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Energy Resource Assessments
Department of Planning, Industry and Environment
By Electronic Submission

Attention: Tatsiana Bandaruk

18 June 2020

Dear Ms Bandaruk

EPA Recommended Conditions – Uungula Wind Farm – SSD 6687 (PAE-3300)

I refer to the Environmental Impact Statement for the Uungula Wind Farm (the project), received by the Environment Protection Authority (EPA) on 22 May 2020. The project involves the proposed construction of up to 97 wind turbines and an energy storage facility about 14km east of Wellington.

The EPA has reviewed the information provided and has determined that it is able to issue an environment protection licence for the project, subject to a number of conditions, if project approval is granted. The applicant will need to make a separate application to EPA to obtain this licence.

The EPA's recommended conditions of approval are provided at **Attachment A**. If the Department grants project approval, these conditions should be incorporated into the approval. Mandatory environment protection licence conditions are also provided for your information at **Attachment B**.

If the project is modified either by the applicant prior to the granting of consent, or by proposed conditions of approval, the Department should consult with the EPA about the changes. This will allow the EPA to determine whether any of its recommended conditions need to be modified.

The applicant should confirm the wind speed monitoring location/s and method to be used for wind turbine noise monitoring, consistent with the locations and method used for background noise regression curves and including wind speed measurement as close as practicable to hub height.

The EPA also requests that in considering the recommended conditions, the Department seeks confirmation from WaterNSW that receiver ILG006 is unlikely to be used as a residence in future.

If you have any questions regarding this matter, please contact Joshua Loxley at the EPA's Dubbo office on (02) 6883 5333 or by e-mail to central.west@epa.nsw.gov.au.

Yours sincerely

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ATTACHMENT A: EPA Recommended Conditions for Uungula Wind Farm

Administrative conditions

A1. Information supplied to the EPA

- A1.1** Except as expressly provided by these conditions, works and activities must be carried out in accordance with the proposal contained in:
- the development application SSD-6687; and
 - the *Uungula Wind Farm Environmental Impact Statement* dated 20 May 2020 and supporting documents.

A2. Fit and Proper Person

- A2.1** The applicant must, in the opinion of the EPA, be a fit and proper person to hold a licence under the *Protection of the Environment Operations Act 1997*, having regard to the matters in s.83 of that Act.

Limit conditions

L1. Pollution of waters

- L1.1** Except as may be expressly provided by a licence under the *Protection of the Environment Operations Act 1997* in relation of the development, Section 120 of the *Protection of the Environment Operations Act 1997* must be complied with in and in connection with the carrying out of the development.

L2. Waste

- L2.1** The licensee must not cause, permit or allow any waste generated outside the premises to be received at the premises for storage, treatment, processing, reprocessing or disposal or any waste generated at the premises to be disposed of at the premises, except as expressly permitted by a licence under the *Protection of the Environment Operations Act 1997*.
- L2.2** This condition only applies to the storage, treatment, processing, reprocessing or disposal of waste at the premises if it requires an environment protection licence under the *Protection of the Environment Operations Act 1997*.

Note: Condition L2 is included to ensure that a premises based activity is not used as a waste facility (unless that scheduled activity is permitted by another condition).

L3. Noise limits

- L3.1** For wind speeds from cut in to rated power of the wind turbine generators, wind turbine noise generated from the premises must not exceed the greater of:
- a) 35 dBA or
 - b) the existing background noise level plus 5 dBA for each integer wind speed at 166 metres above ground level (hub height) at the wind farm site
- at the nearest non-involved residential receivers.
- L3.2** For the purpose of determining compliance with condition L3.1, the locations and noise limits in the table below apply. The locations referred to in the table below are defined in condition L3.4.

