

Lestar Manning – Partner

Mark Baker-Jones

Madonna Griffin

Matt Patterson

Andrew Williams

Michael Neal – Partner

Marlies Hobbs

Clare Farley

Annabelle Nilsson

Samantha Watkins



9 March 2011

Chief Executive Officer  
Tablelands Regional Council  
PO Box 573  
ATHERTON QLD 4883

**Attention:** Peter Pattison, Senior Planner

**By Email:** [peterp@trc.qld.gov.au](mailto:peterp@trc.qld.gov.au)

Dear Peter

## HIGH ROAD WIND FARM – LEGAL ADVICE ON NOISE STANDARDS

Thank you for your instructions dated 16 February 2011, as detailed in Section 1, below.

### 1 Instructions

- 1.1 You have instructed us to advise you concerning a wind farm development application in relation to the following.
- (a) With particular consideration of nearby existing dwellings (indoor and outdoor) and vacant lots, advise what the acceptable noise standards are as applicable to noise created by wind turbines in Queensland.
  - (b) There are two 'participating landowners' who own the subject land and adjoining property to the proposed development and have entered into agreements with the developer of the wind farm. Advise whether the same noise standards should be applied to adjoining 'participating landholder' land.
  - (c) There are existing reconfiguration approvals for non-participating land on the western side of Tumoulin Road and these approvals restrict the location of any future dwellings through building envelopes required by the earlier approvals. Advise of Council's planning obligations in relation to those lots.
  - (d) Comment on any associated important issues.

### 2 Summary of Advice

- 2.1 Our recommendations are summarised below.



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### Noise limits

- 2.2 As assessment manager of the wind farm development application, the first step for Council in this matter is to assess the application against documentation and matters listed under section 314 of the *Sustainable Planning Act 2009 (SPA)*. The FNQ Regional Plan and the Herberton Planning Scheme are the most relevant concerning noise in this matter.
- 2.3 The FNQ Regional Plan is the only planning document that directs the Council to a legal document regarding noise, in this instance the *Environment Protection (Noise) Policy 2008 (Policy)* created under the *Environmental Protection Act 1994 (Act)*. Because the default noise standards under the Act do not concern noise from wind farms, the acoustic quality objectives of the Policy apply.
- 2.4 The AS 4959-2010: Acoustics – Measurement, Prediction and Assessment Of Noise From Wind Turbine Generators (**Standard**) and the Draft Environmental Protection and Heritage Council National Wind Farm Guidelines (**Draft Guidelines**) provide the most current guidance in formulating noise limits specifically concerning wind farms.
- 2.5 The Council is not required to consider the Standard, Draft Guidelines and South Australia Guidelines, however they could be useful in filling in any ‘gaps’ not addressed by the Act and the Policy, provided that they do not contradict the objectives of the Act and Policy. For example, a ‘gap’ that the Council may wish to consider is the control of background creep levels. In this case, we recommend that Council obtain further information from an acoustic expert and the Department of Environment and Resource Management (DERM) as provided under section 256 of SPA.
- 2.6 We are of the view that if the Council attaches development conditions to address any nuisance, environmental harm and other adverse impacts arising from the noise of the wind turbines, it is likely that Council will be considered to have taken reasonable steps to prevent HWRF from being liable under the Act for noise arising from the wind turbines. This will also greatly reduce the risk of Council being liable of any civil offences as discussed below.

### Noise limits - vacant Lots

- 2.7 Consistent with section 314 (3) of SPA, Council must have regard to development approvals and lawful use of adjacent premises.
- 2.8 An assessment of an acceptable noise limit for vacant lots will depend on the use, if any, of such lots. If the vacant lot has had a development approval granted over it for a noise sensitive receptor such as a dwelling, school, camp etc or be promoted under the Herberton Shire Planning Scheme 2005 as land appropriate for such use, we suggest that noise limits should be applied according to that lot as if the potential development already existed. The Policy also provides for parks and gardens.

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### **Variation of noise standard for participating landowners**

- 2.9 The Act and the Policy do not account for the variation of noise standards by agreement. We do not recommend Council to take into account any relaxed noise limits agreed to by participating landowners. Council should adopt the strictest applicable noise limits in development conditions that attach to the land so that prospective purchasers of the land will be aware of the noise limits applicable to the sensitive noise receptor on their land. This will limit the scenario where a new purchaser sues the Council and/or HRWF.
- 2.10 We do recommend that Council make HRWF aware that in conducting any negotiations they should not have the effect of stifling comments from residents who are likely to be affected through the public consultation process under SPA.
- 2.11 We note that the Standard recommends a regulatory authority set criteria that is flexible to account for existing agreements between landowners. We are of the view that this process is legally flawed and should not be adopted.

### **Offences under the Act**

- 2.12 The offences under the Act are mainly an issue for HRWF. However if HRWF causes environmental harm in accordance with a development condition of a development approval, HRWF may have some defence.

