



Mr Stephen Gash
Chief Executive Officer
Shire of Kojonup, WA

Dear Mr Gash

I refer to your e-mails dated 06 October and 10 October 2011 to Professor Anderson concerning a wind farm development application.

You sought advice on the meaning of a "precautionary approach" to be adopted by authorities as suggested in the NHMRC Statement: *Wind Turbines and Health*. In reviewing the evidence about the possible health effects of wind turbines, NHMRC has concluded that there was not enough robust scientific evidence to form any conclusive links. However the absence of conclusive evidence on adverse health effects does not necessarily mean that there are no possible health effects. There is simply insufficient evidence to form an opinion one way or the other.

NHMRC does not intend its comment to be taken as an instruction to approving authorities to refuse or defer wind farm development applications, or that buffer distances should be increased.

Given that claims of health effects of wind turbines have yet to be scientifically proven or disproven, NHMRC is acting prudently and in accordance with risk management principles by adopting the precautionary approach.

The NHMRC suggests that approving authorities form their own judgement taking into account the evidence available to them. The precautionary approach encourages authorities to make relevant enquiries in each case. At this stage, unfortunately, there is simply insufficient research available to make a more conclusive general assessment.

In relation to buffer distances, approving authorities may find it useful to refer to guidelines that address noise, such as Section B, pages 37-66 of the Environment Protection and Heritage Council's *National Wind Farm Development Guidelines-Draft-July 2010* (<http://www.ephc.gov.au/node/449m>).

Following the Scientific Forum on Wind Farms and Human Health in June this year, NHMRC has agreed to review the literature using a systematic approach, and will seek comments from a reference group on any changes to the current Public



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N H M R C

Statement. It is planned to make a literature review and a revised Public Statement available in mid-2012.

In the meantime, there has been no change to NHMRC's position outlined in its Public statement of July 2010. NHMRC is not in a position to comment upon possible subsequent studies until a full literature review has been completed and assessed.

Thank you for seeking NHMRC's advice on this matter.

Yours sincerely

A handwritten signature in black ink that reads 'Tony Kingdon'.

Tony Kingdon
General Manager

19 October 2011

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ABN 88 601 010 284

18 MAY 2011



Your Ref: DB.BDA.8

9 May 2011

Stephen Gash
Chief Executive Officer
Shire of Kojonup
PO Box 163
Kojonup WA 6395

Dear Mr Gash

Re: *NHMRC Wind Turbines and Health—A Rapid Review of the Evidence (July 2010)*

Thank you for your letter enquiring about wind turbines and health. Professor Anderson has asked me to respond on his behalf. I will address each of your questions separately.

- **Is there a timeframe and/or process for the Rapid Review document to be reviewed and/or updated?**

NHMRC has begun the process of updating the Rapid Review document. We have commenced searching the published literature for any new evidence. A workshop will be held in June bringing together experts in the field and members of the community and government to identify key issues surrounding wind turbines and possible health effects. The outcomes of that workshop will inform further work plans so at this stage it is not possible to say when the work will be complete.

- **Should the Shire continue to rely on the outcomes in the Review when dealing with wind farm applications?**

The purpose of the Rapid Review was to present findings from a search of the evidence from current literature on the potential impacts of wind turbines on human health. Planning issues surrounding wind farm applications are beyond the scope of the document. However, noting the lack of published scientific evidence, NHMRC Council acknowledged public concern and through the Public Statement advised that a precautionary approach is required (and that individuals seek medical opinion should they have any concerns). This remains NHMRC's position.

ICR4134

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- **Are there any other guidelines that the Council itself would use in considering the development of a wind farm?**

There is another set of guidelines which you may find useful if you are not already aware of them. The Environment Protection and Heritage Council's (EPHC) *Draft National Wind Farm Development Guidelines—July 2010* aim to outline best practice for industry and planning authorities in areas including heritage, threatened species and turbine noise. The guidelines can be found on EPHC's website at <http://www.ephc.gov.au/node/449>.

