



Planning &
Environment

ASSESSMENT REPORT

WHITE ROCK WIND FARM SECTION 75W MODIFICATION (10_0160 MOD 2)

1. BACKGROUND

The White Rock Wind Farm project is located approximately 20 kilometres (km) west of Glen Innes in the Northern Tablelands, within the Inverell and Glen Innes Severn local government areas (see Figures 1 and 2). The project is owned and operated by White Rock Wind Farm Pty Ltd (White Rock), a subsidiary of Goldwind International.

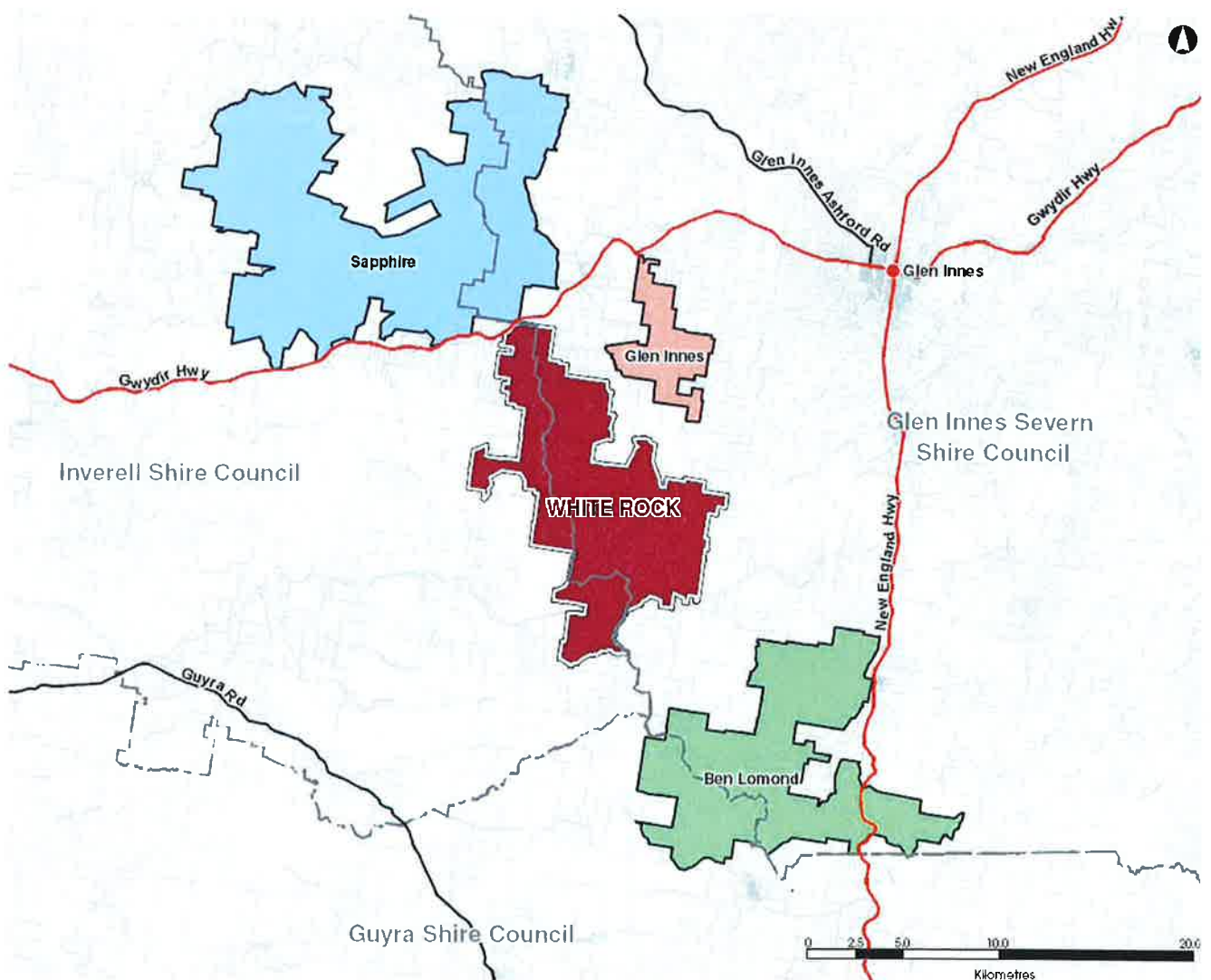


Figure 1: Regional Location

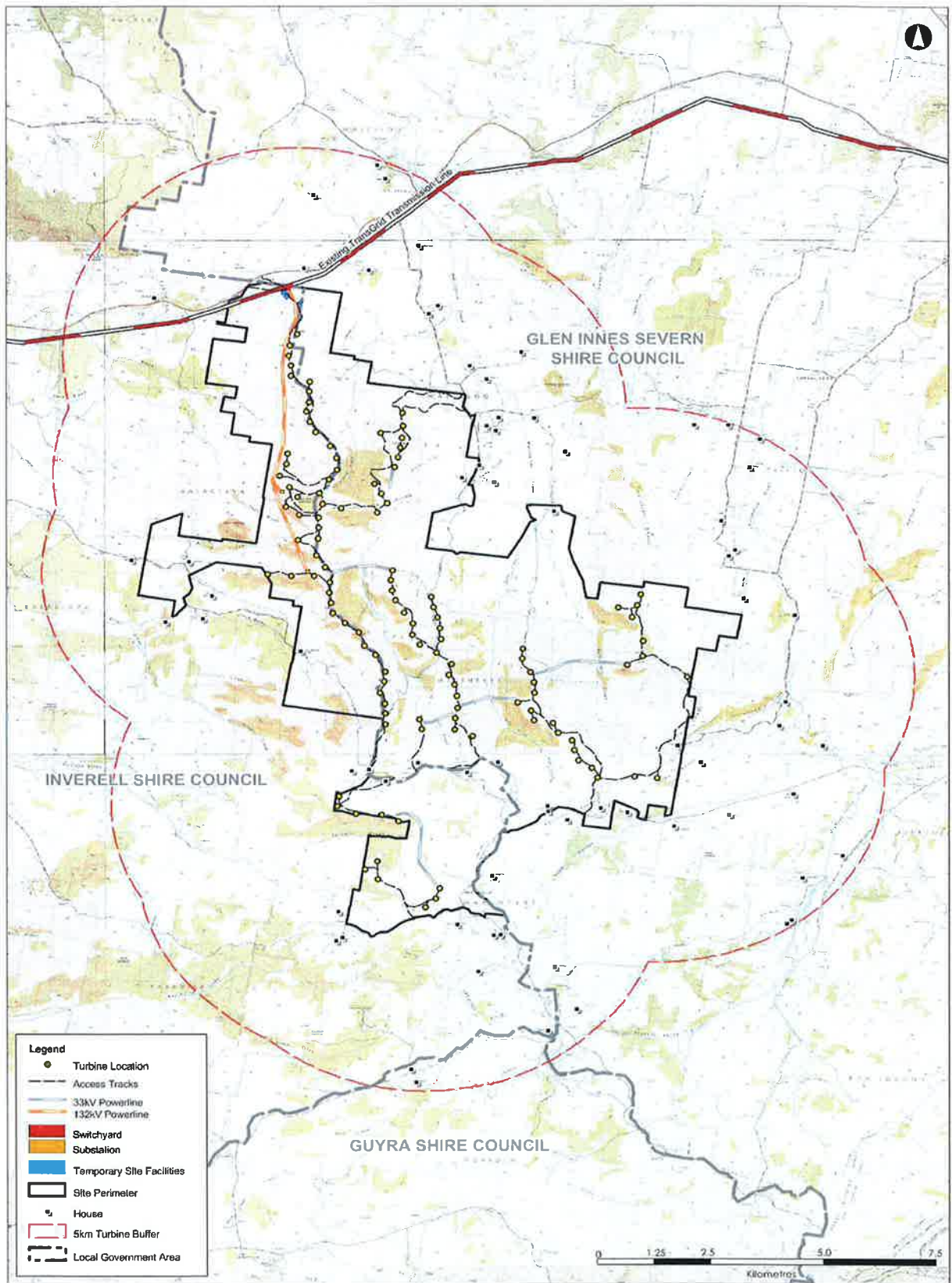


Figure 2: General Layout of White Rock Wind Farm

The project was approved by the Department of Planning and Environment (the Department), as delegate of the Minister for Planning on 10 July 2012 (MP 10_0160). A modification for an alternate transmission line (Modification 1) was lodged in September 2012, but withdrawn in January 2015 prior to determination.

The project as currently approved allows for:

- development and operation of up to 119 wind turbines, associated infrastructure and access tracks;
- a generating capacity of 238 megawatts (MW) of electricity; and
- 6-8km of on-site powerline connecting to TransGrid's existing 132KV Inverell – Glen Innes 132kV transmission line at the northern end of the site.

Construction of the project is yet to commence. Once operational, the project will generate up to 830,000 MW hours of electricity per year.

2. PROPOSED MODIFICATION

