

January 18, 2024

Bill Guinee
Connemara House Farm LLC
252 Rowley Bridge Road
Topsfield, MA 01983

This copy of this 1/18/2024 report was presented during 1/23/2024 Topsfield ZBA meeting and includes additional notes and annotations that were not shown on the report submitted to the board prior to the meeting.

SUBJECT: Connemara House Farm, Topsfield, MA
Event Sound Data Review

Dear Bill,

Per the conditions of the Special Permit, Connemara House Farm has established a sound monitoring program to collect sound data demonstrating compliance with the specified conditions. As requested, we have reviewed the data provided and prepared charts for some of the data sets for evaluation purposes. This report is not intended to serve as a comprehensive analysis of all data provided, but to provide you with some initial feedback so that you can ensure Connemara Farms complies with the Special Permit requirements.

Since the sound monitoring program did not begin until after the Special Permit was granted near the end of the 2023 event season, there are only limited data sets available for review at this time. For this initial evaluation we focused on sound data recorded during one wedding event as well as two different simulated tent event tests, which were conducted using standard Event Tent music levels but with no guests present.

Background and Evaluation Method

The Special Permit prohibits Connemara event tent music from exceeding 55 decibels at the Connemara Farm property lines (presumably 55 decibels A-weighted or 55 dBA – see technical note below). Since the music level at the property lines cannot be measured directly without influence from other sounds, coordinated sound measurements must also be recorded at the event tent as a reference for comparison. This is the same approach we used as the basis for the sound studies we completed in May and June of 2023.

To help convey the importance of recording reference measurements at the sound source in question (the Event Tent), it is worth noting that ambient sound levels regularly measure at or above 55 dBA at the property line receptor locations in the absence of music or other activity at the Connemara Farm Event Tent. We measured and reported such occurrences as part of our previous sound studies, and it is clear from the sound data you provided that those conditions continue to occur routinely. To illustrate this, several of the attached figures include annotations identifying periods when ambient sound levels measured at or above the 55 decibel Special Permit limit without any activity at the Event Tent.

Technical Note: Although the Special Permit does not specify a frequency weighting curve with the 55 dB limit, we assume that A-weighting is implied since that is the metric cited by the Mass DEP Policy referenced in the Special Permit document, and because A-weighting is customarily applied for similar environmental sound evaluations.

Sound Data Charts

Each of the attached figures show sound levels recorded at the Event Tent and at one of the two property line receptor locations on three different dates.

Receptor Locations:

- English Commons = Connemara Farm Property Line on English Commons side
- Lower Field = Connemara Farm Property Line on 232 Rowley Bridge Rd side

Measurement Dates:

- 10/21/2023 (wedding event)
- 10/22/2023 (simulated test with no guests)
- 01/01/2024 (simulated test with no guests)

Observations

- The data provided shows that in most cases music playback in the Connemara Event Tent has minimal effect on the sound level at the property line receptor locations when controlled by the automatic limiting system that is integrated into the Event Tent sound system.
- In some cases, the data suggests that the Event Tent music may have increased the sound level at the property line during some periods. However, the property line sound level did not exceed the 55 dB Special Permit limit except for a few transient moments lasting 1-second or less.

These observations are also consistent with the conclusions presented in our previous sound studies.

Additional Thoughts

- Since there were only a few events remaining for the 2023 season when the sound monitoring program started, sound data for additional events should be reviewed when the 2024 season begins to confirm our findings from this initial evaluation.
- We recommend continuing to monitor sound levels at the same locations during all events, including at the Event Tent, to demonstrate compliance with the Special Permit requirements.
- The measurement equipment purchased by Connemara Farm is capable of recording sound level data in accordance with the requirements specified in the Special Permit. However, we recommend recording 1-minute samples during future events for improved data clarity.

I trust this report provides you with helpful feedback in support of your Special Permit renewal application. Please let me know if we can be of further assistance.

