to fit better into already cleared land, thereby minimising impact Post-Workshop • New layout in light blue • Pad and road have less impact on microbat 100m buffer zone and PCT Habitat mapping zones

# **Multidisciplinary Workshop Methodology** Civil **Planning Engineering** Community Wind consultation Constraints

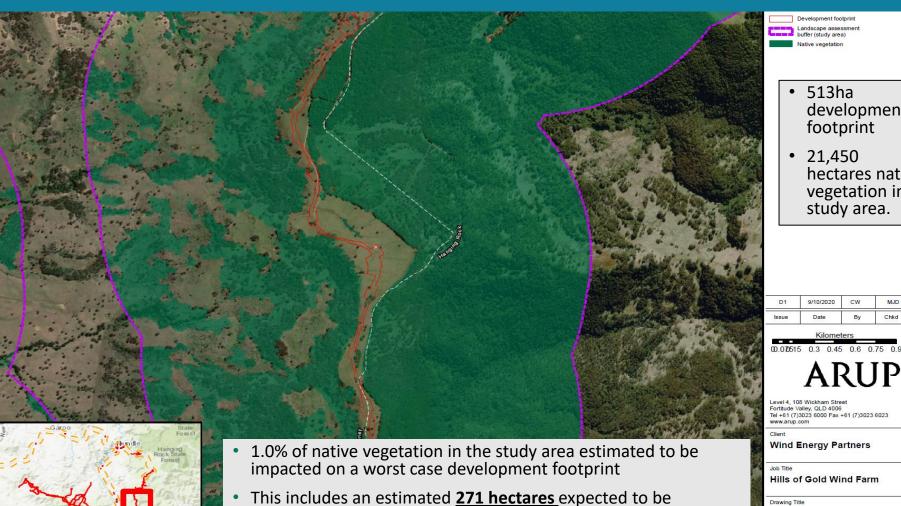
### 6.7 Biodiversity Native Vegetation Map

Sources: Esri

HERE, Garmin.

Intermap, increment





Further design commitments are included to further reduce in detailed design and reassess prior to construction to present

513ha development footprint

Landscape assessment

• 21,450 hectares native vegetation in study area.



Chkd

# ARUP

Fortitude Valley, QLD 4006 Tel +61 (7)3023 6000 Fax +61 (7)3023 6023

Wind Energy Partners

Hills of Gold Wind Farm

Location map native vegetation cover Page 10

Scale at A4 1:25.000 Drawing Status Final

Coordinate System

GDA 1994 MGA Zone 56

270335-00

P Corp., GEBCO GIS User Community, Esri, HERE, Garmin,

rehabilitated

improvements.

Vegetation Plot



- o A total of **22 Plant Community Types (PCTs)** were identified and mapped, varying condition from derived native grasslands (15%), low (18%), moderate (36%) and high (31%) value.
- o A total of 10 species credit species associated with PCTs in the study area were determined to be present, including 8 mammals, 1 amphibian and 1 reptile;
- o A total of **2 Threatened Ecological Communities** (TECs) listed under the NSW *Biodiversity* Conservation Act 2016 (BC Act) were identified:
  - o White Box-Yellow Box-Blakely's Red Gum Grassy Woodland and Ribbon Gum (also EPBC Act listed)
  - o Mountain Gum-Snow Gum Grassy Woodland or open forest.

Types				
	186			
-	192			
	26			
	i40			
9	31			
9	134			
1	192			
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# 6.7 Biodiversity

# SOMEVA RENEWABLES

## Mitigation measures and Biodiversity Offset Strategy

- o Impact assessment follows Avoid → Minimise → Offset hierarchy:
  - Design workshops to locate infrastructure
  - Buffers to protected area estate
  - Buffers to bat roost sites and foraging habitat
  - Site rehabilitation and restoration for temporary impacts
  - Impact assessment adopted maximum footprint for conservative assessment
  - Commitment to further reduce impacts in detailed design and reassess impact
- A Biodiversity Management Plan will be prepared and implemented
  - Mapping and protection of habitat features during detailed design
  - Monitoring and management requirements for construction and operation
- A Bird and Bat Management Plan will be prepared and implemented
- Offset credits calculated using NSW Biodiversity Assessment Method.
  - Biodiversity Offset Strategy to be prepared to investigate options to deliver local, land-based offsets

# 6. 7 Biodiversity Conclusions



The impacts to biodiversity as a result of the project have been avoided and minimised as much as practicable through design phase refinements.

Further mitigation measures are outlined and proposed to be adopted to minimise biodiversity impacts during the construction and operational phases and include the provisions of biodiversity offsets, management measures and monitoring and adaptive management measures.

# The BDAR confirms that there are no serious and irreversible impacts from the project and this is because:

- there is sufficient habitat availability in the wider landscape and study area to continue to support threatened species known to occur within the development footprint;
- the Project design has been refined so that the majority (58%) of vegetation impacts occur on areas that contain exotic grassland;
- the Project design avoids areas of breeding habitat for threatened microbats, by locating all infrastructure outside of the mapped cliffs and steep areas;
- Impacts to high quality vegetation communities, containing higher quality fauna habitat have been minimised through the location of infrastructure;

Residual impacts associated with the project will be offset in accordance with the NSW Biodiversity Offset Scheme and the EPBC Act Offsets Policy. Once these offsets are applied, no net loss to biodiversity should be achieved

# 7. General Business where from here



By David Ross



#### **Land Valuation:**

Land valuation for properties near wind farms is a topic that has been studied in 2009 by the NSW Valuer-General report completed by Duponts in association with Preston Rowe Paterson (PRP) and more recently in 2016 with an Urbis Land Report commissioned by the NSW office of Environment and Heritage. The original 2009 report concluded that wind farm developments at the time had not impacted property values in majority of cases and in the minority of ones that were, other factors may have been involved. The Urbis report concluded that based on their research and expert opinion, wind farms may not significantly impact rural properties used for agricultural purposes. The link to the report for further reading can be found here:

https://www.environment.nsw.gov.au/resources/communities/wind-farm-value-impacts-report.pdf

#### Noise:

The NSW Wind Energy: Noise Assessment Bulletin indicates that the maximum limit for noise generated by a wind farm is 35 decibel or background noise + 5 decibel, whichever is greater is used for all relevant receivers. The maximum noise limit for relevant receivers, is required to be met by a wind farm at any moment throughout the year. This means that the sound level at the receivers will not be at the maximum limit all the time, due to changing environmental factors such as wind speed and direction. To provide you some context with what 35dB compares to, Safe Work Australia's noise comparison table equates 35dB to the equivalent of between a whisper and quiet radio music. The link to Safe Work Australia's information on noise safety can be found here:

https://www.safeworkaustralia.gov.au/noise

#### **Carbon Payback:**

For Vestas wind turbines the energy payback ranges from 5 to 12 months and generally a single Vestas turbine will generate 25 to 50 times more than what it uses. There was an independent review of the Vestas numbers by US researches analysing 2 megawatt machines on a wind farm in the US Pacific North-West. The conclusion was that a wind turbine with a lifetime of 20 years will have a net benefit on energy and carbon within 5 to 8 months of operation. Links for reference are: http://www.inderscience.com/offer.php id=62496,

https://www.vestas.com/en/about/sustainability#!grid 0 content 23 Container

#### Wind Turbines and Microclimates:

The topic of microclimate impacts of wind farms is still being researched and studied as the number of wind farms increase globally. A study published in April of 2016 focused on Black Law wind farm in Scotland, which has been operational since 2005. The research study assessed the impact to the ground-level climate by the operation of the wind farm. Temperature and humidity sensors were installed across the 18.6 square kilometres of site, and data was collected for 6 months in 5-minute intervals from the surface and 30-minute intervals from the soil. There was also a period when the

wind farm was switched off for maintenance, which allowed for a direct comparison to be made. The conclusion of the study is that wind farms have a small impact on the microclimate with a finding that even in the most extreme temperatures the air temperature increased by 1/5<sup>th</sup> of a degree Celsius.

Professor Stephen Mobbs one of the authors of the study mentioned that naturally there will be a temperature difference between the hub height and the ground level of a turbine. The warmer air at the hub height is brought down to the ground level as well as cold air moving from the ground higher up. This is the reasoning he outlines in the BBC article for the small warming recorded in the study.

To conclude, the study also noted the microclimate changes decrease with distance away from a turbine and are contained to the perimeter of the wind farm.

There was also an understanding that although the surface temperature was warmer, no heat was being added, it was just being mixed up by the rotating blade.

Please see below links for further reading.

BBC article:https://www.bbc.com/news/amp/science-environment-36131442

National Centre for Atmospheric Science: <a href="https://www.ncas.ac.uk/en/18-news/2575-turbines-affect-the-local-climate-at-a-wind-farm">https://www.ncas.ac.uk/en/18-news/2575-turbines-affect-the-local-climate-at-a-wind-farm</a>

Research Paper: <a href="https://iopscience.iop.org/article/10.1088/1748-9326/11/4/044024">https://iopscience.iop.org/article/10.1088/1748-9326/11/4/044024</a>

#### Wind Farms and Tourism:

A major community concern about wind farms is their perceived impact on tourism, due to their presence on a landscape. A report was completed in 2008 to assess the impact of wind farms on Scottish tourism, as wind farms were increasing around the country. Tourism is extremely important to Scotland, with 92% of visitors claiming the scenery is the main reason for their visit. To analyse tourists' attitudes towards wind farms, 380 tourists were intercepted in 4 case study areas, in places where they had likely just seen a wind farm. The results of those surveys indicate 39% responded positively to the wind farm, 26% were neutral, 25% were negative with 10% strongly negative. Overall, the study concluded that 93-99% of people who had seen a wind farm suggested that it didn't have a negative impact on their willingness to return.

The link to access the report can be found here, <a href="https://www.gov.scot/publications/economic-impacts-wind-farms-scottish-tourism/">https://www.gov.scot/publications/economic-impacts-wind-farms-scottish-tourism/</a>

- General Project Background I wanted to provide you with some more background information on the project, so you can begin to familiarise yourself with the project. Currently the Hills of Gold Wind Farm is proposed as a 70-turbine layout expected to provide power to approximately 193,000 homes. The specific location of the project is on a ridgeline between Hanging Rock and Crawney Pass. There are a few key reasons as to why the project is being proposed in this location, they are as follows:
  - The area has proven to be a high wind resource after years of wind monitoring
  - The Liddell Coal fired power plant is due to retire in 2023, with Bayswater shortly after
  - There is a power line that exists between Liddell and Tamworth, which allows ease of access for grid connection
  - New renewable energy projects are cheaper than coal or gas projects and are expected to reduce electricity prices
- **Project Benefits** The Hills of Gold Wind Farm is expected to have a number of benefits associated with it, some of the key benefits are:
  - The project will create over 250 jobs at peak construction and around 30 operational jobs, which will have strong flow on effects to the local community
  - Establishing a community benefit fund which will receive annual payments over the operational life of the project. The money in the community benefit fund will be used to fund local projects of benefit to the community;
  - Investing in suitable infrastructure upgrades which help meet the needs of the community. Details will be finalised in consultation with the community and council but will include certain road upgrades; and
  - Establishing a Neighbour Benefit Sharing Program which will provide eligible neighbouring landholders with the opportunity to receive annual payments over the operational life of the project.
  - o 1.2m tonnes of CO2 reduction
  - o Reduced price of power for consumers through a reduction in wholesale prices
- Community Consultative Committee Meetings The CCC meetings are the statutory community consultation process as part of the development framework for State Significant Projects. CCC meetings are made of community and stakeholder group representatives, including local councils, and are chaired by an independent chairperson appointed by the Department of Planning, Industry and Environment. For the Hills of Gold, we have had 4 meetings since commencement, in June, September, December 2019 and recently in April 2020. They are the forum where we provide updates and new information on the proposal as we progress through the planning and development phase of the project. Further information, including the minutes of meeting and project updates, are located here: <a href="https://www.hillsofgoldenergy.com/ccc">https://www.hillsofgoldenergy.com/ccc</a>. On this page, there is also a list of 49 questions lodged by members of the Hills of Gold Preservation Inc stakeholder group, and our

responses, which capture commonly asked questions and concerns raised by community members.

