

## ASSESSMENT REPORT

## Taralga Wind Farm – Modification 8

## 1. BACKGROUND

The Taralga Wind Farm is located in a rural area 3 km east of Taralga, and 35 km north of Goulburn, in the Upper Lachlan local government area (see Figures 1 and 2). Taralga Wind Farm Pty Limited (TWF) owns and operates the wind farm.



**Figure 1: Regional Location**

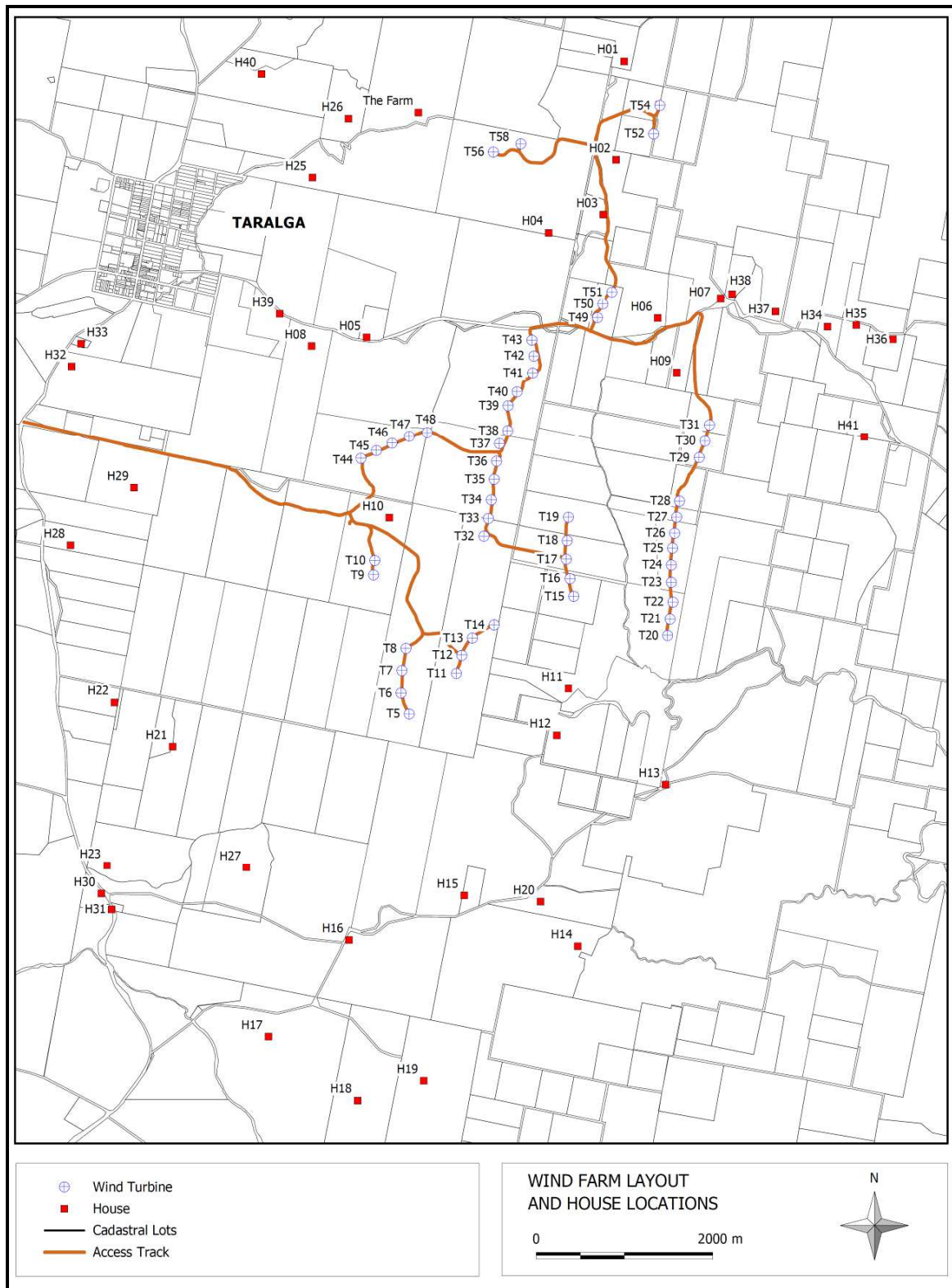
The original development application involved the development of a wind farm with 62 turbines and ancillary infrastructure. The project was approved by the then Minister for Planning in 2004. The decision was subsequently appealed in the Land and Environment Court, which upheld the decision in 2007. The Court's consent has been modified 7 times (see Table 1):

