

## **Black Springs Wind Farm**

## **Noise Study**



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#### 1 Introduction

The Black Springs wind farm is located approximately 25 km south of Oberon in NSW. The project will consist of 9 wind turbine generators with a hub height of approximately 80m and rotor diameter between 82m-88m. For the purpose of this study the analysis is based on an indicative turbine layout consisting of 9, Suzlon S88 turbines (hub height 80m, rotor diameter 88m).



Figure 1-1: Overview Map

The guidelines followed in this report are the South Australian Environmental Protection Agency (SA EPA) Environmental Noise Guideline: Wind Farms (SA EPA Guidelines)¹. This standard provides guidance in monitoring, predicting, and assessing noise from wind farm developments. It sets a noise limit for residences and sensitive locations that are not financially involved in the project of the greater of 35 dB(A) or 5 dB(A) above background noise. Note that the Director General's Requirements for the EIS also request this study to be performed in accordance with the NSW Industrial Noise Policy, however this Policy states that it is not applicable to wind farms, hence it is not relevant to this study. The SA EPA Guidelines have been adopted by the NSW Government as assessment guidelines for wind farm noise.

The "Daisybank" (House No. 25) and the "Aqualoria" Residence (House No. 23) are involved in the proposed development and are hence considered as "non-relevant residences" since there is scope in the SA EPA Guidelines for agreements regarding the noise level at such residences to be made between the developer and the landowner as long as the maximum noise levels in such agreements are still considered reasonable. The "Winton Park" (House No. 28) and the "Miller" (House No. 66) residence (owned by Forestry Commission) are also considered as non-relevant as these residences have indicated that higher noise limits will be accepted.

Comparison of the predicted noise output, measured background noise, assumed background noise and the SA EPA noise limit were carried out over a range of wind speeds and locations. The noise level generated by the wind farm is within the limits set by the SA EPA Guidelines, the NSW

<sup>1</sup> Wind Farms: Environmental Noise Guidelines, Environmental Protection Authority of South Australia, February 2003

Industrial Noise Policy and other standards such as the NZ Noise Standard<sup>2</sup>. The wind farm therefore complies with the noise limits set by the NSW Government.

The results of these comparisons, of the background noise measurements and the noise level prediction are presented in this report. The noise model used for the wind farm noise prediction is based on ISO 9613-2³ and classified as simple noise model using no specific ground attenuation and a fixed reference frequency of 500 Hz. This model is more conservative as more complex sound models and therefore represents a worst case scenario.

NZ6808:1998 - Acoustics - The Assessment and Measurement of sound from Wind Turbine Generators, Standards New Zealand

<sup>&</sup>lt;sup>3</sup> International Standard ISO 9613 " Acoustics – Attenuation of sound during propagation outdoors"

## 1.1 Nomenclature

The following terms are used in this report:

Sound Power Level the source sound emission level in dB(A)

dB (decibel) the units of sound pressure level or sound power

level (logarithmic scale)

dB(A) 'A' frequency weighted unit of sound pressure

level. The A level approximates the sound

perception of the human ear

**L**<sub>Aeq</sub> the average sound level over the measurement

period

Lago the sound level that is exceeded 90% of the time

for a given period

**Hz** Hertz – unit for frequency

AGL or agl above ground level

m/s meters/second

#### 2 Wind Turbine Noise

The most noticeable sound produced by a wind turbine can be described as the periodic "swish-swish" of the blades cutting through the air. Although the blades continuously create this noise while rotating there is a pressure change as the blade passes the tower and an intermittent "swish-swish" sound is propagated.

This sound is not mechanical and does not generally have a tonal nature but is rather a "white<sup>4</sup>" noise and therefore decays more rapidly with distance.

The noise output of turbine increases with wind speed however the background sound pressure level, which has the effect of masking the noise produced by the turbine, also increases. The assessment of noise from wind farms considers the variation of noise output with change in wind. As a reference the sound power level of a wind turbine at a wind speed of 8 m/s is often used in the industry as this is about the level at which the sound of a wind turbine is most noticeable.

The variation in output for the Suzlon S88 turbine is displayed in Table 2-1.

Wind speed [m's at 10m AGL)	Sound Power Level [dB(A)]
3	103.4
4	104.1
5	104.7
6	105.2
7	105.6
8	105.9
9	106.1
10	106.2

Table 2-1: SUZLON S88-2.1 Sound emission

First interim results of noise tests conducted by DEWI<sup>5</sup> indicate that actual sound emissions will be lower than the guaranteed emissions shown in Table 2-1 with 104.9 dB(A) at 8m/s compared to 105.9 dB(A) as per Table 2-1.

#### 3 Noise Guidelines

The assessment of sound levels produced by the Black Springs Wind Farm has been undertaken as per the South Australian Environmental Protection Agency (SA EPA) Environmental Noise Guideline: Wind Farms (SA EPA Guidelines<sup>6</sup>). This guideline has been applied for the development of wind farms in NSW, Victoria and South Australia and is referenced in the NSW Planning draft document, Planning Guidelines for Wind Farms.

The SA EPA Guidelines require that the equivalent noise level ( $L_{Aeq}$ ) due to wind turbine noise at a residence, measured at a level of 2m above ground adjusted for tonality is a maximum of 35 dB(A) or the background sound power level ( $L_{A90}$ ) plus 5 dB(A), whichever is greater. The levels stated are at a reference wind speed range from cut-in wind speed (4 m/s) to rated power of the wind turbine (12m/s) at 10m above the ground. Although the noise output of a turbine increases with wind speed it is accepted that at speeds in excess of 8m/s the background noise generated by the wind generally has a significant masking affect. As the SUZLON S88 does not show a specific tonality in its noise emissions, no adjustment for tonality has been made.

<sup>4</sup> Noise is described as "white" noise when it does not have a specific tonality and frequency spectrum but ranges across a large frequency band.

<sup>&</sup>lt;sup>5</sup> Deutsches Windenergie Institut GmbH, 22/11/2005

<sup>&</sup>lt;sup>6</sup> Wind Farms: Environmental Noise Guidelines, Environmental Protection Authority of South Australia, February 2003

#### 4 Noise Prediction Model

The prediction of the sound pressure levels at the receiver locations was based on a conservative hemispherical spreading model based on ISO 9613-27. The calculation considers the variation in terrain based on a digital elevation model and assumes a specific terrain surface as represented in the project area of 1 dB/km (ground covered with grass) as well as a general atmospheric attenuation of 2 dB/km. The calculation makes no allowance for vegetation such as trees or any other obstacles potentially masking the sound distribution. Although the model is considered to be simple, the assumptions result in generally conservative results, particularly in the case where significant vegetation exists between the source and receivers. The model referenced to in the SA EPA Guidelines to calculate the noise emissions is specified in ISO 9613. This model uses the 1/3 octave band sound emissions from a given turbine as basis for the calculation. As this spectral noise distribution was not available at the time of this report, the simple noise model using an overall sound pressure level at a given wind speed has been used. As the simple noise model generally calculates higher noise levels than the ISO 9613 specification, it is seen as conservative and appropriate. The SA EPA Guidelines allow the selection of a suitable model and as the simple noise model is consider to represent the worst case this is deemed acceptable.

The noise modelling was undertaken with the Windfarmer™ software package. Windfarmer is a specialised wind farm analysis tool developed by the leading consulting firm Garrad Hassan.

The following assumptions are made in the calculation of predictions;

- The turbine noise emits from a point source at hub-height (80mAGL)
- · Receivers are located 2m above the ground
- The turbine noise output varies with wind speed as per Table 2-1
- The ground is considered to be a soft surface covered with grass and non-reflecting
- Attenuation occurs at a rate of 2 dB per km (atmospheric) and 1 dB per km (porous surface)
- There is no vegetation or other attenuating structure between the wind turbine and the receiver (trees around houses are not considered in the prediction).

Although the model does not consider other atmospheric conditions such as air density or humidity, the results obtained from the model have previously compared well with those obtained from complex models based on worst-case atmospheric conditions. The estimated error in the prediction is 2-3 dB.

#### 5 Back[pground Noise

As the wind speed increases at a residence there is a natural increase in the ambient or background noise level. The characteristic of the background sound level will depend upon levels and types of vegetation, nature of structures and degree of exposure. The SA EPA Guidelines acknowledge that the background noise (natural or otherwise) can provide masking affect that reduces the intrusiveness of noise generated by turbines. When background noise levels at a residence are monitored and then analysed with reference to simultaneous wind speed measurements, an adjusted limit can be established.

Background noise levels were monitored at six of the residences considered in this study of which three locations are deemed to be relevant for the wind farm site. The locations of the three relevant sites selected for background noise monitoring are shown in Figure 5-2. These background noise measurements have been conducted by Garrad Hassan from 11-02-2005 to 11-03-2005 using equipment from Acoustic Research Laboratories Model EL-315, Type 2 with an accuracy of  $\pm 1$  dB. As part of the analysis, rainfall data was obtained from the Bathurst Airport BoM station and checked for its validity with local rain gauge measurements recorded by Gavin Douglas at the Black Springs Site. All noise measurements undertaken during periods of rainfall have been excluded from the analysis.

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<sup>&</sup>lt;sup>7</sup> International Standard ISO 9613 " Acoustics – Attenuation of sound during propagation outdoors

Seasonal variation of background noise has not been considered as the measurement only occurred in February/March 2005 and covers all representative wind speeds.

#### Correlation between wind speed measurement levels

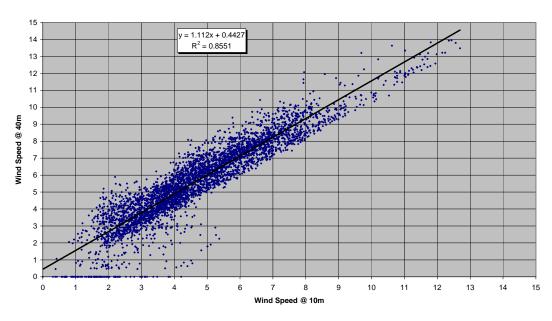


Figure 5-1: Correlation between 10m and 40m wind speed at the Daisybank Monitoring Mast

An analysis of the wind speed correlation between the 10m level and the 50m level indicates that the so called "van den Berg"-Effect of very high wind speeds at hub height even when it is almost calm at the 10m level does not occur on this site (Figure 5-1).



Figure 5-2: Background Noise Monitor Locations and turbine layout

Figure 5-2: Background Noise Monitor Locations and turbine layout



## 5.1 Baxter Residence (Receiver 01 – House 63)

The Baxter residence (House 63) is located to the South of the proposed development (coordinates 750624E 6246715N UTM WGS84 Zone 55) with the receiver installed approximately 15m north-west of the house. Background noise levels were monitored at this location over the period 11-02-2005 until 11-03-2005.

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#### **Background Noise Baxter**

Figure 5-3: Ambient Sound level (L90, dB(A)) at the Baxter residence and concurrent wind speed (10m) on Daisybank

Figure 5-4 displays the logged sound pressure level ( $L_{A90}$ ) against wind speed as well as the second order polynomial regression line. A total of 3,318 10-min data points was used which is considered representative<sup>8</sup>.

Although the third order polynomial regression line results in a better correlation factor the third order shows an incorrect shape at high wind speeds. With the second order polynomial regression line being very close in its correlation quality to the third order the second order polynomial regression has been used. The polynomial regression line has been applied for wind speeds in excess of 2.94 m/s $^9$  at 10m (cut-in wind speed of turbine 4 m/s at hub height) and less than 18 m/s $^{10}$  (cut-out wind speed of turbine) resulting in a total of 2,759 data sets for the regression analysis.