• Hills of Gold Preliminary Environmental Assessment – This is the scoping report for the project which was lodged in November 2018 with the NSW Government Department of Planning, Industry and Environment. It contains a lot of the initial preliminary information on the project and what was proposed. The Preliminary Environmental Assessment includes the Preliminary Visual Impact Assessment, which was based on a 97-turbine layout, which has since been revised to a 78-turbine layout and can be found on page 57. The other area, which you indicated an expression of interest in is the Preliminary Noise Impact Assessment, which can be found on page 63, which provides the contour lines of different decibel (dBA) ratings. The contour lines are useful in providing context as to how your residence will be impacted by the noise. The Preliminary Environmental Assessment can be downloaded on the NSW planning portal, using this link:

http://majorprojects.planning.nsw.gov.au/index.pl?action=view\_job&job\_id=9679 An image of the Preliminary Noise Impact Assessment and Preliminary Visual Impact Assessment is also attached if you want to view those directly, both of which were based on a 97-Turbine layout, which has since been revised to a 78-Turbine Layout.

- Hills of Gold Environmental Impact Statement and Development Application Timeline As discussed, we are currently in the process of undertaking various technical assessments required for the project as part of the Secretaries Environmental Assessment Requirements on what is required in the Environmental Impact Statement. These assessments, and the schedule for delivery of information to the community and for public exhibition, can be seen in the attached file named EIS Development Timetable.
- Transport Assessment In September 2019 CCC, the transport route options were
  presented, and feedback was received from members of the CCC. Further information on
  the transport routes can be found in the attachment to the email named *Transport Route*Assessment.
- **Preliminary Visual Montages -** The preliminary visual montages have been completed at the following locations;
  - o Nundle Road
  - o Jenkins Street
  - Crawney Road
  - o Nundle Cemetery
  - Point Street
  - Hanging Rock Lookout

o Morrisons Gap Road

The photomontage package can be downloaded here:

https://www.hillsofgoldenergy.com/news-and-updates

• **Useful Info and FAQ's:** Other general information on wind farms and the planning process for State Significant Projects in NSW is included on the FAQ's page:

https://www.hillsofgoldenergy.com/useful-info

**November 2018** 



# **Wind Farm Newsletter**

#### First Edition

This is the first in what will be regular updates for the community and all stakeholders. We are keen to share as much information with you as possible and listen to and address your concerns.

New South Wales has a robust and thorough planning assessment process that requires extensive environmental assessment, design and community consultation to finalise an application that takes into account the impacts and benefits for consideration for approval. This process has been designed for the protection of the local community and the environment.

Hills of Gold Energy will be a state significant development and will be assessed under the Environmental Planning and Assessment Act of 1979 and most recent updates from 2017.

The process for this assessment will include ongoing community consultation as well as regular updates as further design and assessment of the project is completed. We will post all information regarding the project on the Hill of Gold Energy Website www.hillsofgoldenergy.com and it will also be available from the NSW Department of Planning and Major Projects website.



(Photo: Australian Wind Alliance)

The Clean Energy Council arranged a number of Wind Farms to be open to the Public on the weekend of 21<sup>st</sup> October. These included both White Rock and Sapphire in the New England area. The wind industry has contributed \$2 billion in investment into the Australian economy in 2018 with another 7.6 billion in future projects expected, including the Hills of Gold



# We've submitted our PEA!

On 17 October 2018, we issued our Preliminary Environmental Assessment ("PEA") to the NSW Department of Planning. This submission commences the assessment process for the Project. Shortly, we expect to receive the Secretary's Environmental Assessment Requirements which details the areas required to be considered as part of our Environmental Impact Statement.

The PEA is available to the public on the Department of Planning's Major Projects website at: majorprojects.planning.nsw.gov.au under the Hills of Gold Wind Farm.

Wind Energy Partners are committed to continuing to progress detailed environmental and social studies for submission of a Environmental Impact Statement.

#### Contact Us

For any further information please contact John and Christine within the Nundle area on 0428 676 903 or email us on info@hillsofgoldenergy.com.

# So what's been happening?

# What is being proposed in the Hills of Gold

The Hills of Gold Wind Farm is a proposed 97 turbine State Significant Development. It is proposed to be located between Hanging Rock and Crawney, 9km south of Nundle.

#### Why a project in the Hills of Gold

The area identified for the proposed wind farm has proven strong wind resources and land suitable for the development of wind turbines and associated infrastructure. The proximity to the high voltage electricity "super highway" provides capacity to transmit power across the state. Tamworth as major regional hub has also been identified as a potential source of skilled people to support with the development, construction and operation of the project.

#### Benefits identified in the PEA

- The project once complete will provide clean and renewable electricity for up to 193,900 Australian homes
- Reduce CO2 emissions by 1.2million tonnes per
  annum
- Contribute up to 272 constructions jobs and 34 operational jobs over 35 years
- Contribute to the local economy through increased spending of construction and operational staff
- Diversify NSW reliance on coal fired power and provide replacement electricity capacity for ageing coal fired power plants
- A community enhancement fund has been announced with further details to be determined during 2019.

#### The plan from here

The project is in the early stages of planning following a long wind monitoring campaign conducted since 2011 proved a wind resource feasible to provide benefits to the Australian electricity market.

Wind Energy Partners will continue to engage specialist consultants to consult the community and undertake detailed environmental surveys and assessment. These will support design options intended to be presented along with associated impacts in an Environmental Impact Assessment. The submission is aiming to finalise this assessment in early 2020 for consideration by the Department of Planning in line with the State Significant Development planning pathway.

## Key Results of the Preliminary Environmental Assessment

The preliminary environmental assessment provides the early concept and broad assessment and suitability of a wind farm against the NSW Wind Guidelines. This newsletter aims to provide a snapshot of the progress of the project thus far as there is a lot of information available from our initial independent studies including visual, noise, and biodiversity. Information can be found in our Preliminary Environmental Assessment on the Department of Planning's Major Projects website. A summary of this includes:

- The visual impact of the project has been identified by some in the community as an area of key concern.
- The preliminary visual studies present various vantage points and potential impact
- As further environmental studies confirm the turbine layout options, detailed visual assessment studies will be completed showing photomontages from various key vantage points
- NSW has some of the strictest noise criteria in the world for Wind Farms.
- Investigations for the Hills of Gold site have looked at a worst case scenario however a final design and assessment will utilise the latest wind turbine technology that meet all noise criteria and guidelines
- The protection of fauna and flora is a key focus area of our studies and is required in the Preliminary Environmental Assessment.
- Detailed field surveys will be carried out on specifies identified in the PEA and any further specifies identified while on site
- Bird song recording stations have been established on site for ongoing recording across various seasons
- Results of these studies will assist in turbine locations that have the lowest potential impact on native wildlife.
- The Department of Planning are consulting relevant agencies and are expected to provide the project State Environmental Assessment Requirements (SEARs) which will inform of the detailed requirement to assess prior to lodging an Environmental Impact Statement.

Christmas and New Year are just around the corner and we understand it's been a hard year in the region. We wish everyone in the area a wet, wet Christmas and hope the tanks are full and the creeks running for the New Year.

02
SEPTEMBER



QUARTERLY
PROJECT
NEWSLETTER

# Hills of Gold Wind Farm Project



#### this issue

Project Announcement - ENGIE P.1

Community Consultation Committee P.2

EPBC Referral Act and Met MastsP.3

The Wind Farm Development Process P.4

#### Hills of Gold Quick Facts

Up to 97 Wind Turbine Generators

Max blade tip height of 220 metres (above ground level)

Up to 193,900 households powered per year

Up to 1.2 million tonnes Carbon Dioxide saved per year

Up to 272 construction jobs

Up to 34 operational jobs

\$2,500 per turbine per year to go to Community Enhancement Fund

# Project Announcement – ENGIE Support

Wind Energy Partners is pleased to announce that global energy and services business ENGIE is supporting the Hills of Gold Wind Farm Project.

ENGIE has 160,000 employees across 70 countries and has more than 103 gigawatts of installed power generation capacity, including 25% in renewables, such as wind and solar photovoltaic technologies.

In Australia, ENGIE has 1,200MW of low-carbon generation capacity and more than 800MW of renewable energy under development. The company also recently completed construction of the 119-Megawatt Willogoleche Wind Farm in South Australia.

ENGIE's Australian team is providing financial, technical and commercial support to the Hills of Gold Wind Farm Project, which is in line with ENGIE's ambition to lead the transition to a zero-carbon world.

For more information, please visit www.engie.com.au



ENGIE's Willogoleche Wind Farm, South Australia.

"When I first saw them, I was literally gob-smacked. They're pretty impressive."

Dennis, Bothwell community member on the wind turbine blade delivery event at Goldwind Australia's Cattle Hill Wind Farm Project

Video link:

https://www.yout ube.com/watch? v=iv6DB6EBSZ0

## **Community Consultative Committee**

Since our last newsletter, the Community Consultative Committee ("CCC") for the Hills of Gold Wind Farm Project has formed and two meetings have been held, the first on 12th June and the second on 18th September, 2019.

The meetings were held in the Nundle Library and attended by 13 community representatives from local councils, stakeholder groups and the Hills of Gold Project developer, Wind Energy Partners.



The CCC process is a structured community engagement activity required by the NSW Department of Planning, Industry and Environment, and designed to ensure stakeholder groups are kept informed of the status of State Significant Projects, and that feedback is provided on key issues that may arise during the development of projects.

A Project Update was presented by Wind Energy Partners at each meeting, and all community representatives present contributed to general discussion on matters such as the visual impact of the wind farm, the Community Enhancement Fund, noise, schedule of biodiversity surveys and methodologies, cultural heritage considerations and the wind farm development schedule and process.

The Minutes of the Meeting for June are available on the Hills of Gold Wind Farm website, located at the following link: <a href="www.hillsofgoldenergy.com/ccc">www.hillsofgoldenergy.com/ccc</a>. The Minutes of Meeting for September will also be posted at this location once finalised.

All members of the Nundle, Hanging Rock and broader community are encouraged to engage with CCC representatives as a resource for accessing up-to-date project information and opportunity to pose questions for representatives to raise during the meetings. This is in additional to other community consultation avenues, such as via the Hills of Gold website (www.hillsofgoldenergy.com) or via email at info@hillsofgoldenergy.com.



# **EPBC Act Referral Lodgement**

Wind Energy Partners have lodged an Environmental Protection and Biodiversity Conservation (EPBC) Act referral as part of the development of the Hills of Gold Wind Farm Project.

Proponents of wind farm projects are required to assess whether their action has the potential to impact Matters of National Environmental Significance or "MNES". Examples of impacts to MNES include such things as National heritage places, threatened species and ecological communities migratory species, wetlands of international importance and others.

The biodiversity surveys currently underway and scheduled for 2019 and 2020 will allow the identification and survey of the following and other threatened species and ecological community within the project area and will play a pivotal role in the decision-making process to avoid or minimise impacts.

For more information, the EPBC Act referral is available for viewing and public comment at the following website link: <a href="http://epbcnotices.environment.gov.au/publicnoticesreferrals/">http://epbcnotices.environment.gov.au/publicnoticesreferrals/</a>.

MNES	Wind Farm Development Corridor	Transmission Line Investigation Area					
Threatened Ecological Communities							
White Box – Yellow Box – Blakelys Red Gum Grassy Woodland (critically endangered)	Significant impact unlikely	Potential for direct impact of the TEC mapped within the transmission line investigation area					
Threatened flora species							
Bluegrass (vulnerable)	Significant impact unlikely	Significant impact unlikely					
Small Snake Orchid (endangered)	Potential for significant impact if identified within footprint	Potential for significant impact if identified within footprint					
Blackbutt Candlebark (vulnerable)	Significant impact unlikely due to limited habitat	Potential for significant impact if identified within footprint					
Fragrant Pepperbush (vulnerable)	Impact unlikely due to limited habitat Potential for significant if identified within foot						
Austral Toadflax (vulnerable)	Potential for significant impact if identified within footprint	Potential for significant impact if identified within footprint					
Threatened fauna species							
Booroolong Frog (endangered)	Significant impact unlikely, as project unlikely to directly impact on hydrology in Peel River	Significant impact unlikely					
Regent Honeyeater (critically endangered)	Significant impact unlikely	Potential to impact of suitable habitat within investigation area					
Spotted-tailed Quoll (endangered)	Significant impact unlikely	Significant impact unlikely					
Greater Glider (vulnerable)	Significant impact unlikely Significant impact unlil						
Brush-tailed Rock-wallaby (vulnerable)	Significant impact unlikely	Significant impact unlikely					
Koala (vulnerable)	Significant impact unlikely	Significant impact unlikely					
Grey-headed Flying-fox (vulnerable)	Significant impact unlikely Significant impact unl						
Migratory species							
Fork-tailed Swift	Potential for significant impact if identified within footprint Significant impact unl						
White-throated Needletail	Potential for significant impact if identified within footprint	Significant impact unlikely					
Satin Flycatcher	Significant impact unlikely	Significant impact unlikely					
Rufous Fantail	Significant impact unlikely Significant impact unlike						



#### MET MASTS ON THE HILL

The Hills of Gold Wind Farm Project reached a significant milestone in the month of July, with the installation and commissioning of two new meteorological masts.

