



EPA ANNUAL STATEMENT

FY24



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Document Approval

Report prepared by	Date	Reviewed by	Date
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1. Introduction

Lal Lal Wind Farm (LLWF) is an operating 60-turbine wind energy facility located approximately 17 km southeast of Ballarat on two sections of farmland in the municipality of Moorabool Shire Council (Council): the Yendon section (2 km east of Yendon) and the Elaine section (2 km north of Elaine).

This report has been prepared in accordance with NZS 6808:2010 and Condition 23 of Planning Permit No PL-SP/05/0461-2, issued by the Minister for Planning on 30 April 2009 and last amended on 12 April 2022, and in accordance with the EPA's Wind Energy Facility Turbine Noise Regulation Guidelines and reports on the period 1 August 2023 to 30 June 2024.

In accordance with the EP Regulations, the Annual Statement must comply with the following:

Item no.	Regulations	Related section
131F (1)	The operator of a wind energy facility must provide a statement in accordance with this regulation to the Authority within 4 months of the end of each financial year.	
131F (2)	A statement under this regulation must include the following information for the previous financial year.	This document
(a)	details of any complaints concerning wind turbine noise received by the operator and how the complaints (if any) were addressed;	3
(b)	if applicable, evidence that the turbine operating modes complied with any relevant requirements contained in the authorising document for the facility;	4
(c)	details of any maintenance activities undertaken, including any unscheduled servicing events;	5
(d)	details of any noise remediation actions undertaken.	3.b
131F (3)	A statement under this regulation must demonstrate whether or not the wind turbine noise from the facility complied with—	
(a)	the noise limit for that facility; or	
(b)	If the wind turbine noise is assessed at an alternative monitoring point, the alternative	Not applicable

	monitoring point criterion for that alternative monitoring point	
131J	Regulation 131F requires WEF operators to prepare an annual statement to document the performance of the WEF over the previous financial year and provide the statement to EPA within four months of the end of each financial year.	This document

2. Complaints Process

LLWF follows the procedure outlined in the Noise Complaints Incident and Response Plan (NCIRP – May 2019), when receiving and investigating noise complaints. The response plan is designed in accordance with the *Australian/New Zealand Standards AS/NZS 10002:2014 – Guidelines for complaint management in organisations* and to the satisfaction of the Minister for Planning. The NCIRP also outlines contact details and how complainants can lodge a noise-related complaint.

In the first instance, noise complaint details are requested from the person submitting the complaint to provide the information necessary to understand the nature of the complaint for the purposes of the investigation. An incident number is issued via email following receipt of the complaint, and if required, further information may be requested.

The complaint is then investigated through a variety of means, which depending on the nature of the complaint, and will include some or all of the following investigation measures.

- Review of wind farm SCADA data to confirm wind speed and directions at the time of the complaint.
- Review of wind farm SCADA alarms, or alternatively, reports provided by the Operational and Maintenance (O&M) contractor, for faults impacting on any of the turbines in close proximity to the dwelling that could have potential impact on noise levels.
- Providing the details of the complaint to the O&M contractor, Vestas, to check for faults, outages, or irregularities with turbine operations.
- Attend near-by locations to conduct listening to identify any unusual noise.
- The Community Engagement Manager (CEM) contacts the person making the complaint to further understand the noise experienced either by email, phone or face-to-face.
- An acoustic consultant attending the dwelling to assess noise pathways and potential acoustic treatments to the dwelling.

The form for capturing a noise complaint is available for download on the LLWF webpage. This form has been endorsed by the Minister for Planning. If the complainant cannot access a form, then the following follow-up questions are asked (these questions are also included in the form).

- Date and time of noise
- Frequency and type of noise
- Name and address

- Weather conditions

There are also requirements to respond to complaints received within a certain timeframe. The following timeframes are summarised and are relevant to resolving noise complaints:

- LLWF will investigate noise enquiries and complaints in a timely manner;
- Noise complaints will be registers within **24 hours** of receipt of all information necessary to commence an investigation and contact will be made with the complainant during that timeframe to organise a meeting if necessary;
- Complaints will be investigated within **48 hours** of registration to determine if the noise issue is due to a mechanical fault;
- Where source of complaint is not mechanical, some interim testing has been undertaken as post construction noise monitoring is ongoing.
- LLWF will endeavour to investigate a complaint within **14 working days** from acknowledgement.

LLWF records all incidents in accordance with the NCIRP timing and processes. The noise complaints register details the date and information of the initial complaint, initial response date, information on whether an investigation has commenced, and information on resolution.