- **Has the Council been approached to contribute to the present Senate Inquiry proposed into wind farms? And if so, what is the Council's likely response?**

NHMRC has contributed a submission to the Senate Inquiry on the Social and Economic Impact of Rural Wind Farms. It can be found at http://www.aph.gov.au/Senate/committee/clac_ctte/impact_rural_wind_farms/submissions.htm. NHMRC's submission is number 850.

- **Are there any planning implications (outside of the Rapid Review) that you would recommend our Shire consider in assessing the wind farm application?**

NHMRC is not able to give advice on planning implications, since that is outside its purview. I suggest you look at the EPHC Guidelines mentioned above and perhaps contact the Department of Environment and Conservation and Department of Planning in Western Australia for more information specific to WA.

Yours sincerely

Cathy Mitchell
A/g Executive Director
Research Translation (Canberra)

11-5-11

2 MAY 2011



Government of Western Australia
Department of Planning

Your ref: DB.BDA.8
Our ref: 553/1/1/8PV3
Enquiries: Tara Cherrie Ph: (08) 9264 7921

ICR3916

| SHIRE OF KOJONUP | | | | |
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Stephen Gash
Chief Executive Officer
Shire of Kojonup
PO Box 163
Kojonup WA 6395

Dear Stephen

Planning Bulletin 67 Guidelines for Wind Farm Development

Thank you for your letter received 4th April 2011 regarding the above.

There is no specific timeframe for the review of Planning Bulletin 67. The Draft National Wind Farm Guidelines (EPHC 2010) will be released as a final document in mid 2011. After that time, policy and bulletin statements may require updating to reflect the new guidelines and other state initiatives towards renewable energy developed since 2004.

The Shire of Kojonup should follow the guidance outlined in Planning Bulletin 67 in response to wind farm applications.

Other guidelines that the Department of Planning utilises to assess wind farm proposals are:

Visual Landscape Assessment in Western Australia: a manual for evaluation, assessment, siting and design, Part 3, Utility Towers, Wind Farms, pp 128-136;

Best Practice Guidelines for Implementation of Wind Energy Projects in Australia (Auswind 2006);

National Wind Farm Development Guidelines - Draft (Environment Protection and Heritage Council 2010); and

Any specific local planning scheme provisions (if applicable).

The Department's response to the Senate Inquiry is directly aligned with the response in this letter, in regards to environmentally and socially responsible wind farm development. The response to the Senate was specifically related to buffer requirements for wind farms.

The Department of Planning's advice regarding the suggested buffer distance (as outlined in Planning Bulletin 67), notes that the distance is only suggested as a guide:

'As a guide, the distance between the nearest turbine and a noise-sensitive building not associated with the wind farm, is likely to be 1km. The ultimate distance between sensitive uses and the wind turbine, may be determined on the basis of acoustic studies' pg 4, Section 6.2 Noise.

The National Wind Farm Development Guidelines (draft EPHC 2010) do not state a specific buffer distance, as each jurisdiction has differing statutory requirements. In the case of noise-sensitive areas/residences, the draft Guidelines recommend such areas undergo a noise impact assessment, as does Planning Bulletin 67. The buffer distance would then be determined on a case-by-case basis, as an outcome of the noise impact assessment.

The Department of Planning supports the above advice in relation to buffer distances for noise-sensitive areas.

Yours sincerely

A handwritten signature in black ink, appearing to read 'D Saunders', written in a cursive style.

David Saunders
A/ Director General

21/4/2011

**DEPARTMENT OF ENVIRONMENT AND CONSERVATION
NOISE REGULATION BRANCH
PROPOSED FLAT ROCKS WIND FARM, KOJONUP
COMMENTS ON NOISE ASSESSMENT**

Prepared by John Macpherson, Principal Environmental Noise Officer

17 October 2011

INTRODUCTION

This report presents the results of a technical review of the noise assessment for the proposed Flat Rocks Wind Farm at Kojonup, as requested by the Chief Executive of the Shire of Kojonup. The proposal, by Moonies Hill Energy, would consist of 74 wind turbines, with rated power 1.8MW, located in cleared farming land.