**Table 1: Modifications**

<b>Date</b>	<b>Subject</b>
20 April 2009	<ul style="list-style-type: none"> <li>Remove one turbine from the project and increase the turbine height from 110 - 131.5 metres (m).</li> </ul>
18 June 2013	<ul style="list-style-type: none"> <li>Remove 10 turbines from the project.</li> </ul>
6 November 2013	<ul style="list-style-type: none"> <li>Replace two site compounds with an alternative compound and create a new access route.</li> </ul>
6 November 2013	<ul style="list-style-type: none"> <li>Install 13 meteorological masts.</li> </ul>
20 June 2014	<ul style="list-style-type: none"> <li>Modify the heavy vehicle transport route through Goulburn.</li> </ul>
11 November 2014	<ul style="list-style-type: none"> <li>Relocation and realignment of electricity lines and access tracks, and minor changes to surface infrastructure.</li> </ul>
13 March 2015	<ul style="list-style-type: none"> <li>Remove restrictions on works at Riparossa Road, re-alignment of an underground electricity cable, administrative changes.</li> </ul>

The project as modified, allows:

- the development of 51 wind turbines (see Figure 2), with a total generating capacity of 107 megawatts of electricity;
- connection from turbines to the grid by underground transmission line to an on-site substation; and
- onward connection via overhead transmission line to the 330 kV line at Marulan, 20 kilometres southwest of the site.



**Figure 2: Approved Turbine Layout**

The project commenced construction in 2014, with over half the number of turbines constructed, and is likely to start fully operating by the end of the year.

The project has a capital investment value of \$250 million, and would assist Australia in meeting its renewable energy target.

## 2. PROPOSED MODIFICATION

TWF is seeking further modifications to its consent (DA241/04 MOD 8). There are 6 components to the proposed modification, including:

- amending the schedule of land in the consent;
- changing the current restrictions on external night lighting;
- revising the operational noise conditions, to remove inconsistency with current practice and guidelines, and to clearly align the conditions with those on the Environmental Protection Licence (EPL);
- changing the offset requirements for the clearing associated with the development of Row 6 of the wind farm;
- clarifying the rehabilitation requirements for the hardstands constructed for the wind farm; and
- revising the proposed arrangements for the proposed TV re-transmitter.

The proposed modification is described in detail in the Environmental Assessment (EA) for the application (see Appendix A) and is discussed in Section 5 below.

## 3. STATUTORY CONTEXT

### 3.1 Section 75 W

The project was approved under Part 4 of the *Environmental Planning and Assessment Act 1979* (the Act). However, under Schedule 6A of the Act, the modification request must be assessed and determined under the now repealed Section 75W of the Act. Given the minor scope of the request, and its limited effects, the Department considers that it falls within the scope of Section 75W.

### 3.2 Approval Authority

The then Minister for Planning was the consent authority for the original development application, and the Minister for Planning is the approval authority for this modification request. However, under the Minister's delegation dated 16 February 2015, the Executive Director, Resource Assessments and Business Systems may determine the application, as TWF has not made reportable political donations, Upper Lachlan Shire Council (Council) did not object, and no public objections were received.

## 4. CONSULTATION

The Department made the application and EA available on its website on 13 July 2015, and wrote to the Office of Environment Heritage (OEH) and Upper Lachlan Shire Council inviting comments on the application.

OEH was concerned with removing the Row 6 offset requirement while the offset strategy required under the development consent is yet to be finalised (see Appendix B). Council sought assurance that the proposed modification would not change the approved noise management regime.

## 5. ASSESSMENT

### 5.1 Schedule of Land

The Department's consideration of requests to clarify the land applying to the project is summarised in Table 2.