The outcome of noise complaint investigations is then shared with the noise complainant by email or phone.

3. Complaints Received

A summary of noise complaints received for the reporting period is provided in the below table. This table includes all project references, as well as the number of complaints received, location, notes and if noise mitigation has been offered.

Property reference	Number of complaints	Location	How Complaint(s) addressed	Complaint status	Complainant satisfied with outcome
out	1	Elaine	Project committed to undertake on-off testing and agreed on mitigation works (acoustic treatment) to dwelling windows and doors.	Open	Ongoing
out	1	Yendon	As above	Open	Ongoing

In addition to the reports received above, seven reports were received via the EPA between 2nd April and 11th June 2024.

The on-off testing referred to was conducted in July 2024, outside the reporting period.

4. Turbine Operating Modes

Lal Lal Wind Farms has previously procured a pre-construction noise assessment for the current layout through the Sonus Pre-Construction Noise Assessment, dated June 2018, reference S5464C9 demonstrating that the wind farm as modelled would comply with the noise limits at all receivers. Although the pre-construction noise assessment predicted compliance, LLWF sought the development of a curtailment strategy involving the application of noise reduced operation modes to some of the turbines during specified wind conditions. The strategy was audited in April 2018 and updated in June 2018. This strategy as implemented is reproduced below:

Table 1 - 24h Criteria – 7AM to 10PM

WTG	Start Mitigation Wind Direction	End Mitigation Wind Direction	7	8	9	10	11	12
YSWT02	110	270			SO4	SO1		
YSWT03	110	270			SO3			
YSWT05	110	270			SO3			
YSWT06	110	270			SO2			
YSWT18	160	300			SO3			
YSWT25	210	20			SO3	SO3		
YSWT27	210	20			SO3	SO3		
YSWT30	210	20			SO3			
YSWT31	210	20			SO3			
YSWT32	160	300		SO3	SO4	SO3		
YSWT33	210	20		SO3	SO4	SO3		
YSWT34	210	20		SO3	SO4	SO3		
YSWT35	210	20			SO4	SO3		
YSWT36	160	300		SO3	SO4	SO3		
YSWT38	200	100			SO2	SO2		
YSWT39	160	300			SO3	SO2		
YSWT40	330	100			SO3			

Table 2 - Night time Criteria - 10PM to 7AM

WTG	Start Mitigation Wind Direction	End Mitigation Wind Direction	7	8	9	10	11	12
ESWT01	80	180			SO3			
ESWT02	80	180			SO1			
YSWT02	110	270			SO4	SO4	SO1	

WTG	Start Mitigation Wind Direction	End Mitigation Wind Direction	7	8	9	10	11	12
YSWT03	110	270			SO3	SO3		
YSWT05	110	270			SO3	SO3		
YSWT06	110	270			SO2	SO2	SO2	
YSWT18	160	300			SO3	SO3	SO3	
YSWT25	210	20			SO3	SO3	SO3	
YSWT27	210	20			SO3	SO3	SO3	
YSWT30	210	20			SO3	SO3	SO3	
YSWT31	210	20			SO3	SO3	SO3	
YSWT32	160	300		SO3	SO4	SO4	SO4	
YSWT33	210	20		SO3	SO4	SO4	SO4	
YSWT34	210	20		SO3	SO4	SO4	SO4	
YSWT35	210	20			SO4	SO4	SO4	
YSWT36	160	300		SO3	SO4	SO3	SO3	
YSWT38	200	100			SO2	SO2	SO2	
YSWT39	160	300			SO3	SO3	SO3	
YSWT40	330	100			SO3	SO3	SO3	

Implementation of this curtailment strategy is not a requirement of the planning permit for the Lal Lal Wind Farm. Despite this, these settings have been validated against the Elaine and Yendon specific WTG Operational Specifications provided by the WTG manufacturer and Operations and Maintenance Contractor, Vestas. In addition, Vestas have provided a list detailing the installed noise mode related parameters, which also reflect the above

5. Maintenance Activities and Unscheduled Servicing Events

LLWF has contracted Vestas to carry out the Operation and Maintenance activities on site as per the Operations and Maintenance Agreement. Vestas carry out operation and maintenance activities in accordance with the Vestas Lal Lal Wind Farm Operation and Maintenance Manual (Doc No: SP[1]45906-PM-LIST-0013).

Scheduled annual maintenance was carried out according to the manuals during the reporting period.

A summary of the material unscheduled and scheduled maintenance activities is included below.

