

Annex B — SAC-01

Record of Special Audible Characteristics (SACs)

Procedural Integrity and Regulatory Reliance

(Evidentiary Annex to Statement of Matters of Public Interest)

B1. Scope, Purpose, and Status of this Record

B1.1 Scope

This record concerns the identification and treatment of Special Audible Characteristics (SACs) relied upon within the post-construction noise compliance framework for the Lal Lal Wind Farm.

B1.2 Purpose

The purpose of this annex is to:

- consolidate the mandatory procedural framework governing SAC identification;
- record the attended-observation material disclosed and relied upon in post-construction compliance reporting;
- identify procedural gaps, inconsistencies, and evidentiary limitations apparent on the face of that material;
- document the regulatory reliance context in which SAC identification has been accepted; and
- establish the current state of the disclosed record relevant to SAC identification.

B1.3 What This Record Does Not Do

This record:

- does not assess audibility, tonality, modulation, or penalty application;
- does not make findings of non-compliance;
- does not assert intent, negligence, or fault; and
- does not substitute opinion for documentary fact.

It records procedural integrity, completeness, and evidentiary sufficiency only.

B2. Governing Framework

2.1

NZS 6808:2010 — Special Audible Characteristics

Identification and treatment of SACs is governed by NZS 6808:2010, as adopted and applied through the endorsed Noise Compliance Test Plan (NCTP).

Under NZS 6808:2010 and the NCTP, the term “shall” denotes a mandatory requirement. This interpretation has been expressly acknowledged by the EPA-appointed environmental auditor.

B2.2

Noise Compliance Test Plan — Mandatory SAC Procedures

Under NCTP section 4.4 and 6.0, SAC identification for each monitoring stage shall be based on attended observations undertaken in a defined and structured manner, including:

- three (3) sets of attended observations per monitoring stage (deployment, interim, retrieval);
- attendance by a suitably qualified acoustic engineer;
- observations undertaken while the wind farm is operating;
- at least one (1) complete set conducted during the night period;
- observations undertaken at the compliance monitoring locations;
- for informative purposes, attended observations shall also be undertaken in proximity to turbines (typically 100–300 m from turbines nearest to each compliance monitoring location) during at least one set; and
- full reporting of all attended observations conducted for SAC identification.

SAC assessment applies to wind farm sound at the compliance monitoring locations.

B2.3

Noise Management Plan — Incorporation and Confirmation of SAC Requirements

The Lal Lal Wind Farm Noise Management Plan (NMP) expressly incorporates and adopts the NCTP as the operative framework for post-construction noise compliance and SAC identification.

The NMP restates SAC requirements using mandatory language and confirms that SAC identification shall be undertaken through attended observations in accordance with the NCTP and NZS 6808:2010.

In particular, the NMP requires that:

- SAC identification shall be based on attended observations by a suitably qualified acoustic engineer;
- three (3) sets of attended observations shall be undertaken during each monitoring stage;
- attended observations shall be undertaken at compliance monitoring locations;

- attended observations shall also be undertaken 100–300 m from turbines nearest to each compliance monitoring location;
- at least one set per stage shall be conducted during the night period;
- the wind farm must be operating during observations;
- observations shall be conducted under suitable weather conditions; and
- audio samples shall be obtained during each attended observation.

The NMP expressly states that it incorporates the NCTP, and that the procedures in the NCTP and NZS 6808:2010 govern SAC identification.

Accordingly, the SAC framework described above forms the stated basis for post-construction compliance reporting and regulatory acceptance on the disclosed record.

B3. Monitoring Stages and Procedural Context

The Stage 1, Elaine and Yendon, and Stage 2 (combined) post-construction reports define fixed monitoring stages by reference to:

- specified monitoring periods; and
- identified compliance monitoring locations.

These stages establish the temporal and spatial framework within which mandatory attended SAC observations are required to occur and be reported.

B4. Attended Observations — Reporting Record

Across the Stage 1, Elaine and Yendon, and Stage 2 (combined) reports, attended listening observations are recorded and relied upon as the basis for SAC identification.

Review of the disclosed reporting record identifies procedural and evidentiary gaps relevant to integrity, traceability, and verifiability.