Location	L _{eq(10minute)} NOISE LIMITS (dBA)										
	Integer wind speed (m/s) at hub height	3	4	5	6	7	8	9	10	11	12 or more
TMR016, TMR022, UUN007	35	35	35	35	35	35	35	35	35	35	35
TMR029, TMR031, WUU005, WUU007, WUU008	35	35	35	35	35	35	35	35	36	37	38

L3.3 The noise limits specified in conditions L3.1 and L3.2 do not apply to any sensitive receiver location (residence) where a noise agreement is in place between the licensee and the respective land owner(s) in respect to noise impacts and/or noise limits.

L3.4 For the purpose of condition L3.2, locations are defined in the table below. Grid references (eastings and northings) refer to the Map Grid of Australia 1994 (MGA94), zone 55.

Location	Name	Easting (m)	Northing (m)
TMR016	Hidden Valley	708493	6401455
TMR022	2220 Twelve Mile Road Spicers Creek	703336	6404755
TMR029	1332 Twelve Mile Road Wuuluman	696861	6402971
TMR031	Umargarlee	699902	6404592
UUN007	1125 Guroba Road Twelve Mile	709390	6396638
WUU005	573 Yarragal Road Yarragal	694461	6393267
WUU007	236 Yarragal Road Wuuluman	694872	6396232
WUU008	350 Yarragal Road Yarragal	694625	6395249

L3.5 For the purpose of condition L3.1, noise must be determined in accordance with the methodology in the *Environmental Noise Guidelines: Wind Farms* (SA EPA 2009). The modification factors in Section 4 of those guidelines must be applied, as modified by the *NSW Wind Energy: Noise Assessment Bulletin for State Significant Wind Energy Development* (2016), to the noise levels measured by the noise monitoring equipment.

L3.6 For the purpose of condition L3.5, the presence of excessive tonality (a special noise characteristic) must be determined in accordance with ISO 1996.2:2007 *Acoustics - Description, measurement and assessment of environmental noise - Determination of environmental noise levels*.

If tonality is found to be a repeated characteristic of the wind turbine noise, 5 dBA should be added to measured noise levels from the wind farm. If tonality is only identified for certain wind directions and speeds, the penalty is only applicable under these conditions.

The tonal characteristic penalty applies only if the tone from the wind turbine is audible at the relevant receiver. Absence of tone in noise emissions measured at an intermediate location is sufficient proof that the tone at the receiver is not associated with the wind farm's operation.

The assessment for tonality should only be made for frequencies of concern from 25 Hz to 10 kHz and for sound pressure levels above the threshold of hearing (as defined in ISO 389.7:2005 *Acoustics - Reference zero for the calibration of audiometric equipment - Part 7: Reference threshold of hearing under free-field and diffuse-field listening conditions*).

For the purposes of condition L3.5, the presence of excessive low frequency noise (a special noise characteristic) must be determined with reference to the *NSW Wind Energy: Noise Assessment Bulletin for State Significant Wind Energy Development (2016)*.

The maximum penalty to be added to the measured noise level from the wind farm for any special noise characteristic individually or cumulatively is 5 dB(A).

L3.7 For the purposes of condition L3.1, wind speed is to be measured directly in accordance with a method nominated by the proponent and at a location nominated by the proponent, consistent with the method and location used to determine the background noise regression curves in the Noise Impact Assessment.

L3.8 To determine compliance:

a) with the $L_{eq(10\text{ minute})}$ noise limits in conditions L3.1 and L3.2, the noise measurement equipment must be located:

- approximately on the property boundary, where any dwelling is situated 20 metres or less from the property boundary closest to the premises; or
- within 20 metres of a dwelling façade, but not closer than 5m, where any dwelling on the property is situated more than 20 metres from the property boundary closest to the premises.

b) with the noise limits in conditions L3.1 and L3.2, the noise measurement equipment must be located:

- at the most affected point at a location where there is no dwelling at the location; or
- at the most affected point within an area at a location prescribed by condition L3.8(a).

L3.9 A non-compliance of condition L3.1 or L3.2 will still occur where noise generated from the premises in excess of the appropriate limit is measured:

- at a location other than an area prescribed by conditions L3.8(a) and L3.8(b); and/or
- at a point other than the most affected point at a location.