Regression order	Correlation (R <sup>2</sup> )
1	0.1714
2	0.1718
3	0.1764

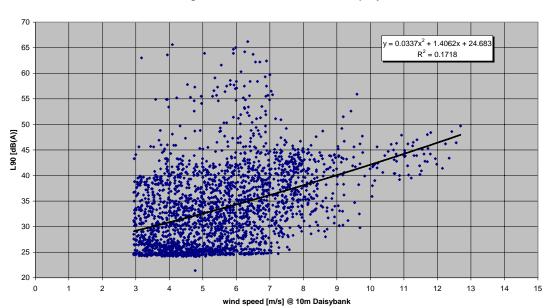
Table 5-1: Correlation R<sup>2</sup> factors Baxter Residence

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<sup>&</sup>lt;sup>8</sup> A minimum of 2,000 data points is considered as sufficient in the SA EPA Guidelines

 $<sup>^{\</sup>rm 9}$  The cut-in wind speed of this turbine is 4 m/s equalling 2.9 m/s at 10m a.g.l.

 $<sup>^{10}</sup>$  The cut-out wind speed of this turbine is 25 m/s equalling 18 m/s at 10m a.g.l.



#### **Background Noise Measurement Baxter Property**

Figure 5-4: Background Noise Measurement Results Baxter

This background noise measurement shows a minimum background noise level of approximately  $28\,dB(A)$  at the cut-in wind speed of 2.94m/s with an average sound pressure level of  $36\,dB(A)$  at 8m/s. The second order regression line was then used and plotted against the predicted sound power level generated by the proposed project. As per the SA EPA Guidelines a maximum sound pressure level of  $35\,dB(A)$  or background noise  $+\,5\,dB(A)$  is acceptable. The results are shown in Figure 5-5. The maximum noise level generated by the wind farm at 8m/s is  $36.4\,dB(A)$ .

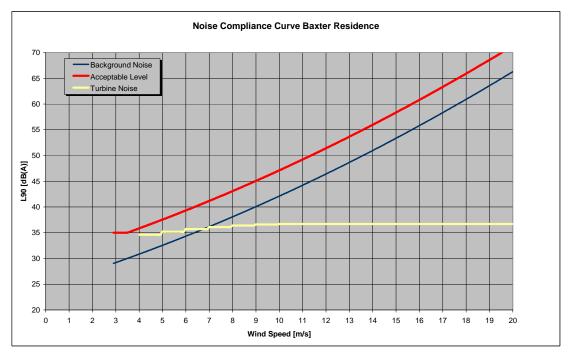


Figure 5-5: Noise Compliance Check Baxter

The calculated sound pressure level at the Baxter residence caused by the wind farm is for all wind speeds lower than the maximum acceptable noise level and therefore the wind farm complies with the applicable noise limits at this particular residence.

### 5.2 House 24 Residence (Receiver 02)

The House 24 background noise measurement was done immediately outside the boundary of the house 24 property approximately 450 m to the south west of the house. The location is north-west of the proposed development (coordinates 751691E 6249489N UTM WGS84 Zone56). Background noise levels were monitored at this location over the period 11-02-2005 until 11-03-2005.

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#### House 24 Background Noise

Figure 5-6: Ambient sound levels (L90, dB(A)) at House 24 and concurrent wind speed (10m) on Daisybank

Figure 5-7 displays the logged sound pressure level ( $L_{90}$ ) against wind speed as well as the second order polynomial regression line. A total of 4,067 10-min data points was used which is considered representative<sup>11</sup>.

Although the third order polynomial regression line results in a better correlation factor the third order shows an incorrect shape at high wind speeds. With the second order polynomial regression line being very close in its correlation quality to the third order the second order polynomial regression has been used. The polynomial regression line has been applied for wind speeds in excess of 2.94 m/s at 10m (cut-in wind speed of turbine 4 m/s at hub height) and less than 18 m/s (cut-out wind speed of turbine) resulting in a total of 2,268 data sets for the regression analysis.

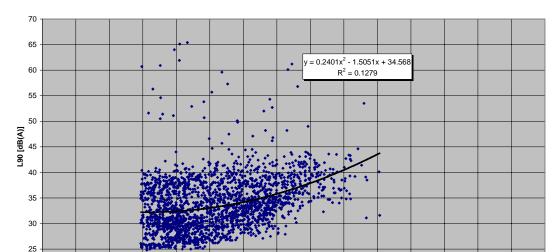
Regression order	Correlation (R <sup>2</sup> )
1	0.1148
2	0.1279
3	0.1340

Table 5-2: Correlation R<sup>2</sup> factors House 24 Residence

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<sup>&</sup>lt;sup>11</sup> A minimum of 2,000 data points is considered as sufficient in the SA EPA Guidelines

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#### **Background Noise Measurement House 24 Property**

Figure 5-7: Background Noise Measurement Results House 24

wind speed [m/s] @ 10m Daisybank

10

13

14

15

This background noise measurement shows a minimum background noise level of approximately  $32 \, dB(A)$  at the cut-in wind speed of  $2.9 \, m/s$  with an average sound pressure level of  $37 \, dB(A)$  at  $8 \, m/s$ . The second order regression line was then used and plotted against the predicted sound power level generated by the proposed project. As per the SA EPA Guidelines a maximum sound pressure level of  $35 \, dB(A)$  or background noise  $+ \, 5 \, dB(A)$  is acceptable. The results are shown in Figure Figure 5-8. As no particular background measurement was conducted at the house itself but in open farmland away from the main roads, it is a reasonably conservative assumption to use the results of this background noise measurement as probable background noise at the house itself (coordinates of house 752162E, 6250018N UTM WGS84 Zone 56). The maximum noise generated by the wind farm at this property at a wind speed of  $8 \, m/s$  is  $38.7 \, dB(A)$ .

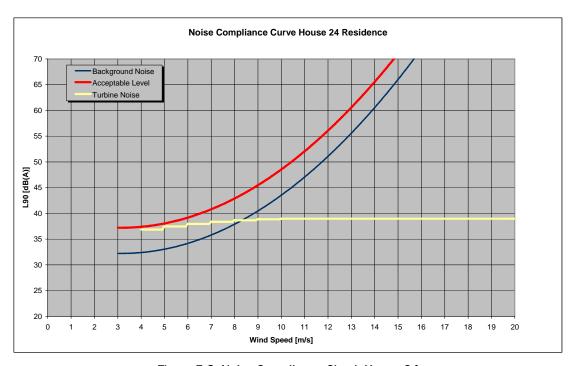


Figure 5-8: Noise Compliance Check House 24

The calculated sound pressure level at the House 24 residence caused by the wind farm is for all wind speeds lower than the maximum acceptable noise level and therefore the wind farm complies with the applicable noise limits at this particular residence.

# **5.3** Miller Residence (House 25 - Receiver 03) – (non relevant as noise agreement signed)

The Miller Residence (House 25) background noise measurement was done 20m to the east of the house (Coordinates: 749410E, 6249951N UTM WGS84 Zone56). Background noise levels were monitored at this location over the period 11-02-2005 until 11-03-2005.

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#### **Background Noise Miller**

Figure 5-9: Ambient sound levels (L90, dB(A)) at the Miller residence and concurrent wind speed (10m) at Daisybank

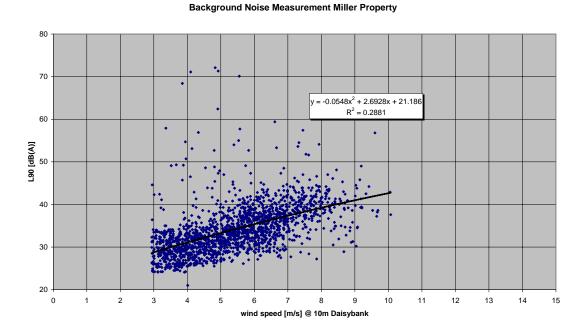
Figure 5-10 displays the logged sound pressure level ( $L_{90}$ ) against wind speed as well as the second order polynomial regression line. A total of 3,704 10-min data points was used which is considered representative<sup>12</sup>.

Although the third order polynomial regression line results in a better correlation factor the third order shows an incorrect shape at high wind speeds. With the second order polynomial regression line being very close in its correlation quality to the third order the second order polynomial regression has been used. The polynomial regression line has been applied for wind speeds in excess of 2.94 m/s at 10m (cut-in wind speed of turbine 4 m/s at hub height) and less than 18 m/s (cut-out wind speed of turbine) resulting in a total of 1,882 data sets for the regression analysis.

Regression order	Correlation (R <sup>2</sup> )
1	0.2875
2	0.2881
3	0.2910

Table 5-3: Correlation R<sup>2</sup> factors House 25 Residence

<sup>&</sup>lt;sup>12</sup> A minimum of 2,000 data points is considered as sufficient in the SA EPA Guidelines



## Figure 5-10: Background Noise Measurement Results Miller

This background noise measurement shows a minimum background noise level of approximately  $28 \, dB(A)$  at the cut-in wind speed of  $2.9 \, m/s$  with an average sound pressure level of  $39 \, dB(A)$  at  $8 \, m/s$ . The second order regression line was then used and plotted against the predicted sound power level generated by the proposed project. As per the SA EPA Guidelines a maximum sound pressure level of  $35 \, dB(A)$  or background noise  $+ \, 5 \, dB(A)$  is acceptable. As a noise acceptance agreement  $^{13}$  has been signed with the landowner stating a maximum noise limit of  $50 \, dB(A)$  at this property, this noise level applies. The results are shown in Figure 5-11. The maximum noise generated by the wind farm at this property at a wind speed of  $8 \, m/s$  is  $44.8 \, dB(A)$ .

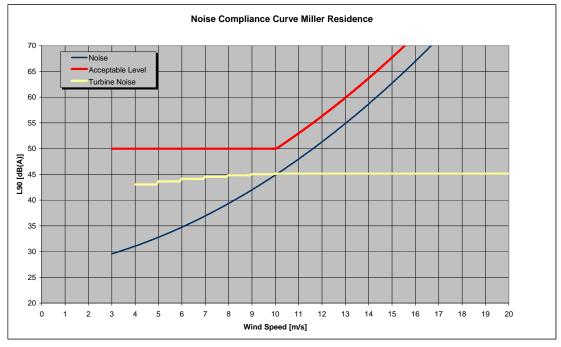


Figure 5-11: Noise Compliance Check Miller

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<sup>&</sup>lt;sup>13</sup> Source: Developer

As this house residence has accepted a higher noise limit of 50 dB(A) as maximum the wind farm complies with the acceptable noise limits at this residence.

## 5.4 General assumptions for houses with no background noise measurement

The background noise measurement conducted is deemed to be representative for the area and therefore the following noise limits will be applied to the houses, where no background noise measurement was done:

- Baxter Residence all houses south of the project
- House 24 all houses east of the project up to Winton Park turn-off
- Miller Residence all houses north of the project and along Oberon-Burraga Road

This approach is considered conservative and appropriate as the background noise measurement sites were in similar areas to the houses were no background noise measurement has been undertaken. Especially in the case of House 24 the noise receiver was sited on a location well off the main road while most houses where this receiver is considered to be relevant are actually located either in a similar area (Winton Park) or closer to the main road and thus expected to experience higher background noise than measured by this receiver.

Therefore the applicable noise limits for the relevant residences would be:

Receiver	Reference	Applic	Applicable sound pressure level at residence [dB(A)] at wind speed in m/s									
		4	5	6	7	8	9	10	11	12	13	14
20	House 24	37.4	38.0	39.2	40.8	42.9	45.5	48.5	52.1	56.1	60.6	65.6
21	House 24	37.4	38.0	39.2	40.8	42.9	45.5	48.5	52.1	56.1	60.6	65.6
22	House 24	37.4	38.0	39.2	40.8	42.9	45.5	48.5	52.1	56.1	60.6	65.6
23	House 24	37.4	38.0	39.2	40.8	42.9	45.5	48.5	52.1	56.1	60.6	65.6
24	Miller	36.1	37.8	39.7	41.9	44.3	47.0	49.9	53.0	56.3	59.9	63.7
25	Miller	36.1	37.8	39.7	41.9	44.3	47.0	49.9	53.0	56.3	59.9	63.7
27	Miller	36.1	37.8	39.7	41.9	44.3	47.0	49.9	53.0	56.3	59.9	63.7
28	Miller	36.1	37.8	39.7	41.9	44.3	47.0	49.9	53.0	56.3	59.9	63.7
29	Baxter	36.6	37.9	39.3	41.0	42.9	45.0	47.3	49.8	52.5	55.4	58.6
31	House 24	37.4	38.0	39.2	40.8	42.9	45.5	48.5	52.1	56.1	60.6	65.6
32	Baxter	35.8	37.6	39.3	41.2	43.1	45.1	47.1	49.2	51.4	53.7	56.0
33	Baxter	35.8	37.6	39.3	41.2	43.1	45.1	47.1	49.2	51.4	53.7	56.0
34	Baxter	35.8	37.6	39.3	41.2	43.1	45.1	47.1	49.2	51.4	53.7	56.0
35	Baxter	35.8	37.6	39.3	41.2	43.1	45.1	47.1	49.2	51.4	53.7	56.0

Table 5-4: applicable Noise Limits at relevant residences

#### 6 Black Springs Wind Farm

The Black Springs Wind Farm will occupy two farm areas, "Aqualoria" and "Daisybank". For the purpose of the study a representative layout of 9 Suzlon S88 turbines with an 88m rotor diameter and an 80m hub height has been used. Within the vicinity of the site there are 14 residences which may experience some noise impact from the wind farm (see Figure 6-1). The residences positions have been established through map review and site survey and are listed in Table 6-1.