White Rock is proposing to modify the approval for the project (10_0160 MOD 2). The proposed modification seeks minor changes to conditions relating to:

- Vegetation clearing (Condition C1), to clarify the specific vegetation permitted to be cleared; and
- Operational noise (Conditions F6 to F18), to ensure consistency between operational noise conditions and incorporate contemporary practice and Environment Protection Authority (EPA) advice.

The proposal is fully described in the Environmental Assessment (EA) and associated documentation provided by White Rock to support the application (see Appendix A), and the proposed modifications are discussed in more detail in Section 5 below.

3. STATUTORY CONTEXT

3.1 Section 75W Modification

Under Schedule 6A of the EP&A Act, the White Rock Wind Farm (10_0160) is classified as a "transitional Part 3A project" and can be modified under the former Section 75W of the EP&A Act. The Department is satisfied that the proposed modification is within the scope of section 75W and is relatively minor in nature. In this regard, the proposed modification involves no change to the approved project area or layout, the approved maximum turbine height, and no change to the approved generating capacity. The Department's assessment indicates that the resulting environmental impacts would be substantially the same as approved for the original project.

3.2 Approval Authority

The Minister for Planning is the approval authority for the application. However, under the Minister's delegation of 16 February 2015 the Executive Director Resource Assessments may determine the proposed modification, as neither of the relevant Councils have made an objection, a political disclosure statement has not been made and there are less than 25 public submissions in the nature of objections.

4. CONSULTATION

The Department made the application publicly available on its website on 18 June 2015. Given the minor nature of the application, the Department did not formally seek submissions on the application.

Since then, the Department has received a public submission. This submission objects to the proposed modification. It was critical of the Department's decision not to formally seek submissions and the proposed changes to the vegetation clearing condition, and asked the Department to ensure detailed background noise monitoring was carried out prior to the construction of the project.

The Department has considered the matters raised in this submission during its assessment of the merits of the proposed modification.

5. ASSESSMENT

5.1 Vegetation Clearing

The original Environmental Assessment (EA) for the White Rock Wind Farm project assessed identified approximately 330 hectares of native vegetation (or woodland) within the 1,361 hectare study area (see Figure 3). This native woodland comprises two endangered ecological communities (EECs) listed under the *Threatened Species Conservation Act 1995*, including:

- 327 hectares of Ribbon Gum Woodland EEC; and
- 3.4 hectares of Yellow Box Woodland EEC.