The masts have been constructed at strategic locations within the planned wind farm development corridor. Their purpose is to collect wind and other relevant meteorological information to further understand the localized climatic conditions at the site and assist in developing the most optimal wind turbine layout and configuration.

The masts are 110 metres above ground level in height and have specialized weather sensors and instrumentation located at specific heights, to collect and measure differences in wind and weather data at various elevations.

The two new masts are in addition to the existing met mast located to the north-east of the wind farm development corridor, and Light Detection and Ranging unit or "LIDAR", which is currently in use to capture and collect additional wind data.

The masts have been constructed to the relevant

Australian and International standards for
meteorological masts, and notification has been given
to the Civil Aviation Safety Authority, local aerial
agricultural associations and operators and
aeronautical clubs.

Have a Question?

Feel Free to Contact Us

Someva Renewables

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Sydney NSW 2000

+61 449 631 875

mike.s@someva.co m.au

www.somevarenew ables.com

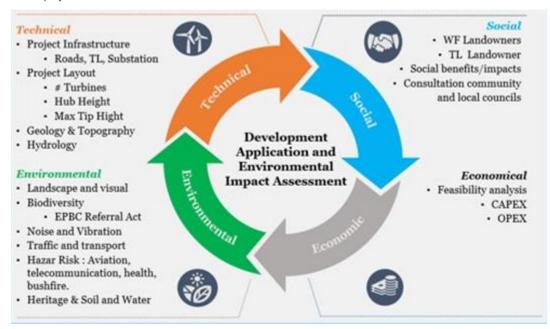


# The Wind Farm Development Process

The Hills of Gold Wind Farm Project is currently undergoing a design optimisation process. This process is a multi-disciplinary exercise that is performed under the planning framework and Federal, State and Local government requirements. It considers Technical, Environmental, Social and Economical variables, as shown in the below diagram.

The main goal of this exercise is to find the optimal project footprint for the wind farm and the transmission line route which avoids and/or minimises negative environmental and social impacts, and is compliant with the project's planning framework, relevant local, state and federal legislation and guidelines and landowner approvals.

As we continue to collect project information from the completion of biodiversity and cultural heritage surveys, community engagement processes, traffic/transport assessments, wind resource monitoring, wind turbine and transmission line design feasibility studies, landowner, etc. we will begin the process of optimising the final design of the project.



#### Additional Resources

- Department of Environment and Energy <u>www.environment.gov.au</u>
- NSW Department of Planning, Industry and Environment <u>www.dpie.nsw.gov.au</u>
- NSW Wind Energy Framework and Guideline <u>www.planning.nsw.gov.au/Policy-and-Legislation/Renewable-</u> Energy/Wind-Energy-Framework
- National Wind Farm Commissioner www.nwfc.gov.au
- Clean Energy Council www.cleanenergycouncil.org.au
- Australian Wind Alliance www.windalliance.org.au
- Hills of Gold www.hillsofgoldenergy.com
- Someva Renewables www.somevarenewables.com

September 2020



### This issue:

- P1 Updated Layout
- P2 Friends of the Wind Farm
- P2 Community Enhancement Fund
- P3 Addressing Community Questions
- P3 Project Timeline Update
- P3 Next Steps for Community Engagement
- P4 Preliminary Photomontage Display
- P4 Appreciation for Firefighters



#### **Updated Layout**

The Hills of Gold Energy project has been updated as a result of:

- Consultation with neighbour's
- Feedback from preliminary photomontages
- Discussion on design changes with technical consultants

There was a multidisciplinary workshop, which involved civil design input, biodiversity mapping, heritage surveys and input from community consultation.

The purpose of the workshop was to reduce the overall footprint.

This involved a process of discussing every turbine location, hardstand, ancillary infrastructure and road layout to assess opportunities to improve the project design.

A map of the updated layout is included as an attachment to the newsletter.

# Updated Layout Benefits

- Community Feedback included
- Avoided Impact
- Civil designs aligned with environmental constraints
- Discussion between all technical consultants
- Reduced overall footprint

#### Friends of the Wind Farm

A group of local residents from Nundle and Hanging Rock have started to become active in showing their support for the project. The Friends of the Wind Farm group have produced signs in support of the project, and they are being displayed by local residents who are part of the group. The Hills of Gold project welcomes the support from the local community, and are grateful for the opportunity to continue to consult with all community members.



Friends of the Wind Farm sign displayed on Morrisons Gap Road



Friends of the Wind Farm signs displayed in Nundle and Hanging Rock

Up to date 80 signs have been made with more requested from Friends of the Wind Farm supporters

#### **Community Enhancement Fund**

The proposed community enhancement fund is a way the project is planning to directly share the benefits with the local communities. The community enhancement fund charter will be submitted along with the development application for determination by the Department of Planning, Industry and Environment. To design the fund, consultation with the community, local aboriginal representatives and the local councils is currently ongoing.

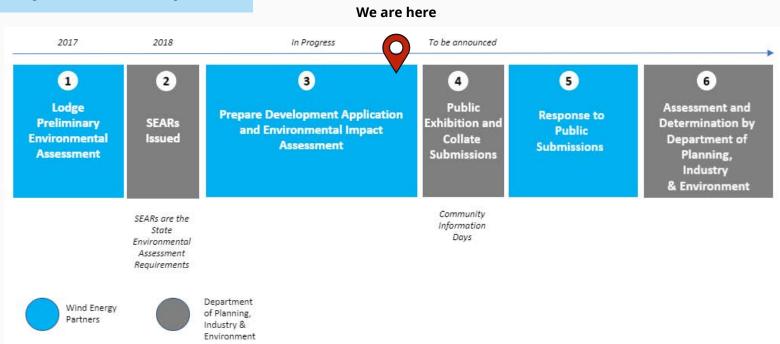
A workshop was held on the 26th of February with the Community Consultative Committee (CCC) and alternate members.

A commitment submitted with the development application to establish a community enhancement fund aligned with community interests.





#### **Project Timeline Update**



#### **Addressing Community Questions**

Feedback was raised from community members in a recent CCC that if the Hills of Gold Wind Farm was not built they would not have access to power with Liddell Power Station scheduled to close in 2023. We wish to be clear that there is a strong pipeline of clean energy proposed to replace Liddell and Bayswater Power Plants. The Hills of Gold Wind Farm has the benefit of being located along this existing transmission superhighway connecting customers from Tamworth to Newcastle and beyond. Some community members also sought clarification that Wind Energy Partners does not have compulsory acquisition rights which was confirmed during this meeting.

#### **Next Steps for Community Engagement**

There are many opportunities in the months leading up to submission of the development application for community consultation. There are two CCC meetings scheduled leading up to submission of the development application. The minutes of the meetings along with the presentation slides, will be made available on the Hills of Gold Energy website. Furthermore, there will be community information days upon submission of the development application, for information to be shared and questions to be answered. We invite any interested community members to contact Aref Taleb or Jamie Chivers.

22nd September CCC

29th October CCC

Community Information days after development application submission



#### **Preliminary Photomontages on Display**

The preliminary photomontages were printed for display in the Nundle Library from the 22nd of June. Updated viewpoint photomontages will be printed and put in the library for display and will be based on the updated 70 turbine layout.



Preliminary Photomontages on display in Nundle Library

Have any questions?

Feel free to contact us

Someva Renewables

36-38 Young St, Sydney NSW 2000

Jamie Chivers +61 423 336 345

jamie.c@someva.com.au

Aref Taleb +61 435 135 937

aref.t@someva.com.au

www.somevarenewables.com

#### **Appreciation for firefighters**

The Hills of Gold Wind Farm team wanted to pass on our acknowledgement of how hard the fires have been on the New England Area and how prolonged drought was seriously impacting people's livelihoods. We want to say thank you to those in the community who have been working for the safety of the community. We are consulting with the Nundle and Hanging Rock RFS and will be providing ways to improve bushfire access as part of our development application. We were also pleased to see the recent rains in the area and the relief they have brought to farmers and the wider community.

#### **Additional Resources**

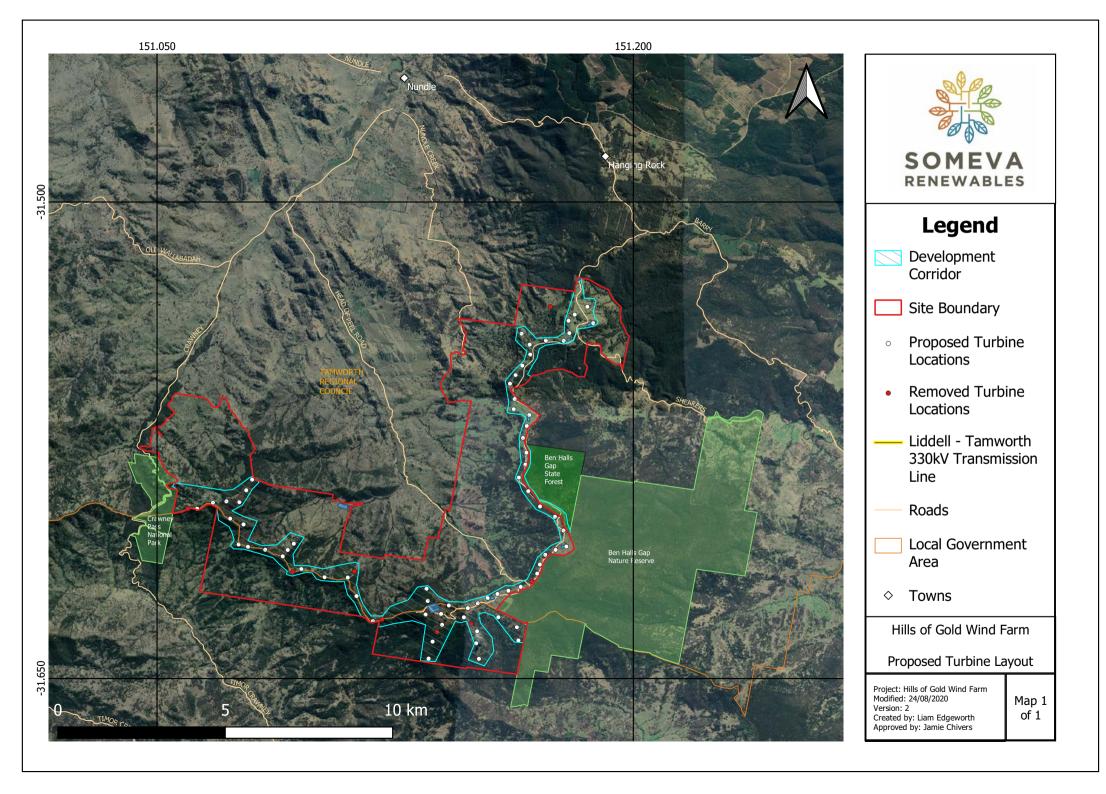
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#### **C.3.4 PRESENTATIONS**





# Wind Energy Partners

- 100% Australian Owned
- Principals have a track record in the power sector, renewables, construction and law.