Figure 6-1: Turbine Layout and Residences

Of the 14 potential noise receivers, 9 are considered as "relevant" as they are not contractually involved in the project. Residences contractually involved in the project have signed noise acceptance agreements with the developer accepting a maximum noise level generated by the wind farm of 50 dB(A). This noise limit has been used for the assessment of these properties. The developer has also signed a noise acceptance agreement with Receiver 25 (Miller) allowing a maximum sound pressure level at this residence of 50 dB(A).

The contractual noise limit for such residences of 50 dB(A) is considered reasonable as the landowners have been informed about this impact, a formal agreement has been reached <sup>14</sup> and the impact of this disposure is unlikely to result in adverse health impacts.

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 $<sup>^{14}</sup>$  Information provided by developer

Figure 6-1: Turbine Layout and Residences



Doggiver	Closest	Distance to	WGS84 Zone 56 U	TM Coordinates		
Receiver No.	Turbine	Closest Turbine (m)	Easting (m)	Northing (m)	Relevant Receiver	
20	9	1,228	751880	6250600	Yes	
21	9	1,561	752275	6250190	Yes	
22	9	1,447	752151	6250042	Yes	
23	9	1,402	751941	6249533	Yes	
24	9	316	750492	6249986	No	
25	8	484	749270	6249750	No	
27	7	504	750004	6249216	No	
28	3	467	749393	6248591	No	
29	1	1,072	748320	6247030	Yes	
31	5	1,156	751614	6248514	Yes	
32	1	1,162	750080	6246960	Yes	
33	2	1,615	750520	6246520	Yes	
34	1	1,533	750120	6246480	Yes	
35	1	1,793	749630	6245950	Yes	

Table 6-1: Noise Receiver Locations (Residences)

## 7 Results

Calculation of noise impacts was carried out for the 14 receivers within the vicinity of the site. The results are presented for the reference wind speed range of 4 m/s to 14 m/s at a height of 10m above the ground. Results marked in bold red show that the applicable limit is exceeded. Results in italic letters show non-relevant receiver locations.

Receiver	Predicted sound pressure level at residence [dB(A)] at wind speed in m/s											
	4	5	6	7	8	9	10	11	12	13	14	Maximum exceedance [dB(A)]
20	35.2	35.8	36.4	36.8	37.1	37.3	37.4	37.4	37.4	37.4	37.4	0
21	33.9	34.5	35.1	35.5	35.8	36.0	36.1	36.1	36.1	36.1	36.1	0
22	34.9	35.5	36.1	36.5	36.8	37.0	37.1	37.1	37.1	37.1	37.1	0
23	36.8	37.4	38.0	38.4	38.7	38.9	39.0	39.0	39.0	39.0	39.0	0
24	47.7	48.3	48.9	49.3	49.6	49.8	49.9	49.9	49.9	49.9	49.9	0
25	42.9	43.5	44.1	44.5	44.8	45.0	45.1	45.1	45.1	45.1	45.1	0
27	46.4	47.0	47.6	48.0	48.3	48.5	48.6	48.6	48.6	48.6	48.6	0
28	44.4	45.0	45.6	46.0	46.3	46.5	46.6	46.6	46.6	46.6	46.6	0
29	35.9	36.5	37.1	37.5	37.8	38.0	38.1	38.1	38.1	38.1	38.1	0
31	39.0	39.6	40.2	40.6	40.9	41.1	41.2	41.2	41.2	41.2	41.2	1.6
32	38.1	38.7	39.3	39.7	40.0	40.2	40.3	40.3	40.3	40.3	40.3	2.3
33	34.5	35.1	35.7	36.1	36.4	36.6	36.7	36.7	36.7	36.7	36.7	0
34	34.9	35.5	36.1	36.5	36.8	37.0	37.1	37.1	37.1	37.1	37.1	0
35	32.2	32.8	33.4	33.8	34.1	34.3	34.4	34.4	34.4	34.4	34.4	0

Table 7-1: Noise Level Prediction at Receiver Locations<sup>15</sup>

Figure 7-1 shows the Sound Pressure Level Contour Map of the proposed development with Iso-Lines<sup>16</sup> showing the sound pressure level in 5 dB(A) intervals (solid lines) and 1 dB(A) intervals (dotted lines).

<sup>&</sup>lt;sup>15</sup> Italic numbers show non-relevant receivers, bold and red numbers show noise levels above acceptable limit

 $<sup>^{16}</sup>$  An ISO line is a contour line representing the same noise level

Figure 7-1: Sound Pressure Level Contour Map



#### 8 Conclusion

A noise limit of 35 dB(A) or background noise + 5 dB(A) whichever is greater at receivers in the vicinity of the wind farm has been considered as defined by the NSW Planning Guidelines and set out in the SA EPA Guidelines which were adapted by the Government of NSW for the assessment of wind farm projects.

In addition, conservative estimates of the variation in background noise level with change in wind speed, based on local measurement, have been used to determine the appropriate adjusted noise limit at residences. The results of the predictive calculations indicate that all the relevant residents in the immediate vicinity of the Black Springs Wind Farm broadly comply with the base 35 dB(A) and background adjusted limits of the SA EPA Guidelines. The small exceedance of maximum 2.3 dB(A) in one residence (House 32) and 1.6 dB(A) in another residence (House 31) is minimal considering the model accuracy of 2 dB(A), the accuracy of the equipment used for background noise measurements and the fact that 2 dB(A) difference is hardly recognisable. House 31 (Winton Park) is surrounded by trees and shelter belts to the west of the house and therefore some masking is expected which would reduce the noise level generated by the wind farm to acceptable noise limits at this residence. It should be noted that guaranteed sound emission levels are usually well above the actual sound emissions of such turbines and therefore adding conservativeness to the model. As a result it is expected that actual sound pressure levels during the operation of the wind farm will lower than the calculated levels.

A spectral sound emission distribution of the specific turbine model was not available at the time writing this report but SUZLON has indicated that no tonality is to be expected in the turbine which is consistent with the noise measurements for other similar turbine models.

Considering the results of the study the noise impact upon local residents is considered to be minimal.

In the case where a significant level of annoyance or disturbance due to wind farm noise is experienced by a resident, and the limits presented by the SA EPA Guidelines are found to be exceeded during operation of the wind farm, mitigation measures should be investigated. Appropriate mitigation measure would be

- Installation of double-glazing for windows facing the wind farm
- Change of blade pitch to reduce noise-emissions<sup>17</sup> for specific directional sectors (wind sector management)

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<sup>&</sup>lt;sup>17</sup> This should only be used in exceptional circumstances when other measures to not bring the desired effect

## Appendix A

## Black Springs Wind Farm - Turbine Positions

Turbine	WGS84 Zone 55 UTM Coordinates						
Turbine	Easting (m)	Northing (m)					
1	749170	6247684					
2	750311	6248122					
3	749386	6248124					
4	750436	6248505					
5	750487	6248773					
6	750513	6249041					
7	750387	6249544					
8	749736	6249883					
9	750714	6250212					



# **Deed of Agreement**

Wind Corporation Australia Limited

The Landowner described in Schedule 1

#### Piper Alderman Lawyers

Level 23, Governor Macquarie Tower
1 Farrer Place
Sydney NSW 2000
Australia
Telephone +61 2 9253 9999
Facsimile +61 2 9253 9900
www.piper-alderman.com.au

Sydney • Melbourne • Brisbane • Adelaide

O Piper Alderman



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## **Deed of Agreement**

#### **Parties**

- Wind Corporation Australia Limited (ACN 091 157 774) of Level 42, 259 George Street, Sydney NSW 2000 (WCA)
- The Landowner described in Item 1 of Schedule 1 (Landowner)

## Introduction

- A. WCA will be lodging a development application with the Consent Authority for the approval of an eleven (11) turbine wind farm known as the Black Springs Wind Farm.
- WCA understands that in New South Wales development applications for wind farms are assessed against the Noise Guidelines.
- C. Studies conducted by WCA have revealed that at some points, the noise generated by the Black Springs Wind Farm will slightly exceed the maximum sound pressure levels set out in or established under the Noise Guidelines.
- D. The Landowner's Property is part of the Black Springs Wind Farm and will be subjected to a sound pressure level which exceeds the Noise Guidelines maximum sound pressure levels as detailed in this Deed.
- E. By executing this Deed, the Landowner acknowledges that the Landowner's Property will be subjected to a sound pressure level which exceeds the Noise Guidelines maximum sound pressure levels as detailed in this Deed and the Landowner agrees that the Landowner will not make any claim or demand in this regard.

## **Operative clauses**

## 1. Definitions

- 1.1 Black Springs Wind Farm means the proposed eleven (11) turbine wind farm at Black Springs, New South Wales situated on the land stated in Item 4 of Schedule 1.
- 1.2 Consent Authority means the Minister for Planning New South Wales.
- 1.3 Development Application means the development application that will be lodged by WCA with the Consent Authority for the approval of an eleven (11) turbine wind farm at Black Springs Wind Farm.
- 1.4 Landowner's Property means the land situated at the address stated in Item 2 of Schedule 1 being the land described in Item 3 of Schedule 1.
- 1.5 Noise Guidelines means the New South Wales Department of Environment and Conservation Industrial Noise Policy and all relevant New South Wales laws, policies and

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- guidelines and the South Australian Environmental Protection Authority document "Wind Farms Environmental Noise Guidelines" February 2003.
- 1.6 **Sound Pressure Level** means the sound pressure levels generated by and associated with the wind turbines located at the Black Springs Wind Farm.
- 1.7 WTG means wind turbine generator.

## 2. Consent Authority's assessment of the Development Application

2.1 The parties acknowledge that the Consent Authority will assess the Development Application in accordance with all applicable legislation, rules and policies including the Noise Guidelines and this Deed does not in any way fetter the Consent Authority's discretion in respect of the assessment of the Development Application.

## 3. Sound pressure levels

- 3.1 The Development Application will be assessed against the Noise Guidelines.
- 3.2 The Noise Guidelines state that "The predicted equivalent noise level (L<sub>Aeq,10</sub>), adjusted for tonality in accordance with these guidelines, should not exceed:
  - (a) 35dB(A); or
  - (b) the background noise (L<sub>A90,10</sub>) by more than 5dB(A);

whichever is greater at all relevant receivers for each integer wind speed from cut-in to rated power of the WTG"

3.3 The predicted Sound Pressure Levels at some points of the Black Springs Wind Farm including that part comprising the Landowner's Property will exceed 35dB(A) and the background noise (L<sub>A90,10</sub>) by more than 5dB(A), but will not exceed 50dB(A).