**Table 2:** Updates to project land details

<b>Land parcel</b>	<b>Consideration</b>	<b>Checked for accuracy/Recommendation</b>
Lot 8 DP750046	Omitted from development application	Accurate. Lot 8 falls within the project area and is associated with the project. Recommend inclusion of this lot in a revised project land figure.
Allocated portion 238 DP750046	Original EIS noted this description and also as Portion 228. This land has been subdivided into Lots 1 & 2 DP1140569	Yes, Portion 238 (or 228) no longer exists, Lot 1 DP1140569 is associated with the project. Lot 2 is not associated with the project. Recommend Lot 1 for inclusion in a revised project land figure.
<b>Land parcel</b>	<b>Consideration</b>	<b>Checked for accuracy/Recommendation</b>
Lot 21 DP750046 Conveyancing No. 994, Book 3335	Title details have changed to "Lot 21 DP750046"	Accurate. Recommend updated title details for Lot 21 in a revised project land figure.

## 5.2 Security Lighting

The company wishes to install four floodlights at the substation for use in emergency situations. These lights would be used for short periods as necessary, where lighting is required for urgent repairs and/or maintenance unable to be undertaken during daytime. Given the minor nature of the lighting, its design and temporary use, it would be unlikely to materially increase the visual impacts of the project.

The Department notes the conditions currently prohibit this lighting from being installed. The Department considers the benefit of the proposed lighting outweighs the potential impacts, and has recommended that the relevant conditions (ie 36 and 36A) are amended to allow the use of emergency lighting.

## 5.3 Noise Management

TWF 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 the project EPL, and remove any ambiguity from the existing conditions. The proposed changes, and the Department's consideration of each, are outlined below.

Conditions 42 - 44 of the development consent set out the operational noise criteria for wind turbines. While these criteria require compliance with the applicable criteria in the South Australian (SA) EPA's *Wind Farms Environmental Noise Guidelines (2003)*, which have been adopted for use in NSW, they also require:

- for associated residences - compliance with the predicted noise levels, which in some cases would be lower than the relevant minimum criteria under the SA Guidelines; and
- for all other receivers - compliance with 35 dB(A) under all wind conditions.

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 similar to the background noise level in a quiet library.

Compliance with 35 dB(A) under all wind conditions is also inconsistent with the South Australian Guidelines and the project's EPL, where a range of noise limits are applicable, which recognise the relationship between background noise and increases in wind speed.

Consequently, the Department has no objection to these proposed changes.

Condition 48 sets out the requirements for determining the presence of tonality in any noise and whether a penalty of 5 dB(A) should be added to measured noise levels. This condition references the International Electrotechnical Commission's (IEC) standard (IEC 61400-11:2002), which is referenced in the SA Guidelines. However, current practice is to determine tonality in accordance with the NSW standard *ISO 1996.2:2007 Acoustics – Description, measurement and assessment of environmental noise – Determination of environmental noise levels*.

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 consent that sets out the detailed requirements for monitoring compliance with the operational noise criteria for wind farms, which also sets out management requirements for low frequency noise from turbines.

Further, the Department and EPA consider that the installation of an anemometer is not relevant to the measurement of noise, and that the measurement protocols in the SA Guidelines are more appropriate. The Department has accordingly removed this requirement from the conditions.

TWF has also asked to modify condition 54, which gives noise mitigation rights from the date of the consent for new residences on vacant non-associated landholdings within the project boundary which are “*not part of an associated land holding at that date*”. TWF states that the way the condition is drafted may be interpreted to give these rights to landholders who become associated with the project following the date of the consent, and seeks to remove this potential ambiguity in the condition.

The Department considers that the noise mitigation rights were only ever contemplated to apply to vacant landholdings in existence at the date the consent was granted whenever this land is not associated with the project. The Department does not object to this clarification, and has re-drafted condition 54 accordingly.

Finally, the Department has recommended the inclusion of a 35dB(A) noise limit to apply to other site infrastructure, in accordance with its current standard practice, and as prescribed by the *NSW Industrial Noise Policy*.

#### 5.4 Biodiversity Offsets

Condition 90 requires the company to reforest an area of land to compensate for the loss of 4.15 hectares of *Silvertop Ash – Narrow-leaved Peppermint open forest* which would be cleared for Row 6 (ie T20- T28).

TWF has asked that this requirement be removed, as it has instead calculated this offset liability using the Biobanking methodology and has included it in the Biodiversity Offset Package (BOP) for the project.

The Secretary has advised the company that it has until the end of the year to commence the required forestation activities. This has allowed this issue to be assessed on its merits under the proposed modification.