The reports covered by this review are as follows:

- 'Moonies Hill Energy – Flat Rocks Wind Farm, Kojonup – Background Noise Monitoring', prepared by Herring Storer Acoustics, dated February 2011; and
- 'Moonies Hill Energy – Flat Rocks Wind Farm, Kojonup – Noise Impact Assessment', prepared by Herring Storer Acoustics, dated July 2011.

The general approach to the assessment by Herring Storer Acoustics (HS) has been to follow the South Australian EPA Guidelines for wind farms of 2003 (SA Guidelines), as recommended in the WA EPA draft Guidance No.8 – Environmental Noise. The SA Guidelines set a base level of 35dB(A) at the noise-sensitive location, and also allow for higher noise levels from the wind farm at high wind speeds where the background noise provides significant masking of the wind turbine noise. The base noise level of 35dB(A) in the SA Guidelines is consistent with the base noise level in the WA Environmental Protection (Noise) Regulations 1997.

This review also recognises the recommendations of the Senate Community Affairs Reference Committee in their report on The Social and Economic Impacts of Rural Wind Farms, of June 2011 (Senate report), particularly with regard to the assessment of low frequency noise and infrasound.

BACKGROUND NOISE MONITORING REPORT

The background noise monitoring report by HS presents the results of background noise level measurements at 11 noise-sensitive locations, and these are correlated against wind speeds measured at the 80m hub height for the wind turbines as measured on the wind farm site. The report develops noise criteria for the wind turbines based on a level that is 5dB(A) above a regression line drawn through the results of the L_{A90} background noise levels when plotted against wind speed, or the base level of 35dB(A), whichever is higher.

This methodology is in accordance with the SA Guidelines and also with Australian Standard 4959-2010, and is accepted.

From the photographs in the HS report, the selected monitoring locations appear to be representative.

The results of the monitoring, and the noise criteria that have been developed, require some comment. In particular, the HS report uses the results from all 11 monitoring locations to determine noise criteria, however it is apparent that the data from some of the locations are unusable for this purpose. This is discussed further below.

The central objective of the monitoring is to show that there is significant background noise present such that masking of the wind farm noise will occur. This requires that the background noise is always present when the wind is blowing, and thus should result from wind in nearby vegetation. This is normally demonstrated by showing that the background noise is correlated with wind speed.

There are several tests that should be applied to the background noise data if it is to be accepted for the purposes of the noise assessment, as follows:

Correlation with wind speed – the background noise levels should be reasonably strongly correlated with wind speed. Correlation results are provided in the HS report, ranging from very poor ($r^2 = 0.015$ at Location 3) to good ($r^2 = 0.68$ at Location 9).

Shape of curve – the regression curve should show a consistent increase with increasing wind speed.

Background noise levels at low wind speeds – high background noise levels at low wind speeds would tend to indicate the presence of noise sources other than wind, e.g., insects, which cannot be assumed to always be present at low wind speeds.

Influence of noise floor – where the background noise results show the presence of constant lower level noise sources, these are likely to be due to either the electronic ‘noise floor’ of the noise logger or the operation of mechanical plant, rather than wind. Inclusion of these results in the regression analysis would skew the regression line.

Table 1 below presents a ‘risk-based’ analysis of the background noise monitoring data to assess its reliability as a basis for the noise assessment. The various factors are rated as Good, Fair or Poor, based on the results in the HS report.

Table 1: Assessment of reliability of background noise data

| Location | Correlation wind speed | Curve shape | Background low wind | Noise floor | Reliability |
|----------|------------------------|-------------|---------------------|-------------|-------------|
| 1 | Poor | Poor | Poor | Good | Unreliable |
| 2 | Good | Good | Good | Good | Reliable |
| 3 | Poor | Poor | Poor | Poor | Unreliable |
| 4 | Good | Fair | Poor | Poor | Unreliable |

| | | | | | |
|----|------|------|------|------|------------|
| 5 | Good | Good | Good | Fair | Reliable |
| 6 | Fair | Good | Good | Good | Reliable |
| 7 | Fair | Good | Good | Fair | Reliable |
| 8 | Good | Good | Good | Good | Reliable |
| 9 | Good | Good | Good | Good | Reliable |
| 10 | Fair | Fair | Poor | Fair | Unreliable |
| 11 | Poor | Fair | Poor | Fair | Unreliable |

On the basis of this analysis, only the results from Locations 2, 5, 6, 7, 8 and 9 should be used to set noise criteria based on masking effects provided by wind. This conclusion is used in commenting on the second HS report below.