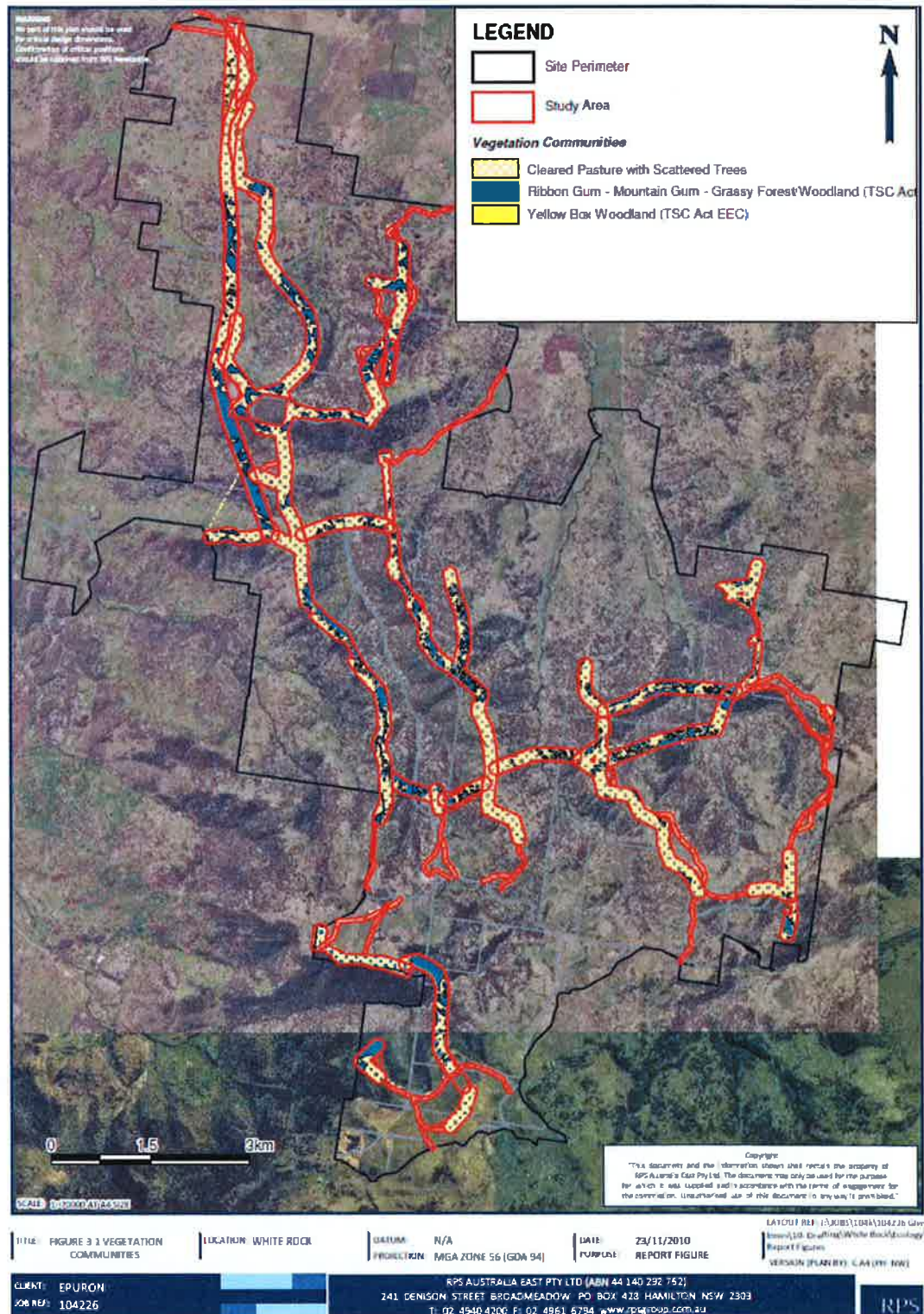


Figure 3: Location of vegetation communities within the study area.

Of this total, up to 22 hectares of the Ribbon Gum Woodland EEC would be affected by the project, including:

- 4.9 hectares of clearing required for wind turbines, access roads, cabling and related infrastructure; and
- 17.6 hectares of clearing required for transmission lines, which many not involve complete clearing.