# 4. Landowner's acknowledgment and consent regarding sound pressure levels

- (a) The Landowner acknowledges that the Black Springs Wind Farm will generate sound pressure levels which may exceed the guideline limits set out in clause 3.2 of this Deed, but will not exceed 50dB(A).
- (b) By entering into this Deed the Landowner accepts that the Black Springs Wind Farm will generate sound pressure levels of a maximum 50dB(A) and consents to the proposed operation of the Black Springs Wind Farm despite its non-compliance with the Noise Guidelines sound pressure levels set out in clause 3.2 of this Deed.

## 5. Warranty as to claims

By entering into this Deed, the Landowner warrants that the Landowner will not:

(a) Lodge an objection to the Development Application with the Consent Authority in respect of the sound pressure levels;

The of of

- (b) Lodge any complaint, claim or objection to the New South Wales Environmental Protection Authority or any other authority or court in respect of the sound pressure levels;
- (c) Make any claim for compensation in respect of the sound pressure levels to the Consent Authority or WCA or elsewhere; or
- (d) Make any claim, demand or objection of any kind whatever in relation to the sound pressure levels to any person.

## 6. Successors Bound

If the Landowner agrees to sell the Landowner's Property, the Landowner agrees that as a condition of any sale, it must disclose to a potential purchaser the existence of this Deed and require the potential purchaser to enter into an agreement with WCA on similar terms to this Deed before entering into such a sale.

## 7. Indemnity

- (a) The Landowner acknowledges that WCA will suffer significant loss if the Landowner breaches any of the warranties contained in clause 5 of this Deed or acts in breach of clause 6 of this Deed.
- (b) The Landowner indemnifies WCA against all claims and all losses, costs, liabilities and expenses incurred by WCA arising wholly or in part from an act or omission by the Landowner or its employees, agents or contractors in breach of this Deed.

## 8. Assignment

The Landowner may only assign its rights or obligations which will not be unreasonably withheld under this Deed with the written consent of WCA.

## 9. Amendment

This Deed may only be amended in writing signed by the parties.

## 10. No waiver

- 10.1 A party may only waive a breach of this Deed in writing signed by that party or its authorised representative.
- 10.2 A waiver is limited to the instance referred to in the writing (or if no instance is referred to in the writing, to past breaches).

## 11. Entire agreement

- 11.1 This document records the entire agreement between the parties about its subject matter.
- Neither party has given any warranty or made any representation to the other party about the subject matter of this Deed, other than those warranties and representations appearing in this Deed.

  4, M. Offold African Company and the subject matter of this Deed.

## 12. Counterparts

- 12.1 This Deed may be executed in any number of counterparts. A counterpart may be a facsimile.
- 12.2 Together all counterparts make up one document.
- 12.3 If this Deed is executed in counterparts, it takes effect when each party has received the counterpart executed by each other party, or would be deemed to have received it.

## 13. Governing law

- 13.1 This Deed is governed by the law of New South Wales.
- 13.2 The parties irrevocably submit to the non-exclusive jurisdiction of the courts of New South Wales.
- 13.3 No party may object to the jurisdiction of any of those courts on the ground that it is an inconvenient forum or that it does not have jurisdiction.

## 14. Costs

14.1 Each party pays its own costs associated with this Deed.

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## **Execution**

Execute	d	as	а	deed	ο'n

October

2006

Executed by

Wind Corporation Australia Limited

Witness

SCOTT TURNER

Name (please print)

Director/Company Secretary

MARIL FORARY

Name (please print)

**Executed** by the Landowner

Trudi Hodgins

Witness

Name (please print)

Landowner (Signature)

**GABRIELLO MAZZOTTI** 

of ofoxy you

Landowner (Signature)

MODESTA MAZZOTA

Landowner (Signature)

**LORENA MARIA LOUISA TURNER** 

## Schedule 1- Landowner Details

#### Item 1: Landowner

Gabriello Mazzotti, Modesta Mazzotti and Lorena Maria Louisa Turner

## Item 2: Landowner's Property

## Item 3: Title Details - Landowner's Property

Land in the Local Government Area of Oberon Council, Parish of Swatchfield, County of Westmoreland being:

Lot	"Deposited Plan
31	757072
32	757072
48	757072

## Item 4: Title Details - Black Springs Wind Farm

Land in the Local Government Area of Oberon Council, Parish of Swatchfield, County of Westmoreland being:

Lat	Deposited Plan
1	115062
144	757072
171	757072
110	757072
172	757072
182	42908
19	757072

FM Sof A

Lot	e Deposited Plan
36	757072
81	757072
84	757072
31	757072
32	757072
48	757072
2	1047456
134	757072

Land in the Local Government Area of Oberon Council, Parish of Swatchfield, County of Westmoreland being Auto Consol 6724 – 112.

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## **Deed of Agreement**

Wind Corporation Australia Limited

The Landowner described in Schedule 1

#### Piper Alderman Lawyers

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1 Farrer Place
Sydney NSW 2000
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## **Deed of Agreement**

#### **Parties**

- Wind Corporation Australia Limited (ACN 091 157 774) of Level 42, 259 George Street, Sydney NSW 2000 (WCA)
- 2. The Landowner described in Item 1 of Schedule 1 (Landowner)

### Introduction

- A. WCA will be lodging a development application with the Consent Authority for the approval of an eleven (11) turbine wind farm known as the Black Springs Wind Farm.
- B. WCA understands that in New South Wales development applications for wind farms are assessed against the Noise Guidelines.
- C. Studies conducted by WCA have revealed that at some points, the noise generated by the Black Springs Wind Farm will slightly exceed the maximum sound pressure levels set out in or established under the Noise Guidelines.
- D. The Landowner's Property is part of the Black Springs Wind Farm and will be subjected to a sound pressure level which exceeds the Noise Guidelines maximum sound pressure levels as detailed in this Deed.
- E. By executing this Deed, the Landowner acknowledges that the Landowner's Property will be subjected to a sound pressure level which exceeds the Noise Guidelines maximum sound pressure levels as detailed in this Deed and the Landowner agrees that the Landowner will not make any claim or demand in this regard.

## Operative clauses

#### 1. Definitions

- 1.1 Black Springs Wind Farm means the proposed eleven (11) turbine wind farm at Black Springs, New South Wales situated on the land stated in Item 4 of Schedule 1.
- 1.2 **Consent Authority** means the Minister for Planning New South Wales.
- 1.3 Development Application means the development application that will be lodged by WCA with the Consent Authority for the approval of an eleven (11) turbine wind farm at Black Springs Wind Farm.
- 1.4 **Landowner's Property** means the land situated at the address stated in Item 2 of Schedule 1 being the land described in Item 3 of Schedule 1.
- 1.5 **Noise Guidelines** means the New South Wales Department of Environment and Conservation Industrial Noise Policy and all relevant New South Wales laws, policies and

- guidelines and the South Australian Environmental Protection Authority document "Wind Farms Environmental Noise Guidelines" February 2003.
- 1.6 **Sound Pressure Level** means the sound pressure levels generated by and associated with the wind turbines located at the Black Springs Wind Farm.
- 1.7 WTG means wind turbine generator.

# 2. Consent Authority's assessment of the Development Application

2.1 The parties acknowledge that the Consent Authority will assess the Development Application in accordance with all applicable legislation, rules and policies including the Noise Guidelines and this Deed does not in any way fetter the Consent Authority's discretion in respect of the assessment of the Development Application.

# 3. Sound pressure levels

- 3.1 The Development Application will be assessed against the Noise Guidelines.
- 3.2 The Noise Guidelines state that "The predicted equivalent noise level (L<sub>Aeq,10</sub>), adjusted for tonality in accordance with these guidelines, should not exceed:
  - (a) 35dB(A); or
  - (b) the background noise  $(L_{A90,10})$  by more than 5dB(A);

whichever is greater at all relevant receivers for each integer wind speed from cut-in to rated power of the WTG"

3.3 The predicted Sound Pressure Levels at some points of the Black Springs Wind Farm including that part comprising the Landowner's Property will exceed 35dB(A) and the background noise (L<sub>A90,10</sub>)by more than 5dB(A), but will not exceed 50dB(A).

# 4. Landowner's acknowledgment and consent regarding sound pressure levels

- (a) The Landowner acknowledges that the Black Springs Wind Farm will generate sound pressure levels which may exceed the guideline limits set out in clause 3.2 of this Deed, but will not exceed 50dB(A).
- (b) By entering into this Deed the Landowner accepts that the Black Springs Wind Farm will generate sound pressure levels of a maximum 50dB(A) and consents to the proposed operation of the Black Springs Wind Farm despite its non-compliance with the Noise Guidelines sound pressure levels set out in clause 3.2 of this Deed.

# 5. Warranty as to claims

By entering into this Deed, the Landowner warrants that the Landowner will not:

(a) Lodge an objection to the Development Application with the Consent Authority in respect of the sound pressure levels;

- (b) Lodge any complaint, claim or objection to the New South Wales Environmental Protection Authority or any other authority or court in respect of the sound pressure levels;
- (c) Make any claim for compensation in respect of the sound pressure levels to the Consent Authority or WCA or elsewhere; or
- (d) Make any claim, demand or objection of any kind whatever in relation to the sound pressure levels to any person.

### 6. Successors Bound

If the Landowner agrees to sell the Landowner's Property, the Landowner agrees that as a condition of any sale, it must disclose to a potential purchaser the existence of this Deed and require the potential purchaser to enter into an agreement with WCA on similar terms to this Deed before entering into such a sale.

# 7. Indemnity

- (a) The Landowner acknowledges that WCA will suffer significant loss if the Landowner breaches any of the warranties contained in clause 5 of this Deed or acts in breach of clause 6 of this Deed.
- (b) The Landowner indemnifies WCA against all claims and all losses, costs, liabilities and expenses incurred by WCA arising wholly or in part from an act or omission by the Landowner or its employees, agents or contractors in breach of this Deed.

# 8. Assignment

The Landowner may only assign its rights or obligations under this Deed with the written consent of WCA.

#### 9. Amendment

This Deed may only be amended in writing signed by the parties.

#### 10. No waiver

- 10.1 A party may only waive a breach of this Deed in writing signed by that party or its authorised representative.
- 10.2 A waiver is limited to the instance referred to in the writing (or if no instance is referred to in the writing, to past breaches).

# 11. Entire agreement

- 11.1 This document records the entire agreement between the parties about its subject matter.
- 11.2 Neither party has given any warranty or made any representation to the other party about the subject matter of this Deed, other than those warranties and representations appearing in this Deed.

# 12. Counterparts

- 12.1 This Deed may be executed in any number of counterparts. A counterpart may be a facsimile.
- 12.2 Together all counterparts make up one document.
- 12.3 If this Deed is executed in counterparts, it takes effect when each party has received the counterpart executed by each other party, or would be deemed to have received it.

# 13. Governing law

- 13.1 This Deed is governed by the law of New South Wales.
- 13.2 The parties irrevocably submit to the non-exclusive jurisdiction of the courts of New South Wales.
- 13.3 No party may object to the jurisdiction of any of those courts on the ground that it is an inconvenient forum or that it does not have jurisdiction.

### 14. Costs

14.1 Each party pays its own costs associated with this Deed.

# **Execution**

Executed as a deed on	October	2006	
Executed by Wind Corporation Australia Limited	d		
Witness Walk Tourset	<u>{</u>	Director/Company Secr	
Name (please print)		Name (please print)	

**Executed** by the Landowner

Witness

SANDRA STOKES.

Name (please print)

Landowner (Signature

GAVIN WAUGH ANDREW DOUGLAS

# Schedule 1- Landowner Details

### Item 1: Landowner

Gavin Waugh Andrew Douglas

# Item 2: Landowner's Property

"Daisybank" Black Springs NSW 2787

# Item 3: Title Details - Landowner's Property

Land in the Local Government Area of Oberon Council, Parish of Swatchfield, County of Westmoreland being:

Lot	Deposited Plan
1	115062
144	757072
171	757072
110	757072
172	757072
182	42908
19	757072
36	757072
81	757072
84	757072

# Item 4: Title Details - Black Springs Wind Farm

Land in the Local Government Area of Oberon Council, Parish of Swatchfield, County of Westmoreland being:

Lot	Deposited Plan
1	115062
144	757072
171	757072
110	757072
172	757072
182	42908
19	757072
36	757072
81	757072
84	757072
31	757072
32	757072
48	757072
2	1047456
134	757072

Land in the Local Government Area of Oberon Council, Parish of Swatchfield, County of Westmoreland being Auto Consol 6724 – 112.