### **Civil liability**

- 2.13 If Council is practical and applies conditions to the development approval based on consideration of the Act, Policy and any information from acoustic experts or DERM (requested under section 256 of SPA), and enforces those conditions and nuisance provisions of the Act where necessary, it would be difficult for a Court to allow a claim against Council.
- 2.14 Based on the report by Mr Thorne, Council may require a new expert noise assessment prior to approval of the wind farm development. This will assist Council in identifying likely issues of concern for nearby properties and residents and drafting conditions to ameliorate negative effects resulting from the wind farm.
- 2.15 Council may also consider creating local laws to address noise level limits under its devolved powers under the Act.

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- (a) To minimise the risk of protracted litigation under SPA or in defence in a civil claim, we suggest that Council:
    - (i) ensure that any possible issues of tonality, infrasound, low emission noise and any other characteristics of wind farms are identified prior to approval of the development application where possible;
    - (ii) attach development conditions to the development approval to mitigate any adverse affects such as unacceptable noise, shadow flicker and unacceptable impact to amenity if Council decides to approve the development application. Compliance with a noise management plan may be required under a condition; and
    - (iii) use its powers under SPA or the Act to enforce compliance with development conditions where necessary.

### **3 Background**

- 3.1 High Road Wind Farm Pty Ltd (**HRWF**) lodged a development application dated 8 October 2010 for a:
  - (a) Development Permit for a Material Change of Use for the purpose of an 'undefined' use (**Wind Farm**);
  - (b) Development Permit for Reconfiguring a Lot; and
  - (c) Preliminary Approval for Operational Works (roadwork).
- 3.2 Discrepancies in the initial application were corrected by correspondence to the Tablelands Regional Council dated 22 October 2010. The application is currently in the public notification stage.
- 3.3 The Wind Farm will comprise of 17 wind turbines on site and ancillary infrastructure necessary to distribute electricity at the site.
- 3.4 The material change of use is impact assessable, with the reconfiguration and operational works components of the application being code assessable. The current use of the land on which the development is proposed is rural pursuits including cattle grazing and agriculture. The land is located in the Rural Locality of the Rural Area of the Herberton Shire Planning Scheme 2005.
- 3.5 The Wind Farm is proposed to be located on the following lots (**the Land**):

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- (a) Lot 1 of RP723613;
  - (b) Lot 53 of CWL1229;
  - (c) Lot 2 of RP723613;
  - (d) Lot 45 of CAR124255;
  - (e) Lot 171 of CAR12496; and
  - (f) Lot 60 of CWL93.

3.6 HRWF is currently negotiating agreements with landowners which are subject to development approval. HRWF has not provided details of any draft agreements with landowners to the Council.

3.7 We have relied on the following documents:

- (a) IDAS Application Forms 1 and 5;
- (b) Development Application prepared by RPS dated October 2010;
- (c) Letter from RPS to Tablelands Regional Council dated 22 October 2010;
- (d) Peer Review of Noise Assessment of the Wind Farm from Noise Measurement Services to Tablelands Regional Council dated 24 November 2010 (**Peer Review Report**);
- (e) Letter from Tablelands Regional Council to HRWF dated 29 November 2010;
- (f) Letter from RPS to Peter Pattison dated 9 February 2011.

#### 4 **Impact Assessment**

4.1 Section 314 of the SPA applies to any part of the application requiring impact assessment. In accordance with section 314(2) of SPA, the assessment manager must assess the part of the application against each of the following relevant matters or things, to the extent the matter or thing is relevant to the development:

- (a) the State planning regulatory provisions;
- (b) the regional plan for a designated region, to the extent it is not identified in the planning scheme as being appropriately reflected in the planning scheme;
- (c) State planning policies, to the extent the policies are not identified in -
  - (i) any relevant regional plan as being appropriately reflected in the regional plan; or
  - (ii) the planning scheme as being appropriately reflected in the planning scheme; and
- (d) a planning scheme.

4.2 In addition to the above, section 314(3) provides that the assessment manager must assess the part of the application having regard to the following:

- (a) the common material (this may include any advice or comment received under section 256 of SPA);
- (b) the development approval for, and any lawful use of, premises the subject of the application or adjacent premises;
- (c) any referral agency's response for the application.

4.3 Council has the power under section 345 of SPA to apply conditions that are:

- (a) relevant to, but not an unreasonable imposition on , the development or use of premises as a consequence of the development; or
- (b) be reasonably required in relation to the development or use of premises as a consequence of the development.

4.4 Further, under section 256 of SPA, the Council may ask any person, such as an acoustic expert or DERM, for advice or comment about an application at any stage of IDAS, other than the compliance stage. There is no particular way advice or comment must be asked for and received.

## **5 The Law on Noise Standards and Informative Material**

### **Noise standards under the Act**

5.1 As the Tablelands Regional Council has not used its devolved powers under s 514 of the Act and s 99 of the Environmental Protection Regulation 2008 (**Regulation**) to make local laws

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addressing noise standards<sup>1</sup>, the default noise standards under Chapter 8, Part 3B, Division 3 of the Act would apply.