NOISE IMPACT ASSESSMENT REPORT

The noise impact assessment report by HS presents noise predictions for 25 existing residences and one proposed residence that are not associated with the wind farm proposal ('non-stakeholders'); and 8 residences that are 'stakeholders'. The report finds that the predicted noise levels comply with the SA Guidelines at all non-stakeholders and show only marginal exceedances at two of the stakeholder locations.

The following comments address a number of relevant factors in the noise assessment.

Sound power data –

The HS report provides the full specifications of the Vestas V100-1.8MW wind turbine, which, according to the Development Application by Moonies Hill Energy, is one of several units under consideration for the proposal. These units comprise a 100m diameter rotor with hub height of 80m, and the specifications include comprehensive sound power data on which the assessment is based. The following observations can be made on the data provided.

Overall A-weighted sound power levels –

The overall A-weighted sound power levels are typical of these types of units, increasing from 94 dB(A) at a wind speed of 4 m/s to a maximum sound power level of 105 dB(A) at about 8-9 m/s (at hub height). Data are provided for three operational modes, designated Modes 0, 1 and 2; the sound power levels are the same for Modes 0 and 1, while the maximum level is 2 dB lower, at 103 dB(A), for Mode 2. The sound power levels for Mode 0 have been used in the modelling to represent a worst case.

It is possible that a different wind turbine may be used in the final proposal, in which case there may be small changes in the sound power levels.

Tonality –

The specifications also present the results of the spectral measurements carried out for the manufacturer by Delta of Denmark to identify any tonality in the noise spectrum

(noise that may stand out at specific frequencies). The narrowband results, taken from a relatively close distance of 155m, indicate the presence of possible tones at five frequencies. However, these tones are not evident in the one-third octave spectra for the various wind speeds; and none of these one-third octave spectra would be classed as containing tonality as defined under the WA noise regulations. The noise character is therefore not expected to be perceived as 'tonal', particularly at greater distances.

Low frequency and infrasound content –

The spectral data contain information on the A-weighted noise levels down to a frequency of 10 Hz. The HS report does not present any assessment of low frequency noise and infrasound; therefore, in view of the recommendations in the Senate report, an analysis is presented below.

Table 2 presents the results for the highest measured sound power levels (11 m/s wind speed) for the frequencies up to 160 Hz. The A-weighting adjustments have then been removed to obtain 'non-A-weighted' sound power levels. These values have been used to estimate the sound pressure level at a distance of 1 km, assuming the noise level is reduced only by the distance, and adding 5 dB to the value for one turbine to account for the presence of other nearby turbines. Finally, the estimated sound pressure levels at 1 km are compared with the hearing threshold levels for each frequency, as recommended in the Draft National Wind Farm Development Guidelines of 2010.