# **Deed of Variation**

Wind Corporation Australia Limited

**Gavin Waugh Andrew Douglas** 

### Piper Alderman Lawyers

Level 23, Governor Macquarie Tower 1 Farrer Place Sydney NSW 2000 Australia Telephone +61 2 9253 9999 Facsimile +61 2 9253 9900 www.piper-alderman.com.au

Sydney • Melbourne • Brisbane • Adelaide

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# **Deed of Variation**

### **Parties**

- Wind Corporation Australia Limited ACN 091 157 774 of Level 42, 259 George Street, Sydney NSW 2000 (WCA)
- 2. Gavin Waugh Andrew Douglas of "Daisybank" Black Springs NSW 2787 (Douglas)

# Introduction

- A. WCA and Douglas are parties to the Transaction Documents.
- B. The purpose of this Deed is to amend the Transaction Documents.

# Operative clauses

### 1. Definitions

1.1 For the purpose of this Deed and the Transaction Documents:

Commencement of Construction means the date on which WCA gives written notice to the relevant Consent Authority that construction has commenced on the Site.

Consent Authority means any authority which has to give consent to or be informed that construction is to commence on the site.

**Consumer Price Index (CPI)** means the index in respect of Sydney (All Groups) published by the Australian Bureau of Statistics or any index officially substituted for it.

**CPI Review Date** means the date 1 July falling immediately after the end of the first full financial year which occurs during the Term and then each anniversary of that 1 July.

**CPI Review Period** means the period commencing 90 days before the Relevant CPI Review Date and ending on the Relevant CPI Review Date.

Deed means this Deed of Variation including as amended in writing signed by the parties;

Energreen means Energreen Pty Limited (ABN 97 092 937 678).

Financial Year means the period 1 July to 30 June.

**Further Term** means any of the eleven (11) consecutive further terms stated in clause 4.1(b) of this Deed.

Notice means any communication in writing.

**Previous CPI** means the Consumer Price Index number for the quarter ending immediately prior to the last past anniversary of the Relevant CPI Review Date.



Relevant CPI means the date by reference to which the Rent is being calculated.

Relevant Review Date means the CPI Review Date by reference to which the rent has been reviewed.

**Review Notice** means the Notice given by the Lessor to the Lessee stating the Rent the Lessor considers should apply for the relevant Rent period.

**Substation** means a Substation which houses any or all of; a number of transformers, high voltage switchyard and equipment, busbars, high voltage portals, low voltage switchgear and equipment, ancillary equipment, a building housing the switchgear room, a control room, maintenance storeroom and workshop, meeting rooms, staff facilities, low voltage equipment, batteries and all other equipment required to properly operate and maintain the substation and Turbines.

Transaction Documents means the following documents and each of them:

- (a) Licence Deed made 1 February 2005 between WCA and Douglas (Licence);
- (b) Call Option made 1 February 2005 between WCA and Douglas (Option);
- (c) form of Lease in the form of Annexure "A" to the Option as completed or to be completed in accordance with clause 4 of the Option (Lease);
- (d) form of Tripartite Deed in the form of Annexure "D" to the Option (Tripartite Deed);
- 1.2 All other words and phrases in this Deed have the same meaning as in the Transaction Documents.

# 2. Variation of Licence

- 2.1 WCA and Douglas vary the Licence as follows:
  - (a) by inserting the date "1 February 2005" as the Commencement Date in Item 3 of the Schedule:
  - (b) by adding the following as clause 6.4:

# "6.4 Assignment to Energreen

Notwithstanding any other provision of this licence the Licensee may assign its rights and novate its obligations under this licence to Energreen or the nominee of Energreen without the consent of the Licensor."

# 3. Variation of Option

- 3.1 WCA and Douglas vary the Option as follows:
  - (a) by deleting in the definition of "Commencing Date" in clause 1.1 the words "the day the Survey Plan is delivered to the Grantor" and substituting the words "the Commencement of Construction";



- (b) by deleting in the definition of "Grantee's Solicitor" in clause 1.1 the words "Freehill's, 101 Collins Street, Melbourne VIC 3000" and substituting the words "the solicitor nominated by the grantee";
- (c) by inserting the words "the solicitor nominated by the grantor" after the words "Grantor's Solicitor means" in clause 1.1;
- (d) by deleting in the definition of "Option Period" in clause 1.1 the words "1 year and 6 months" and substituting the words "3 years and 6 months";
- (e) by deleting in clause 4.1 the words "the day the Survey Plan is delivered to the Grantor" and substituting the words "the Commencement of Construction";
- by deleting the word "and" after the word "16<sup>th</sup>" and by inserting a comma before the word "21<sup>st</sup>" and by inserting the words "26<sup>th</sup>, 31<sup>st</sup>, 36<sup>th</sup>, 41<sup>st</sup>, 46<sup>th</sup>, 51<sup>st</sup>, and 56<sup>th</sup>" after the word "21<sup>st</sup>" in clause 4.2(a);
- (g) by deleting clause 4.2(b);
- (h) by adding the following as clause 6.2(d):
  - "(d) Notwithstanding any other provision of this deed:
    - (1) the Grantee may nominate Energreen as the nominee for the purpose of clause 6.1:
    - (2) clause 6.2(b) does not apply if the Grantee nominates Energreen as the Nominee for the purpose of clause 6.1." and
- (i) by adding the following as clause 6.5:

# "6.5 Assignment to Energreen

Notwithstanding any other provision of this deed the Grantee may assign its rights and novate its obligations under this deed to Energreen or the nominee of Energreen without the consent of the Grantor."

# 4. Variation of Lease

- 4.1 WCA and Douglas vary the Lease by:
  - inserting in the lease and in Subsequent Leases for the first further ten (10) terms the words "Subject to the right to renew for a further eleven (11) terms (each of five (5) years) for a total of 60 years" after the words "5 years" in the details column for Item 5 of the Reference Schedule on page one (1) of the lease;
  - (b) by inserting in the lease the words and figures "and 36/757072" after the Folio Identifier "84/757072" in the details column for Item 12 of the Reference Schedule on page one (1) of the lease;
  - (c) inserting in the lease the Plan which is Annexure A to this Deed as the Plan required to be "Exhibit A Plan" at page twenty (20) of the lease;



- (d) renumbering clause 3 as clause 3.1;
- (e) adding the following as clause 3.2:

# "3.2 Option to renew

- (a) The Lessor must grant the Lessee a new lease of the Site commencing on the day following the last day of the Term, if:
  - (1) the Lessor gives the Lessee a Notice requesting a new lease of the Site for a Further Term;
  - (2) the Lessor receives the Lessee's Notice pursuant to clause 3.1(a)(1) not earlier than the date that is six (6) months before the Terminating Date of the then current term and not later than the date that is three (3) months before the Terminating Date of the then current Term; and
  - (3) on the day of service of the Lessee's Notice pursuant to clause 3.1(a)(1) and on the Terminating Date of the then current Term, there is no unremedied breach of this lease by the Lessee which have been notified to it by the Lessor.
- (b) The lease for each Further Term will be on the same terms and conditions as this lease except that:
  - (1) any necessary or consequential amendments must be made to record the Commencing Date and Terminating Date of the Further Term and the number of Further Terms then remaining, if any;
  - the commencing rent is to be determined in accordance with clause 5;
  - (3) the new lease must include any variations to this lease which became effective during the preceding Term; and
  - (4) this clause 3.1 will be omitted from the lease in respect of the final Further Term."
- (f) deleting from clause 5.1 the words "2.5% of the Total Gross Earnings" and substituting the words "\$10000 per annum per Turbine on the Land and \$10000 per annum per Substation on the Land." and
- (g) adding the following as clause 5.2:

#### "5.2 Rent Review

- (a) Review of the Rent
  - (1) The Rent may be reviewed under clauses 5.2(b), 5.2(c), 5.2(d) and 5.2(e) on each CPI Review Date.



- (b) CPI Rent Review
  - (1) The Lessor may give a Review Notice to the Lessee in a CPI Review Period.
- (c) Calculation of Rent
  - (1) In calculating the Rent the Lessor must:
    - (i) take the annual Rent as at the last CPI Review Date or if none, the Rent at the Commencement Date (X);
    - (ii) divide that Rent by the Consumer Price Index number for Sydney (All Groups) last published before that date (CPI 1);
    - multiply the result by the Consumer Price Index number for Sydney (All Groups) last published before the Relevant CPI Review Date (CPI 2).
  - (2) The result is the new rent for the year beginning on the Relevant CPI Review Date (\$Y), written as a formula –

(d) Change in reference base index

If the Australian Bureau of Statistics makes a change in the reference base of the index and there is a published co-relation between the old reference base and the new reference base then the published co-relation is to be applied to convert the CPI 1 figure and the CPI2 figure to the new reference base. If there is none then the Lessor and the Lessee agree to accept the calculations of the President who may be retained by either party to determine a fair co-relation between the old and the new series of numbers.

(e) New Rent

The rent determined under clauses 5.2(a), 5.2(b) and 5.2(c) shall be the Rent from and including the Relevant Rent Review Date.

# 5. Timing

5.1 The variations referred to in each of clauses 2.1, 3.1 and 4.1 take effect from and including the date of this Deed of Variation.

# 6. Assignment

Notwithstanding any other provision of this Deed, WCA may assign its rights and novate its obligation under this Deed to Energreen or the nominee of Energreen without the consent of Douglas.



# 7. Covenant to Obtain Consent

7.1 In relation to any portion of the Land held as a perpetual lease, Douglas covenants to promptly obtain the consent of the Minister required under Part 1 of Schedule 3 of the *Crown Lands (Continues Tenures) Act 1989* as well as all other consents and approvals necessary to enable him to enter into this deed and the Transaction Documents.

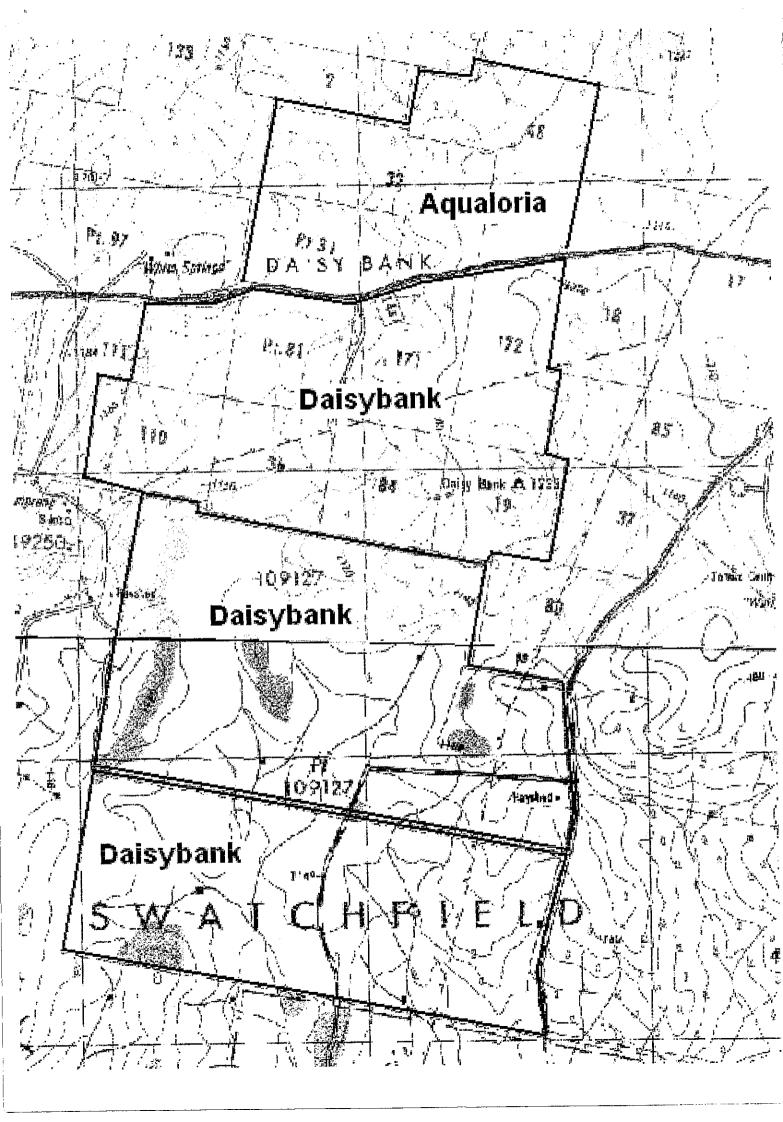
# 8. Confirmation

In all other respects the parties confirm the provisions of the Transaction Documents.