- 5.2 Under the default noise provisions, only s 440S might apply to wind turbines as it relates to “generators” (among other things). However, considering the context of section 440S, it is unlikely this section is relevant to wind turbines<sup>2</sup>. “Generator” is not defined in the Act. Although a wind turbine may be classified as a generator (according to the Webster dictionary), s 440S deals with “regulated devices” which consists of generators, compressors, grass-cutters, leaf blowing tool and other small scale tools. These are obviously different from the size and scale of a wind farm and, in our view, s 440S would not apply.
- 5.3 In light of the above, acceptable noise standards to be imposed must be gleaned from the documents discussed below.

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<sup>1</sup> Pursuant to s 514 of the Act and ss 98 and 99 of the *Environmental Protection Regulation 2008*, power is devolved to local governments to administer ss 440 (Offence of causing environmental nuisance), 440Q (Offence of contravening a noise standard) and Chapter 8, Part 3B, Division 3 (Default noise standards) of the Act. Upon devolution of power, the local government becomes the administering authority for the devolved matter (s 514(3)). The local government may then, relevantly, make a local law about any matter for which it is necessary or convenient to make provision for carrying out or giving effect to the devolved matter (s 514(5)(b)). The local law must not be inconsistent with the Regulation unless it imposes requirements in relation to environmental nuisance (s 514(6A)). Accordingly, section 440P of the Act provides that the default noise standards under Division 3 apply in this instance.

<sup>2</sup> Although a wind turbine may be classified as a generator (according to the Webster dictionary), section 440S deals with “regulated devices” which consists of generators, compressors, grass-cutters, leaf blowing tool and other small scale tools.

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### Acoustic quality objectives under the Policy

- 5.4 The Policy<sup>3</sup>, among other things, identifies environmental values to be enhanced or protected and states acoustic quality objectives for enhancing or protecting the environmental values. The environmental values listed in the Policy are the qualities of the acoustic environment that are conducive to:
- (a) protecting the health and biodiversity of ecosystems; and
  - (b) human health and wellbeing, including by ensuring a suitable acoustic environment for individuals to do any of the following:
    - (i) sleep;
    - (ii) study or learn;
    - (iii) be involved in recreation, including relaxation and conversation; and
    - (iv) protecting the amenity of the community<sup>4</sup>.
- 5.5 The acoustic quality objectives are intended to be progressively achieved as part of achieving the purpose of the policy in the long term<sup>5</sup>. However, 1.3.2 of the FNQ Regional Plan requires developments to meet the objectives of the Policy.
- 5.6 Acoustic quality objectives are outlined below as they correspond with various sensitive receptors and environmental values as relevant to this matter. Please refer to Section 1 of the Policy if other types of amenities (such as retail stores, schools, etc) are contemplated on the lots nearby the proposed wind farm development site. A sensitive receptor is defined in the Policy as an area or place where noise is measured<sup>6</sup>. The table in the Policy identifies sensitive receptors as, among others, dwelling (for outdoors); dwelling (for indoors); various protected areas; marine parks and other parks and gardens.
- (a) LAeq,adj,1hr means the A-weighted sound pressure level of a continuous steady sound, adjusted for tonal character, that within a 1 hour period has the same mean square sound pressure of a sound that varies with time.
  - (b) LA10, adj, 1hr means the A-weighted sound pressure level, adjusted for tonal character or impulsiveness, that is exceeded for 10% of a 1 hour period when measured using time-weighting 'F'.

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<sup>3</sup> Created under Chapter 2, *Environmental Protection Act 1994*.

<sup>4</sup> Section 7, Part 3, the Policy.

<sup>5</sup> S8(3) of the Policy.

<sup>6</sup> Schedule 2, *Environment Protection (Noise) Policy 2008*.



- (c) LA1, adj, 1hr means the A-weighted sound pressure level, adjusted for tonal character or impulsiveness, that is exceeded for 1% of a 1 hour period when measured using time-weighting 'F'.

Column 1	Column 2	Column 3			Column 4
Sensitive receptor	Time of day	Acoustic quality objectives (measured at the receptor) <i>dB(A)</i>			Environmental value
		<b>LAeq,adj,1hr</b>	<b>LA10,adj,1hr</b>	<b>LA1,adj,1hr</b>	
dwelling (for outdoors)	daytime and evening	50	55	65	health and wellbeing
Dwelling (for indoors)	daytime and evening	35	40	45	health and wellbeing
	night-time	30	35	40	health and wellbeing, in relation to the ability to sleep
protected area, or an area identified under a conservation plan under the <i>Nature Conservation Act 1992</i> as a critical habitat or an area of major interest	anytime	the level of noise that preserves the amenity of the existing area or place			health and biodiversity of ecosystems
marine park under the <i>Marine Parks Act 2004</i>	anytime	the level of noise that preserves the amenity of the existing marine park			health and biodiversity of ecosystems
park or garden that is open to the public (whether or not on payment of an amount) for use other than for sport or organised entertainment	anytime	the level of noise that preserves the amenity of the existing park or garden			community amenity

- 5.7 Further, section 10 of the Policy states the management intent for an activity involving noise. The management intent refers to controlling background creep however the section is only

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relevant to environmental management decisions made by the administering authority (see Regulation 51 of the *Environmental Protection Regulation 2008*)<sup>7</sup>.

