

Collector Wind Farm Pty Ltd
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11 August 2021

Mr Callum Firth
Planning Officer – Post Approval
Department of Planning, Industry & Environment
Locked Bag 5022
Parramatta
NSW 2124

Dear Mr Firth,

Project Approval MP10_0156 - Collector Wind Farm: Condition E8: Noise Monitoring & Compliance

Condition E8 of the above planning approval states that Collector Wind Farm Pty Ltd (CWFPL) must :

Within 3 months of the commencement of operations, unless otherwise agreed by the Secretary, the Proponent shall:

- (a) Undertake noise monitoring to determine whether the project is complying with the relevant conditions of this approval; and*
- (b) Submit a copy of the monitoring results to the Department and the EPA*

This timetable was extended to a maximum of 5 months, with approval from the Department of Planning, Industry & Environment (DPIE) on 18 Jan 2021 (ref. *Extension Requests_18012021_031628*).

The proposed scope and programme of the noise monitoring work was set out in the Operation Noise Management Plan (ONMP), as approved by DPIE on 14 Apr 2021 (ref. *Approval of Plan Strategy or Study_14042021_94654*). Under this programme, the noise monitoring programme in the field was scheduled to be undertaken over a 6 week period.

With the formal commencement of operations on 20 May 2021, the noise monitoring programme commenced on 9 June 2021, as described in the attached letter from the consultants, Marshall Day Acoustics (MDA). Based on the 6 week timeframe, it was anticipated that the work in the field would be completed by the last week of July.

However, as detailed in the attachment, as a result of particular conditions at the wind farm during the monitoring period, the ongoing analysis of collected data has indicated there is limited available data after screening from some of the monitoring locations. In addition, at the start of this week one of the monitoring stations was found to be non-operational following damage caused by livestock in the paddock. The timely replacement of this unit is complicated by the restrictions in place due to the COVID lockdown in Sydney and elsewhere in NSW.

Given these issues, CWFPL has consulted with MDA and agreed with the preferred option to extend the field monitoring for a further 6 weeks, with expected completion in the first half September. To maximise the opportunity for collecting sufficient data sets through this extended period, all routine O&M activities that would necessitate stopping of turbine operations have been / will be minimised through the remainder of the monitoring programme.

It is anticipated that this approach will ensure sufficient useable data is collected for the assessment. However, in the unlikely event that insufficient data is collected even through this extended monitoring period, MDA has reiterated the modified screening methodology outlined in the ONMP that would be used to manage this scenario.

CWFPL welcomes any comment or feedback from DPIE on any of the contents of this submission at this stage, and confirms that DPIE will be notified at the time if implementation of the modified screening process is required (and hence will have a further opportunity for feedback or comment).

CWFPL also notes that these issues will also have a material impact on the potential timelines for completion of the compliance assessment. The potential for this was recognised in the ONMP, which stated that

“The noise measurements shall be timed to meet the commitment to submit the results to the DPIE within five (5) months of commencement of operations. Any variation from this commitment for reasons beyond the control of the owners of the Collector Wind Farm (e.g. unexpected equipment damage or failure, COVID interruptions, or interruptions to site operations) would require prior written approval of the DPIE.”

Clearly the incidents that have happened are beyond the control of the proponent, with further hurdles to rectifying problems in a timely manner arising from the COVID situation and the restrictions / constraints imposed from lockdown requirements.

Given that, CWFPL requests a further extension of time to complete the noise compliance assessment in full, seeking a further 8 weeks (extending the submission deadline to 15 Dec 2021) to allow for a combination of factors affecting the process:

- The extension to the background noise monitoring period;
- An allowance for likely ongoing COVID related delays & constraints (given that COVID restrictions do not appear likely to change anytime soon);
- Ensuring a reasonable allowance for the additional time required for the analysis of all the additional data collected through the extended noise monitoring period.

I trust the DPIE appreciates the need for this request, and responds accordingly - please do not hesitate to contact me via any of the details below if any immediate questions or comments on this.

Yours sincerely,

Neil Weston

Electronic signature: 11 Aug. 21

Neil Weston

Project Manager

RATCH-Australia Developments Pty Ltd, for and on behalf of Collector Wind Farm Pty Ltd

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Attachment – LT 002 20201163-CWF-Noise Compliance Monitoring (Marshall Day, Aug 2021)

9 August 2021

Collector Wind Farm Pty Ltd
Level 7, 111 Pacific Highway
North Sydney NSW 2060

Attention: Neil Weston

Dear Neil

**COLLECTOR WIND FARM
NOISE COMPLIANCE MONITORING STATUS**

We confirm our prior discussion concerning the findings of our review of the operational data for the Collector Wind Farm.

The wind farm formally commenced operating as of 20 May 2021. In accordance with the approved Operational Noise Management Plan¹ (the approved ONMP), operational noise compliance monitoring (noise monitoring) commenced 9 June 2021 in order to enable a compliance report to be submitted to the Department of Planning Industry and Environment (DPIE) and EPA within five (5) months² of operations commencing.

A total of eight (8) weeks of data has been obtained at the nine (9) locations where the noise monitoring is being carried out (eight locations as specified in the approved ONMP, plus an additional location included to address a community request). The requirement for six (6) weeks of monitoring as specified in Section 5.3.1 of the approved ONMP has therefore been satisfied.