Sincerely,
CAVANAUGH TOCCI



John T. Foulkes

JTF/JTF/jtf/23133 - Connemara House Farm - CHF Data Analysis

FIGURES

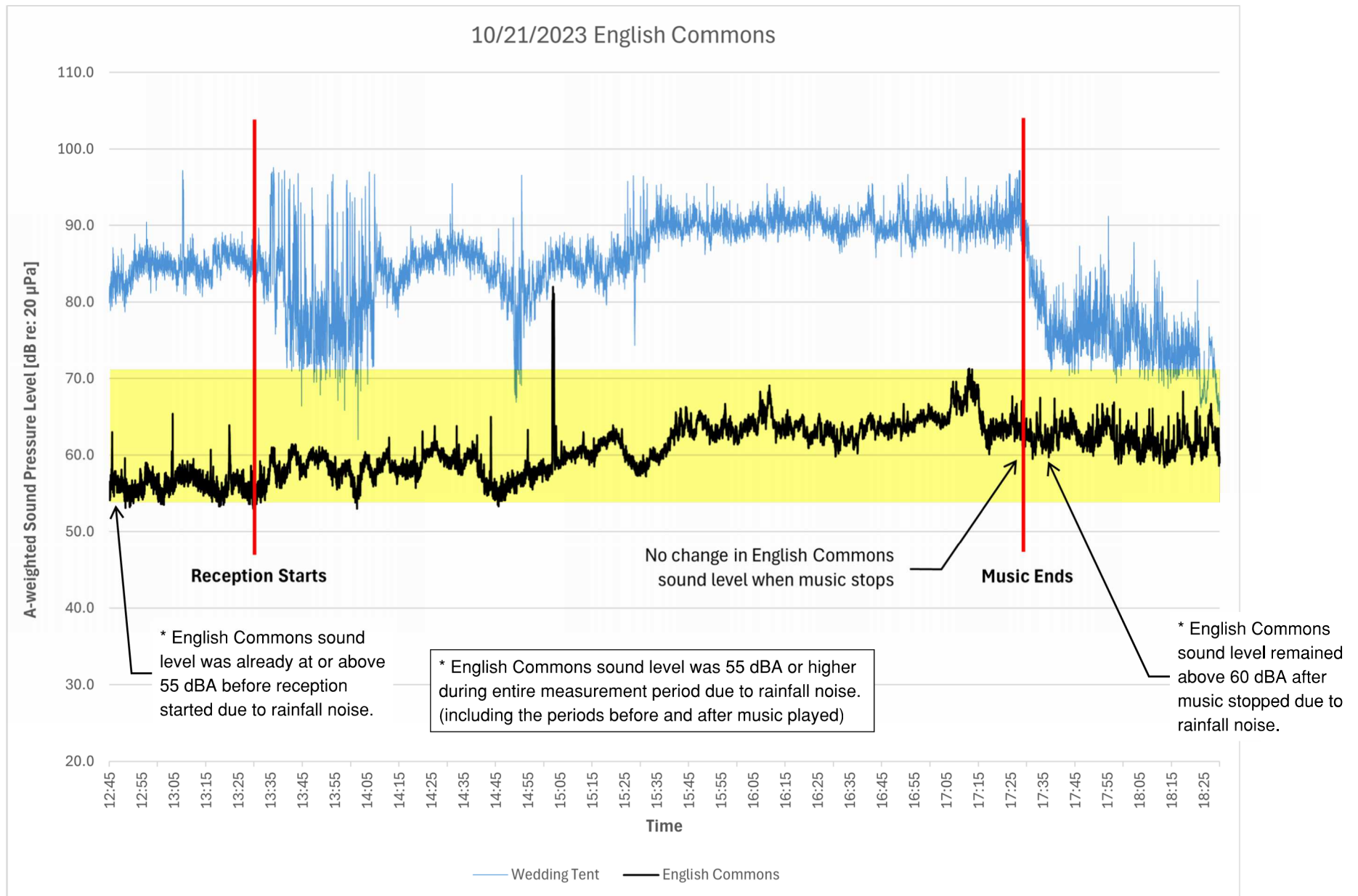


