

August 24, 2026

Chantalle Pellizzari
Supervisor of Development Administration
Sec-Tres. - Committee of Adjustment
Planning and Development Services
Centre Wellington
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Via Email: CPellizzari@centrewellington.ca

RE : Peer Review of Noise Impact Study Prepared by Aercoustics Engineering
Limited dated November 7, 2023
Proposed Lichty Pit, Township of Centre Wellington
HGC Project #: 02600485

Dear Chantalle,

As requested, HGC Noise Vibration Acoustics has completed a peer review of the Noise Impact Study prepared by Aercoustics Engineering Limited for the proposed Lichty Pit. The proposed above-water aggregate pit is located at 5999 and 6043 8th Line East and 7190 Sideroad 12, Part of Lots 11 and 12, Concession 4 West, Township of Centre Wellington.

1 INTRODUCTION

The purpose of this peer review is to comment on the completeness and general suitability of the submitted Noise Impact Study with respect to the applicable Ministry of the Environment, Conservation and Parks (MECP) noise guidelines and accepted practice for aggregate pit noise assessments in Ontario. The opinions expressed in this peer review are based on the material provided and may be supplemented, reconsidered, or revised should new or additional information become available.

Our review was based on the Noise Impact Study, Proposed Lichty Pit, Township of Centre Wellington, prepared for James Thome Construction Ltd. by Aercoustics Engineering Limited, dated November 7, 2023. Email communication was also received from Aercoustics dated August 11, 2026 regarding updates to the perimeter berms recommendations.

It is noted that a site visit has not been completed by HGC as part of this peer review and the acoustic modelling was not digitally reviewed. The review is therefore based on

the submitted Noise Impact Study and the information available at the time of preparation.

2 REVIEW SUMMARY

In summary, the Noise Impact Study has been prepared using MECP Environmental Noise Guideline NPC-300, "Stationary and Transportation Sources - Approval and Planning," for noise from the pit operations. Truck traffic noise on the off-property haul route was also considered using the general assessment approach described in MECP's "Noise Guidelines for Landfill Sites," dated October 1998. These references are considered appropriate for a study of this nature.

The study identifies the nearby noise-sensitive receptors, establishes applicable Class 2 and Class 3 sound level limits, models the proposed pit operations, and recommends noise controls intended to maintain the predicted sound levels at or below the applicable MECP limits during the proposed daytime operating period. The overall methodology and assessment approach are generally considered reasonable, subject to the comments below and the outstanding clarifications required.

Additional information is required before HGC can confirm that the Noise Study has been completed in conformance with the MECP guidelines and that sufficient noise control measures have been incorporated into the site design. In particular, confirmation should be provided regarding the appropriate receptor height for R09, and clarification should be provided regarding the local acoustic barriers for the crusher and screener.

3 PEER REVIEW COMMENTS

Our review comments are provided below under the same general topic areas used in the Noise Impact Study. Where clarification or additional information is required, the comment should be addressed before final confirmation is provided.

3.1 Noise Criteria and Receptor Assessment

The report classifies a total of eleven receptors and one vacant lot receptor. Receptors R03 and R04 were considered to be in a Class 2 acoustic environment due to the influence of 8th Line East, while the remaining receptors were classified as Class 3. The use of the minimum NPC-300 exclusion limits for the daytime operating period is conservative and appropriate. The inclusion of a potential receptor on the vacant lot identified as VL12 is also appropriate.

A receptor height of 1.5 m was used for R09. Based on the information reviewed, confirmation should be provided that this height is representative of the most exposed noise-sensitive location at this receptor. It appears that basement windows are present above grade and, therefore, the first-floor windows are likely higher than 1.5 m above existing grade. The assessment should be updated to confirm compliance at the appropriate receptor height.



3.2 Modelling Methodology and Assumptions

The use of CadnaA with ISO 9613-2 is appropriate for the prediction of aggregate pit noise. The modelling was based on predictable worst-case operating conditions, with all equipment operating simultaneously and positioned to represent the highest noise impact at the receptors. This is consistent with accepted practice for this type of assessment.