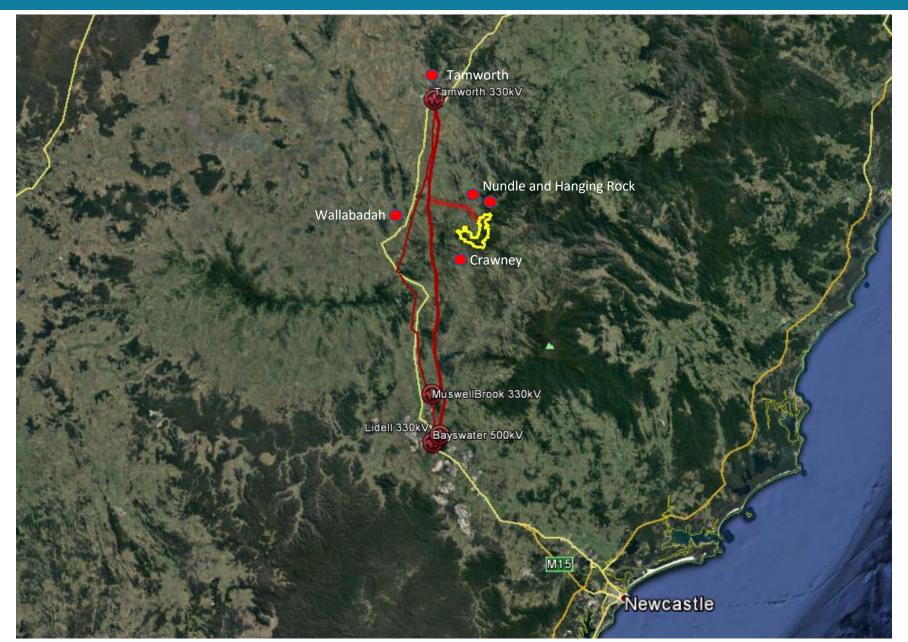


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- Development Management including planning, technical, and construction advisory
- Track record of 300MW of wind advisory in Australia and 550MW of Wind investment and construction internationally



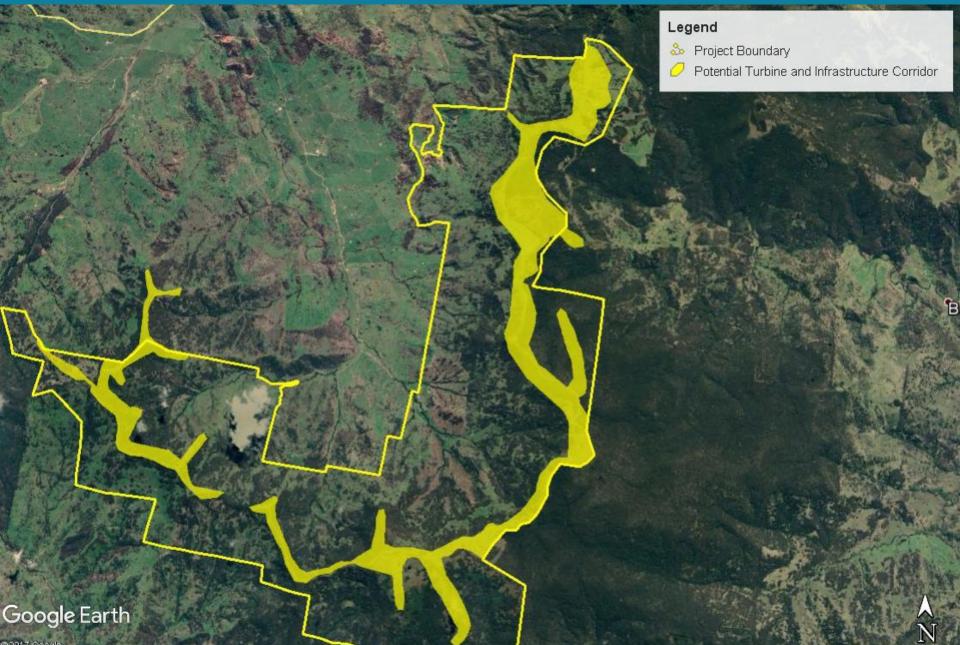
- Locally owned (15km north of Nundle)
- Community Engagement
- Experience in energy sector and recently successful wind project near Goulburn





# Early Concept Boundaries and Development Corridor















Australian Global Emissions Targets	<ul> <li>Hills of Gold Energy will support Australia meeting our global emission target by avoiding almost 1m tonnes of CO2 per annum</li> </ul>
Reducing the Cost of Energy	<ul> <li>Expected to support a reduction in the cost of wholesale electricity and provide more renewable energy into the district</li> </ul>
Replacing Coal Fired Power	<ul> <li>Provide a viable replacement for old coal fired power stations and power close to 172,000 Australian homes</li> </ul>
Wind resource and Connection	<ul> <li>The project has a proven strong wind resource, is close to existing demand with a strong connection</li> </ul>
Existing roads and tracks	Good tracks across the ridge already exist

# Status and Timeframes

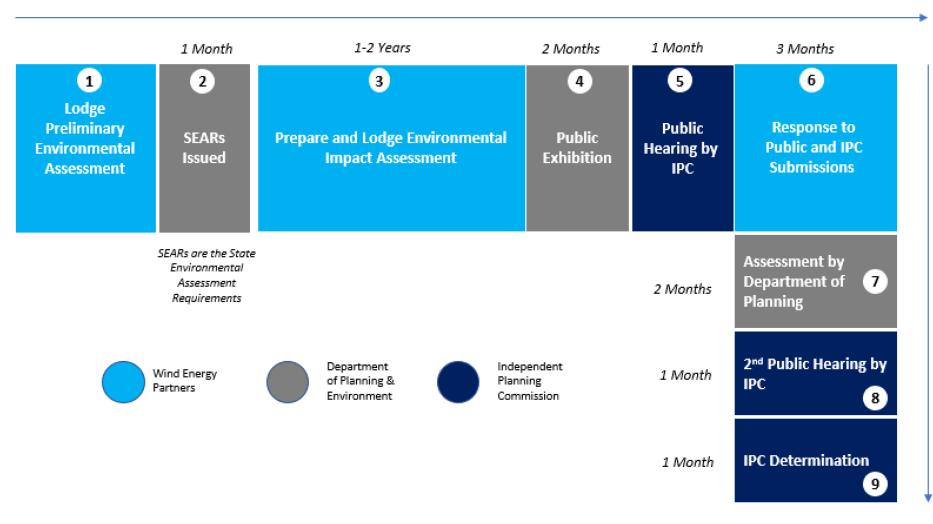


	2018		2019			2020						
Milestone	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Project Scoping												
Development Application												
Community Consultation												
Development Assessment												
Network Connection												
Engineering												
Construction Tender and Contracting												
Construction Start												

Indicative only and will be subject to NSW Planning Process requirements

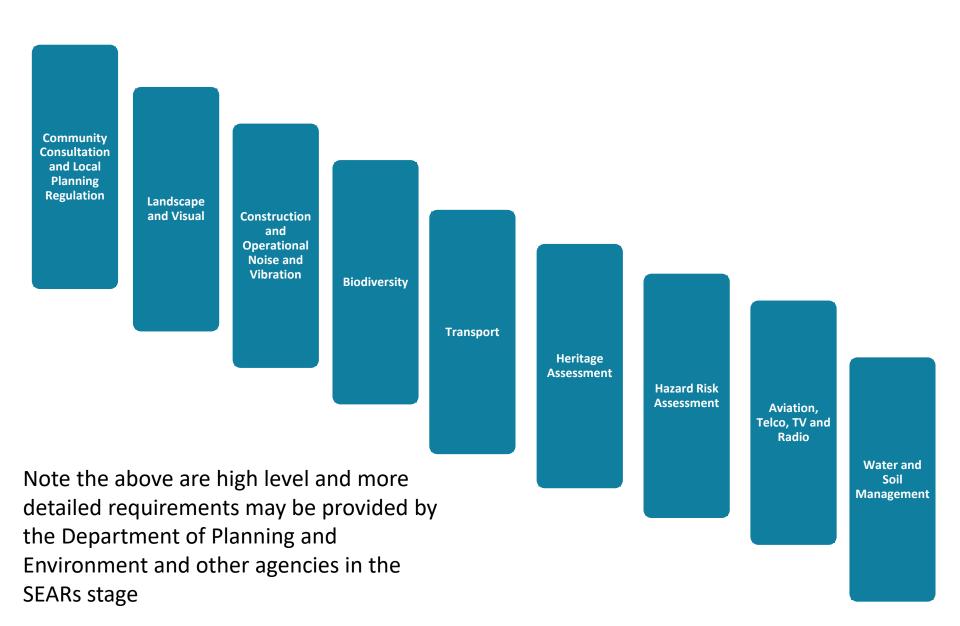
### The NSW State Significant Project Planning Process





Timeframes are estimates and subject to change





# What's in it for the community



Jobs	An increase in economic activity including an estimated: • 272 construction jobs over ~2 years • 34 operational and maintenance during the 25 year project life • Spending of construction and operational workers locally
Local Investment	Up to 14-20 direct landowners across entire project will spend in the community
Community Impact Fund	<ul> <li>Community Impact Fund to be established</li> <li>Discussion with Community Representatives to begin once SEARs issued and CCC</li> </ul>
Other Benefits	<ul> <li>Increase in spending of construction and operation staff</li> <li>Increased demand for accommodation, food and services</li> <li>Potential for additional attraction for tourists visiting Nundle</li> <li>Improvement to roads and local infrastructure (reduced bushfire risk)</li> <li>Educational opportunities for schools and university groups</li> </ul>



## Real Jobs Examples and Opportunities



#### Real jobs such as:

- Administration staff such as payroll staff, office managers, contract compliance
- Weed and pest control
- Fencing contractors
- Earth works
- Builders for O&M office
- Labour during foundations and building works
- Mechanics and electrical engineers

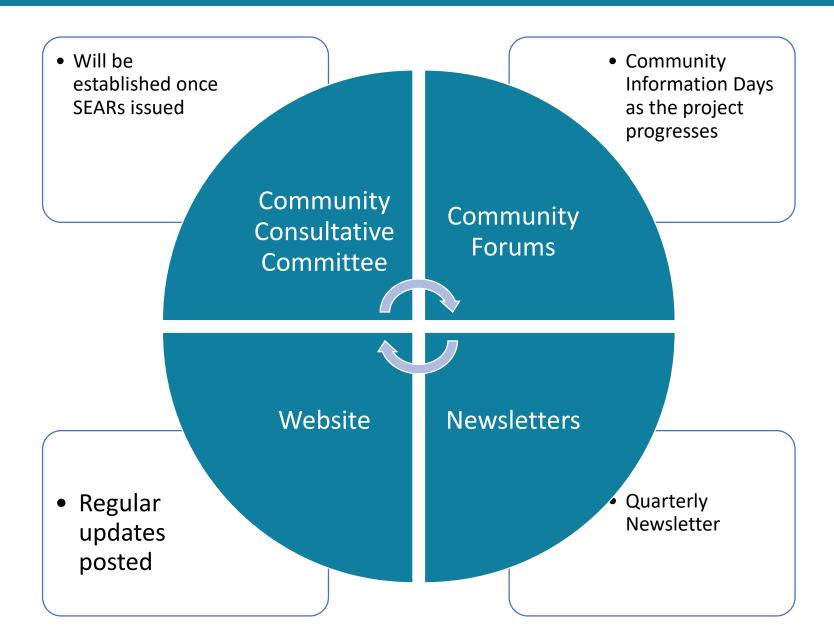
#### Suppliers:

- Labour
- Sand
- Water
- Crushed rock
- Cement
- Gravel
- Equipment hire(tractors, graders, etc)















#### Next meeting once:

- State Environmental Assessment Requirements Provided (SEARs)
- Progress towards Community Consultation Committee
- Community Impact Fund Design Ideas
- Further suggestions...

#### Contacts





#### Case Study – Local Opportunities



- A local baker in Glen Innes, Eileen Halloran said the renewables building boom had made a difference to her business and the town.
- "It was a downer before, the town was in a bit of lull," she said.
- Now her bakery opens an hour earlier and she has employed four more staff.
- "It's brought more workers to town, so therefore it's bought more income and more jobs, more stability."



- An independent consultant (SKM)
   determined that each worker on a project
   spends \$25,000 in the local economy over
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  - Rent and accommodation
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Sourced from ABC News (19th October 2017)



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- This shows a fire started by a harvester on farming land in Australia. Local fire brigades were more easily able to use a wind farm access track to successfully contain the fire.

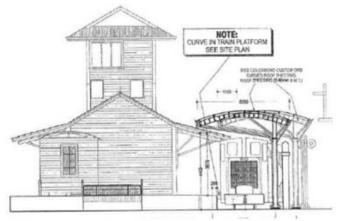


Source: AGL CCC Meeting

#### Case Study – Improving Heritage

SOMEVA

- In 2017 the Collgar Wind Farm was asked to contribute to preserving historic rail history in the region by funding a cover over the rolling stock (trains) at the Merredin Railway Museum.
- Debbie Morris from the Merredin CRC said that "the cover looks absolutely fantastic and as well as protecting the trains from deteriorating, it is extremely aesthetically complementary to the current station buildings".