### **The Standard**

- 5.8 The Standard is not referred to by the Act, the Policy or planning instruments and is not a document that the Council is required to consider under section 314 of SPA. However, the Standard accounts for the unique characteristics of wind farms and could be useful in filling any 'gaps' that may not be addressed by the Act or Policy.
- 5.9 The Standard was created by Standards Australia and provides a methodology for measuring noise from horizontal and vertical axis turbine generators in the presence of wind at all noise receivers in the vicinity of a wind farm. The Standard does not measure characteristics such as infrasound and low frequency noise.
- 5.10 The Standard states that "when setting criteria, the Relevant Regulatory Authority should consider existing ambient noise environment at receivers around the proposed wind farm and the characteristics of wind farm noise.....The criteria should be flexible to account for agreements between landowners and wind farm developers or for circumstances where the amenity of the ambient noise environments differs from a rural area."<sup>8</sup>.
- 5.11 The Standard raises the possibility where the noise level from each wind turbine will increase with increasing wind speed and that the background noise within the ambient noise environment at receivers will also increase in those conditions. This could give rise to a scenario where the minimum noise level limit may be exceeded by the background noise itself before it is exceeded by the noise from the wind turbine.
- 5.12 Further, the Standard recommends "that the Relevant Regulatory Authority allow the minimum noise limit to be exceeded, provided the wind farm noise level does not exceed the background noise level by a specific amount.

*At each nominal wind speed, the noise limit should be the higher of-*

- (a) minimum noise level limit; or*
- (b) background noise levels plus the specified amount.*

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<sup>7</sup> For the reasons outlined in footnote 1, the Council is not empowered to make environmental management decisions and accordingly this section does not apply.

<sup>8</sup> Paragraph 4.1, Page 7, the Standards.

*The noise limits should be specified at nominal wind speed intervals of 1m/s between the wind speed at which the WTG<sup>9</sup> starts to generate electricity ('cut-in' wind speed) and the wind speed at which the WTG reaches its maximum generation ('rated' wind speed).<sup>10</sup>*

### **Draft Guidelines**

- 5.13 Similar to the Standard, the Draft Guidelines are not referred to by the Act or the Policy and is not a document that the Council is required to consider under section 314 of SPA. However, the document may offer some assistance to Council.
- 5.14 The most recent version of the Draft Guidelines is dated July 2010. The Draft Guidelines provide supplementary guidance on, and technical methodologies, for assessing issues not contained in the Standard. With regard to noise limits, the Draft Guidelines support the Standard and recommend that the noise level limit framework be as defined in the Standard yet do not set defined noise limits. Accordingly, the Draft Guidelines recommend using A-weighted decibels and including a minimum noise level limit and variation of the minimum noise level limit during periods of elevated background noise (a 'background noise level +' approach)<sup>11</sup>.
- 5.15 The Draft Guidelines do not require specific assessment of infrasound or low level noise as it states that such characteristics of wind farms are normally at levels well below the uppermost levels required to cause any health effects<sup>12</sup>. The Draft Guidelines also refer the reader to documents that may assist in the assessment of other specific areas of assessment such as low frequency noise<sup>13</sup>.
- 5.16 However the Draft Guidelines recommend post-construction assessment of Amplitude Modulation<sup>14</sup> and Impulsiveness<sup>15</sup> and suggest a 5dB penalty may apply to the received noise level if any of the attributes are present. Concerning Tonality<sup>16</sup>, a pre-construction assessment is recommended but a post construction assessment may be required and a 5dB penalty may apply to the received noise level if Tonality is present.
- 5.17 The Draft Guidelines recommend consideration to separate noise limits for day time and night time. This is consistent with the Policy. The criteria for non-residential uses should only address the common hours of use for the location<sup>17</sup>.

<sup>9</sup> Wind turbine generator. See paragraph 3.12 of the Standards.

<sup>10</sup> Paragraph 4.1, the Standard.

<sup>11</sup> Page 46, Guidelines.

<sup>12</sup> Paragraph 3.2, Guidelines.

<sup>13</sup> See Technical Appendice A and paragraph B.2.3 of the Draft Guidelines respectively.

<sup>14</sup> Where sound level exhibits a fluctuation that is regular, cyclic and audible, eg. Loud-soft-loud-soft. Paragraph B.6, Draft Guidelines.

<sup>15</sup> Where sound has a short duration, eg. Banging, hammering. Paragraph B.6, Draft Guidelines.