- **July 2023:** Gearbox bushing alerts and major failures at turbines E04, E06, and E17. Scheduled 4-year services and compliance checks were completed on several turbines.
- **August 2023:** Continued high-speed shaft failure at E17. Gearbox bushing alerts and internal blade inspections were conducted, along with 4-year services.

- **September 2023:** Gearbox failures at Y16 and E17, with scheduled maintenance including blade inspections and foundation work.
- **October 2023:** Blade crack at Y24 and gearbox failure at Y27. Planned maintenance at the Elaine Terminal Station took place.
- **November-December 2023:** Blade repairs and gearbox bushing replacements were completed across various turbines. The annual HV shutdown at Yendon occurred during this time.
- **January-March 2024:** Unplanned grid trips, controller, and pitch faults occurred, while scheduled 4-year services continued.
- **April-June 2024:** Continued planned maintenance, including 4- and 5-year services, as well as unplanned blade and gearbox repairs.

None of the maintenance and remedial work activities listed above, or any other maintenance or work performed across the site, were identified, or initiated, from noise complaints received by the wind farm.

6. Compliance

Elaine Wind Farm

Stage 1 Noise Compliance Testing at the Elaine section was conducted from 9 March to 8 May 2021, in accordance with the planning permit and the Noise Compliance Test Plan (NCTP) developed by Marshall Day in January 2018. The Elaine Post-Construction Noise Assessment and the verification report can be accessed via the following links:

- [Elaine Post-Construction Noise Assessment](#)
- [Elaine Verification of Post-construction Noise Assessment](#)

The independent verification report states: *“The post-construction noise assessment (SLR Consulting Pty Ltd, Lal Lal Wind Farm – Elaine, Compliance Noise Monitoring, Report No 640.11872-R04-v1.7, dated June 2022) confirms that the Elaine Wind Energy Facility (WEF) complies with the noise limits established under NZS 6808:2010 and Condition 23 of Planning Permit No PL-SP/05/0461/C.”*

After the release of the verification report, SLR identified a minor transcription error in the analysis of data for K15aa, which slightly reduced the compliance margin. However, the correction did not affect the conclusion that the wind farm remained compliant with the relevant noise limits. A corrected compliance report, along with an errata letter detailing the changes, was provided to the independent auditor. The updated verification report has been submitted to the responsible authority and uploaded to the Lal Lal Wind Farm website.

Yendon Wind Farm

Stage 1 Noise Compliance Monitoring at Yendon was conducted from 26 May to 1 August 2022 by SLR Consulting, in line with the planning permit and NCTP. The testing involved:

- Unattended noise measurements at three residential locations
- Attended observations to assess the wind farm’s noise characteristics
- A monitoring period of nearly 10 weeks at each location, exceeding the 4-week requirement of the NCTP to ensure sufficient data collection

This followed two unsuccessful attempts in 2021 due to data limitations caused by grid curtailment and operational factors, despite extended testing durations during those periods.

Stage 2 Noise Compliance Testing for both the Elaine and Yendon sections commenced in March 2023. The testing ran for 14 weeks, collecting noise data across various operational conditions. At Elaine, the testing proceeded smoothly, but at Yendon, wind-induced noise interference affected data accuracy at two locations (M29aa and N31ab), necessitating additional monitoring starting in October 2023.

Additionally, turbine Y24 at Yendon Wind Farm was offline due to a fault during the testing period, which required further extension of the noise monitoring to ensure accurate data collection. Y24 was returned to service in early November 2023. Although the turbine downtime could have impacted the noise assessment, SLR Consulting extended the monitoring period and collected additional data after Y24 resumed operation to ensure comprehensive and accurate results.

The final Stage 2 Post-Construction Noise Assessment, completed in January 2024, confirmed that both the Yendon and Elaine sections of the Lal Lal Wind Farm complied with the applicable noise limits. The report was independently verified, and the auditor confirmed compliance with Condition 23 of the Planning Permit. The compliance report and verification letter have been submitted to the responsible authority.

Appendix A – Noise complaint form

Lal Lal Wind Farms Noise Complaint Form		
COMPLAINANT DETAILS		
Your Name:	Phone:	
Postal Address:	Email:	
Date:		
Please provide details of the complaint you wish to make about the facility (eg. time/ date, how you are/ were affected etc).		
Please provide other information you think may assist us in attempting to understand the complaint and approaches for its resolution.		
APPROVED FOR THE MINISTER FOR PLANNING SHEET 17 OF 17		