Table 2: Low frequency and infrasound noise levels

| Frequency (Hz) | A-weighted sound power at 11 m/s, dB | A-weighting adjustment, dB | Non-A-weighted sound power, dB | Estimated noise level at 1km, dB | Hearing threshold, dB |
|----------------|--------------------------------------|----------------------------|--------------------------------|----------------------------------|-----------------------|
| 10 | 49.5 | 70.4 | 119.9 | 57 | 95 |
| 12.5 | 54.1 | 63.4 | 117.5 | 55 | 87 |
| 16 | 57.1 | 56.7 | 113.8 | 51 | 79 |
| 20 | 62.2 | 50.5 | 112.7 | 50 | 71 |
| 25 | 66.0 | 44.7 | 110.7 | 48 | 63 |
| 31.5 | 72.2 | 39.4 | 111.6 | 49 | 55.5 |
| 40 | 77.3 | 34.6 | 111.9 | 49 | 48 |
| 50 | 77.4 | 30.2 | 107.6 | 45 | 40.5 |
| 63 | 80.9 | 26.2 | 107.1 | 44 | 33.5 |
| 80 | 82.1 | 22.5 | 104.6 | 42 | 28 |
| 100 | 85.1 | 19.1 | 104.2 | 41 | 23.5 |
| 125 | 86.7 | 16.1 | 102.8 | 40 | - |
| 160 | 89.0 | 13.4 | 102.4 | 39 | - |

The analysis indicates that the low frequency noise levels from wind turbines are likely to be audible to the average person only at frequencies above about 40 Hz, and then only in the absence of background noise. A person with highly sensitive hearing may possibly be able to perceive the noise at frequencies down to perhaps 25 Hz. At lower frequencies down to 10 Hz, the noise is likely to be inaudible. The estimated noise levels for indoors are likely to be similar to or slightly lower than the outdoor levels presented in Table 2.

The Delta report presented no infrasound data below 10 Hz, however various other measurements of infrasound levels indicate that the sound power levels below 10 Hz have their maximum energy typically in the range 2-5 Hz, at levels about 10 dB above the level at 10 Hz. Thus the estimated sound pressure levels below 10 Hz may be of the order of 65-70 dB at a distance of 1 km; and these levels would be even further below the threshold of hearing than they are at 10 Hz.

In the light of this analysis, low frequency noise and infrasound are considered highly unlikely to represent a problem for residences in the vicinity of the Flat Rocks Wind Farm.

Noise predictions –

The HS report presents noise predictions for 25 ‘non-stakeholder’ and 8 ‘stakeholder’ locations (Table 5.1 of the HS report). These are based on the proposed locations of the turbines, and take into account the topography and sound propagation over distance. Noise levels are predicted for integer wind speeds of 4 m/s to 9 m/s at hub height.

The acoustic model, based on ISO9613, is in common use for wind farm assessments. Verification measurements carried out at other sites, including in Australia, would indicate that this model may slightly overpredict the received sound levels, by up to 3 dB. Thus the predictions may be accepted as representing a reasonable worst case.

The predicted noise levels across the range of wind speeds follow the pattern of increase in sound power level with wind speed, as expected. However there are a few receiving locations for which the predicted levels appear anomalous:

- *NSH01 and SH33* – the predicted level does not increase as expected from 7 m/s to 8 m/s, indicating that the correct predicted levels for 8 and 9 m/s may be about 5dB higher than those shown in Table 5.1 of the HS report; and
- *NSH21 and SH26* – the predicted level jumps by 9 dB and 8 dB, respectively, from 7 m/s to 8 m/s, indicating that the correct predicted levels for 8 and 9 m/s may be about 5 dB lower than those shown in Table 5.1 of the HS report.

The predicted levels are low in each of the above cases, thus the above anomalies have little bearing on the outcomes.

Comparison with WA noise regulations –

The predicted noise levels in the HS report are compared against noise criteria based on the measured background noise levels. However it is important to also compare the predicted noise levels against the WA noise regulations. It should be noted here

that the regulations apply to noise passing from one premises to another, thus they do not apply at 'stakeholder' locations, where the noise is generated and received on the same premises.

The regulations specify an outdoor L_{A10} assigned noise level for night time of 35 dB(A), which applies at any point within 15m of the dwelling. Assuming all wind turbines operate at night, the predicted noise levels in Table 5.1 of the HS report can be seen to meet the assigned level for night time at all 'non-stakeholder' locations at wind speeds up to and including 7 m/s. Small exceedances could occur at five receiving locations at wind speeds of 8 m/s and above, however assessment against the noise regulations is not normally carried out at such high wind speeds, as explained below.