L4 Blasting Conditions

L4.1 The airblast overpressure level from blasting operations at the premises must not exceed 120dB (Lin Peak) at any time at any noise sensitive locations. Error margins associated with any monitoring equipment used to measure this are not to be taken into account in determining whether or not the limit has been exceeded.

- L4.2** The airblast overpressure level from blasting operations at the premises must not exceed 115dB (Lin Peak) at any noise sensitive locations for more than five per cent of the total number of blasts over each reporting period. Error margins associated with any monitoring equipment used to measure this are not to be taken into account in determining whether or not the limit has been exceeded.
- L4.3** Ground vibration peak particle velocity from the blasting operations at the premises must not exceed 10mm/sec at any time at any noise sensitive locations. Error margins associated with any monitoring equipment used to measure this are not to be taken into account in determining whether or not the limit has been exceeded.
- L4.4** Ground vibration peak particle velocity from the blasting operations at the premises must not exceed 5mm/sec at any noise sensitive locations for more than five per cent of the total number of blasts over each reporting period. Error margins associated with any monitoring equipment used to measure this are not to be taken into account in determining whether or not the limit has been exceeded.
- L4.5** Blasting at the premises may only take place between 9:00am-5:00pm Monday to Friday. Blasting is not permitted on public holidays.
- L4.6** Blasting outside of the hours specified in L4.5 can only take place with the written approval of the EPA.
- L4.7** The airblast overpressure and ground vibration levels in conditions L4.1 to L4.4 do not apply at noise sensitive locations that are owned by the licensee or subject to a private agreement, relating to airblast overpressure and ground vibration levels, between the licensee and landowner.

L5. Hours of operation

Construction hours

- L5.1** Unless otherwise specified by another condition of this licence, construction activities must only be carried out:
- between the hours of 7am and 6pm Monday to Friday;
 - between the hours of 8am and 1pm Saturday; and
 - at no time on Sundays or Public Holidays.
- L5.2** The following activities may be carried out outside the hours in Condition L5.1:
- Construction work that causes $L_{Aeq(15min)}$ noise levels that are:
 - no more than 5 dB above rating background level at any residence not subject to a private negotiated agreement, in accordance with the *Interim Construction Noise Guideline* (DECC 2009); and
 - no more than the noise management levels in Table 3 of the *Interim Construction Noise Guideline* (DECC 2009) at other sensitive land uses.
 - Delivery of plant, equipment and materials which is required to be delivered outside standard construction hours by Police and/or other authorities for safety reasons.
 - Emergency work to avoid loss of life, damage to property and/or environmental harm.
 - Activities approved through the process outlined in Condition L5.3.

On becoming aware of the need to undertake emergency work, the proponent must notify the EPA on 131 555.

- L5.3** The hours of construction specified in condition L5.1 may be varied with the prior written approval of the EPA. Any request to alter the hours of construction shall be:
- considered on a case-by-case or activity-specific basis;
 - accompanied by details of the nature and justification for activities to be conducted during the varied construction hours;
 - accompanied by written evidence that appropriate consultation with potentially affected noise sensitive receivers and notification of relevant agencies has been and will be undertaken;
 - all reasonable and feasible noise mitigation measures have been put in place; and,
 - accompanied by a noise impact assessment consistent with the requirements of the *Interim Construction Noise Guideline* (DECCW, 2009).

Operating conditions

O3 Dust

- O3.1** The premises must be maintained in a condition which prevents or minimises the emission of air impurities, including dust, from the premises.
- O3.2** All operations and activities occurring at the premises must be carried out in a manner that prevents or minimises the emission of air impurities, including dust, from the premises.
- O3.3** Trucks entering and leaving the premises that are carrying loads of materials which have the potential to cause emissions of air impurities, including dust, must have their loads covered at all times, except during loading and unloading.