Figure 1

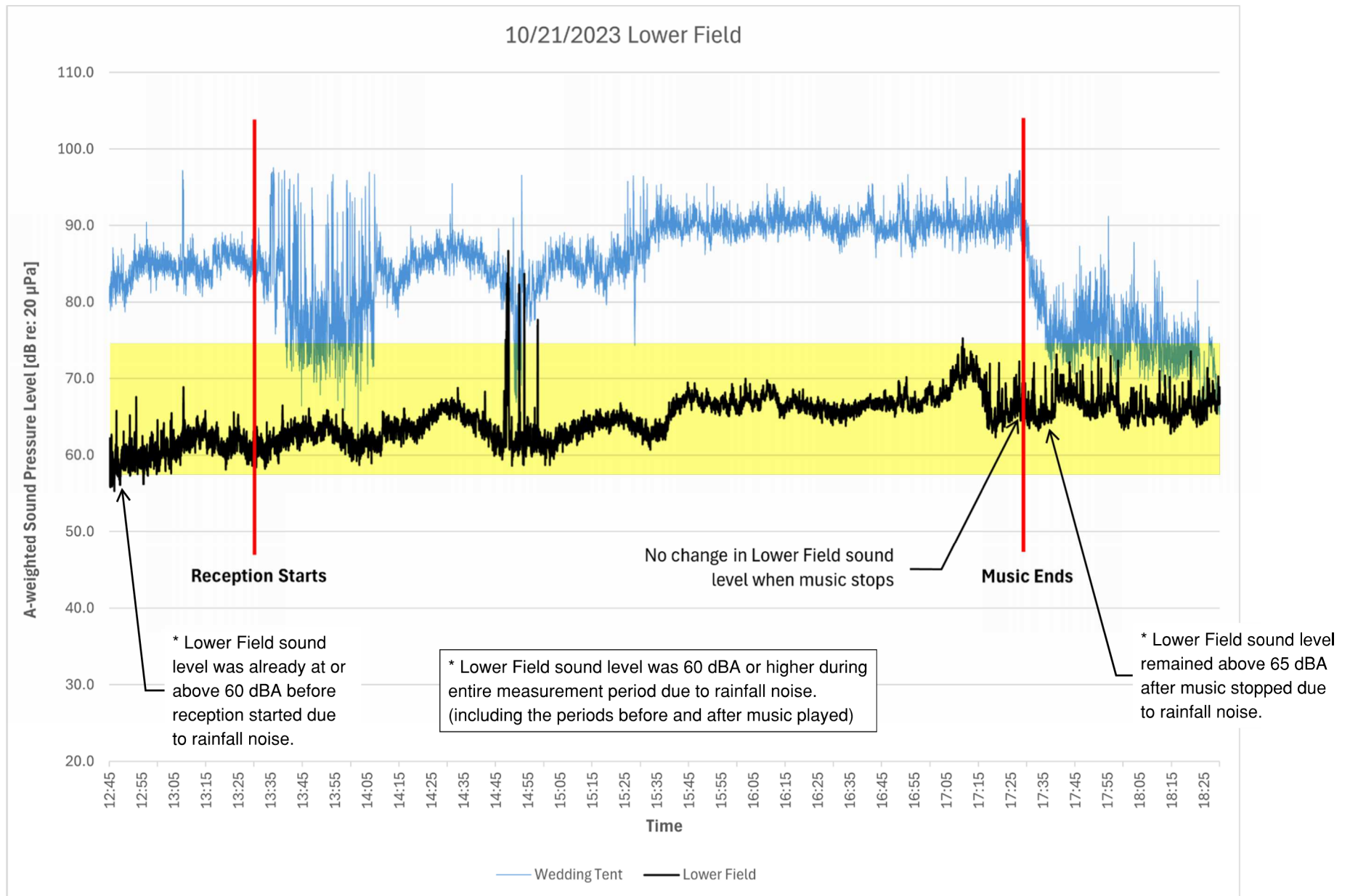