<sup>16</sup> Where noise contains a discrete frequency component, eg. Humming, whining. Paragraph B.6, Draft Guidelines

<sup>17</sup> Page 48, Draft Guidelines.

5.18 The Draft Guidelines also refer to vacant lots and provides that:

- (a) properties of residents who are financially associated with the wind farm; and
- (b) areas of potential noise-sensitive developments with development approval or areas promoted as such by the planning system for that jurisdiction;

are likely to be considered as noise sensitive receivers<sup>18</sup>.

5.19 Concerning agreements for relaxed noise levels with land owners of nearby property, the Draft Guidelines state

*“Such agreements may contain specific clauses related to agreed noise levels from the wind farm on the landowner’s property. Often such clauses can take the form of alternative noise criteria. If such agreements are likely, the relevant authority should be contacted to confirm whether alternative noise criteria are permissible at stakeholder properties.*

*The Guidelines recommend that where stakeholders are involved in a proposed development and they agree to a relaxed set of noise level limits to apply at their property/properties, the minimum noise level limit may be increased by a suitable margin, for example 5dB. Minimum noise level limits of more than 45dB LAeq at a receiver are not considered suitable without provision for noise insulation of the dwelling and a suitable protected outdoor living area.*

*In establishing stakeholder-specific noise level limits, it is important to clearly communicate the proposed changes in noise level to the stakeholder as well as any occupier of the property and to clearly explain the consequences of the relaxation and any potential effects on amenity at the receiver property.<sup>19</sup>”*

#### **South Australia Wind Farm Guidelines 2009 (SA Guidelines).**

5.20 The SA Guidelines were developed by the Environment Protection Authority of South Australia to assist with compliance with the general environmental duty under the *Environment Protection Act 1993 (SA)* and specific environmental policies such as the *Environment Protection (Noise) Policy 2007 (SA Noise Policy)*.

5.21 The SA Noise Policy allows states that an environmental noise duty may be met if the continuous source noise level does not exceed the background noise level by 5dB(A)<sup>20</sup>.

<sup>18</sup> Pp 44-45, Draft Guidelines.

<sup>19</sup> Page 48, Draft Guidelines.

<sup>20</sup> Section 18, SA Noise Policy.

Additionally, the SA Noise Policy allocates indicative noise levels according to the land use rather than the specific type of dwelling.

- 5.22 The Draft Guidelines acknowledge that the 2003 SA Guidelines have been referred to previously in Queensland<sup>21</sup>. However we note that Mr Bob Thorne's Peer Review Report states (Peer Review Report) that the SA Guidelines have not been peer reviewed to support its application.

#### **Case law**

- 5.23 There have been few instances where Australian courts have dealt with the issue of noise limits in relation to wind farms. No cases in Queensland have explored this issue.
- 5.24 In *Taralga Landscape Guardians Inc v Minister for Planning and Res Southern Cross Pty Ltd*<sup>22</sup>, the Court had to consider conditions that emerged as a consequence of a third party right of appeal to the Court against the Minister's approval of the project. The Court applied the SA Guidelines because the development control plan relevant to the locality required compliance with the SA Guidelines.
- 5.25 The Court referred to the 2003 SA Guidelines when discussing noise level limits for participating landowners. The 2003 SA Guidelines stated,

*"Wind farm developers commonly enter into agreements with the owners of private land suitable for a windfarm site. The agreement provides the windfarm developers with the appropriate siting and generally provides the landowner with a level of compensation and diversity in their income stream.*

*The criteria have been developed to minimise the impact on the amenity of premises that do not have an agreement with windfarm developers.*

*Notwithstanding this, the EPA cannot ignore noise impacts on the basis that an agreement has been made between the developer and the landowner. HRWFs cannot absolve themselves of their obligations under the Act by entering into an agreement with a landowner.*

*If it is shown that a development is having an 'adverse effect on an amenity value of an area that ... unreasonably interferes with ... the enjoyment of the area' then appropriate action can be taken under the Act.*

- 5.26 However, the existence of an agreement will affect the consideration of whether the interference is unreasonable in a given situation. According to the SA Guidelines, it is unlikely that there will be unreasonable interference if:

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<sup>21</sup> Table b-2, page 47, Draft Guidelines.

<sup>22</sup> [2007] NSWLEC 59.