However, we understand from Collector Wind Farm Pty Ltd (CWFPL) that turbine T51 has not been operational for much of the noise monitoring programme due to an ongoing fault which was only rectified recently. In addition, other turbines at the site have been subject to periodic shutdowns for routine maintenance activities.

We have therefore reviewed the wind farm's operational data to assess the effect of turbine shutdowns. For this purpose, section 5.7.3 of the approved ONMP defines a conservative screening process to evaluate the operation of the wind farm and determine whether the noise level measured in each 10-minute period is valid or not for noise assessment purposes. The procedure only designates a 10-minute measurement as valid if turbine curtailment is likely to have had an immeasurable effect on noise levels at the measurement locations. Any periods which are designated as not valid are removed from the analysis.

Applying this screening process resulted in the removal of a significant quantity of the noise monitoring data. At most locations, less than 50 % of the noise monitoring data was available after screening for operation, and in some cases, less than 10 % of the data was available.

¹ MDA report Rp 001 R02 20201163 *Collector Wind Farm – Operation Noise Management Plan* dated 13 April 2021, as approved by the DPIE in their correspondence dated 14 April 2021.

² A period of three (3) months after commencement of operations, unless otherwise agreed by the Secretary, is stated in the Project Approval. However, the DPIE subsequently approved an extension of the timing to five (5) months, as detailed in their correspondence dated 18 January 2021.

In light of these findings, and subject to the agreement of the residences, the total noise monitoring period is proposed to be extended to a total of twelve (12) weeks (i.e. an additional six weeks). This equates to an estimated completion date in the first week of September. The objective of this extension is to enable collection of a suitable quantity of valid noise monitoring data.

In addition to the issues with turbine operation, there have been high levels of rainfall in the area during the noise monitoring period which are expected to have resulted in periods of elevated background noise levels (both directly as a result of rainfall noise and indirectly as a result of frog and insect noise near accumulated surface water). Measurement periods affected by these extraneous noise sources would also be screened from the analysis using the procedures specified in the approved ONMP.

As a result, even with the extended noise monitoring period, limited data may be available after the measurements are screened for atypical wind farm operation and extraneous noise influences. Our experience is that this is an increasingly common challenge when attempting to conduct noise monitoring in the early stages of a wind farm's operation. This was recognised in section 5.7.3 of the approved ONMP which states:

The screening process [for atypical wind farm operations] can result in the removal of large quantities of data if the wind farm's operations are interrupted by equipment faults or unavoidable external constraints on power generation imposed by the electrical network operator. If the remaining data after application of the screening process is not sufficient for a reliable compliance assessment, an assessment of compliance may be based on the application of a modified screening process, accompanied by an assessment of any potential uncertainties associated with the modified screening process.

Accordingly, if the screening process still results in a limited quantity of data after completion of the extended noise monitoring period, a modified screening process as referred to in the approved ONMP is proposed to be implemented. The precise form of the modified screening process will depend on the operational characteristics of the wind farm during the extended noise monitoring period.

Broadly, there are two options for the modified screening:

- **Simple modified screening:** this approach is suitable when a single or limited number of turbines accounts for the greatest portion of data being removed as a result of operational screening. The approach involves screening the data using the process described in the approved ONMP, but applying the procedure selectively to all turbines other than the turbine(s) which are subject to the greatest curtailment. An assessment of compliance is carried out on the retained valid data, accompanied by a sensitivity analysis to determine if the noise contribution of the turbine(s) which were subject to the greatest curtailment could alter the compliance assessment outcomes.
- **Advanced modified screening:** this approach is suitable when large quantities of data are removed as a result of the combined effect of limited periods of shutdowns for numerous turbines across the site. The premise of the modified screening procedure is a change to the way the validity of each 10-minute measurement period is determined for noise assessment purposes. Instead of assessing validity by checking the operational status of the majority of turbines near each noise measurement location (i.e. per the approved ONMP), data validity would be determined by calculating the potential effect of any turbine curtailments in each 10-minute period. If the net calculated effect of the curtailment is sufficiently small, the data for a 10-minute period would be deemed valid. The intention of this modified screening process is to yield additional data for compliance assessment purposes which can be clearly related to potential noise levels when turbine curtailment levels are reduced. Importantly, the revised procedure is structured to enable the effect of turbine curtailments and the associated uncertainty to be quantified and accounted for in the assessment.

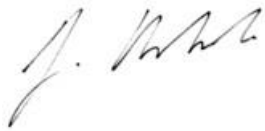
If a modified screening process is necessary to complete a representative assessment of noise compliance for the wind farm, the procedure would be fully documented in the noise compliance report. The assessment is proposed to be based on the simplest form of modification to the screening process that enables a complete assessment of noise levels associated with full power operation of the wind farm.

The above screening modifications relate solely to matters concerning the operation of the wind farm. If significant data limitations also apply as a result of the effects of extraneous noise influences, additional measures may be needed as part of the compliance assessment. This may involve supplementary analysis based on noise monitoring at the intermediate locations, as described in section 5.7.7 of the approved ONMP, and, if necessary, further survey extensions for selected locations.

We trust the above information is suitable for your immediate purposes. Please do not hesitate to contact us if you have any questions or wish to discuss.

Yours sincerely

MARSHALL DAY ACOUSTICS PTY LTD



Justin Adcock

Senior Associate