Figure 2

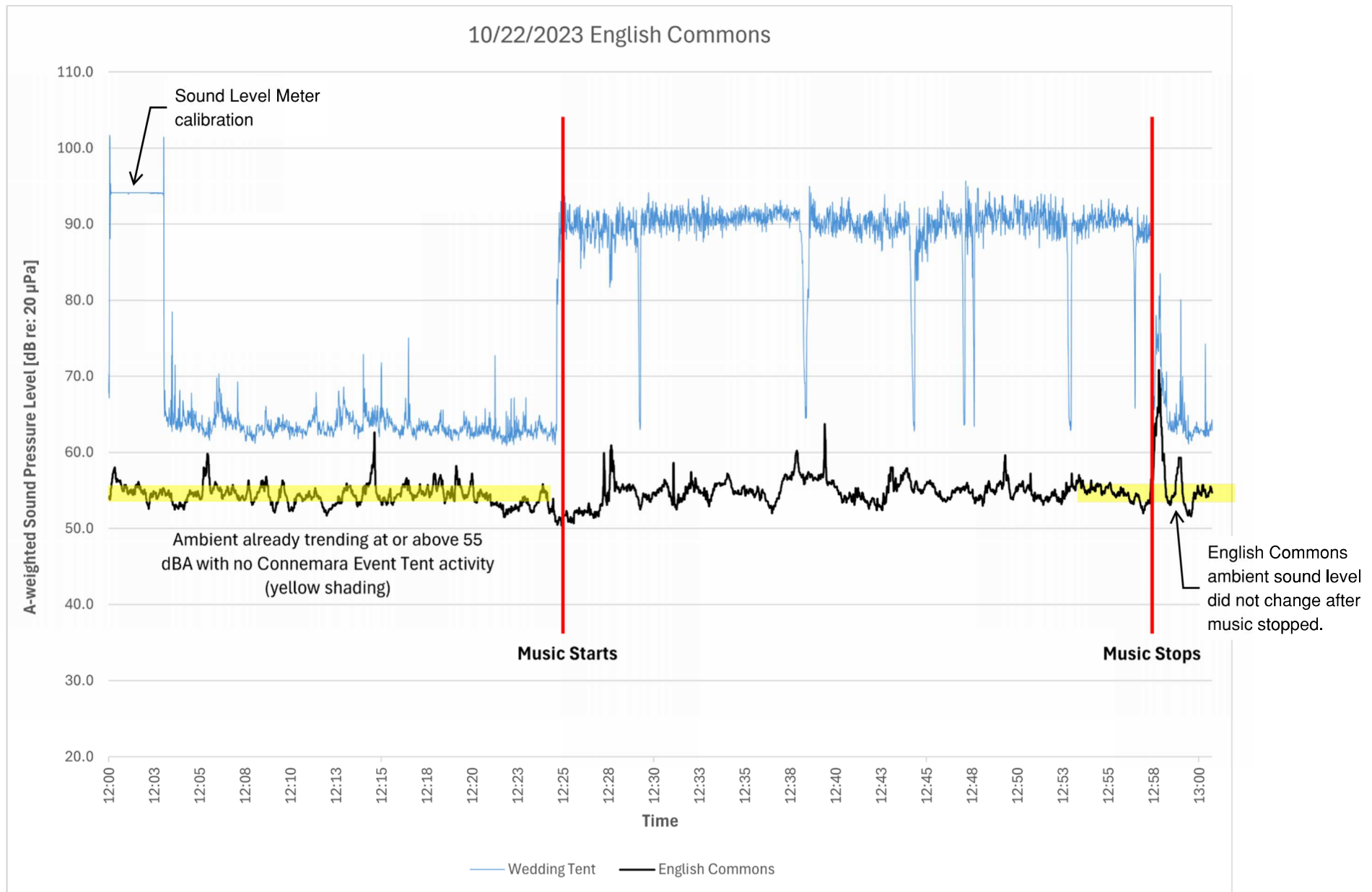


Figure 3