# Annexure A

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Executed as deed on	October	2006
Executed by Wind Corporation Australia Limited		
Director	Witness	
MARK POLICETY	John Hunder	*********
Name (please print)	Name (please print)	
Signed by Gavin Waugh Andrew Douglas in the presence of	Man	
Withess	Gavin Waugh Andrew Dougla	ss
SANDRA STOKES	V /	

Name (please print)



# Wind Monitoring Deed of Agreement

Date The date stated in Item 1

The party stated in Item 2 of Schedule 5 (Landowner)

The party stated in Item 3 of Schedule 5 (Developer)

# Piper Alderman Lawyers

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# WIND MONITORING DEED OF AGREEMENT

**Parties** 

The party stated in Item 2 of Schedule 5 (Landowner)

The party stated in Item 3 of Schedule 5 (Developer)

# Background

- A The Landowner is the registered proprietor of the Land or is entitled to be the registered proprietor of the Land and has initiated steps to become the registered proprietor of the Land.
- B The Landowner is entitled to be and is in occupation of the Land.
- C The Landowner has agreed to give Developer access to the Land on the Terms set out in this Deed.
- D The Landowner has agreed to grant to Developer the Lease and the Easements on the Terms set out in this Deed.
- E The Landowner and Developer have agreed to work together in good faith to expedite the project.
- F The Landowner and Developer have agreed to work together in good faith to address any land use and management issues which may arise from time to time, including but not limited to issues concerning the rights and obligations of the Developer in relation to vehicle access onto the Land and the personnel who will represent the Developer.

# **Provisions**

The interpretation provisions of this Deed including definitions are in schedule 1. The schedules and any annexures form part of this Deed.

# 1 Term

### 1.1 The Term

The maximum Term of this Deed is 36 months calculated from and including the date of this Deed, subject to Part 2.

# 1.2 Discontinuance Notice

Developer is entitled to deliver a notice to the Landowner under this clause at any time during any Current Period and on the delivery of that notice:

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- a) the Term and this Deed and all rights and obligations of the Landowner and Developer under this Deed will end; but
- b) any accrued rights will continue.

# 1.3 Developer Decisions

It is stated for the avoidance of doubt that all and each of the following is a matter for Developer to decide in its unfettered discretion:

- a) whether or not to terminate the Term and this Deed under clause 1.2;
- b) whether or not to establish further Current Periods under clause 2.4;
- c) exercise or not exercise any rights under the Licence;
- d) whether or not to enter into an Easement;
- e) whether or not to enter into a Lease.

# 2 Consideration and Current Periods

# 2.1 Current Periods

The Term of this Deed and the Licence will be divided into Current Periods each of six (6) months.

# 2.2 First Current Period and Consideration

- a) The first Current Period of the Term is the period commencing on the date of this Deed and ending on the date 6 months later.
- b) Developer must pay the Landowner the sum stated in Item 4 of Schedule 5 exclusive of GST on execution of this Deed:
  - i) in consideration for the Licence for Developer to use the Agreed Land for the first Current Period;
  - ii) which the Landowner shall be entitled to keep in all circumstances and which is not refundable in any circumstance.

# 2.3 Early End of Term

Notwithstanding clause 1.1 the Term will end at the end of a Current Period unless the next Current Period commences immediately in accordance with clause 2.4.

# 2.4 Extended Term and Additional Consideration

a) Developer shall be entitled to continue the Term for further Current Periods after the preceding Current Period ends by:

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- i) written notice under this clause delivered to the Landowner before the end of the then Current Period; and
- ii) payment of the sum stated in Item 5 of Schedule 5 exclusive of GST to the Landowner simultaneously with delivery of each such notice.
- b) Developer shall be entitled to exercise its right to establish further Current Period under clause 2.4(a) on no more than 5 occasions so that the aggregate of all Current Periods including the first Current Period is not more than 36 months from and including the date of this Deed.
- c) The Landowner shall be entitled to keep any consideration paid to it under clause 2.4(a)(ii):
  - i) in consideration for the Licence for Developer to use the Agreed Land during the relevant further Current Period;
  - ii) in all circumstances and without refunding it in any circumstance.

# 3 Licence to enter Land

# 3.1 Grant of licence

The Landowner grants Developer a Licence to access and cross and use the Agreed Land during the Term on the terms and conditions set out in this Deed.

# 3.2 Rights Under the Licence

Developer may use the Agreed Land pursuant to the Licence for:

- a) the construction, erection, maintenance, use, repair, demolition and removal of Wind Monitoring Towers and such associated equipment as Developer deems necessary for the effective use of the Wind Monitoring Towers, without the need for any further consent by the Landowner and in doing so may:
  - enter and remain on any part of the Agreed Land with or without vehicles or machinery;
  - ii) disturb and remove the surface of the Agreed Land;
  - iii) attach anything to the Agreed Land and leave it there.
- b) crossing and recrossing the Excluded Land to gain access to the Agreed Land by a route agreed with the Landowner with both parties acting reasonably with or without vehicles or machinery, but without the need for any further consent by the Landowner;
- c) any other purpose not inconsistent with the use of the Agreed Land by the Landowner, with the consent of the Landowner not to be withheld unreasonably.

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#### **Exercise of Licence Rights** 3.3

The rights under the Licence may only be exercised over the Agreed Land and, without limitation, the Wind Monitoring Towers may be constructed, erected, maintained, used and repaired and demolished on the Agreed Land but not on any other part of the Land.

#### **Number of Wind Monitoring Towers** 3.4

Developer may construct and erect and maintain such number of Wind Monitoring Towers on the Agreed Land as it elects and may change their location on the Agreed Land at its election, subject to clause 3.5(a).

#### Notice to Landowner 3.5

- The Wind Monitoring Towers may only be constructed and a) erected generally in accordance with plans shown by the Developer to, and agreed by the Landowner acting reasonably by the Developer prior to the construction of them.
- The Developer must give Notice to the Landowner prior to the b) construction, erection, maintenance, use, repair, demolition or removal of any associated equipment referred to in clause 3.2(a) on or from the Agreed Land.

#### No Additional Fees 3.6

Developer is entitled to exercise its rights under the Licence in this Deed without payment of any fee or consideration in addition to the fees stated in Part 2.

#### **Excluded Land** 3.7

There is no Excluded Land if the Plan in Schedule 4 does not have any part of it marked by hatching.

#### Ownership, Maintenance and Repair 4

#### Ownership of Wind Monitoring Towers, Wind Farm 4.1 **Equipment and Product**

Developer is at all times and will at all times be solely and beneficially entitled to and shall own:

- any Wind Monitoring Towers and associated equipment a) brought onto the Agreed Land;
- all of the information and data obtained and available from the b) use of the Wind Monitoring Towers and any associated equipment at the Agreed Land.

Maintenance and repair 4.2

Developer must:

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- a) at all times during the Term keep any Wind Monitoring
  Towers and associated equipment placed on the Agreed Land
  by Developer in good working order and safe condition;
- b) while it uses the Agreed Land pursuant to the Licence keep and maintain that part of the Agreed Land actually used by Developer under the Licence, but not any other part, generally in good repair, order and condition having regard to the rights of Developer under the Licence to use the Agreed Land; and
- c) on termination of the Term, but provided the Lease has not commenced, restore that part of the Agreed Land actually used by Developer under the Licence, but not any other part, generally to the condition it would have been in had Developer not exercised any rights under the Licence and in doing so Developer:
  - may at its election remove or leave Wind Monitoring Towers on the Agreed Land;
  - ii) shall not be obliged to remove any concrete pads or footings placed by it on the Agreed Land;
  - shall be obliged to cover concrete pads and footings with soil to a depth of at least 20cm and revegetate the area with pasture as agreed with the Landowner, with the Landowner acting reasonably.

# 5 Lease

# 5.1 Exercise of Right for Lease

Developer may at any time during the Term give a Notice to the Landowner requiring the Landowner to grant the Lease to Developer or its nominee.

# 5.2 Landowner's to Grant Lease

The Landowner must grant the Lease if Developer gives a Notice pursuant to clause 5.1

### 5.3 The Nature of the Lease

The Lease will be on terms and conditions reasonably required by Developer and notified in writing by or on behalf of Developer to the Landowner including those set out in the Lease Term Sheet in Schedule 6 and will:

- a) be for a term of 5 years with 5 consecutive options for renewed lease each for a further term of 5 years being a maximum of 30 years;
- b) commence on the date on which the notice is given under clause 5.1 unless the Developer elects to give notice under clause 5.5, in which case the Lease shall commence on the date established under clause 5.5;

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- c) provide that the Landowner is entitled to terminate the Lease if by the date 3 years after its commencement date neither of the following has occurred:
  - (i) the minimum number of Wind Turbines agreed between the Developer and Landowner and stated in Item 15 of Schedule 6 have not been erected on the Agreed Land
  - ii) the Developer does not from that date pay rent as if that number of Wind Turbines has been erected on the Agreed Land by that date.
- d) provide that the Developer has no right to a lease of the Agreed Land after the date 30 years from the commencement date of the Lease;
- e) provide for a rent calculated on the basis of the amount stated in Item 6 of Schedule 5 per Wind Turbine per annum;
- be granted over the Agreed Land or such part of the Agreed Land as Developer nominates;
- g) provide for Developer to occupy and use the Agreed Land subject to the Lease at the risk of Developer and for Developer to indemnify the Landowner for any claim or action against the Landowner arising directly or indirectly from Developer's use and occupation of the Agreed Land subject to the Lease.

# 5.4 Formalising the Lease

- a) At the request of Developer during the Term, Developer and the Landowner shall work together in good faith and acting reasonably to formalise the form and content of the Lease and any separate agreement to keep confidential between them any commercial or other arrangements about the Lease which they agree to keep confidential.
- b) Clause 5.4(a) is without prejudice to any other provision of this Deed.
- c) Without limitation to clause 5.4(a), Developer shall be entitled to complete all blank spaces in the Lease Term Sheet set out in Schedule 6.

# 5.5 Construction of Wind Turbines

- a) Developer may give notice under this clause simultaneously with giving notice under Clause 5.1.
- b) If Developer gives notice under Clause 5.5(a) then:
  - (1) Developer may construct Wind Turbines pursuant to this Agreement as if Developer could exercise under this Agreement the Permitted Use Rights stated in that Lease;

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- The Term of this Agreement shall extend automatically (2)until the construction of the Wind Turbines is completed;
- Developer must, from the date of the giving of the (3) notice under clause 5.1, pay the Rent which would be payable under the said lease as if the Lease had been started on the date of the giving of the notice under Clause 5.1:
- The Lease shall commence when the construction of the (4) Wind Turbines is completed.

#### **Easements** 6

#### **Exercise of Right for Easements** 6.1

Developer may at any time during the Term give Notice to the Landowner requiring the Landowner to grant the Easements agreed between the Developer and Landowner both acting reasonably to Developer or its nominee.

#### Easements may be in the Lease or Otherwise 6.2

The Easements:

- may be contained in the Lease if Developer so elects; or a)
- may be separate from the Lease if mutually agreed by the b) Developer and Landowner both acting reasonably.

#### 6.3 Landowner to Grant Easements

If Developer gives a Notice pursuant to clause 6.1the Landowner must grant the Easements:

- in the Lease or: a)
- separate from the Lease if agreed between the Developer and b) Landowner both acting reasonably.

