

Rye Park Wind Farm

Fact Sheet

3

September
2020

Noise



Why was the assessment undertaken?

A Wind Farm can create noise due to mechanical noise produced by the wind turbine generators, movement of the rotor blades and general construction.

An Environmental Noise Assessment (Modification ENA) (contained at Appendix G.3 of the Modification Application Report) was prepared by Sonus to assess the increase in tip height, removal of 12 wind turbines and changes to onsite ancillary infrastructure. The ENA assessed the change in potential construction and operational noise from the Approved Project to the Modified Project.

As a result of the comments provided by the Environment Protection Authority (EPA) in their submission received during the public exhibition period, further background noise monitoring was conducted and summarised in a Background Noise Monitoring Report (Contained at Appendix I of the RTS Report).

A revised Environmental Noise Assessment (Revised ENA) was also prepared (contained at Appendix J of the RTS Report) to ensure consistency with the Background Noise Monitoring Report.

In response to community concerns and comments made by DPIE regarding construction traffic noise along the Preferred Transport Route, construction traffic noise was also assessed as part of the Revised ENA.

What was the approach?

The Modification ENA was prepared considering the relevant conditions of the Development Consent and in accordance with the relevant Guidelines including:

- for operational noise, *South Australian Environment Protection Authority's Wind Farms – Environmental Noise Guidelines* (SA EPA Guidelines); and
- for construction noise, *Interim Construction Noise Guideline* (ICN Guideline).

Noise predictions were based on an indicative wind turbine model being the GE 158 5.5MW wind turbine that has one of the highest noise emissions of those currently on the market. This was done to provide a conservative 'worst case' scenario.

What did we find and how does it compare to the approved project?

Operational Noise

The Modification ENA found that the noise generated from the indicative wind turbines is predicted to achieve the operational noise criteria at all residences in the vicinity of the Project, with the exception of four non-associated residences. The findings of the Revised ENA was consistent with these findings.

A curtailment regime (operating selected wind turbines in a noise reduced mode) was determined to ensure noise from the Modified Project can achieve the criteria at all residences.

The need for a curtailment strategy will be further evaluated once the final wind turbine model (which could be quieter) has been selected, the layout finalised and as part of a pre-construction noise assessment to ensure compliance with the relevant criteria.

Construction Noise

Based on the predicted noise levels, it is expected that construction noise from wind turbine construction will be greater than 40 dB(A) at a distance of 1.2km however this noise limit is significantly less than the 75 dB(A) limit provided in the ICN Guidelines. Against the ICN Guidelines, residences within this radius will be 'noise affected', meaning there may be some community reaction to noise. Construction of the internal access tracks will be 61 dB(A) at 330m from the closest non-associated residence. Again, this is below the ICN Guidelines.

Construction Traffic Noise

A noise level of approximately 57 dB(A) is predicted at residences outside towns which are located 30 m from the roadside. This is 2dB(A) above the noise criterion specified in the conservatively applied RNP.

At the lowered travel speeds through the township of Rye Park, the noise level has been predicted at the closet resident at a distance of 10 m to be 56 dB(A). This is 1dB(A) above the noise criterion specified in the conservatively applied RNP.

2 dB(A) and 1 dB(A) is not considered to be either related to the Proposed Modification or to be a noticeable impact. Further, it would only occur for a limited period of time during the construction period.

As the Final Modified Project is estimated to decrease heavy vehicle traffic generated during the construction phase of the project by 0.1% from the Approved Project, the change in construction traffic noise from the Approved to the Final Modified Project is considered to be negligible.

What are the proposed mitigation strategies?

Operational Noise

In accordance with the Development Consent, background noise monitoring is currently being undertaken and the preparation of a noise compliance testing plan is being progressed. The noise compliance testing plan will ensure the Project is compliant with the operational noise criteria.

Construction Noise

Where residences are classed as 'noise affected', Tilt Renewables will apply all feasible and reasonable work practices and will inform residents of the proposed construction work. Strategies to be incorporated into a Construction Noise Management Plan could include:

- scheduling construction work, including heavy vehicle movements, to between 7am and 6pm Monday to Friday, and between 8am and 1pm on Saturdays;
- locating fixed noise sources as far as reasonably practicable from residences;
- installing acoustic screens around fixed noise sources;
- enclosing generators and compressors;
- implementing alternative processes (where feasible and reasonable); and
- ensuring effective site, equipment and vehicle management and maintenance.

