

April 14, 2025

Lanark County
99 Christie Lake Road
Perth, Ontario
K7H 3C6

Attention: Mike Dwyer, Planning Manager

VIA E-MAIL
mdwyer@lanarkcounty.ca



Re: Acoustic Assessment
Peer Review
Highland Line Pit
Part of Lot 5, Concession 10
Lanark Highland Township
Lanark County, Ontario
Pit Licence Number 626599
Our File: 25-016

As requested, Jade Acoustics Inc. has reviewed the *Acoustic Assessment* dated September 23, 2022, prepared by Freefield Ltd. on behalf of Thomas Cavanagh Construction Limited. We have also reviewed the CadnaA acoustic model prepared by Freefield Ltd. and received on February 25, 2025. In addition, we reviewed the *Operations Plan* and *Operations Plan Notes* dated January 13, 2025, prepared by B.J. Henderson P.Eng.

The proposed Highland Line Pit is a Class A, Sand Pit (below water) located at Part of Lot 5, Concession 10 in the Lanark County, Ontario. The North American Industry Classification System (NAICS) code of the facility is 212323.

We have reviewed the Acoustic Assessment in accordance with the Ministry of the Environment, Conservation and Parks (MOE) guidelines. We have also considered the Aggregate Resources of Ontario: Technical Reports and Information Standards document dated August 2023. No original work has been undertaken.

The peer review consists of a review of the approach, source information, and analysis methods used, as well as the required/recommended acoustic mitigation measures determined by the acoustical consultant that prepared the assessment.

We find that the Acoustic Assessment has generally been prepared in accordance with the applicable guidelines and requirements and the approach to the mitigation is generally acceptable.

Our comments are summarized below.

Noise Comments

1. On page 6 of the report, there are references to 24-hour excavation activities. Based on the analysis and report, the excavation activities are expected to occur only during the daytime hours between 7:00 a.m. and 7:00 p.m. The time when excavation activities take place should be confirmed.
2. It seems that an Extraction Area 1 crushing and screening operations concurrently with extraction occurring close to POR 2 scenario may need to be assessed in addition to the nine (9) operation scenarios analyzed in the report. The acoustic consultant should advise if the current report is sufficient to ensure that the applicable sound level limits are achieved at the affected noise sensitive receptors at all times during the operation activities.
3. Many sound pressure levels included in Table 6 are not consistent with the sound pressure levels predicted in the CadnaA acoustic model. Additional information regarding the discrepancies would be appreciated.
4. Based on Table 7 and Table A2.4, the required sound barrier heights for Barrier SP1 and Barrier CP1 are 4 m and 10 m, respectively. In the CadnaA acoustic model Scenario 1, Barrier SP1 is shown to be an 8 m high sound barrier. Barrier CP1 is shown to be a 12 m high sound barrier in the acoustic model. The sound barrier requirements should be clarified. The 4 m and 10 m high sound barriers are also shown on the Operations Plan. Once the height of the sound barriers is clarified the Operations Plan should be updated as necessary.
5. Similar to the information shown on Figure 23, we would suggest that Figures 22, 24 and 25 include the required sound barrier heights.
6. The number of daytime trucks shown for some line sources in Table A2.3 is not consistent with the number of daytime trucks included in the CadnaA acoustic model. The information should be clarified.
7. Based on Appendix 4, the generator 1/1 octave band sound power levels are A-weighted. The same sound power level magnitudes are considered to be linear (not A-weighted) in Table A2.5 and as such used in the CadnaA acoustic model. The potential impact on the predicted sound levels should be assessed and, if needed, the noise calculations should be updated.





8. In Tables A2.7.1 to A2.7.9, some sound pressure levels shown are not consistent with the sound pressure levels predicted in the CadnaA acoustic model. Even though, the differences are not significant we would ask the acoustical consultant to clarify the predicted sound pressure levels.
9. The analysis does not include reflections. While we do not anticipate that including reflections will alter the results, we recommend that at least one order of reflections be included in the analysis.
10. The report incorporates attenuation due to intervening trees/foliage. Applying this correction should also take into consideration the times of the year when the deciduous trees do not have any foliage. The analysis and noise report should be updated accordingly.
11. There are several receptors assessed adjacent to Barbers Lake. The analysis has correctly accounted for the reflective nature of the water surface. It should be noted that the acoustic modelling and the guidelines do not require that any other effects (e.g. amplification) of sound propagation over water bodies be accounted for in the noise assessments.
12. One of the receptors assessed in the analysis is Wheelers Pancake House and Sugar Camp (receptor POR 7). The building and an area of 30 m around the building is required to be assessed as per the guidelines. This has been appropriately assessed.
13. For completeness, we request that the updated report include the unmitigated sound levels at each receptor.

General Comments

Questions regarding the cumulative impact of the existing pit operations in the area and the proposed Cavanagh pit have been raised by the public. The MECP and MNR guidelines do not require that a cumulative analysis be conducted.

Each pit is required to be assessed independent of other sources in the vicinity of the proposed pit. Each pit obtains its own license to operate based on the acoustic assessment of its proposed operations and the ability to meet the sound level limits at sensitive receptors from their operations.

Meeting the numerical limits outlined in the guidelines does not guarantee inaudibility. However, the MECP guidelines only indicate that compliance with the sound level limits is required.

Conclusions and Recommendations

Based on our review of the Acoustic Assessment, it is expected that the proposed pit is feasible and can be operated to meet the MECP noise guidelines.

As discussed with the municipality, for completeness, an analysis of the off-site haul routes should also be included in the updated noise report.

The noise report is dated September 2022. We note that Cavanagh Construction provided updated information dated January 2025 regarding the site plan and pit operations on their website. There does not appear to be an updated noise report. Therefore, these proposed modifications to the site plan and/or pit operations, should be included in the updated Acoustic Assessment.

We recommend that the peer review comments be addressed in an updated report. A subsequent peer review is to be completed when the updated Acoustic Assessment has been submitted. Where applicable, the Operations Plan and Operations Plan Notes should be updated accordingly and provided to the municipality for review.

Yours truly,

JADE ACOUSTICS INC.

Per:

Davor Sikic, P.Eng.



Per:

Dalila C. Giusti, P.Eng.



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