The WA Environment Protection Authority (EPA) Draft Guidance 8 – Environmental Noise specifies default 'typical worst case' meteorological conditions for noise predictions for assessing noise from general industry. If the proponent can demonstrate compliance under these conditions, the EPA would accept that the proposal can be managed to comply with the noise regulations. The default conditions for daytime are wind speed of 4m/s, temperature 20°C and relative humidity 50%; and for night time 3m/s, 15°C and 50%, respectively, and with a temperature inversion included (Pasquill Stability Factor "F" if using SoundPlan software).

The basis for this approach is that –

- (a) these default values represent typical worst case conditions for sound propagation; and
- (b) at wind speeds above these default values (near the receiver), the background noise due to wind in vegetation is likely to mask the noise received from the proposal.

Draft Guidance 8 therefore places no requirements on general industry proponents to demonstrate compliance with the noise regulations for higher wind speeds than these default values. In the case of the Flat Rocks Wind farm proposal, the predicted noise levels comply with the assigned level at wind speeds up to 7m/s at hub height; this would correspond to a wind speed of about 5 m/s at 10m above ground level, which is well above the 3 or 4 m/s required for noise assessment for compliance with the regulations. The predicted noise levels are at least 3 dB below the assigned level at this wind speed, thus providing some safety margin.

It can therefore be concluded that the noise emissions from the Flat Rocks Wind farm should be manageable to meet the assigned noise levels in the WA noise regulations when assessed against the EPA's default conditions for general industry.

Comparison with South Australian Guidelines –

When compared with general industry, wind farms represent a special case, in that the sound power levels increase with wind speed. For this reason EPA draft Guidance 8 refers to the 2003 South Australian EPA guidelines for wind farms, and this is the basis on which the HS report made its assessment.

Table 6.1 of the HS report compares predicted noise levels with noise criteria based on background noise levels. However, the comments above regarding the background

noise report by HS would indicate that the some of the background noise data is considered unreliable for the purpose of setting such criteria. Table 3 below presents the noise predictions from the HS report for the receivers where noise levels above 35 dB(A) were predicted at the high wind speeds. Where these sites have unreliable background noise data, the predicted levels are compared with criteria based on background noise levels from the quietest site (Location 6) to replace the unreliable data. The emphasis is again on the ‘non-stakeholder’ locations.

Table 3: Comparison of predicted noise levels with alternative background noise criteria for some receiving locations

| Receiving / background location | Predicted / Criteria | Predicted noise level / Noise criteria, dB(A) | | | | Exceedance, dB |
|---------------------------------|----------------------|---|------|------|------|----------------|
| | | 6m/s | 7m/s | 8m/s | 9m/s | |
| NSH03 | Predicted | 27 | 31 | 36 | 36 | |
| Loc 6 | Criteria | 35 | 35 | 37 | 38 | Complies |
| NSH04 | Predicted | 28 | 32 | 36 | 36 | |
| Loc 6 | Criteria | 35 | 35 | 37 | 38 | Complies |
| NSH12 | Predicted | 27 | 31 | 37 | 36 | |
| Loc 6 | Criteria | 35 | 35 | 37 | 38 | Complies |
| NSH13 | Predicted | 26 | 30 | 36 | 36 | |
| Loc 2 | Criteria | 35 | 36 | 37 | 39 | Complies |
| NSH14 | Predicted | 27 | 31 | 37 | 37 | |
| Loc 9 | Criteria | 37 | 39 | 41 | 43 | Complies |
| NSH15 | Predicted | 28 | 32 | 37 | 37 | |
| Loc 6 | Criteria | 35 | 35 | 37 | 38 | Complies |
| NSH34 | Predicted | 28 | 32 | 37 | 37 | |
| Loc 6 | Criteria | 35 | 35 | 37 | 38 | Complies |

Although the analysis in Table 3 represents a more conservative approach than that in the HS report, the predicted noise levels still comply with the criteria based on background noise levels in each case. With the exception of NSH14, compliance is marginal in the above cases, and it would be appropriate that consideration be given to relocating the nearest turbines to reduce noise levels at these locations. Approval conditions for the project should require noise monitoring at these receivers.