#### The Nature of the Easements 6.4

The easements will be:

- on terms and conditions reasonably required by Developer and a) notified in writing by or on behalf of Developer to the Landowner including those set out in Annexure B to the lease which is set out in Schedule 6 to this Agreement and:
  - will burden such parts of the Agreed Land as Developer i) nominates to the Landowner;
  - will benefit such land or interest in land as Developer ii) reasonably nominates to the Landowner.

b)

will be of the following nature:



- i) easements for power cables;
- ii) easements for right of way;
- iii) easements for overhang.
- c) in the case of easements for power cables, underground to the extent that Developer is reasonably able to do so but otherwise overhead.

# 6.5 Formalising the Easements

- a) At the request of Developer during the Term Developer and the Landowner shall work together in good faith and acting reasonably to formalise the form and content of the Easements and any separate agreement to keep confidential between them any commercial or other arrangements about the Easements which they agree to keep confidential.
- b) Clause 6.5(a) is without prejudice to any other provision of this Deed.

# 7 Mortgagee's Consent

# 7.1 Landowner to Obtain

The Landowner must obtain the consent of any Mortgagee of the Land to:

- a) this Deed;
- b) the Lease if Developer requires it to be granted;
- c) the Easements if Developer requires them to be granted.

# 8 Costs

# 8.1 Each Party to Pay

- a) Developer must pay all stamp duty, fees and charges of or incidental to this Deed and the Lease and the Easements.
- b) Each party must pay its own legal costs in relation to this Deed and the Lease and the Easements.

### 9 Consents

### 9.1 Developer to Apply

Developer will, at its own expense, apply for the Consents when and if Developer deems practicable.

### 9.2 Landowner's Obligation

The Landowner must consent to any application by Developer for the Consents in relation to the Land and

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- a) do all things reasonably requested by Developer to support that application and the grant of the Consents on terms and conditions reasonably acceptable to Developer;
- b) not do anything that may impede or prejudice that application or the grant of the Consents on terms and conditions reasonably acceptable to Developer.

# 10 Restrictions on Dealing with Land

# 10.1 Restriction on granting rights

The Landowner must not grant to any other person during the Term any right to:

- a) operate a wind farm on the Land;
- b) establish or collect wind or related data from the Land.

### 10.2 Sale or Transfer of Land

The Landowner must not sell or transfer the Land or any part of the Land unless before completion of the sale or transfer the proposed purchaser or transferee enters into a deed on terms reasonably required by Developer under which the proposed purchaser or transferee assumes all of the Landowner's obligations under this Deed and agrees to observe and perform all such obligations as if named as the Landowner in this Deed.

# 10.3 Dealing with Land

The Landowner must not during the Term do or allow to be done anything which may prevent or hinder the exercise of any right by Developer under this Deed or the Licence or any Lease or any Easement.

# 11 Confidentiality

# 11.1 Keep Confidential Information Confidential

Each of the parties must keep confidential all information about this Deed and ensure that, without the other's prior written consent, information provided by another party is not disclosed except as expressly authorised in this Deed.

### 11.2 Take Reasonable Steps

Each of the parties must take all reasonable steps necessary or desirable in order to safeguard the confidentiality of information provided by another party.

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# 11.3 Not Use Confidential Information

The parties must not use information provided by another party for any purpose other than this Deed.

# 12 Release and Indemnity

# 12.1 Indemnity of Landowner

Developer shall indemnify and keep indemnified the Landowner from and against all claims, demands, actions, suits, judgments, charges, liens, orders, decrees, damages, costs, losses and expenses which the Landowner may suffer or incur in connection with or arising directly out of Developer's use or occupation of the Agreed Land pursuant to the Licence except to the extent caused by the wilful or negligent act or omission of the Landowner or anyone acting on the Landowner's behalf or claiming through the Landowner.

# 12.2 Assumption of Risk by Developer

Developer's use and occupation of the Agreed Land pursuant to the Licence shall be at risk of Developer and Developer releases and discharges the Landowner from all claims for loss or damage to the plant, equipment, fixtures and fittings of Developer on or about the Agreed Land except to the extent caused by the wilful or negligent act or omission of the Landowner or any acting on the Landowner's behalf or claiming through the Landowner.

# 13 Representations

#### 13.1 No reliance

Each party acknowledges that in deciding to sign this Deed:

- it did not rely on any representation or warranty or covenant of the other party or anyone on its behalf not expressly contained in this Deed;
- b) it has made its own enquiries and relied upon and satisfied itself from the advices of its own independent consultants.

# 13.2 Undertakings by the Landowner and Developer

Each of the Landowner and Developer:

- a) shall not, in respect of the Land, contravene or violate any law, regulation, or governmental decision (including, without limitation, laws, regulations or governmental decisions relating to building, zoning, occupational safety, environmental, land use or similar matters);
- b) shall give notice to the other of any notice, instruction, regulation or order relating to the Land which is served on it;

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- c) shall provide all reasonable and necessary assistance to the other (subject to Developer paying all reasonable costs incurred) in obtaining all licences, permits, authorisations or other approvals which may be required in respect of the Land to enable Developer to exercise its rights under the licence or this Deed; and
- d) shall provide to the other copies of all material governmental approvals, licences, permits or other authorisations or consents which it may have received or may receive in respect of the Land.

# 13.3 Conflict of interest

The Landowner represents that to the best of the Landowner's knowledge, no person connected directly or indirectly with the Landowner is an agent, employee, supplier, licensee or officer of Developer or any subsidiary, affiliate or parent corporation.

# 14 **GST**

# 14.1 GST Exclusive

All amounts specified in this Deed as being payable by either party to the other are exclusive of any GST applicable.

# 14.2 Recovery of GST on a Supply

If a supply under or in connection with this Deed constitutes a Taxable Supply then the party making the supply may recover from the party receiving the supply an amount on account of GST in addition to any payment or other consideration for the supply.

# 14.3 Additional amount

The additional amount shall be the amount of GST payable in respect of the supply. The payment of the additional amount shall be made upon the receipt of a Tax Invoice by the recipient of the supply.

# 14.4 Acquisition of Taxable Supply by Landowner

If the Landowner purchases or acquires a Taxable Supply for which it is entitled to be reimbursed by the Developer under the terms of this Deed, the Landowner agrees that the reimbursable amount shall be reduced by the full amount of any Input Tax Credit to which the Landowner is entitled.

# 14.5 Adjustable Event

If in relation to a Taxable Supply an Adjustment Event occurs that gives rise to an Adjustment, then the GST payable by one party to the other will be addressed accordingly and where necessary, payment will be made to reflect the change in the amount of GST payable (by

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the payer to the payee in respect of an increase in the amount of GST payable and by the payee to the payer in respect of a decrease in the amount of GST payable). If a payment is required, it will be made upon the issue of an Adjustment Note by the payee (who must issue and Adjustment Note immediately upon becoming aware of an Adjustment Event).

### 14.6 Definitions

Expressions in this clause bear the same meaning as those expressions in "A New Tax System (Goods and Services) Tax Act 1999".

# 15 General

# 15.1 Representative

Developer may appoint a representative or nominee to perform all or any of its rights or obligations under or pursuant to this Deed.

# 15.2 No merger

None of the terms, conditions or any matter or thing done under or by virtue of or in connection with this Deed shall operate as a merger of any of the rights and remedies of the parties in or under this Deed but such rights and remedies will at all times continue in full force and effect.

# 15.3 No partnership

Nothing contained in this Deed will be deemed or construed by the parties or by any other person as creating a relationship of partnership or of principal and agent or of joint venturer between or amongst the parties.

# 15.4 Severability

- a) If any provision of this Deed or its application to any person or circumstance is or becomes invalid, illegal or unenforceable the provision will so far as possible be read down to such extent as may be necessary to ensure that it is not illegal, invalid or unenforceable.
- b) If any provision or part of it cannot be so read down, the provision or part of it will be deemed to be void and severable and the remaining provisions of this Deed will not in any way be affected or impaired.

#### 15.5 Modifications

Any modification, alteration, change or variation of any term or condition of this Deed shall only be made in writing, executed by both parties.

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# 15.6 Counterparts

This Deed may be executed in any number of counterparts and all such counterparts taken together shall be deemed to constitute one and the same instrument.

# 15.7 Governing law

- a) This Deed is to be construed and take effect in accordance with and the rights and obligations of the parties under this Deed are to be governed by the laws of the State or Territory where the Land is situated.
- b) Each of the parties submits to the jurisdiction of the Courts of the State or Territory where the Land is situated including all Courts of appeal.

# 15.8 Performance of Obligations

Subject to the other provisions of this Deed, if either party defaults in fully and punctually performing any obligation contained or implied in this Deed, the other party may, without prejudice to its rights under this Deed, do all things necessary or desirable in its opinion to make good or attempt to make good that default.

### 15.9 Further assurance

Each party must do all things and execute all further documents necessary to give full effect to this Deed.

# 15.10 Entire contract

This Deed is the entire contract between the Landowner and Developer in respect of its subject matter.

#### 15.11 Waiver

- a) Waiver of any right arising from a breach of this Deed or of any right, power, authority, discretion or remedy arising upon default under this Deed must be in writing and signed by the party granting the waiver in order to be effective.
- b) A failure or delay in exercise, or partial exercise, of:
  - i) a right arising from a breach of this Deed; or
  - ii) a right, power, authority, discretion or remedy created or arising upon default under this Deed,

does not result in a waiver of that right, power, authority, discretion or remedy.

c) Neither the Landowner nor Developer is entitled to rely on a delay in the exercise or non-exercise of a right, power, authority, discretion or remedy arising from a breach of this Deed or on a default under this Deed as constituting a waiver of that right, power, authority, discretion or remedy.

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- d) A party may not rely on any conduct of another party as a defence to exercise of a right, power, authority, discretion or remedy by that other party.
- e) This clause may not itself be waived except by writing.

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# **Schedule 1 - Definitions**

#### **Definitions** 1.1

Agreed Land

all of the Land except the Excluded

Land.

Consents

all approvals, consents, permissions and licences of any authority which may from time to time be necessary to enable Developer lawfully to commence and to carry out the rights granted to it under this Deed, the

Licence, the Lease and the Easements and any of them.

Deed

this deed and all schedules and annexures hereto, as amended from

time to time.

Easement

any easements required by Developer

under this Deed.

Excluded Land

Subject to clause 3.7 that part of the Land marked by hatching on the Plan

in Schedule 4.

Developer

includes Developer its successors

and permitted assigns.

Land

the whole of the land described in Item 7 of Schedule 5 being shown on the Plan comprising Schedule 3 and

described in that Schedule.

Landowner

includes the successors in title of the Landowner to the Land and any other person who is at any time entitled to an estate or interest in the Land.

Lease

any Lease required by Developer

under this Deed.

Licence

the licence granted in this Deed.

Nominee

anybody nominated by the Developer

to act as its nominee

Notice

a notice in the form set out in

Schedule 2.

Plan

The plan comprising Schedule 4.

Representative

anybody appointed by the Developer

to act as its representative

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# Wind Monitoring Tower

includes a tower, anemometers, wind vanes, temperature sensors, data loggers and other associated and ancillary equipment and includes without limitation any equipment and associated electricity cables established for the purpose of monitoring wind.

#### Wind Turbine

includes a tower, blades, shaft, pump, generator and concrete pad or other base for the tower and includes without limitation any equipment and associated electricity cables established for the purpose of generation of electricity or transfer of electricity and forming part of the structure containing the tower.