The assumed sound levels for the crusher and screener were based on measurements of the specific equipment proposed for the site and are considered reasonable for this type of equipment. Other equipment sound levels were based on measurements of similar equipment at other aggregate operations. These assumptions are considered reasonable for planning purposes, provided that the equipment used at the site is maintained and operated such that sound emissions do not exceed the stated levels.

3.3 Recommended Noise Controls

The recommended noise controls include daytime only extraction, processing and shipping, limits on the type and number of operating equipment, maximum equipment sound emission levels, restrictions on crusher and screener locations, perimeter berms, and local acoustic barriers for the processing plant. These measures are consistent with typical mitigation approaches for aggregate pit operations.

The mitigation requirements are relatively complex and vary with the location of processing equipment within Areas 1 and 2, based on distances from the extraction limit. The Operational Plan should therefore be reviewed to confirm that all noise control requirements are shown clearly including Berms A through D, the local barrier heights, the distance-based trigger points, and the restriction on crushing and screening near Receptor R06.

The local barrier recommendations state that the acoustic barriers for the crusher and screener are to be positioned such that the top height of the barrier is no more than 7 m from the crusher or screener in the direction of the listed receptor. The basis for measuring this 7 m offset is not clearly defined. The report should clarify whether the distance is to be measured horizontally from the nearest edge, centreline, or acoustic centre of the equipment to the barrier face or barrier centreline, so that the requirement can be implemented consistently in the field and incorporated into the Operational Plan without ambiguity.

In addition, the 7 m noise barrier separation from the crusher and screener does not appear to be representative of the typical footprint of a processing plant or noise barrier, particularly where stockpiles are intended to form part of the noise control strategy. For example, the footprint required to achieve a 5.2 m-high stockpile would be expected to exceed 7 m, depending on the material slope and practical operating requirements. Further clarification is therefore required to confirm that the assumed barrier locations and stockpile arrangements are practical, constructible, and consistent with the modelled mitigation.



The practical implementation of the specified local barrier heights of 5.2 m and 7.8 m should also be clarified, as these relatively precise barrier heights may be difficult to maintain consistently for movable processing equipment, particularly if stockpiles are intended to provide part of the required acoustic screening and the predicted levels are already at the applicable limits.

3.4 Haul Route Noise

The haul route assessment indicates a predicted worst-case hourly increase of approximately 7 dB and an average hourly increase of approximately 3 dB along 8th Line East. The report concludes that this represents a noticeable to significant change during the peak hour, but that 8th Line East remains the preferred haul route from a noise perspective because other local roadways would have lower existing traffic volumes and would therefore experience greater relative increases.

The truck traffic assessment is generally reasonable for comparing haul route options. Since there are no specific guideline sound level limits applicable to the haul route assessment, and the routes have been assessed on the basis of identifying the preferred haul route from a noise perspective, the truck traffic assessment is considered acceptable.

4 CLOSING OPINION

Based on the review completed, the Noise Impact Study is considered to provide a generally reasonable basis for assessing the proposed pit from a noise perspective, provided that the recommended mitigation measures are fully incorporated into the Operational Plan, licence conditions, and any related approvals.

However, confirmation is required regarding the receptor height used for R09, and clarification is required regarding the required distance between the crusher and screener and the associated local acoustic barriers.

For R09, the receptor height should be confirmed to represent the most exposed noise-sensitive location, given that basement windows appear to be present and the first-floor windows are likely higher than 1.5 m above existing grade. If the receptor height is confirmed to be higher, confirmation should be provided that the proposed noise controls will meet the applicable limits at that receptor, or the noise controls should be revised as required.

For the local barriers, the basis for measuring the stated barrier offset should be clearly defined and reflected in the Operational Plan, since the predicted sound levels rely on the barriers being located and implemented as assumed in the noise model with precise heights. Until these items are addressed, confirmation cannot be provided that the Noise Impact Study has been completed in full accordance with accepted assessment practice or that the recommended mitigation is appropriate and practically implementable as currently described.



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HGC agrees that any future changes to equipment type, equipment quantity, processing locations, haulage rates, operating hours, or barrier arrangements should be reviewed by a qualified acoustical consultant before implementation to confirm continued compliance with the applicable MECP sound level limits.

We trust the above is sufficient for your current purposes. If we can be of further assistance, please call.

Best regards,
Howe Gastmeier Chapnik Limited



Mandy Chan, P.Eng



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