- (a) *a formal agreement is documented between the parties.*
- (b) *the agreement clearly outlines to the landowner the expected impact of the noise from the windfarm and its effect upon the landowner's amenity*
- (c) *the likely impact of exposure will not result in adverse health impacts (eg the level does not result in sleep disturbance)": at 3 and 4."*

## 6 Recommendations on Noise Limits

### Applicability of documents

- 6.1 There are no set mandatory noise limits in Queensland specifically addressing the noise created by the wind turbines. We recommend the first step for Council in this matter is to assess the application against documentation and matters listed under section 314 of SPA. For the purpose of this advice, we note below how relevant documents in this matter that fall within section 314 of SPA concern the acoustic environment:
- (a) the Far North Queensland Regional Plan 2009-2031 State Planning Regulatory Provisions do not make specific reference to noise;
  - (b) the Far North Queensland Regional Plan 2009 – 2031 (**FNQ Regional Plan**) provides for acoustic environment protection. In particular, 1.3.2 states that development that generates emissions must be adequately separated or planned, designed, constructed and operated to ensure the impacts of air and noise emissions on sensitive land uses meet the objectives of the Environmental Protection (Noise) Policy;
  - (c) the Draft State Planning Policy: Air, Noise and Hazardous Substances 2009 does not apply in this matter as the application proposal does not include a 'sensitive use' as defined in that policy<sup>23</sup>;
  - (d) the Herberton Planning Scheme. Rural amenity is likely to be an issue for consideration arising from the noise impacts from the operation of the wind farm.
- 6.2 The FNQ Regional Plan is the only planning document that directs the Council to a legal document relating to noise, in this instance the Policy created under the Act. Because the default noise standards under the Act do not concern noise from wind farms, the Policy is the starting point of reference for the Council in defining noise limits. The noise limits outlined in the Policy do not specifically cater for the unique characteristics of wind farms however the environmental values referred to in paragraph 5.4 outline the purposes of achieving acceptable noise limits.
- 6.3 The Policy identifies sensitive receptors including dwellings indoors and outdoors. When considering impacts of the wind farm it will be necessary, as a minimum, to meet the criteria in

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<sup>23</sup> See 4(1) of the Draft State Planning Policy: Air, Noise and Hazardous Substances 2009.

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the Policy. This however is not to say that Council cannot consider other matters under its general conditions power.

- 6.4 The Council must assess the application having regard to the development approval for, and any lawful use of, premises the subject of the application or adjacent premises. Also, if the Council seeks information from DERM or acoustic experts about any of the noise limits, the application will also have to be assessed with regard to the information provided by DERM.
- 6.5 The NMA Report attached to the RPA letter of 9 February 2011 states that the noise assessment was “carried out to the most current guideline (SA) in accordance with both the Australian Standard and the National Wind Farm Development Guidelines – Draft July 2010”. Although this may be the case, we note that applying the noise limits in the SA Guidelines does not offend the SA Noise Policy however it contradicts the acoustic quality objectives in the Policy in Queensland.
- 6.6 The criteria for noise limits in the noise assessment is based on the noise limits in the South Australian regime which sets minimum noise limits according to land use rather than the purpose of a constructed building on the land. However, the SA Noise Policy mentions wind farms and therefore contemplates noise from wind farm turbines. The Queensland Policy does not refer to wind farms.
- 6.7 Council is obliged to adopt the noise limits in the Policy rather than the noise limits suggested in the SA Guidelines as the Policy must be adhered to under the FNQ Regional Plan. Although we recognise that the SA Guidelines have been referred to before in Queensland, the SA Guidelines conflict with the acoustic quality objectives for Queensland, have not been peer reviewed, and are not as current as the Standard and the Draft Guidelines.
- 6.8 The Standard and the Draft Guidelines provide the most current guidance in formulating noise limits specifically concerning wind farms however the Council is not required to take these into consideration in assessing the development application. However, we are of the view that the Standard, Draft Guidelines and SA Guidelines could be referred to fill in any ‘gaps’ not addressed by the Act and the Policy, provided that they do not contradict the objectives of those documents. One ‘gap’ that the Council may wish to consider is the control of background creep levels.
- 6.9 We strongly recommend Council impose conditions on the development under section 345 of SPA to ameliorate noise impacts of the wind farms. The conditions can impose noise limits on the development and pertain to matters such as background creep depending upon the expert advice received by Council.

#### **Noise limits - dwellings**

- 6.10 In our view, to be consistent with the Act and Policy and FNQ Regional Plan, the noise limits in the Policy should be adhered to. A condition specifying those limits should be imposed.

- 6.11 However, according to the Standard and the Draft Guidelines, a formula for creating a noise limit specific to wind farms could be applied as follows:
- (a) At each nominal wind speed, the noise limit should be the higher of-
    - (i) minimum noise level limit of [**insert noise limit from Policy**] LA<sub>ec</sub>, adj, 1HR; or
    - (i) background noise levels plus the specified amount.
  - (b) The noise limits should be specified at nominal wind speed intervals of 1m/s between the wind speed at which the WTG<sup>24</sup> starts to generate electricity ('cut-in' wind speed) and the wind speed at which the WTG reaches its maximum generation ('rated' wind speed).
- 6.12 If this proposed condition could be worked and maintain the Policy as a base and then deal with other matters it may be an appropriate response. Council should confer with Mr Thornton to determine this.
- 6.13 We note that the noise report attached to the development application of 8 October 2010 indicates that there are no tonal characteristics associated with the turbines. If this is indeed the case, we do not view a penalty of 5dB(A) necessary. The documents provided to us do not suggest there are other characteristics present.
- 6.14 Council is not required to take into account the Standard and Draft Guidelines but may wish to do so given the emerging issues specific to wind farm noise. If Council wishes to make conditions regarding the issues in paragraphs 6.11 to 6.13, we recommend that Council obtain the following advice as provided under section 256 of SPA:
- (a) an acoustic expert to recommend noise limits according to the formula and suggestions in the Standard and Draft Guidelines; and
  - (b) comments from DERM about the suggested noise limit and formula adopted to obtain the suggested noise limit.
- 6.15 We are of the view that if the Council attaches conditions to address any nuisance and environmental harm arising from the noise of the wind turbines, it is likely that Council will be considered to have taken reasonable steps to prevent HWRF from being liable under the Act for noise arising from the wind turbines. This will also greatly reduce the risk of Council being liable of any action as discussed below.