Other operating conditions

O6.1 Stormwater/sediment control – Construction Phase

A Soil and Water Management Plan (SWMP) must be prepared and implemented. The plan must describe the measures that will be employed to minimise soil erosion and the discharge of sediment and other pollutants to lands and/or waters during construction activities. The SWMP should be prepared in accordance with the requirements for such plans outlined in *Managing Urban Stormwater: Soils and Construction* (Landcom 2004).

O6.2 Stormwater/sediment control – Operation Phase

A Stormwater Management Scheme must be prepared for the development and must be implemented. Implementation of the Scheme must mitigate the impacts of stormwater runoff from and within the premises following the completion of construction activities. The Scheme should be consistent with the Stormwater Management Plan for the catchment. Where a Stormwater Management Plan has not yet been prepared the Scheme should be consistent with the guidance contained in *Managing Urban Stormwater: Source Control* (EPA 1998) and *Managing Urban Stormwater: Treatment Techniques* (EPA 1997).

Monitoring and recording conditions

M1 Monitoring records

M1.1 The results of any monitoring required to be conducted by the EPA’s general terms of approval, or a licence under the *Protection of the Environment Operations Act 1997*, in relation to the development must be recorded and retained as set out in conditions M1.2, M1.3 and M1.4.

M1.2 All records required to be kept by the licence must be:

- a) in a legible form, or in a form that can readily be reduced to a legible form;
- b) kept for at least 4 years after the monitoring or event to which they relate took place; and
- c) produced in a legible form to any authorised officer of the EPA who asks to see them.

M1.3 The following records must be kept in respect of any samples required to be collected:

- a) the date(s) on which the sample was taken;
- b) the time(s) at which the sample was collected;
- c) the point at which the sample was taken; and
- d) the name of the person who collected the sample.

M4. Weather monitoring

M4.1 An onsite meteorological weather station must be built, maintained and operated so as to be capable of continuously monitoring the parameters specified in condition M4.2.

M4.2 The proponent must monitor the parameters specified in Column 1 of the table below at the onsite weather station, using the sampling method, units of measure, averaging period and sampling frequency specified in the other columns. Sampling methods are defined in the *Approved Methods for the Sampling and Analysis of Air Pollutants in NSW* (DEC 2007).

Onsite weather station

Parameter	Units of Measure	Frequency	Averaging Period	Sampling Method
Siting	-	-	-	AM-1
Wind direction	°	Continuous	10 minute	AM-2 & AM-4
Wind speed	m/s	Continuous	10 minute	AM-2 & AM-4
Sigma theta	°	Continuous	10 minute	AM-2 & AM-4

Reporting conditions

R5. Other reporting conditions

R5.1 Revised Noise Impact Assessment

The Proponent shall prepare a revised Noise Impact Assessment (NIA) for the final turbine model and turbine layout selected prior to commissioning of the wind turbines. The revised NIA must:

- a) demonstrate, through appropriate modelling and in accordance with the *Environmental Noise Guidelines: Wind Farms* (SA EPA 2009), as modified by the *NSW Wind Energy: Noise Assessment Bulletin for State Significant Wind Energy Development* (2016), that the final turbine model and layout can meet the limits derived in accordance with those guidelines
- b) validate the power law relationship used to derive hub height wind speed in the EIS.

R5.2 Noise Management Plan

Prior to commissioning of the turbines, the Proponent must prepare and implement a Noise Management Plan to manage noise emissions from the operation of the project. The Plan must include, but not necessarily be limited to:

- c) compliance monitoring within one year of commissioning, in accordance with the *Environmental Noise Guidelines: Wind Farms* (SA EPA 2009)
- d) procedures to certify noise emissions from wind turbines
- e) identification and implementation of best practice management techniques for minimisation of noise emissions where reasonable and feasible
- f) measures to be undertaken to rectify annoying characteristics resulting from the operation of the project such as infrasound, tonality or adverse mechanical noise from component failure
- g) procedures and corrective actions to be undertaken if non-compliance is detected.