Plans for the cover of the Rolling Stock



Source: Collgar Wind Farm





Wind Energy Partners was established in 2010 to act as a developer of renewable energy projects in Australia.



#### **Colin Liebmann**

University of Sydney Bachelors of English Cranfield School of Management, UK MBA

#### **Principal of Wind Energy Partners**

- Extensive senior management experience in the renewable energy industry in Australia including Managing Director of RES Australia and Recurrent Australia
- Identified and secured a pipeline of 1.5GW of utility scale solar project opportunities on 21 sites across 4 states

Someva was established in 2016 to provide developers access to institutional investors while adding commercial and technical expertise to projects.



#### **Jamie Chivers**

Sydney University Bachelor Economics MIT Portugal Sustainable Energy Systems

#### **Investment, Commercial and Development Management**

- Strong understanding of Australian market for development assets
- As CEO of Equis controlled Redaya Energi lead 20 full time employees in development of 1.2GW of Wind and Solar assets in Indonesia
- As Head of Investments for Equis owned Energon, lead contracting and investments of 550MW of Wind Power across 3 Asian markets
- Development Management expertise in Australian on 3 wind projects and 2 solar projects totalling 480MW.



#### **Chris Gavin**

Fordham University New York Masters and Bachelor Science and Accounting CPA – New York

#### **Investment and Development Management**

- 2 years with Mazar Global Infrastructure Finance on financial model development focused on Australian wind and solar projects as well as social infrastructure investments
- 4 years with Deloitte in New York and Sydney in infrastructure sector financing



#### Jerry Randall

Cambridge University BA (1st Class)+MEng (Distinction) Aerospace and Aerothermal Engineering

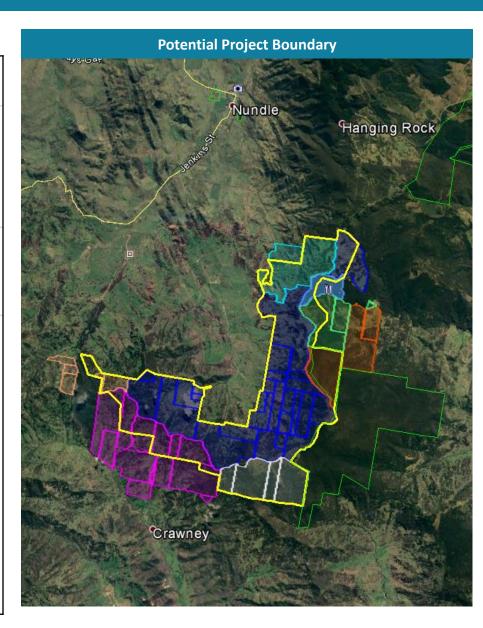
#### **Engineering and Design**

- Specialist energy engineer having worked in the industry since 2009
- 4 years at DNV GL as a Development Engineer and Regional Team Leader across South East Asia
- Expertise in WAsP, WindFarmer, WindPro, CFD for complex sites, GIS mapping software, turbine site suitability and operational analysis

## Nundle Wind Farm Project Overview



Location	Along the ridgeline following the Morrison Gap Rd, south of Hanging Rock
Project Infrastructures	<ul> <li>Expected to be up to 400MW of up to 98 wind turbines</li> <li>One on-site collector substation</li> <li>Overhead powerlines and switchyard at connection point</li> <li>Access road &amp; tracks for construction and maintenance</li> </ul>
Short Term Project Objectives	<ul> <li>Finalise involved landowners and begin community consultation</li> <li>Submit revised project scope to government in March 2018</li> </ul>
Project Plan	<ul> <li>Project Development Process (~ 3-4 years)         <ul> <li>Environmental Assessment</li> <li>Community Consultation</li> <li>Permitting</li> <li>Construction Contracting</li> <li>Capital raise and power sales</li> </ul> </li> <li>Construction (~ 2 years)         <ul> <li>Access roads</li> <li>Foundation work &amp; tower erection</li> <li>Electrical work &amp; project commissioning</li> </ul> </li> <li>Operation &amp; maintenance (~ 35 years)</li> <li>Decommissioning         <ul> <li>Electrical infrastructure removal</li> <li>Tower removal</li> <li>Site rehabilitation</li> </ul> </li> </ul>



## Nundle Wind Farm Project Justification



The Context	<ul> <li>Australian Renewable Energy Target to reach 33,000 GWh of electricity generation from renewable sources</li> <li>Australian coal power stations are planning to be retired and replacement capacity is required</li> <li>Australian commitment to 26-28% CO2 emissions reductions by 2030 at Paris Agreement</li> </ul>
Nundle Wind Farm Site	<ul> <li>High elevation exposed ridgeline with high long term average wind speed</li> <li>High voltage transmission line located near site</li> </ul>
Wind Farm Associated Economics	For a 400MW project the following can be assumed:  • Potential for up to 98 turbines  • 272 construction jobs during construction (~2 years)  • 35 operational and maintenance during project life (~ 35 years)  • 1,082 GWh of green electricity generation per annum, equivalent to:  - 982,000 tons of CO2 emission reduction  - 170,000 Australian homes consumption
Potential Community Opportunities	<ul> <li>Increased accommodation demand during development, construction and operations</li> <li>Increased visibility for existing tourism operators and local contractors</li> <li>Wind farm tours from local operators</li> <li>Funding of local community support initiatives through dedicated community fund</li> <li>Improvement to roads and local infrastructure</li> <li>Educational opportunities for school and university groups</li> </ul>





## Adding capacity to NSW Government Renewable Energy Precinct



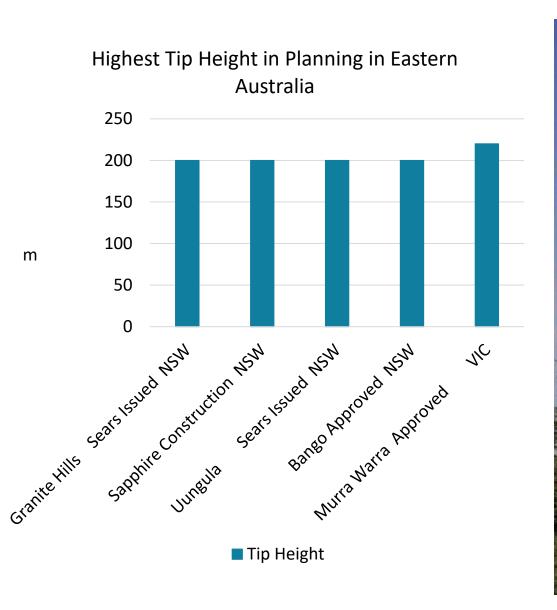
## New England is planned as a renewable energy hub and has been designated as one of the six NSW Government Renewable Energy Precincts to support reaching 20% renewable energy target.

Project	White Rock	Glen Innes	Sapphire	Nundle	Total
Capacity (MW)	175	81	270	400	926MW
Employment during construction	250	85	250	272	857 Jobs
Employment during project life	20	7	20	34	81 Jobs
Annual Generation (GWh)	830	206	1,000	1,082	3,118GWh
Equivalent CO2 Emission Reduction (tons)	754,000	195,000	900,000	982,000	2,831,000tons





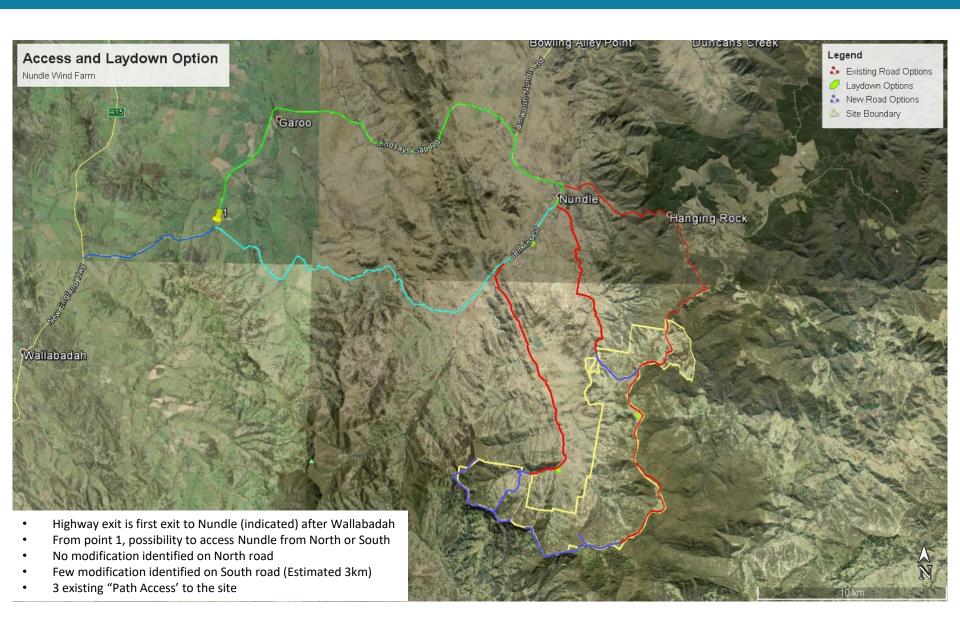




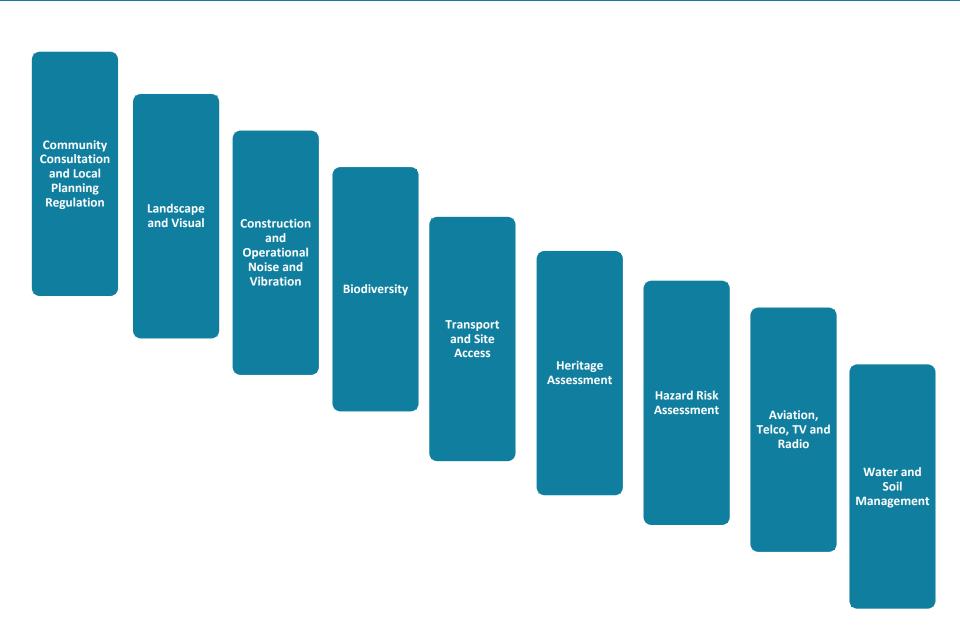


## Access from Highway









## Current Development Plan



	2018			2019				2020				
Milestone	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Project Scope and Land Finalised												
Development Application												
Community Consultation												
Development Assessment and Approval												
Network Connection												
Offtake Agreement												
Engineering												
Contracting And Procurement												
Capital Raise for Financial Close and Construction Start												

## Thank you for your time









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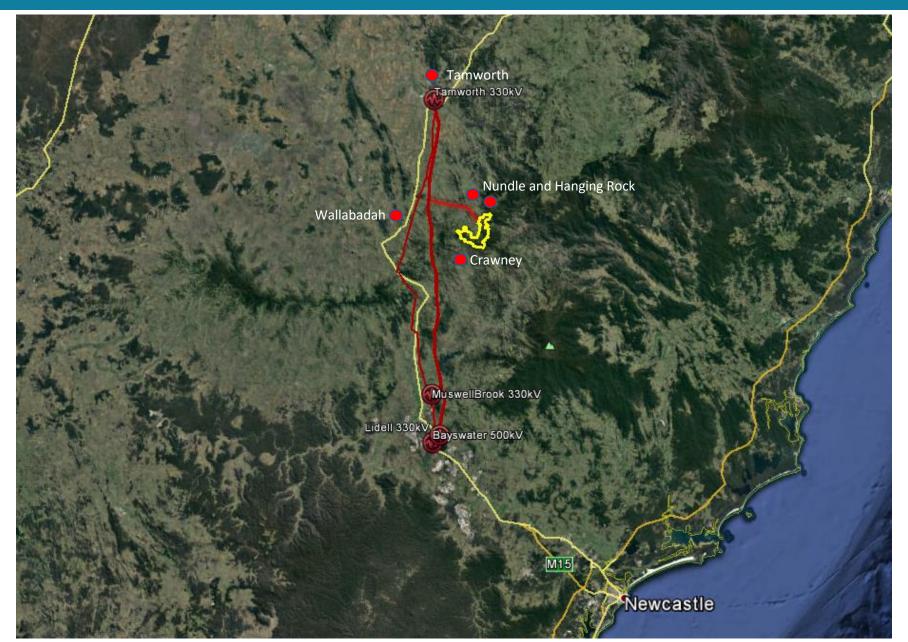