It can therefore be concluded that the noise emissions from the Flat Rocks Wind Farm should be manageable to achieve compliance with the South Australian EPA Wind Farm Guidelines of 2003.

Noise buffer issues –

The noise contours presented in Appendix C of the HS report, especially for the higher wind speeds, indicate that there are significant areas of non-stakeholder land which are within the 35 dB(A) noise contour. There is a risk for the wind farm operators that it may be possible for the landowner to construct an additional residence on this land in the future, and that noise levels will thus be non-compliant at the new residence. In such a case the *Environmental Protection Act 1986* does not recognise 'who was there first'.

In order to minimise this risk it is recommended that the proponent take measures to secure agreement with the adjacent landowners that would prevent further residences being constructed in the affected areas. This could also be enacted through land use planning provisions where appropriate.

Stakeholder residences –

As indicated above, the noise regulations deal with noise emissions from one premises to another and do not apply where noise is emitted and received on the same premises. Consequently, the assigned levels in the regulations would not apply to noise received at the residence of a landowner who had wind turbines on his own property by arrangement with the wind farm proponent ('stakeholder'). In this case, it is recommended that the predicted noise levels should be based on the South Australian EPA Guidelines, but with a base level of 40dB(A). However it should be recognized that this is not a regulatory requirement and it is open to the proponent to negotiate higher noise levels at the receiver, according to the circumstances.

The predicted noise levels for the Flat Rocks Wind Farm in the HS report indicate that noise levels will be 40 dB(A) or less at all of the stakeholder receivers; and would meet the 2003 South Australian EPA Guidelines at all but two receivers, where the predicted noise level of 38 dB(A) would be 1 dB above the criterion level for a wind speed of 8 m/s.

CONCLUSIONS

This review by the DEC Noise Regulation Branch of the noise assessment for the proposed Flat Rocks Wind Farm near Kojonup finds that the noise emissions from the proposal should be manageable to achieve compliance with both the Environmental Protection (Noise) Regulations 1997 and the South Australian EPA Guidelines for wind farms, at the residential receiving locations assessed. Compliance is likely to be marginal at 6 receiving locations, and it would be appropriate that consideration be given to relocating the nearest turbines to reduce noise levels at these locations. Approval conditions for the project should require noise monitoring at these receivers.

There remains a risk that future residences may be constructed on land that is within the 35 dB(A) noise contour, and that the noise emissions may not comply at such locations. Appropriate measures should be put in place to minimise this risk.



Dr Sarah Rankin
Director
Moonies Hill Energy Pty Ltd
78 Pensioner Road
KOJONUP WA 6395

Our Ref A367505
Enquiries Leanne Thompson
Phone 6467 5246

Dear Dr Rankin

**NOTICE UNDER SECTION 39A(3)
*Environmental Protection Act 1986***

PROPOSAL: Flat Rocks Wind Farm
LOCATION: approximately 35 km south-east of Kojonup
PROPONENT: Moonies Hill Energy Pty Ltd
DECISION: Not Assessed – no advice given

Thank you for your letter referring the above matter to the Environmental Protection Authority (EPA).

This proposal raises a number of environmental issues. However, the overall environmental impact of the proposal is not so significant as to require assessment by the EPA, and the subsequent setting of formal conditions by the Minister for Environment under Part IV of the *Environmental Protection Act 1986* (EP Act).

Nevertheless, the EPA expects that the proposal will be implemented in an environmentally responsible way.

The EPA's decision to not assess the proposal is open to appeal. There is a 14-day period, closing 2 May 2011, during which, on payment of the \$10 appeal fee, an appellant may ask the Minister to consider directing the EPA to reconsider this decision or conduct a formal assessment. Information on the outcome of the appeals process is available through the Appeals Convenor's website, www.appealsconvenor.wa.gov.au, or by telephoning 6467 5190 after the closing date of appeals.

Yours sincerely

Mark Jefferies
A/Director
Assessment and Compliance Services

18 April 2011