B5. Alignment of Attended Observations with Monitoring Stages

The reporting record includes attended observations undertaken outside the stated monitoring periods relied upon for compliance assessment.

The reports do not explain:

- how such observations are incorporated into defined monitoring stages;
- whether monitoring stages were extended or re-established; or
- how observations outside stated periods were treated for SAC identification.

As presented, the record does not demonstrate that all attended observations relied upon are procedurally aligned with the monitoring stages on which compliance assessments are based.

B6. Mandatory Structure of Attended Observation Sets

The NCTP requires SAC identification to be based on three defined sets of attended observations per monitoring stage, with at least one complete set conducted at night.

The reporting record:

- lists attended observations as individual entries;
- does not identify which observations correspond to deployment, interim, or retrieval sets; and
- does not demonstrate that a complete night-time set was undertaken for each monitoring stage.

Accordingly, the disclosed reporting material does not demonstrate, in a manner capable of independent verification, how the attended observations were organised and reported as the three defined sets per monitoring stage (including a complete night-time set) described in the NCTP.

B7. Near-Turbine Attended Observations — Receiver-Specific Requirement

For informative purposes, the NCTP provides that attended observations shall be undertaken in proximity to turbines during at least one set per monitoring stage.

This requirement is receiver-specific.

The reporting record does not:

- identify observation locations relative to turbines nearest each compliance receiver;
- document distances demonstrating compliance with the 100–300 m requirement; or
- map such observations to defined attended-observation sets.

As recorded, satisfaction of this requirement on a receiver-specific basis is not demonstrated.

B8. Use of Non-Framework and Undefined Locations

Stage 2 records attended observations at locations that:

- are not compliance monitoring locations;
- are not assessed receivers; and
- are not included in the compliance assessment body.

An “Elaine intermediate” location is referenced without definition or procedural status.

The record does not clarify whether such observations are informative only, nor how they relate to mandatory SAC identification.

B9. Temporal Coherence and Traceability

B9.1

Stage 2 — Identified Observer

Stage 2 records observations attributed to a named observer at spatially separated locations within timeframes that are not explained in the reporting record.

No explanation is provided as to sequencing, observer numbers, or time recording methodology.

B9.2

Stage 1 — Unidentified Observer

Stage 1 observations do not identify the observer, preventing independent verification of attendance and sequencing.

B10. Reporting Completeness

The NCTP requires full reporting of all attended observations conducted for SAC identification.

The disclosed record does not consistently evidence:

- linkage to defined monitoring stages;
- identification of the three mandatory observation sets;
- confirmation of night-time sets;
- receiver-specific near-turbine observations;
- definition of non-framework locations; or
- temporal coherence.

B11. Auditor Verification Context

The EPA-appointed auditor has acknowledged that “shall” denotes mandatory requirements and has accepted the compliance reports.

This record does not challenge that acceptance. It records that the SAC reporting material, on its face, does not demonstrate in a manner permitting independent verification how the mandatory attended-observation procedures described in the NCTP were satisfied.

B11.1

Scope of Verification

The auditor’s verification was limited to planning permit and NCTP compliance and did not assess obligations under the Environment Protection Regulations 2021.

B11.2

SAC and Amplitude Modulation Methodology

The auditor records reliance on a UK IOA amplitude modulation approach differing from the endorsed NCTP and notes that further regulatory discussion would be required.

B11.3

Post-hoc Assessment

The auditor records reliance on post-hoc analytical material in relation to background monitoring, which is addressed separately in Annex A.

B11.4

Implications for Regulatory Reliance

Accordingly, auditor verification acceptance, as described above, does not of itself explain or reconcile the documentary gaps identified in this Annex on the disclosed record.

B12. Current Procedural Status

B12.1

Based on the disclosed record:

- SAC identification is stated to have occurred; however
- the disclosed reporting material does not demonstrate satisfaction of all mandatory procedural requirements in a manner permitting independent verification.

This annex makes no findings as to audibility, penalties, or compliance outcomes. It records procedural completeness and evidentiary sufficiency only.

B12.1A

Record Limitation

This Annex does not conclude that required attended observations did not occur. It records that the disclosed reporting material does not demonstrate their satisfaction in a form permitting independent verification