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<sup>24</sup> Wind turbine generator. See paragraph 3.12 of the Standards.



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**Noise limits - vacant Lots**

- 6.16 Consistent with section 314 (3) of SPA, Council must have regard to development approvals and lawful use of adjacent premises.
- 6.17 In its letter of 29 November 2010, Council advised that future dwellings will be developed on the following:
- (a) Lot 2 on CWL2413;
  - (b) Lot 62 on CWL91;
  - (c) Lots 1 and 2 on RP704518;
  - (d) Lot 2 on 723613; and
  - (e) Lot 150 on SP216461.

All of the above except for Lot 62 on CWL91 are directly adjacent to the Land.

- 6.18 An assessment of an acceptable noise limit for vacant lots will depend on the use, if any, of such lots. Consistent with the Policy, if the vacant lot is either a:
- (a) protected area, or an area identified under a conservation plan under the Nature and Conservation Act 1992 as a critical habitat or an area of major interest; or
  - (b) park or garden that is open to the public (whether or not on payment of an amount) for use other than for sport or organised entertainment,

the noise limit should be a level of noise that preserves the amenity of the existing area, place, park or garden.

- 6.19 If the vacant lot has had a development approval granted over it for a noise sensitive receptor such as a dwelling, school, camp etc or be promoted under the Herberton Shire Planning Scheme 2005 as land appropriate for such use, we suggest that noise limits should be applied according to that lot as if the potential development already existed.
- 6.20 We note that in *Taralga*, the Court was satisfied that even if there were no guidelines that required noise limits on vacant lots, that some measure of protection was appropriate for presently unapproved dwellings on vacant lots. This approach will also apply in Queensland.

**Variation of noise standard for participating landowners**

- 6.21 The Act and the Policy do not account for the variation of noise standards by agreement. We do not recommend Council to take into account any relaxed noise limits agreed to by participating landowners. Council should adopt practical applicable noise limits in development conditions

that attach to the land so that prospective purchasers of the Land and land within the area of noise impacts will be aware of the noise limits applicable to the sensitive noise receptor on their land. This will limit the scenario where a new purchaser sues the Council and/or HRWF.

- 6.22 We do recommend that Council make HRWF aware that in conducting any negotiations they couldn't stifle comments from residents who are likely to be affected. The Court has warned,

*"The Council should have the opportunity to assess the application in the light of the informed attitude of interested parties, especially local residents and most especially those living closest to the site who would mostly be affected. That informed attitude may well be perverted by a developer who uses the cheque book...In this case the cheque book approach to potential submitters has not affected the merits of the various arguments on the disputed issues. I take the opportunity, however, to deplore it in the strongest terms. Should this approach manifest itself in other application, the Court will have to examine the ramifications in detail. Could it have the effect of vitiating the public notification stage, requiring re-notification? Might it amount to an abuse of process?"<sup>25</sup>.*

- 6.23 We note that the Standard recommends that a regulatory authority set criteria that is flexible to account for existing agreements between landowners. We do not agree with this approach.

#### **Planning obligations concerning existing reconfiguration approvals**

- 6.24 Upon the grant of reconfiguration development approval for a nearby property, the Council has no additional planning obligations under the *Integrated Planning Act* and SPA to the applicants of those approvals with regard to the wind farm development.
- 6.25 The planning obligations with regard to the development application for the wind farm apply such as public notification and consideration of the material identified in section 314 of SPA. If the Council wishes to approve the wind farm, we suggest Council impose development conditions to ameliorate any adverse effects on land within the area of potential noise impacts.
- 6.26 The Council must then deal with any appeals against the development application. Any appeals in this matter would likely raise matters such as amenity, shadow flicker from the rotating blades of the wind turbines and noise issues including infrasound and low frequency noise. We note that the Draft Guidelines state that infrasound and low frequency noise is not likely to be an issue in this regard however, we recommend Council obtain expert advice in this instance.
- 6.27 Council would also need to enforce any development conditions under its power under Chapter 7, Part 3 of SPA.