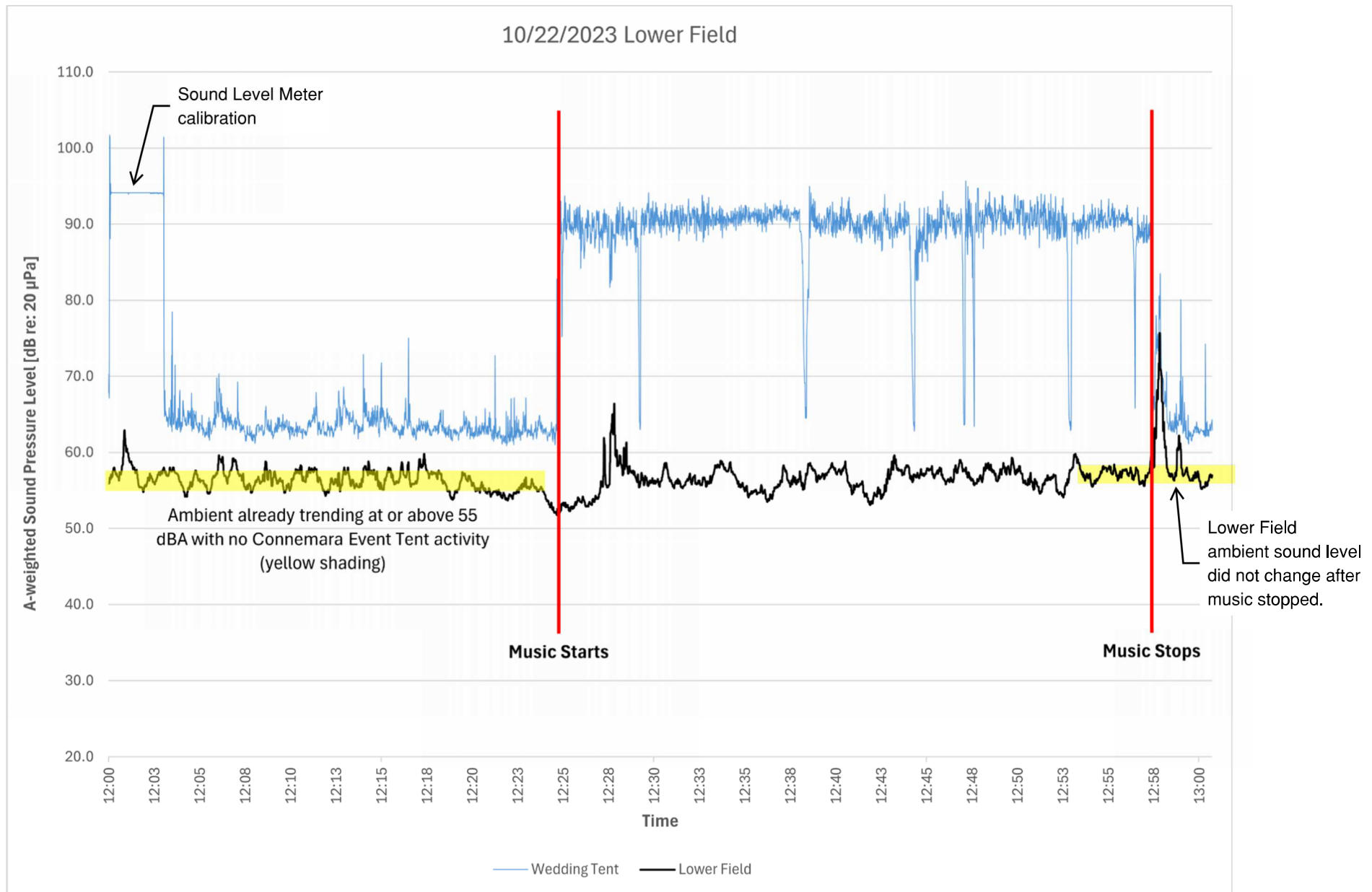


Figure 4

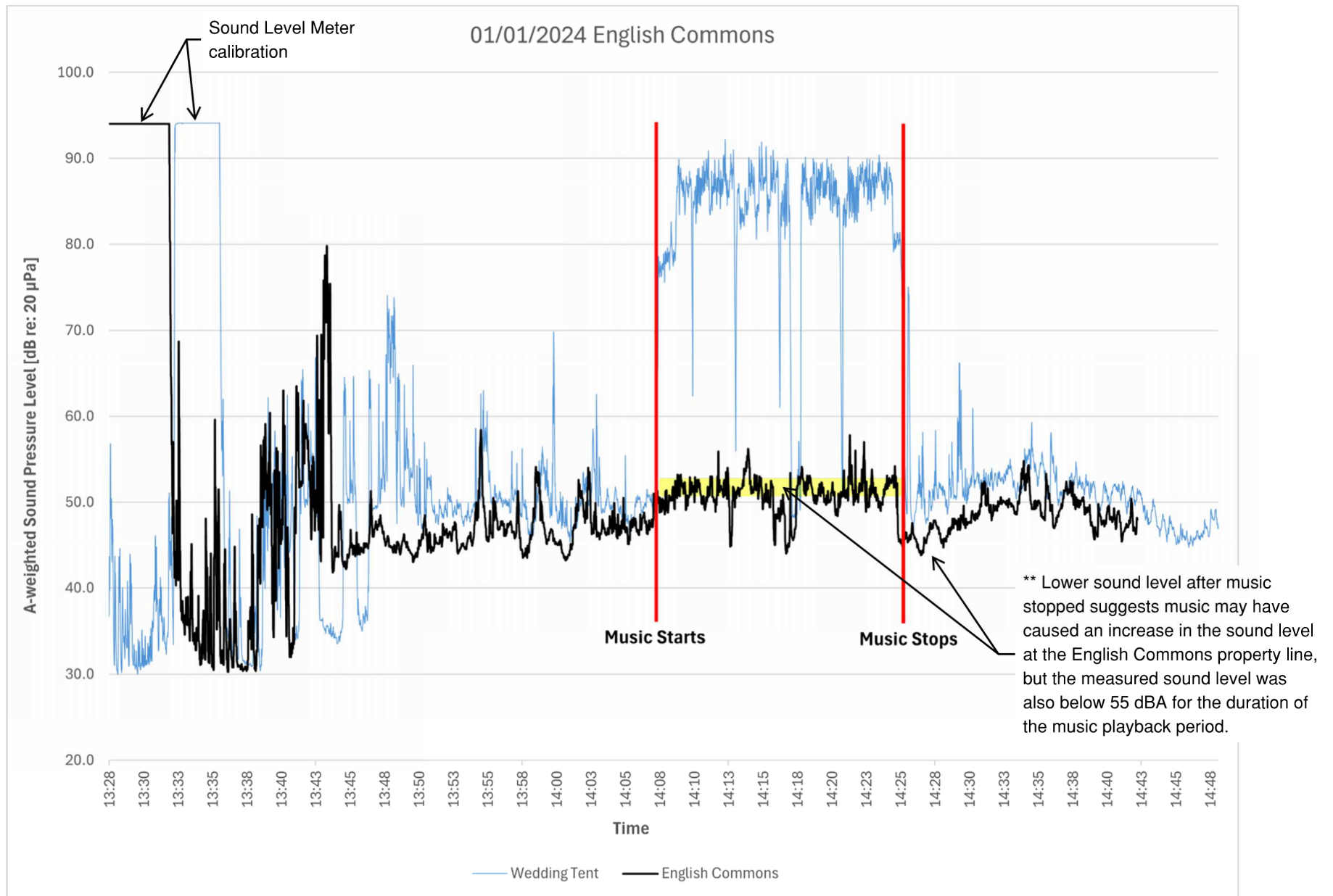