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## Early Concept Boundaries and Development Corridor



- Boundary
  - 👢 Hills Of Gold Boundary
- Construction Corridor
  - Construction Corridor
- Site Access Route
  - Site Access 1
  - Site Access 2













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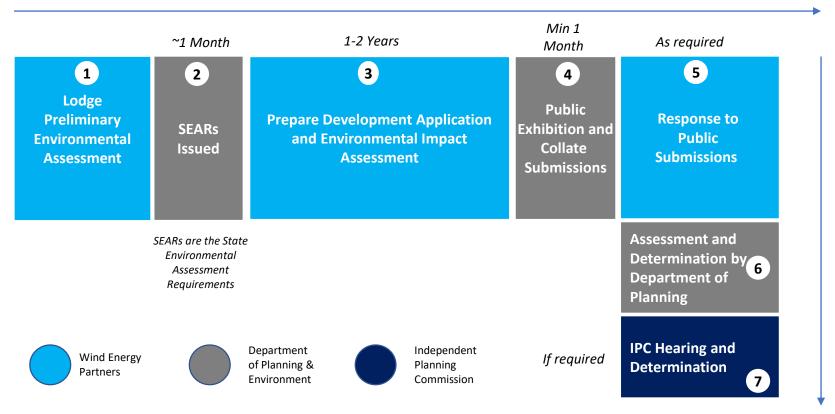


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#### The NSW State Significant Project Planning Process

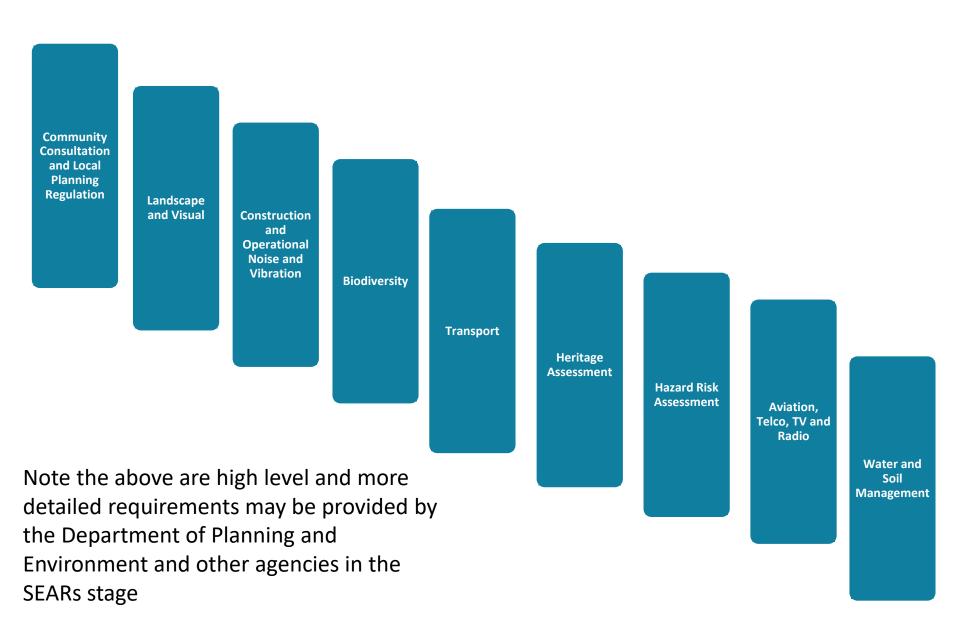




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## What's in it for the community



Jobs	An increase in economic activity including an estimated: • 272 construction jobs over ~2 years • 34 operational and maintenance during the 25 year project life • Spending of construction and operational workers locally
Local Investment	Up to 14-20 direct landowners across entire project will spend in the community
Community Impact Fund	<ul> <li>Community Enhancement Fund commitment of \$2,500 per turbine once operating</li> <li>Discussion with Community Representatives to begin once SEARs issued and CCC formed</li> </ul>
Other Benefits	<ul> <li>Increase in spending of construction and operation staff</li> <li>Increased demand for accommodation, food and services</li> <li>Potential for additional attraction for tourists visiting Nundle</li> <li>Improvement to roads and local infrastructure (reduced bushfire risk)</li> <li>Educational opportunities for schools and university groups</li> </ul>



#### Real Jobs Examples and Opportunities

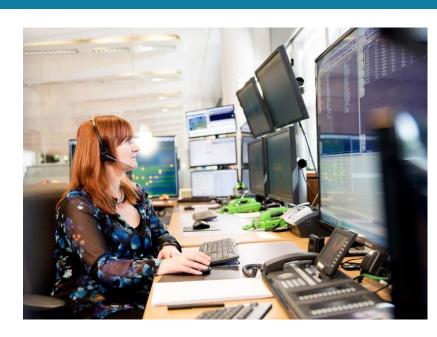


#### Real jobs such as:

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- Builders for O&M office
- Labour during foundations and building works
- Mechanics and electrical engineers

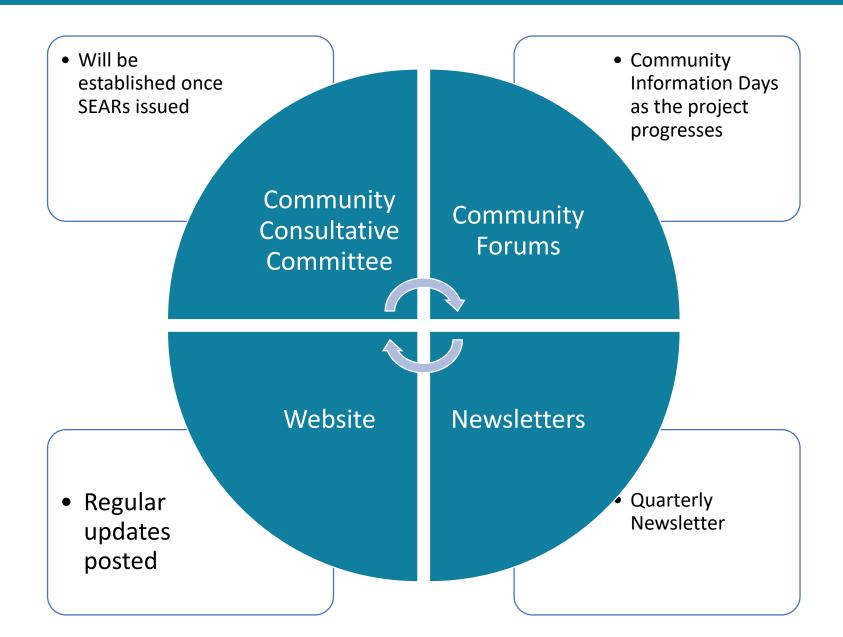
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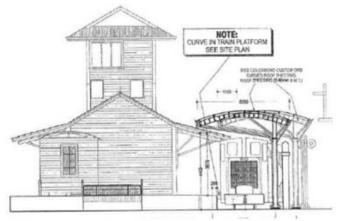


Source: AGL CCC Meeting

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Plans for the cover of the Rolling Stock



Source: Collgar Wind Farm



#### Next meeting once:

- State Environmental Assessment Requirements Provided (SEARs)
- Progress towards Community Consultation Committee
- Community Impact Fund Design Ideas
- Further suggestions...







## Meeting Agenda



### **Agenda**

- 1. Project team introductions
- 2. Project background
  - Wind Farm location, corridor and infrastructure.
- 3. Project progress update
  - Biodiversity/ecological surveys ARUP
  - Indigenous cultural heritage surveys ARUP
  - Transport route survey RJA
  - EPBC Act Referral ARUP
- 4. Existing understanding of biodiversity values
- 5. Biodiversity survey methodology

## 1. About Our Team





- 100% Australian Owned
- Principals have a track record in the power sector, renewables, construction and law.



- 100% Australian Owned
- Development Management including planning, technical, and construction advisory
- Track record of 300MW of wind advisory in Australia and 550MW of Wind investment and construction internationally



- Engie has entered into a commercial arrangement to provide support to Wind Energy Partners (WEP), the HOGWF developer.
- Providing financial, technical and commercial support to WEP to continue HOGWF development and seeks to eventually support the construction and operation of the project.

## 1. About Arup and Biosis



# ARUP

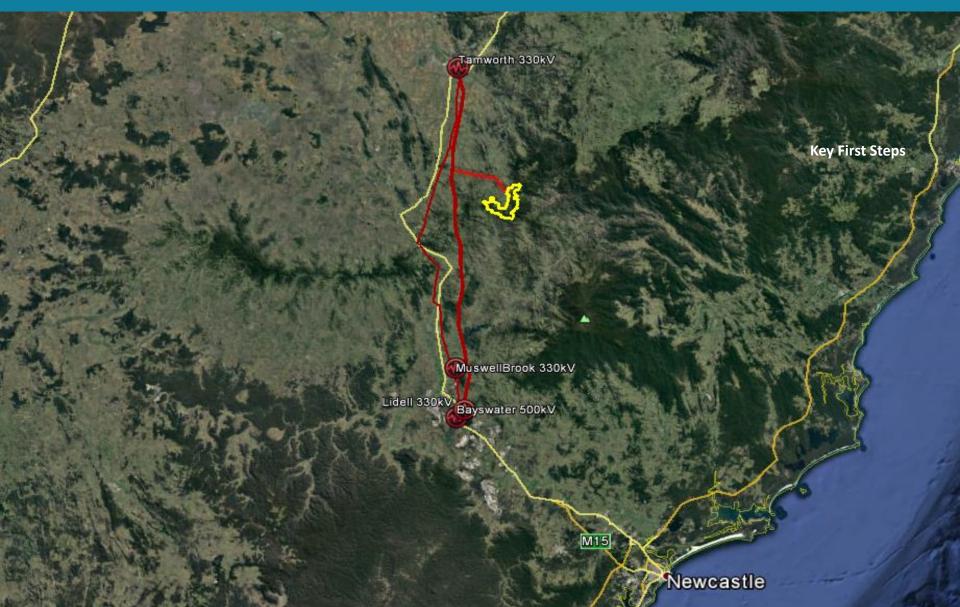
- Independent, employee-owned consultancy
- Environmental Impact Assessment
- Biodiversity specialists
- Botanical and vegetation assessment specialists
- Accredited assessors under the BAM



- Biodiversity specialists fauna, zoology and
- Bird and bat strike collision risk modelling
- Accredited assessors under the BAM