The EA also identified that the project would affect some other scattered native vegetation, which it considers does not constitute EEC.

Condition C1 of the project approval requires White Rock to limit clearing of native vegetation to the minimum extent practicable, with no more than 22 hectares of native vegetation allowed to be cleared. White Rock has sought to amend this condition to clarify that the 22 hectares relates to native vegetation that constitutes EEC, as opposed to native vegetation in general.

The Department confirms that the 22 hectares maximum clearance in Condition C1 was based on the ecological assessment in the EA, and that the intention was that this limit relates to native vegetation that is classified as Ribbon Gum Woodland EEC.

Accordingly, the Department agrees with the proposed change and has recommended amending Condition C1 to clarify that the maximum 22 hectare clearing relates to native vegetation that is classified as EEC.

The Department notes that this change does not remove the general requirement to minimise clearing as far as practicable, which would be required to be addressed as part of the Construction Flora and Fauna Management Plan for the project (ie. Condition E22(f)).

The Department also notes that the project approval requires White Rock to offset the clearing required for the project through the implementation of a biodiversity offset strategy finalised in consultation with OEH (Condition C7). To this end, White Rock has identified a number of potential offset areas in the area, comprising some 168 hectares of Ribbon Gum Woodland EEC. The potential offset areas are shown on Figure 4 below.

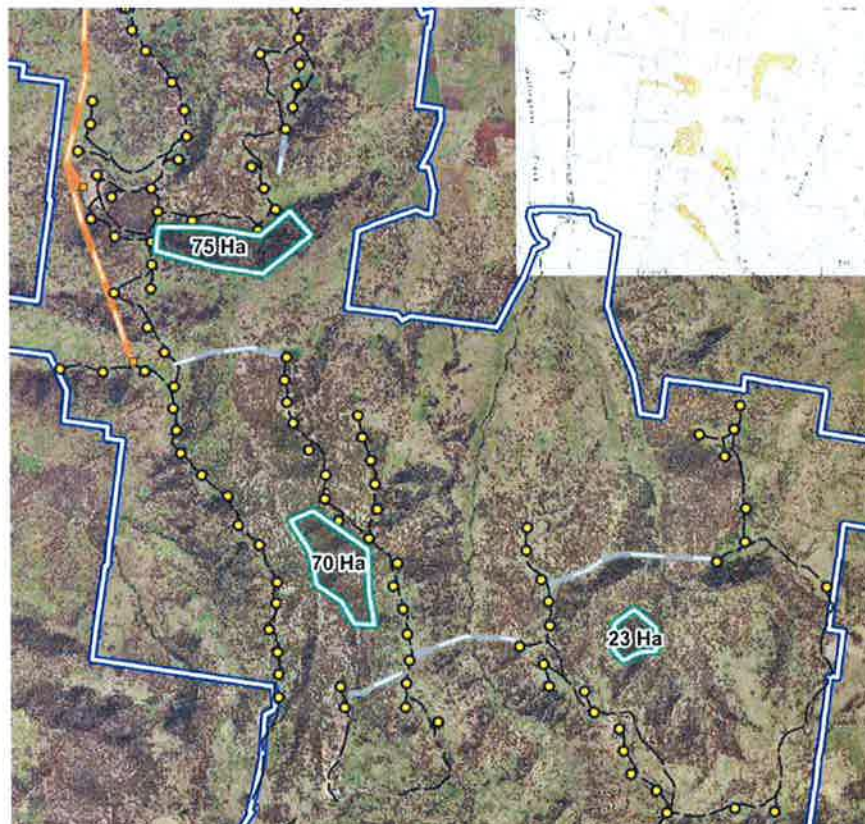


Figure 4: Potential offset areas

The final offset package (including size and composition) would be determined in accordance with the requirements of Condition C7.

5.2 Operational Noise

White Rock is proposing to make a number of changes to the conditions relating to operational noise criteria and noise measurement, principally to align the conditions with contemporary noise policy for wind farms in NSW, and remove any ambiguity from the existing conditions. The proposed changes, and the Department's consideration of each, are outlined below.