Construction Traffic Noise

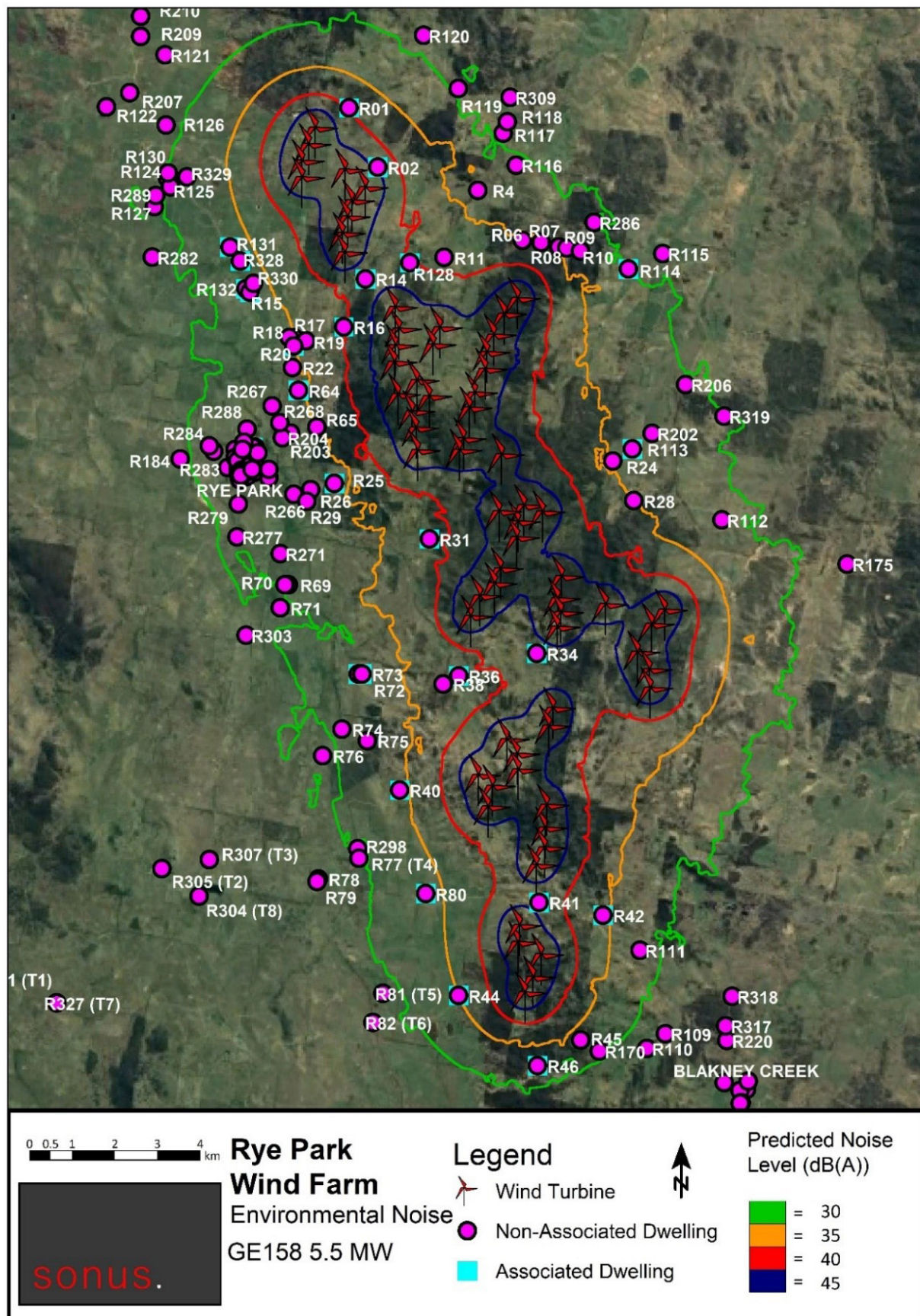
The following mitigation strategies are proposed:

- communicate with the affected community;
- incorporate information regarding the route to all drivers prior to accessing the site and the need to minimise impacts through driver operation at certain locations; and
- schedule construction traffic deliveries such that it is as evenly dispersed as practicable.

Assessment against Development Consent

In addressing the EPA's comments, the Applicant proposes that the noise limits contained in Condition 11 of Schedule 3 to the Development Consent be updated to reflect the results of the further noise assessments carried out in line with the Noise Bulletin. It is proposed the table to Condition 11 of Schedule 3 be replaced with more general criteria which will remain valid for any hub height. This is described further in the Amendment Report.