R5.3 Construction Noise Management Plan

The proponent must prepare and implement a detailed construction noise management plan, prior to commencement of construction activities, including but not necessarily limited to:

- a) identification of each work area, site compound and access route (both private and public)
- b) identification of the specific activities that will be carried out and associated noise sources at the premises and access routes
- c) identification of all potentially affected sensitive receivers
- d) the construction noise objectives identified in accordance with the *Interim Construction Noise Guideline*
- e) assessment of potential noise from the proposed construction methods (including noise from construction traffic) against the objectives identified in (d)
- f) where the objectives are predicted to be exceeded an analysis of feasible and reasonable noise mitigation measures that can be implemented to reduce construction noise impacts
- g) description of management methods and procedures and specific noise mitigation treatments that will be implemented to control noise and vibration during construction, including those identified in the EIS.

ATTACHMENT B: Mandatory Conditions for all Environment Protection Licences

Operating conditions

O1 Activities must be carried out in a competent manner

O1.1 Licensed activities must be carried out in a competent manner.

This includes:

- a. the processing, handling, movement and storage of materials and substances used to carry out the activity; and
- b. the treatment, storage, processing, reprocessing, transport and disposal of waste generated by the activity.

O2 Maintenance of plant and equipment

O2.1 All plant and equipment installed at the premises or used in connection with the licensed activity:

- a. must be maintained in a proper and efficient condition; and
- b. must be operated in a proper and efficient manner.

Monitoring and recording conditions

M5 Recording of pollution complaints

M5.1 The licensee must keep a legible record of all complaints made to the licensee or any employee or agent of the licensee in relation to pollution arising from any activity to which this licence applies.

M5.2 The record must include details of the following:

- a. the date and time of the complaint;
- b. the method by which the complaint was made;
- c. any personal details of the complainant which were provided by the complainant or, if no such details were provided, a note to that effect;
- d. the nature of the complaint;
- e. the action taken by the licensee in relation to the complaint, including any follow-up contact with the complainant; and
- f. if no action was taken by the licensee, the reasons why no action was taken.

M5.3 The record of a complaint must be kept for at least 4 years after the complaint was made.

M5.4 The record must be produced to any authorised officer of the EPA who asks to see them.

M6 Telephone complaints line

M6.1 The licensee must operate during its operating hours a telephone complaints line for the purpose of receiving any complaints from members of the public in relation to activities conducted at the premises or by the vehicle or mobile plant, unless otherwise specified in the licence.

M6.2 The licensee must notify the public of the complaints line telephone number and the fact that it is a complaints line so that the impacted community knows how to make a complaint.

M6.3 Conditions M6.1 and M6.2 do not apply until 3 months after the licence is issued.

Reporting conditions

R1 Annual Return documents

What documents must an Annual Return contain?

R1.1 The licensee must complete and supply to the EPA an Annual Return in the approved form comprising:

- a. a Statement of Compliance,
- b. a Monitoring and Complaints Summary,
- c. a Statement of Compliance - Licence Conditions,
- d. a Statement of Compliance - Load based Fee,
- e. a Statement of Compliance - Requirement to Prepare Pollution Incident Response Management Plan,
- f. a Statement of Compliance - Requirement to Publish Pollution Monitoring Data; and
- g. a Statement of Compliance - Environmental Management Systems and Practices.

Before the end of each reporting period, the EPA will provide to the licensee a copy of the form that must be completed and returned to the EPA.

Period covered by Annual Return

R1.2 An Annual Return must be prepared in respect of each reporting, except as provided below

Note: *The term “reporting period” will be defined in the dictionary at the end of the licence. Do not complete the Annual Return until after the end of the reporting period.*

R1.3 Where this licence is transferred from the licensee to a new licensee,

- a. the transferring licensee must prepare an annual return for the period commencing on the first day of the reporting period and ending on the date the application for the transfer of the licence to the new licensee is granted; and
- b. the new licensee must prepare an annual return for the period commencing on the date the application for the transfer of the licence is granted and ending on the last day of the reporting period.