Operational Noise Criteria

Conditions F6 and F7 of the project approval set out the operational noise criteria for wind turbines.

While these criteria require compliance with the applicable criteria in the South Australian EPA's *Wind Farms Environmental Noise Guidelines (2003)*, which have been adopted for use in NSW, they also require compliance with the predicted noise levels, which in some cases would be lower than the relevant minimum criteria under the SA Guidelines.

This is inconsistent with current government policy and practice.

Applying noise criteria at predicted levels below 35 dB(A) would not result in any appreciable environmental or amenity benefits for receivers, given that 35 dB(A) has been established as the base level below which adverse amenity impacts are unlikely to occur. In this regard, it should be noted that a noise level of 35 dB(A) is very low in absolute terms, and is akin to the background noise level in a quiet library.

Consequently, the Department has no objection to the proposed change.

The Department agrees with the comments in the public submission that the proponent should be required to carry out detailed background noise monitoring before it is allowed to commission the wind farm, as the final operational noise criteria for the wind farm will depend on this data and it is important for this data to be current before the wind farm begins operating.

Consequently, the Department has inserted conditions requiring a detailed background noise survey and verification report to be carried out in accordance with the South Australian EPA's *Wind Farms Environmental Noise Guidelines (2009)* prior to the commissioning of the wind farm.

Finally, Condition F10 sets out the requirements for determining the presence of tonality in any noise and whether a penalty of 5 dB(A) shall be added to measured noise levels where tonality is present.

This condition references both the draft *NSW Planning Guidelines: Wind Farms (2011)* and the International Electrotechnical Commission's standard (IEC 61400-11:2002), which is referenced in the SA Guidelines.

This is a potential source of confusion, as the two standards provide different methods for tonality assessment with the NSW standard requiring assessment at the receiver and the IEC standard requiring assessment at the wind turbine.

As tonality at the receiver is the principal factor for determining potential impact, and therefore whether a penalty should be applied to measured noise levels, both the Department and EPA favour the NSW standard.

The Department has therefore redrafted the condition to ensure that the NSW standard is used.

This condition includes the addition of a new appendix to the approval that sets out the detailed requirements for monitoring compliance with the operational noise criteria for wind farms.

Apart from the changes for tonality (discussed above), these requirements are based on those in the South Australian EPA's *Wind Farms Environmental Noise Guidelines (2009)*.

Further, the 2009 SA Guidelines do not include any specific modification factors or penalties for low frequency noise (which includes infrasound as a subcategory). This is because the South Australian EPA is satisfied that infrasound is not a feature of modern wind turbine designs.

While the Department and NSW EPA accept this view, the draft NSW wind farm guidelines adopt a precautionary approach which involves adding a penalty of 5 dB(A) to measured noise levels in the unlikely event of low frequency noise exceeding levels of 65 dB(C) during the day and 60 dB(c) during the evening or night.

The Department has included this approach in the revised conditions for the White Rock Wind Farm.

Verification and Independent Review

Conditions F14 to F18 of the project approval require White Rock to undertake verification monitoring of the wind turbines within 3 months of commissioning and provide for mitigation of any identified exceedances, as well as provisions for independent reviews of noise impacts.

The Department notes that the noise modelling undertaken for the project indicates that the wind farm is able to meet the applicable noise criteria at all times at all non-associated residential receiver locations. As outlined above, the Department has recommended conditions requiring White Rock to comply with these criteria.

The Department has retained the verification requirements in the project approval, given that actual monitoring of the working wind farm turbines would be important for establishing noise levels and verifying the modelling results. As outlined above, the Department has also recommended a condition requiring White Rock to reassess the background noise levels at representative non-associated residences, to ensure that background noise levels (and hence operational noise criteria) reflect current best practice standards.