The Final Modified Project can comply with all other existing conditions of the Development Consent relating to noise.



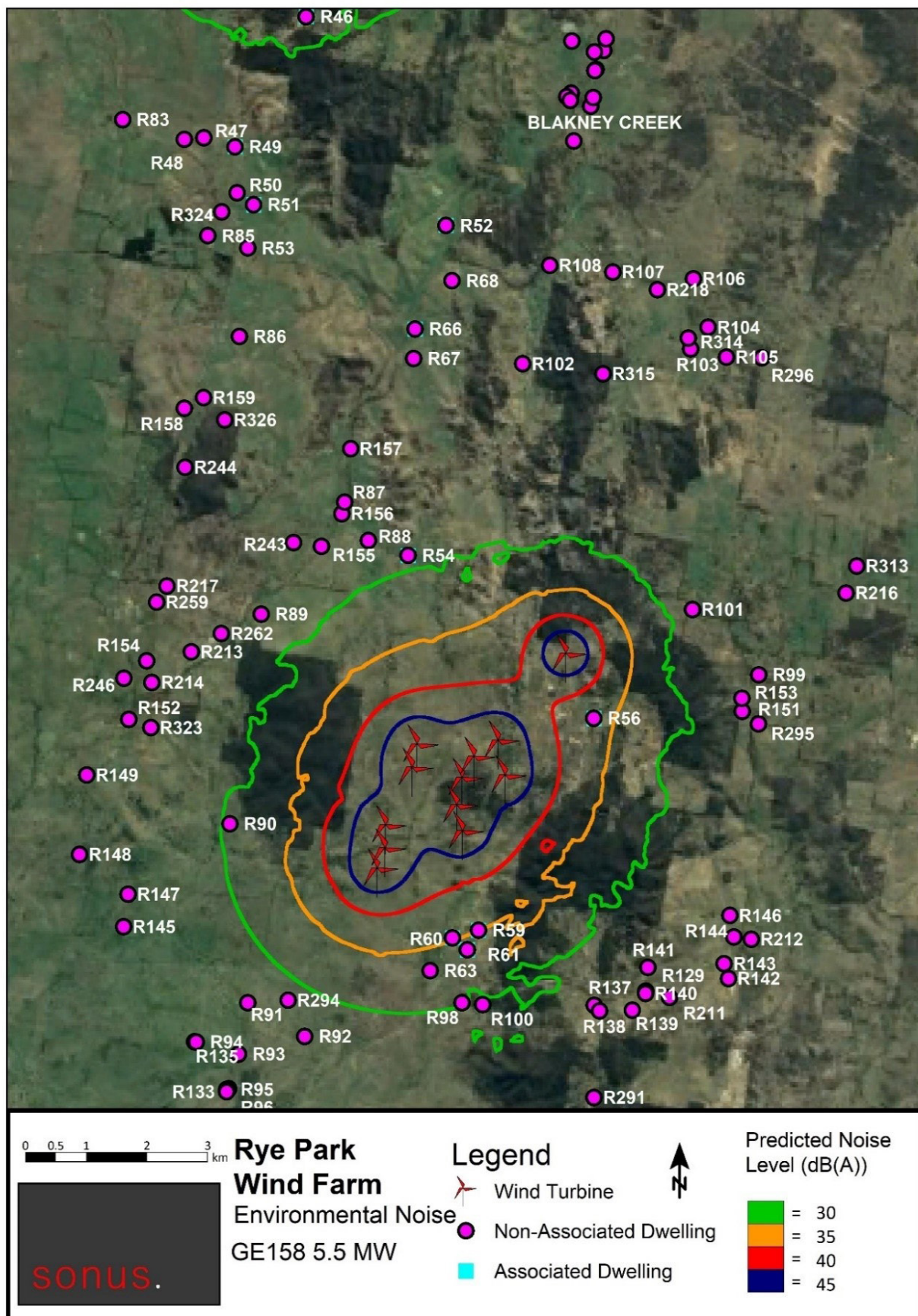
Diagrams: Contours of the predicted noise levels at nearby residences

For more information, please visit the dedicated public exhibition website informryeparkwf.com

or call us anytime to ask questions using: **1800 WE TILT (938 458)**

Email: ryeparkwindfarm@tiltrenewables.com | **Web:** www.ryeparkwf.com.au

Postal Address: PO Box 16080 Collins St West, Melbourne Vic 8007



Diagrams: Contours of the predicted noise levels at nearby residences