The BOP involves securing a 50 ha site under a Biobanking agreement. To compensate Row 6 clearing, the BOP includes conservation of 18.6 ha of *Silvertop Ash – Narrow-leaved Peppermint open forest* (which compensates 141 of the 178 ecosystem credits required under the Biobanking calculation) and 9.9 ha of *Red Stringybark – Brittle Gum – Inland Scribbly gum dry open forest* (which provides a further 74 ecosystem credits).

OEH does not object to the offset liability for Row 6 clearing to be included in the BOP, but considers that a greater number of direct match credits should be provided, as the company's assessment shows excess direct match credits are available in the proposed Biobanking site. It also believes that until the BOP is finalised and approved, that the reforestation requirement should remain.

The Department notes that the current policy document *Framework for Biodiversity Assessment* allows credit trading for vegetation types within the same class, which is currently proposed in the BOP. The Department considers however that the quantum of the offset and the adequacy of the measures proposed in the BOP are matters which require OEH's concurrence before the BOP could be finalised and a Biobanking Agreement entered into.

The Department and OEH are in general agreement that alternative offsetting mechanisms for Row 6 clearing can be considered, and both agencies believe that the BOP is a suitable mechanism to compensate this impact. Modifying condition 90 would allow the company the certainty that this liability would be able to be considered in the BOP.

The proposed modification would not affect OEH's consultation role in regard to the suitability of the proposed measures, or for it to enter into a Biobanking Agreement with the company to secure the offset, in accordance with the FBA.

The Department therefore does not object to the request, and has re-drafted condition 90 to require a suitable offset to be developed for impacts of Row 6 clearing, in consultation with OEH. The revised condition also allows this offset to be considered and included in the BOP.