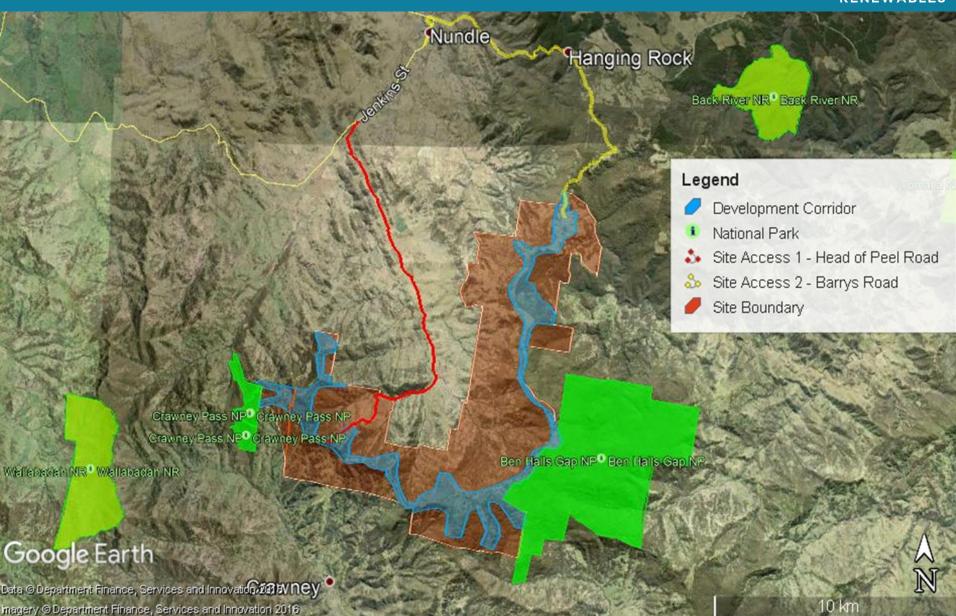
## 2. Project Background - Location





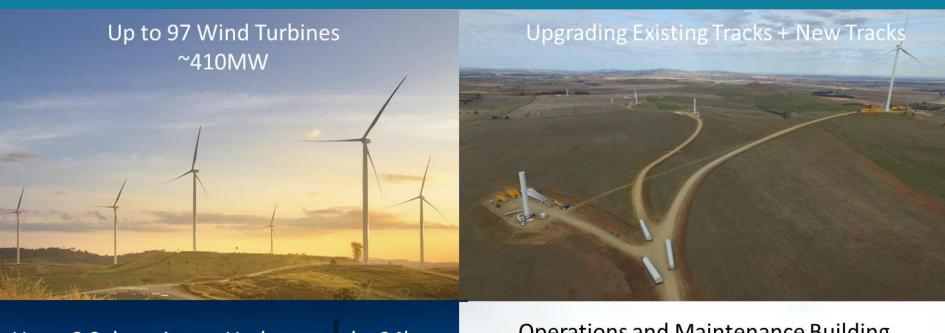
## 2. Project Background – Wind Farm Corridor





### 2. Project Background – Infrastructure





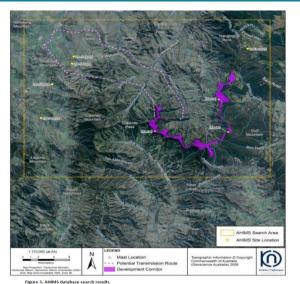




### 3. Project Progress Update



- Biodiversity/Ecological surveys ARUP.
  - Complete scope developed to inform EIS
  - Meeting with OEH August survey methodologies approach
  - Includes Winter surveys (August) and Spring surveys (October)
- Indigenous cultural heritage surveys ARUP.
  - Preliminary heritage survey completed;
  - Wind farm and transmission line development corridor desktop assessment and AHIMS Search
  - Due diligence site survey on met mast locations no finds
- Transport route survey RJA.
  - Route options from Newcastle Port to Nundle and Site
  - Transport feasibility of major components (blades, towers, rotors, etc.) along existing road infrastructure
- EPBC Act Referral ARUP.
  - Preliminary biodiversity surveys have concluded the potential for impact to MNES (listed species/TEC's).
  - Precautionary strategy to be taken, inclusive of assessment of multiple route options under consideration.



ROUTE STUDY Newcastle to Hills of Gold Windfarm

**168.1 Km's:** Wybong Road onto Kayuga Road at Muswellbrook.

Image 1:









#### Studies to date

- 5-day field survey habitat assessment and vegetation community mapping
- 5 Songmeters deployed across site
- Habitat suitability assessment for threatened flora and fauna

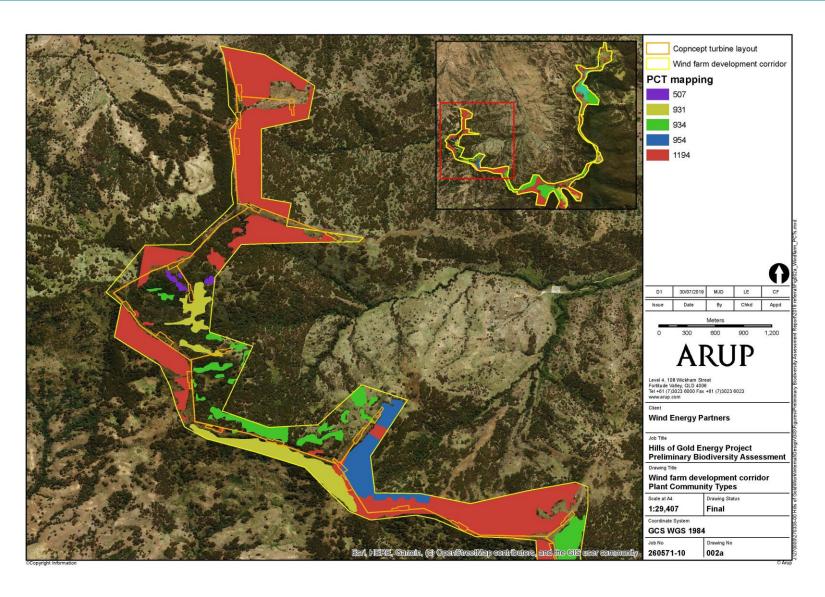
#### **Findings**

- 6 Plant Community Types
- Dominated by Snow Gum-Mountain Gum-Mountain Ribbon Gum open forest
- Quality variable across site remnant, regrowth and non-native
- Adjacent Ben Halls Gap National Park

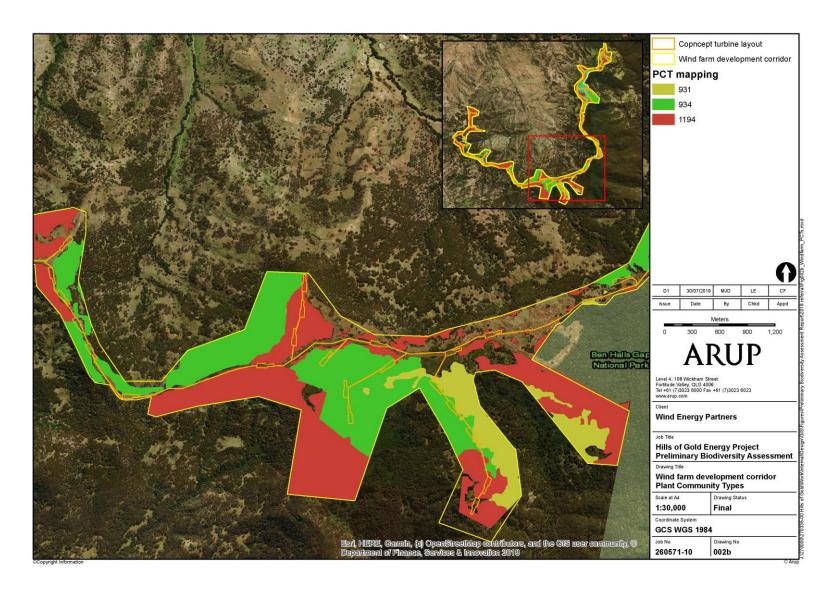
#### Threatened species and communities

- One TEC (Snow Gum-Mtn Gum-Mtn Ribbon)
- Threatened fauna likelihood: 2 frogs, 19 birds,
   20 mammals
- Threatened flora likelihood: Purple Pepperbush recorded and 8 species with potential

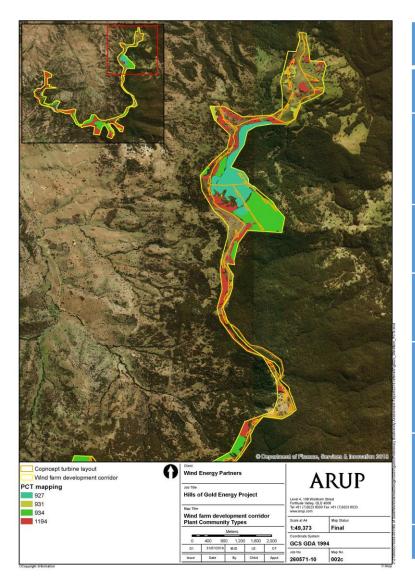






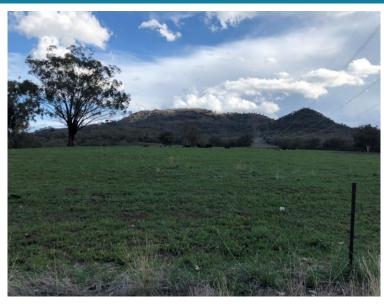






PCT ID	PCT Name	Aroa (ba)
PCTID		Area (ha)
507	Black Sallee - Snow Gum grassy woodland of the New England Tableland Bioregion	2.1
927	Messmate - Brown Barrel grassy open forest of escarpment ranges of the NSW North Coast Bioregion and New England Tableland Bioregion	76.3
931	Messmate - Mountain Gum tall moist forest of the far southern New England Tableland Bioregion	118.8
934	Messmate open forest of the tableland edge of the NSW North Coast Bioregion and New England Tableland Bioregion	285.5
954	Mountain Ribbon Gum - Messmate open forest of escarpment ranges of the NSW North Coast Bioregion and New England Tableland Bioregion	21.6
1194	Snow Gum - Mountain Gum - Mountain Ribbon Gum open forest on ranges of the NSW North Coast Bioregion and eastern New England Tableland Bioregion	502.5
TOTAL		1,006.8







#### Studies to date

- Desktop assessment only final corridor yet to be defined
- Brief reconnaissance only
- Habitat suitability assessment for threatened flora and fauna

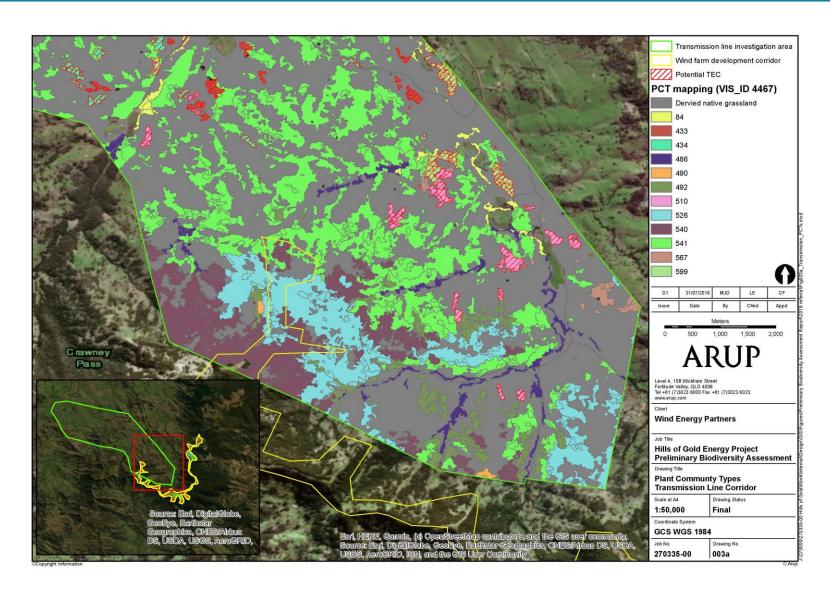
#### **Findings**

- White Box-Yellow Box-Blakely's Red Gum Grassy Woodland and Derived Native Grassland
- Agricultural land use dominant, with patchy native vegetation

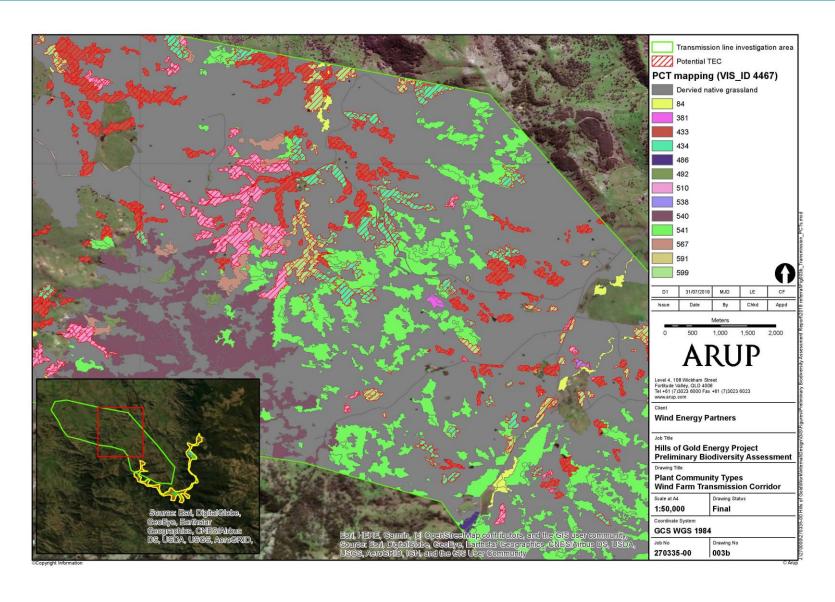
#### **MNES**

- White Box-Yellow Box-Blakely's Red Gum Grassy Woodland and Derived Native Grassland
- Habitat for Booroolong Frog, Koala, Red Goshawk, Swift Parrot, Grey-headed Flying-fox