Note: *An application to transfer a licence must be made in the approved form for this purpose.*

R1.4 Where this licence is surrendered by the licensee or revoked by the EPA or Minister, the licensee must prepare an annual return in respect of the period commencing on the first day of the reporting period and ending on

- a. in relation to the surrender of a licence - the date when notice in writing of approval of the surrender is given; or
- b. in relation to the revocation of the licence – the date from which notice revoking the licence operates.

Deadline for Annual Return

R1.4 The Annual Return for the reporting period must be supplied to the EPA using eConnect EPA or registered post not later than 60 days after the end of each reporting period or in

the case of a transferring licence not later than 60 days after the date the transfer was granted (the 'due date').

Licensee must retain copy of Annual Return

R1.6 The licensee must retain a copy of the annual return supplied to the EPA for a period of at least 4 years after the annual return was due to be supplied to the EPA.

Certifying of Statement of Compliance and Signing of Monitoring and Complaints Summary

R1.7 Within the Annual Return, the Statement of Compliance must be certified and the Monitoring and Complaints Summary must be signed by:

- a. the licence holder; or
- b. by a person approved in writing by the EPA to sign on behalf of the licence holder.

R2 Notification of environmental harm

R2.1 Notifications must be made by telephoning the EPA's Pollution Line service on 131 555.

R2.2 The licensee must provide written details of the notification to the EPA within 7 days of the date on which the incident occurred.

Note: The licensee or its employees must notify the EPA of incidents causing or threatening material harm to the environment immediately after the person becomes aware of the incident in accordance with the requirements of Part 5.7 of the Act

R3 Written report

R3.1 Where an authorised officer of the EPA suspects on reasonable grounds that:

- a. where this licence applies to premises, an event has occurred at the premises; or
- b. where this licence applies to vehicles or mobile plant, an event has occurred in connection with the carrying out of the activities authorised by this licence,

and the event has caused, is causing or is likely to cause material harm to the environment (whether the harm occurs on or off premises to which the licence applies), the authorised officer may request a written report of the event.

R3.2 The licensee must make all reasonable inquiries in relation to the event and supply the report to the EPA within such time as may be specified in the request.

R3.3 The request may require a report which includes any or all of the following information:

- a. the cause, time and duration of the event;
- b. the type, volume and concentration of every pollutant discharged as a result of the event;
- c. the name, address and business hours telephone number of employees or agents of the licensee, or a specified class of them, who witnessed the event; and
- d. the name, address and business hours telephone number of every other person (of whom the licensee is aware) who witnessed the event, unless the licensee has been unable to obtain that information after making reasonable effort;
- e. action taken by the licensee in relation to the event, including any follow-up contact with any complainants;
- f. details of any measure taken or proposed to be taken to prevent or mitigate against a recurrence of such an event;

g. any other relevant matters.

R3.4 The EPA may make a written request for further details in relation to any of the above matters if it is not satisfied with the report provided by the licensee. The licensee must provide such further details to the EPA within the time specified in the request.

General conditions

G1 Copy of licence kept at the premises or on the vehicle or mobile plant

G1.1 A copy of this licence must be kept at the premises or on the vehicle or mobile plant to which the licence applies.

G1.2 The licence must be produced to any authorised officer of the EPA who asks to see it.

G1.3 The licence must be available for inspection by any employee or agent of the licensee working at the premises or operating the vehicle or mobile plant.

G2 Contact number for incidents and responsible employees

G2.1 The licensee must operate one 24-hour telephone contact line for the purpose of enabling the EPA:

- a. to contact the licensee or a representative of the licensee who can respond at all times to incidents relating to individual premises, and
- b. to contact the licensee's senior employees or agents authorised at all times to:
 - speak on behalf of the licensee, and
 - provide any information or document required under licence.

G2.2 The licensee is to inform the EPA of the contact number within 3 months of the licence being issued.