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<sup>25</sup> *Bunnings Building Supplies Pty Ltd v Redland Shire Council and Ors* [2000] QPELR 193, paras [30] and [32].

## Offences

- 6.28 The Act outlines a number of relevant offences. These include where a person must not:
- (a) wilfully and unlawfully, or unlawfully, cause serious environmental harm<sup>26</sup>;
  - (b) wilfully and unlawfully, or unlawfully, cause material environmental harm<sup>27</sup>;
  - (c) wilfully and unlawfully, or unlawfully, cause an environmental nuisance<sup>28</sup>.
- 6.29 Generally, environmental harm is defined in the Act to be any adverse effect, or potential adverse effect on an environmental value, and includes environmental nuisance<sup>29</sup>. Environmental nuisance is generally defined as unreasonable interference or likely interference with an environmental value caused by noise (among other things)<sup>30</sup>.
- 6.30 If the environmental harm or environmental nuisance is authorised to be done under a development condition of a development approval, the act is not unlawful<sup>31</sup>, and the above offences will not apply.
- 6.31 The offences noted above are of most concern to the HRWF. However if HRWF causes environmental harm in accordance with a development condition of a development approval, the HRWF will likely have a defence to a charge.

## Civil liability

- 6.32 In addition to the above, there are civil liability issues to consider.
- 6.33 The Act does not limit a civil action under the common law or otherwise and compliance with the Act does not necessarily show that an obligation that exists apart from this Act has been satisfied or has not been breached<sup>32</sup>. As the Policy was developed under the Act, it is likely this also extends to the Policy. This means that Council may be sued for a civil liability such as negligence, nuisance and/or breach of statutory duty arising out of a development approval regardless of the operation of the Act or Policy.
- 6.34 The Court in *Alec Finlayson Pty Ltd v Armidale City Council*<sup>33</sup> stated

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<sup>26</sup> S437.

<sup>27</sup> S438.

<sup>28</sup> S440.

<sup>29</sup> S14.

<sup>30</sup> S15.

<sup>31</sup> S 493A EPA

<sup>32</sup> S24 of the Act.

<sup>33</sup> (1994) 84 LGERA 225 at [84].

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*"... had the Council done nothing about the land, it might not have laid itself open to liability... But once it took steps, and particularly once it decided to grant the first development application, it came under a duty of care in relation to the very action that it was taking. If the action created a hazard, it was the Council's duty to take reasonable care so that the threatened injury or damage might be avoided"*

- 6.35 For the Council, the main risks are related to approving the development application for the wind farm without conditions that reasonably mitigate or address negative impacts on the residents and landowners of affected areas and failing to attempt to remedy a breach of development conditions.
- 6.36 Persons who may be adversely affected and suffer loss or damage due to the wind farm development may attempt to sue the Council.
- 6.37 By way of example, the likely risks for the Council arise in the following situations:
- (a) a person ultimately suffers a health impact such as loss of sleep or regular headaches because the conditions imposed on the development approval fell short of mitigating the adverse effect of the wind farm;
  - (b) where an adverse effect caused harm because the HRWF breached a development condition and the Council failed to enforce the condition under the SPA and/or enforce the nuisance provisions of the Act.
- 6.38 If Council is practical and applies conditions to the development approval based on consideration of the Act, Policy and any information from acoustic experts or DERM (requested under section 256 of SPA), and enforces those conditions and nuisance provisions of the Act where necessary, it may be difficult for a Court to hold the Council accountable.
- 6.39 Based on the report by Mr Thorne, Council may require a new expert noise assessment prior to approval. This will assist Council in identifying likely issues of concern for nearby properties and residents and drafting conditions to ameliorate negative effects from the wind farm.
- 6.40 To minimise the risk of protracted litigation under SPA or in defence in a civil claim, we suggest that Council as a minimum:

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- (a) Ensure that any possible issues of tonality, infrasound, low emission noise and any other characteristics of wind farms are identified prior to approval of the development application where possible.
  - (b) Attach development conditions to the development application to mitigate any adverse affects such as unacceptable noise, shadow flicker and unacceptable impact to amenity if Council decides to approve the development application. Compliance with a noise management plan may be required under a condition.
  - (c) Use its powers under SPA or the Act to enforce compliance with development conditions.
- 6.41 Council may also consider creating local laws to address noise level limits under its devolved powers under the Act.
- 6.42 We are able to provide you with more detailed advice on the risk of civil liability should you require. Please let us know if you would like us to further assist you in this regard.
- 6.43 Of course, if the proposed wind farm cannot be conditioned to meet acceptable noise levels then it is open to Council to refuse the application.

If you have any queries, please do not hesitate to contact us.

Yours faithfully

A handwritten signature in black ink, appearing to read 'Annabelle Nilsson', with a long horizontal flourish extending to the right.

**Annabelle Nilsson** LLB BA  
Solicitor - Cairns Office  
e [annabelle@paelaw.com](mailto:annabelle@paelaw.com)