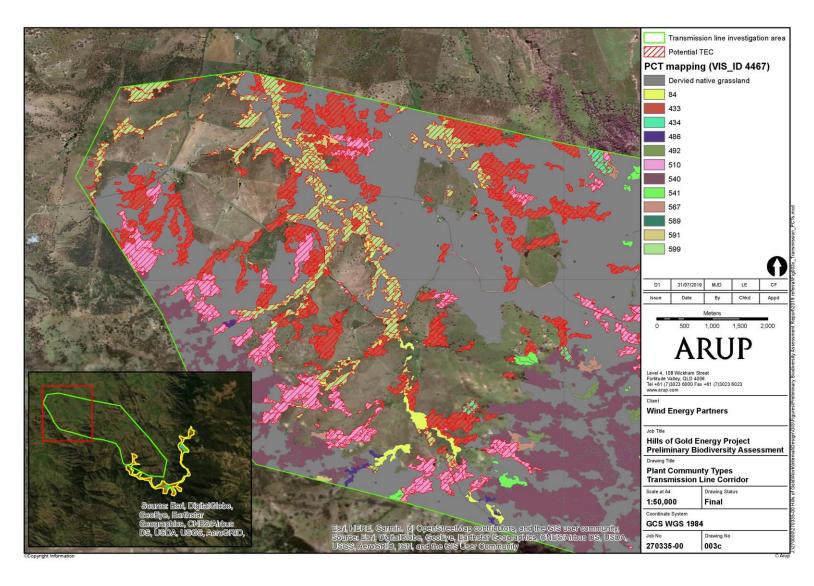












# 4. Biodiversity values – threatened species



Plants			
Acacia atrox	Myall Creek Wattle	Any time	Spring
Asterolasia sp. 'Dungowan Creek'	Dungowan Star Bush	Any time	Spring
Chiloglottis platyptera	Barrington Tops Ant Orchid	Sep - Oct	Spring
Commersonia procumbens		Aug - May	Spring
Dicanthium setosum	Bluegrass	Dec- May	Summer
Digitaria porrecta	Finger Panic Grass	Dec - Jan	Summer
Eucalyptus nicholii	Narrow-leaved Peppermint	Any time	Spring
Homopholis belsonii	Belson's Panic	Dec - Apr	Summer
Homoranthus prolixus	Granite Homoranthus	Any time	Spring
Picris evae	Hawkweed	Sep - Feb	Summer
Polygala linariifolia	Native Milkwort	Any time	Spring
Pterostylis elegans	Elegant Greenhood	Dec - May	Summer
Tasmannia glaucifolia	Fragrant Pepperbush	Any time	Spring
Tasmannia purpurascens	Broad-leaved Pepperbush	Any time	Spring
Thesium australe	Austral Toadflax	Sep - Feb	Summer
Tylophora linearis		Sep - May	Summer

Amphibians					
Adelotus brevis	Tusked Frog		t - b	Sui	mmer
Litoria booroolongensis	Booroolong Frog	No De			ring
Litoria daviesae	Davies Tree Frog	Se <sub>l</sub> Jar		Spi	ring
Litoria subglandulosa	Glandular Frog	Oc De		Spi	ring
Mixophyes balbus	Stuttering Frog	Se <sub>l</sub>		Sui	mmer
Reptiles					
Hoplocephalus bitorquatus	Pale-heade Snake	d	Nov - Dec		Summer
Uvidicolus sphyrurus	Border Thio tailed Geck		Nov - Mar		Summer

Mammals			
Aepyprymnus rufescens	Rufous Bettong	Any time	Spring to Summer
Cercartetus nanus	Eastern Pygmy Possum	Oct - Mar	Spring to Summer
Chalinolobus dwyeri	Large- eared Pied Bat	Sep - Mar	Summer (if required)
Dasyurus maculatus	Spotted- tailed Quoll	Any time	Spring to Summer
Macropus parma	Parma Wallaby	Any time	Spring to Summer
Miniopterus australis	Little Bentwing- bat	Dec - Feb	Summer (if required)
Miniopterus schreibersii oceanensis	Eastern Bentwing- bat	Nov - Feb	Summer (if required)
Myotis macropus	Southern Myotis	Nov - Mar	Summer (if required)
Petauroides volans	Greater Glider	Any time	Summer
Petaurus norfolcensis	Squirrel Glider	Any time	Spring to Summer
Petrogale penicillata	Brush- tailed Rock- wallaby	Any time	Spring to Summer
Phascolarctos cinereus	Koala	Any time	Spring and Summer
Pteropus poliocephalus	Grey- headed Flying-fox	Any time	Winter and Spring
Vespadelus troughtoni	Eastern Cave Bat	Nov - Jan	Summer (if required)

## 4. Biodiversity values – threatened species



Birds			
Anthochaera phrygia	Regent Honeyeater	Sep – Dec	Winter and Spring
Burhinus grallarius	Bush Stone- curlew	Any time	Summer
Callocephalon fimbriatum	Gang-gang Cockatoo	Oct - Jan	Spring
Calyptorhynchus lathami	Glossy Black Cockatoo	Mar - Aug	Winter
Hamirostra melanosternon	Black- breasted Buzzard	Sep - Nov	Spring
Hieraaetus morphnoides	Little Eagle	Aug - Oct	Winter
Lathamus discolour	Swift Parrot	May – Aug	Winter
Lophoictinia isura	Square- tailed Kite	Sep – Jan	Spring
Ninox strenua	Powerful Owl	May - Aug	Winter
Tyto novaehollandiae	Masked Owl	May – Aug	Winter

### Notable habitat features include:

- Hollow-bearing tree resources, various sizes on wind farm development corridor
- Winter-flowering eucalypts in lower areas
- Peel River and lower tributaries with permanent water

### 5. Biodiversity survey methodology overview



- Winter, Spring and Summer targeted threatened fauna species:
  - Diurnal bird surveys
  - Hollow-bearing trees and stick nest surveys for raptors, owls and Glossy Black Cockatoo
  - Nocturnal bird surveys for owls
  - Nocturnal mammal surveys
  - Nocturnal frog surveys
  - Camera trapping for mammals and bat detectors
- Spring and Summer threatened flora surveys
- Habitat assessment
- Vegetation condition and structure plots
- Winter, spring and summer bird activity surveys to validate collision risk models
- Aquatic ecology surveys





### C.3.5 SURVEY

### Nundle Renewable Energy Park

### **Local Community Consultation Survey**

Survey Purpose: The region of Nundle is rich in natural resources presenting a high potential for renewable energies. These include solar PV and wind turbines.

The purpose of this survey is to understand the attitudes towards renewable energy in the Nundle community.

#### Introduction:

The number of renewable energy projects in Australian is increasing on account of state and federal policies encouraging the uptake of renewable technologies to reduce greenhouse gas emissions and now because it is cheaper than alternate coal and gas projects. Renewable energy facilities are designed and located to take advantage of the available resources. The facilities also need to be reasonably close to existing electrical grid infrastructure in order to economically deliver to consumers the electricity they generate.

They are many different type of renewable facilities that can produce green electricity. Solar farms, wind farms, hydroelectric power plants or biomass power plants are the most commons.

The development of renewable energy projects can take 5-10 years given the importance of studying the available resources and the suitability of different technology of their long lives. These types of projects are design for 35 years with the potential for longer in some circumstances.

It is important to understand values within the community and ensure that these are taken into consideration in the concept design, construction and operational phase of projects.



This questionnaire has been made to group information on the Nundle community opinions on renewables.

The Survey
About the survey:
The survey comprises multiple choice and open-ended questions and should take approximately 10-15 minutes to complete.
Who should complete it:
The survey is designed for a wide range of persons from the community to assess views and opportunities that might be created by a renewable energy park in the region. Key participants should include residents, local landowners, local businesses with or without the skills to contribute, elected and community leaders, local interest groups who perhaps have an interest in tourism, the environment or sustainability.
What's next
Results of the survey will be taken into consideration for preliminary concept design of a renewable energy project and allow Someva to directly feed information to the project developer and investors. It will create a preliminary understanding of the community concerns and help provide us and the government form a view as to how to proceed with a minimum impact.
Questions about the Nundle Wind Farm
Note: Some of the survey's questions can expect more than one answer
Question 1:
What is your relationship with the Nundle community?
<ul> <li>You own a business in Nundle, Hanging Rock or Crawney</li> <li>You are an employee of a business in Nundle, Hanging Rock or Crawney</li> <li>You are a locally elected</li> <li>You are a local landowner</li> </ul>
☐ You are a resident of Nundle
You are a resident of Hanging Rock
<ul> <li>✓ You are resident of Crawney</li> <li>☐ You are planning to acquire a property in Nundle, Hanging Rock or Crawney</li> <li>☐ Other:</li> </ul>
Question 2:
Have you ever seen a renewable energy facility?
☐ Yes☐ No

Question 3:
What kind of facility was it?
<ul> <li>□ A Solar Farm (Thermal or Photovoltaic)</li> <li>□ A Hydroelectric Dam</li> <li>□ A Wind Farm</li> <li>□ A Biomass Power Plant</li> <li>□ Other, it was</li> <li>□ I have never seen a renewable energy facility</li> </ul>
Question 4:
What did you like about that/these energy facility(ies)
☐ I have never seen any
Question 5:
What did you dislike about that/these energy facility(ies)
☐ I have never seen any
Question 6:
The Australian Government is committed in environmental objectives including the Renewable Energy Target which is designed to require 23% of all electricity from renewables and the Paris agreement which is global commitment to carbon dioxide reduction.
Do you think Australia should have entered into these agreements?
☐ Yes ☐ No because

Question 7:
In addition, with these engagements, traditional Australian electricity power plants like coal facilities are aging and scheduled for retirement. This decommissioning of thermal generation capacity will create a need for new energy. Do you think renewable installation combined with battery storage or pumped hydro storage facilities can replace traditional types of coal and gas generation?
☐ Yes
☐ I am not sure
☐ Not at all, this type of production can't be reliable
Question 8:
Do you think renewable energy facility is economically an opportunity for Nundle and that new opportunities will be created?
☐ An Opportunity
☐ A threat to existing business
☐ I'm indifferent
Question 9:
Please expand on your comments in question 8 if you would like to add more information
☐ I believe that
☐ I'm indifferent
Question 10:
<del></del>
If you were a member of the authority giving approval for a renewable energy power plant installation, what would be the most important request(s) you would ask to the developer to undertake?
☐ I would ask the developer to prioritise
☐ I don't really know
Question 11:
As a member of the Nundle Community or around, would you be in favour of a renewable energy power plant installation in the area?
☐ Yes ☐ No

Question 12:
What kind of benefits would you expect the Nundle region from a renewable energy installation?
I would expect
Question 13:
Are you aware of any endangered or threatened species of flora and fauna in the vicinity? If Yes please specific species and any information to help us assess.
Question 14:
Do you visit any particular landscape features regularly or are there any features of the landscape you value highly?
<del></del>
<del></del>
Question 15:
Are you aware of any aboriginal or European cultural heritage sites? If 'yes' please provide us information to identify areas of significance.
<del></del>
Question 16:
If a community consultation committee would be formed to discuss about any project, would you be interested in being a community representative to represent the local community interests?
☐ Yes ☐ No
If yes, please enter your contact details bellow to let us contact you to move forward.
Name: First Name:
Address
Phone Number: email address

Question 17:					
Do you think this survey was useful and public opinion on renewables?	d its questions were relevant for a first community approach to understand				
☐ Yes					
<u> </u>					
— No, i believe you should have_					
If you are interested in staying informe please either complete your details on details.	s on trying to find the best way to create benefits for the Nundle community t.  ed about any potential renewable energy project updates and opportunities this form or alternatively email <a href="mailto:jamie.c@someva.com.au">jamie.c@someva.com.au</a> with your contact est Name:				
Address					
Phone Number:	email address:				
Property Description DP/Lot Number (if known)					
Thank you for your time and considera	ition,				
Jamie Chivers					
Development Manager					
0423 336 345					



Someva Pty Limited