APPENDIX 12-6

NOISE COMPLIANCE MANAGEMENT PLAN

APPENDIX 12-6 DRAFT PROTOCOL FOR MANAGING COMPLAINTS RELATING TO AM AND TONALITY

This procedure applies where a noise complaint is associated with amplitude modulation (AM) and/or tonality arising from operation of the project. The operator will investigate complaints in collaboration with the turbine manufacturer. The following step provides an outline methodology that will be applied to noise complaint investigations.

1. Record the complaint details (date/time, location, description) and request that the complainant completes a noise complaint log/diary covering periods when the noise occurs at the dwelling/residence.
2. Provide a complaint log template based on ISO/TS 15666:2021 *Acoustics — Assessment of noise annoyance by means of social and socio-acoustic surveys*, Section 9 of EPA document '*Guidance Note for Noise: Licence Applications, Surveys and Assessments in Relation to Scheduled Activities NG4 EPA, 2016*, or another equivalent/agreed template.
3. Review the complaint log entries and classify the reported character as follows:
    i. Potential tonality indicators: reports of "hum", "whine", "drone", or similar tonal character.
    ii. Potential AM indicators: reports of "thumping", "whoomphing", or similar periodically varying character.
4. In collaboration with the turbine manufacturer, review the complaint log alongside available records of turbine operational conditions and meteorological condition for the relevant periods to determine whether an operational correlation is identifiable.
5. If the log review and operational correlation are insufficient to identify the issue and/or to evaluate mitigation, determine whether noise measurements are necessary. Where required, undertake measurements at the complainant's location or a suitable agreed proxy location.
6. Conduct measurements in accordance with an agreed survey methodology, such as IOA A Good Practice Guide to the Application if ETSU-R-97 for the Assessment and rating of Wind Turbine Noise Supplementary Guidance Note 5: Post Completion Measurements (July 2014) (or equivalent agreed methodology).
7. Apply objective analysis methods appropriate to the complaint type:
    i. Analyse for tones using a robust objective approach, such as ISO 1996-2:2017, with modifications as set out in IEC TS 61400-11-2 (or equivalent agreed methodology).
    ii. Analyse for AM using a robust objective approach, such as the IOA Noise Working Group (Wind Turbine Noise) AMWG method set out in *A Method for Rating Amplitude Modulation in Wind Turbine Noise IOA, 2016*, or equivalent agreed methodology.
8. Where practicable, identify and implement mitigation measures appropriate to the cause/source identified through Steps 4–7. Mitigation will typically be applied at the turbine(s)) and may include:
    i. engineering modifications to mechanical and/or electrical components; and/or
    ii. software-based operational controls via the turbine control system (e.g., adjustments to operating mode, rotor speed and/or blade pitch).
9. On completion of the investigation, the Operator will prepare a technical report documenting the complaint, the investigation undertaken, the analysis performed (including any follow-up monitoring/analysis, where carried out), the findings, and any mitigation implemented or proposed. The report will be submitted to the Local Authority in accordance with the agreed NCMP. Where the investigation is protracted, the Operator will provide an interim update report at six-monthly intervals until the investigation is concluded.