However, the Department has removed the conditions relating to mitigation and independent review, as White Rock's noise assessment indicates that the project would comply with the applicable criteria and the recommended conditions require White Rock to comply with these criteria at all times.

As currently worded, the conditions contemplate the potential for exceedances of the criteria. This is not the case, and if White Rock is found to exceed the applicable criteria then it would be in breach of its consent, and therefore subject to potential compliance action under the EP&A Act and/or its Environment Protection Licence (EPL).

Further, the Department is satisfied that the provisions for independent reviews are not warranted for contemporary wind farm projects, given that:

- once operational, wind farm noise sources are generally static – that is, they produce the same noise from the same turbines under the same meteorological conditions. The independent review provisions in the project approval originated from mining-related development consents, where the noise sources change in location and nature over time as mining progresses; and
- following changes to the *Protection of the Environment Operations Amendment (Scheduled Activities) Regulation 2013*, the EPA became the appropriate regulatory authority for wind farms, with wind farms now requiring an EPL. If there are any valid concerns that the noise from a wind farm has changed over time, then the EPA is best placed to conduct an investigation under a wind farm's EPL.

Consequently, the Department has recommended that the conditions contemplating non-compliance, and provisions relating to independent noise review, be deleted. As outlined above, this would not absolve White Rock from its responsibilities under the project approval to comply with the applicable noise criteria at all times, or to comply with conditions in relation to community consultation, complaints management, compliance monitoring, incident reporting, independent auditing, dispute resolution and environmental management.

Other Ancillary Infrastructure

The Department has also recommended conditions simplifying the noise conditions for ancillary infrastructure (ie. the substation), and clarifying that measurement of such noise sources is to be in accordance with the provisions of the *NSW Industrial Noise Policy*. The Department notes that the changes do not affect the criteria or intent under the existing conditions.

5.3 Other Issues

The Department is satisfied that other issues associated with the proposed modification are minor and/or would be adequately managed through the existing conditions of consent.

6. RECOMMENDED CONDITIONS

The Department has drafted a recommended notice of modification (see Appendix A) for the proposal, as well as a consolidated version of the development consent as modified (see Appendix B). The recommended modifications to the conditions include:

- clarification of vegetation clearing limits;
- updated operational noise criteria;
- updated noise management conditions;
- minor changes to ensure the impacts of decommissioning the project are appropriately incorporated in the project approval; and
- administrative changes to update definitions and to reflect contemporary best practice for wind farm projects.

White Rock has reviewed and does not object to the recommended conditions.

7. CONCLUSION

The Department has assessed the modification application in accordance with the relevant statutory requirements, having regard to the EA, submissions, as well as documentation relating to the original project.

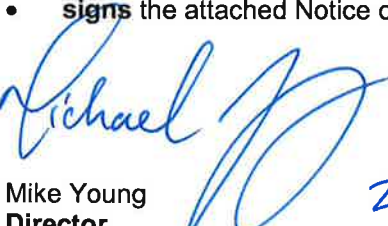
Based on this assessment, the Department is satisfied that the proposed modification is reasonable and would not result in any significant change in environmental impacts beyond those associated with the original project. The proposed change to the vegetation clearing conditions would simply clarify the intent of the original condition, and the proposed changes to the operational noise conditions would ensure that noise is managed in accordance with contemporary best practice standards for wind farms in NSW.

Consequently, the Department is satisfied that the proposed modification is in the public interest and should be approved, subject to conditions.

8. RECOMMENDATION

It is recommended that the Executive Director, Resource Assessments, as delegate of the Minister for Planning:

- **considers** the findings and recommendations of this report;
- **determines** that the proposed modification falls within the scope of section 75W of the EP&A Act;
- **approves** the modification application, subject to conditions; and
- **signs** the attached Notice of Modification (Appendix A).


Mike Young
Director
Resource Assessments

22. 7. 15.


24/7/15
David Kitto
Executive Director
Resource Assessments

APPENDIX A: NOTICE OF MODIFICATION

APPENDIX B: CONSOLIDATED CONSENT