# 1.2 Interpretation

In this Deed, headings and underlinings are for convenience only and do not affect the interpretation of this Deed and, unless the context otherwise requires:

- a) words importing the singular include the plural and vice versa;
- b) words importing a gender include any gender;
- other parts of speech and grammatical forms of a word or phrase defined in this Deed have a corresponding meaning;
- an expression importing a natural person includes any company, partnership, joint venture, association, corporation or other body corporate and any governmental agency;
- e) a reference to any thing (including, but not limited to, any right) includes a part of a thing;
- f) a reference to part, clause, party, annexure, exhibit or schedule is a reference to a part and clause of, and a party, annexure, exhibit and schedule to, this Deed and a reference to this Deed includes any annexure, exhibit and schedule;
- g) a reference to any statute, regulation, proclamation, ordinance or by-laws includes all statutes, regulations, proclamations, ordinances or by-laws amending, consolidating or replacing them, and a reference to a statute includes all regulations, proclamations, ordinances and by-laws issued under that statute;
- h) a reference to a party in this Deed includes that party's:
  - i) successors and permitted assigns; and
  - ii) employees, officers, contractors and consultants;

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- no provision of this Deed will be construed adversely to a party solely on the ground that the party was responsible for the preparation of this Deed or that provision;
- a reference to an Deed other than this Deed includes an undertaking, deed, Deed or legally enforceable arrangement or understanding whether or not in writing;
- a reference to a body, other than a party to this Deed (including, without limitation, an institute, association or authority), whether statutory or not:
  - i) which ceases to exist; or
  - ii) whose powers or functions are transferred to another body;

is a reference to the body which replaces it or which substantially succeeds to its powers or functions.

- 1) "include" and its derivatives means without limitation.
- m) a reference to any one of an individual, corporation, partnership, joint venture, association, authority, trust or government includes (as the context requires) any other of them;
- n) a reference to any instrument (such as a deed, agreement or document) is to that instrument (or, if required by the context, to a part of it) as amended, novated, substituted or supplemented at any time and from time to time.

### 1.3 Notices

 Any notice or other communication to or by a party to this Deed must be in legible writing and in English addressed as shown below:

i) if to:

Landowner

Address:

as stated in Item 8 of Schedule 5

Attention:

as stated in Item 9 of Schedule 5

ii) if to:

Developer

Address:

as stated in Item 10 of Schedule 5

Attention:

as stated in Item 11 of Schedule 5

or as specified by any party by notice.

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## Schedule 2 - Notice

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### NOTICE

Developer	ACN	here	by:
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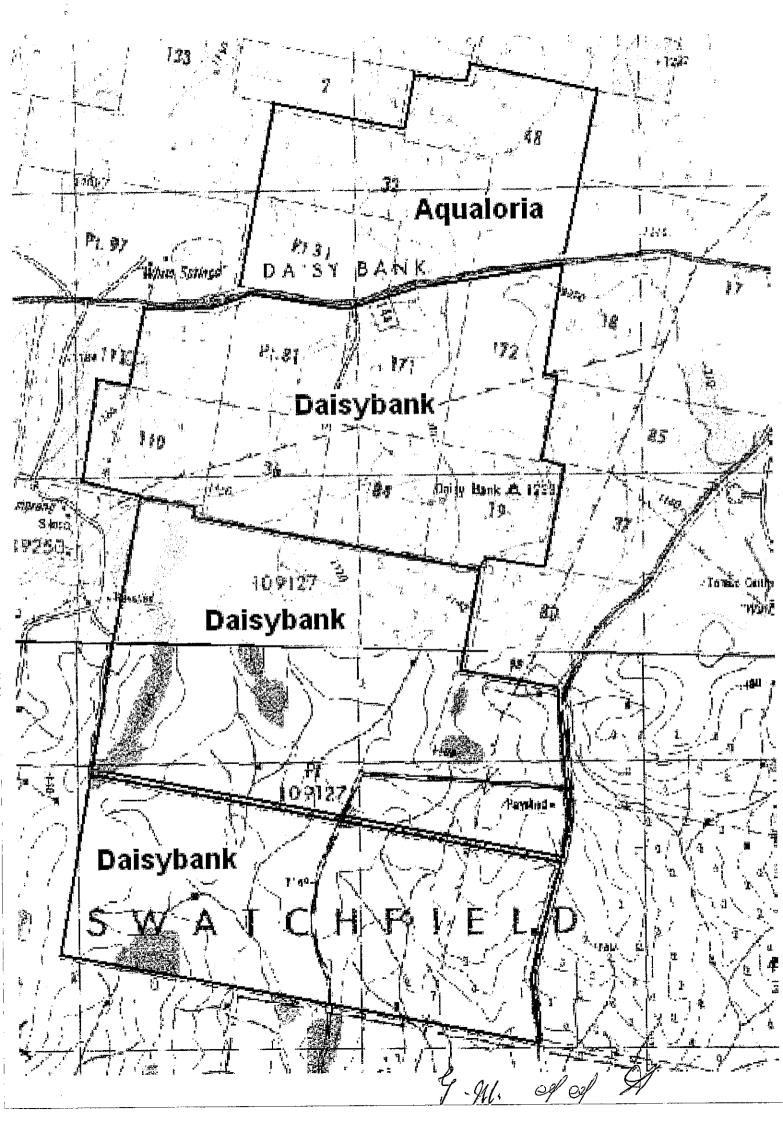
- gives this Notice pursuant to the Wind Monitoring Deed of Agreement between you and it requiring you to grant the Easements or Lease or both under that Deed;
- nominates [Insert Name] as the lessee under the Lease and the grantee of the Easement for the purpose of the Deed.

Dated:	
Developer By	
Name of authorised officer	<u> </u>

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# Schedule 3 - Plan of Land - Description of Land



Aqualoria Daisybank Daisybank Daisybank

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Schedule 4 – Plan of Excluded Land			
There is no Excluded Land			
There is Excluded Land which is marked by hatching on the following map			

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## Schedule 5 – Items

Item	Matter to be completed	Transaction Details
1	Date of Agreement	
2	Landowner Name and Address	Gabriello Mazzotti, Modesta Mazzotti and Lorena Maria Louisa Turner
3	Developer Name, ACN and Address	Wind Corporation Australia Limited ACN 091 157 774 Level 42, 259 George Street Sydney NSW 2000
4	Sum Payable under Clause 2.2(b) for initial Current Period	AUD\$500
5	Sum Payable under Clause 2.4(a)(ii) for extension of Current Period	AUD\$500
6	Rent Per Wind Turbine per annum under Lease (Clause 5.3(e))	AUD\$10,000
7	Description of Land (see Schedule 1)	Lot 31 DP 757072 Lot 32 DP 757072 Lot 48 DP 757072
8	Landowner name for purpose of sending notice or other communications	

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	<del></del>	
9	Landowner's address for purpose of sending notice or other communications	
10	Developer name for purpose of sending notice or other communications	Wind Corporation Australia Limited
11	Developer's address for purpose of sending notice or other communications	Level 42, 259 George Street Sydney NSW 2000

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## Schedule 6 - Lease Term Sheet

Landlord: 1.

Gabriello Mazzotti, Modesta Mazzotti

and Lorena Maria Louisa Turner

Tenant: 2.

Wind Corporation Australia Limited or

its nominee

Land: 3.

All the land listed at Item 7 in Schedule

Premises: 4.

The land nominated by Developer which may be the buildings and structures comprising the Wind Turbines shown on the Plan to be established by the Tenant and to be in

accordance with the Permitted Use

**Commencement Date:** 5.

to be nominated by Wind Corporation

Australia Limited in accordance with

clause 5.

**Termination Date:** 6.

the date 5 years after the

Commencement Date

Term: 7.

5 years

Further Term: 8.

Eleven (11) further Terms each of five years, making a total of fifty five (55) years in the further terms and making

an aggregate of sixty (60) years

including the Term.

9. Rent: The amount of \$10,000 per annum for

each Wind Turbine on the Premises.

**CPI Review Date:** 10.

Annually on each anniversary of the

Commencement Date.

Permitted Use: 11.

Construction, erection, maintenance, repair, replacement, operation,

demolition and removal of Wind Turbines and Wind Farm Equipment, and all related activities which the

Tenant deems necessary or desirable for

the purpose of a Wind Farm

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#### **Public Risk Insurance** 12.

(The amount of public risk insurance for any single claim the Tenant is required to obtain under the Lease in respect of any liability of the Tenant.)

Amount:

currently unknown

#### **Address for Service** 13.

## Landlord

Address:

Gabriello Mazzotti, Modesta Mazzotti and

Lorena Maria Louisa Turner

Phone:

Fax:

**Tenant** 

Address:

to be nominated by Wind Corporation

Australia Limited

Phone:

to be nominated by Wind Corporation

Australia Limited

Fax:

to be nominated by Wind Corporation

Australia Limited

14.

Jurisdiction:

the State or Territory in which the Land is

situated

15. Minimum

number of

Wind Turbines:

Two (2)

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Signing Section	
Executed as a deed.	
Dated: October 2006	
Signed, sealed and delivered by Landowner in the presence of:	y-Mon 2 pt
Itu.	Lahdowner (signature) GABRIELLO MAZZOTTI
Witness (signature)	Landowner (signature)
SCOTT TURNER, PLEASE PRINT NAME	MODESTA MAZZOTTI
	Landowner (signature) LORENA MARIA LOUISA TURNER
Executed by Developer:  Director (signature)	Director/company secretary (signature)
MORRIL POLARTY	John Huster
PLEASE PRINT NAME	PLEASE PRINT NAME



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FORESTS NSW

Cnr Browning St & Panorama Ave (PO Box 143) Bathurst NSW 2795

www.torest.nsw.gov.au T 02 6331 2844 F 02 6331 5528

Energreen Wind PO Box 574 EAST MAITLAND NSW 2323

27/09/2006 Your ref: NA Our ref: 848/648

Attention: Mr. Alan Keller

Dear Alan

### Black Springs Wind Farm

This letter sets out a formal agreement between Forests NSW and Energreen Wind Pty Ltd with regard to the proposed Black Springs Wind Farm. Specifically, this letter documents undertakings agreed to by the respective parties in relation to the management of the following issues.

- The impact(s) of the installation and operation of a wind turbine on private land adjacent to the residence located in compartment 535 of Vulcan State Forest (No. 621)
- The impact(s) associated with the transport and installation of a wind turbine on private land adjacent to compartments 451 and 452 of Vulcan State Forest.

### Forest NSW undertakes to:

- Not to object to the development on the grounds of impact of elevated sound pressure at the White Springs residence;
- Not raise complaints about the impact of the elevated sound pressures on the White Springs residence;
- Insert in the occupation permit incorporating the use of the White Springs residence conditions to the effect that:
  - (a) The permittee acknowledges that the construction or operation of the Black Springs Wind Farm may impact on the quiet enjoyment of the residence particularly with regard to elevated sound pressures:
  - (b) The permittee's occupation is subject to the acceptance of that impact;
  - (c) The permittee waives any right of action in relation to that impact, and
  - (d) The permit may be terminated after due inquiry if any occupier of the residence makes any formal objection or complaint regarding the elevated sound pressures.
- 4. Make available roads within compartments 450, 451 and 452 of Vulcan State Forest, for the transport and installation of two wind turbines on the adjacent private property know as "Daisybank".

## Energreen Wind Pty Ltd undertakes to:

- Pay compensation of \$20,000 to Forests NSW within four weeks of formal construction approval for the Black Springs Wind Farm project.
- Seek approval for and pay Forests NSW full costs associated with any road works required to allow for the access of heavy equipment, long loads etc through roads on State forest and to return the roads to the standards defined in the Macquarie Region Road Management Plan.

 Seek approval and pay compensation for any tree removal required to allow for the access of heavy equipment, long loads etc through roads on State forest. Any payments will be based on cost recovery (for tree falling) and compensation based on \$36.80/tree (GST Inc).

All undertakings made by Forests NSW are conditional on full receipt of the compensation payment as per Clause 5 above and sound pressures at the White Springs residence do not exceed the 50dB maximum nominated in previous correspondence and discussions.

All undertakings by Energreen Wind Pty Ltd are conditional on formal notification of construction approval.

Undertakings by both parties are subject to full agreeance as evidenced by the signatures below.

Signed for and on behalf of Forests NSW;

Mike Freeman

(act) Regional Manager

Macquarie Region - Forests NSW

Signed for and on behalf of Energreen Pty Ltd:

Alan Keller

Managing Director

Energreen