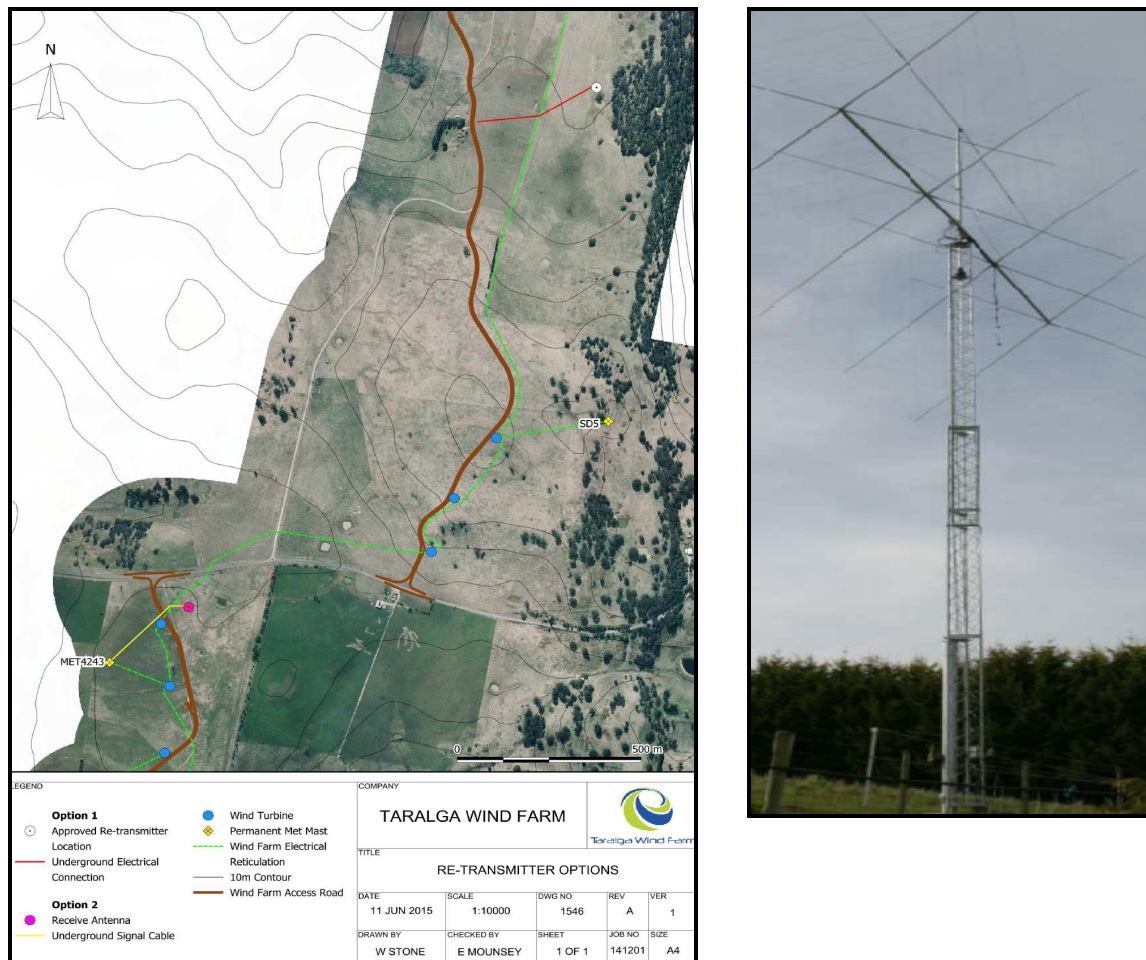
### 5.5 Hardstand Rehabilitation

The original EA for the project application stated that turbine construction hardstands would be rehabilitated following the construction stage. The Department considers that the requested deferral of hardstand rehabilitation until the end of the project is reasonable, as this would allow maintenance vehicles and cranes to access the turbines throughout the life of the project and during the decommissioning stage.

The Department therefore does not object to the request. Rehabilitating the hardstands would be undertaken in accordance with the approved Decommissioning and Rehabilitation Management Plan, which would be regularly updated as necessary during the project. The Department considers that the current conditions of approval would effectively manage any residual impacts of this change.

### 5.6 TV Re-Transmitter

A 15 m high TV re-transmitter was approved for installation and use under the original development application (see Figure 3).



**Figure 3: Proposed Re-transmitter Locations and Receive Antenna**

However the consent did not include reference to the necessary low voltage power connection for the re-transmitter. TWF has asked that this now be included in the project, and for an alternative location to be considered to locate the re-transmitter (see also Figure 3).

Both options require around 300 m of underground cable to connect the re-transmitter to a local power supply. Whichever option is selected, this infrastructure is unlikely to materially increase the approved biodiversity impacts of the project, given the land is cleared grazing land containing non-native vegetation. The Department also considers that this infrastructure would not increase the approved visual impacts of the project, given the scale of the antenna (see Figure 3), and particularly so for Option 2, as this option involves attaching the re-transmitter to an existing meteorological mast located in close proximity to 3 turbines.

The Department is also satisfied that the minor nature of this infrastructure, its low-voltage power connection and the distances between the proposed locations and residences, that electro-magnetic field impacts are unlikely to exceed recommended guideline levels.

Overall, the Department does not object to either option being used for this equipment, and considers that the current conditions of approval would effectively manage any residual installation or operational impacts.

#### 4 RECOMMENDED CONDITIONS

The Department has drafted a recommended Notice of Modification (see Appendix C). The Department's recommendations allow:

- emergency lighting to be used at the project substation;
- the operational noise regime to be aligned with current regulatory arrangements;
- compensation for Row 6 clearing to be integrated with the BOP for the project as a whole; and
- administrative corrections to be made to the project land figure, and to update recent name changes of government agencies.

The company has been provided with the Department's recommended conditions and does not object to them.

#### 5 CONCLUSION

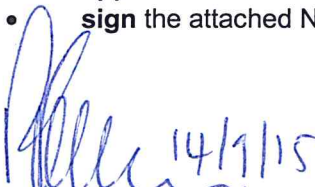
The Department has assessed the modification application and supporting information in accordance with the relevant requirements of the EP&A Act. The Department's assessment has found that the proposed modification would not materially change the approved impacts of the project.

The Department considers that the benefits of the proposed modification outweigh the residual impacts, and that it is in the public interest and should be approved, subject to conditions.

#### 6 RECOMMENDATION

It is recommended that the Executive Director, Resource Assessments and Business Systems, as delegate of the Minister:

- **consider** the findings and recommendations of this report;
- **determine** that the proposed modification is within the scope of Section 75W of the EP&A Act;
- **approve** the modification request, subject to conditions; and
- **sign** the attached Notice of Modification (Appendix C).

 14/9/15  
Paul Freeman  
A/Team Leader  
Resource Assessments

 14. 9. 15.  
Mike Young  
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Resource Assessments & Business Systems

## **APPENDIX A: ENVIRONMENTAL ASSESSMENT**

## **APPENDIX B: OEH SUBMISSION**

## **APPENDIX C: NOTICE OF MODIFICATION**