Figure 5

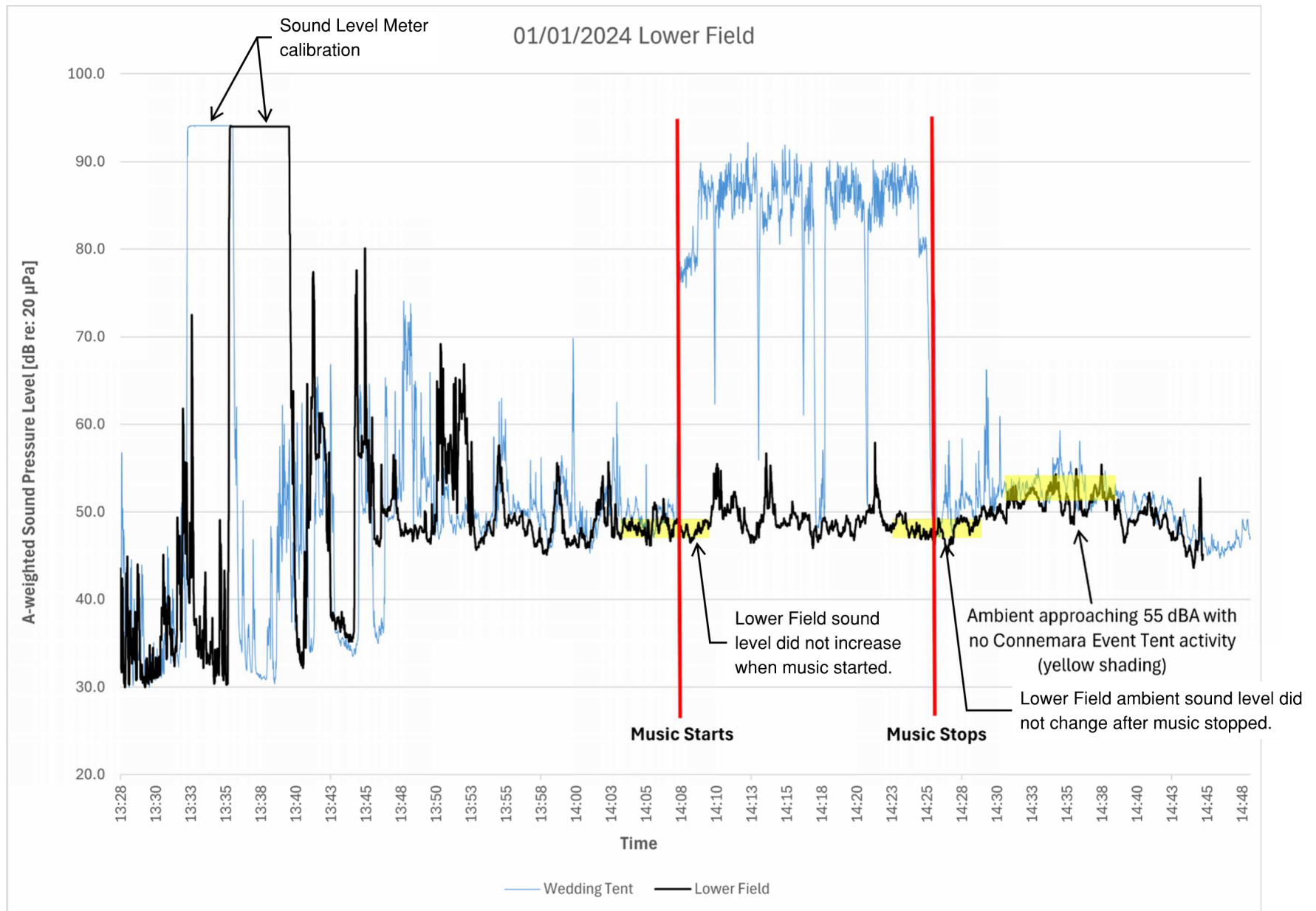


Figure 6