

**J.E. COULTER
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LIMITED**

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DRAFT

August 11, 2020

Citizens for Safe Ground Water
Wilmont, ON

Attention: Samantha Lernout

**RE: PEER REVIEW OF NOISE FEASIBILITY STUDY
PROPOSED HALLMAN PIT
WILMONT , ONTARIO**

At the request of Citizens for Safe Ground Water, J.E. COULTER ASSOCIATES LIMITED has conducted a peer review of the Noise Feasibility Study for the Hallman Pit, prepared by HGC Ltd., dated September 12, 2019. We have also reviewed the peer review of the Noise Feasibility Study done by SLR consulting Ltd., dated February 28, 2020.

Background

The Hallman Pit is proposed to be located north of Witmer Road, south of Bleams Road (Regional Road 4) and west of Queen Street in the Town of Wilmot.

Operations at the proposed pit include aggregate excavation, a screening plant, a permanent crushing plant (recycling), a permanent washing plant, and a portable crushing plant. Trucks and/or conveyors may be used to transfer material from the working face to the central plant. The gravel pit will typically operate from 07:00 to 18:00 on Monday to Friday, and from 08:00 to 12:00 on Saturday. No other evening or nighttime operations are expected.

There are existing residences located north of the site along Bleams Road and southwest/southeast of the site along Witmer Road. Based on site observations by HGC, the receptors located north of the gravel pit along Bleams Road were considered by the report's authors to be within a Class 2 environment and remaining receptors were considered to be located within a Class 3 environment.

Criteria

The Ministry of the Environment, Conservation and Parks' (MECP) applicable criteria to a site such as this are found in its publication *NPC-300* "Environmental Guide for Noise, Stationary and Transportation Sources – Approval and Planning."

MECP considers activities generated by fixed or mobile sources of noise within non-transportation facilities to be stationary sources. *NPC-300* basically states the average noise of the stationary source should not exceed the average noise of the roadway traffic during the same hourly time period or the exclusion limits, whichever is higher. The exclusion limit is lowest value of sound level limit at a specific point of reception for the stationary source (i.e., the sound level limit when the background sound level is below this exclusion limit).

For Class 1 areas (Urban), the exclusion limits that apply are 50 dBA L_{eq} during the daytime (0700–1900 hours) and 50 dBA L_{eq} during the evening (1900–2300 hours). For Class 2 areas, the criterion levels that apply are 50 dBA L_{eq} during the daytime and 45 dBA L_{eq} during the evening hours. And, for Class 3 areas, the criterion levels that apply are 45 dBA L_{eq} during the daytime and 40 dBA L_{eq} during the evening hours.

A “stationary noise source,” to which the guideline applies, is defined in the interpretation section of the MECP guideline as being everything on a property, with a series of exceptions. The time period over which the sound is averaged is 1 hour.

Methods

Unattended sound monitoring was conducted at 2115 Bleams Road from May 19 to May 28, 2020 and at 2183 Bleams Road from June 5 to June 12, 2020 to determine the validity of the report’s statement that the Bleams Road residences were Class 2 in nature in the worst-case predictable required by *NPC 300*. Sound levels were measured continuously in the backyards of the residences shown in the Figure in the Appendix. Hourly L_{eq} sound levels were calculated at both locations. Noise measurements were discounted for periods with precipitation or winds greater than 25 km/h. Noise measurements were also discounted when interfering noise sources (landscaping equipment, other machinery operating close to the monitoring equipment) were the dominant sound source.

Measured Sound Levels

The ambient hourly sound levels measured in the backyards of 2115 and 2183 Bleams Road were between 47 to 50 dBA 1-Hour L_{eq} . The sound levels measured 50 dBA 1-Hour L_{eq} for 4 1-hour time periods at 2115 Bleams Road and for 3 1-hour time periods at 2183 Bleams Road. For the rest of the time periods the sound levels were below 50 dBA 1-Hour L_{eq} at both receptors.

Recommendations and Conclusions

Sound levels measured in the rear yards at 2115 and 2183 Bleams Road were mostly 2 to 3 dB below the 50 dBA 1-Hour L_{eq} exclusion limit for a Class 2 area. The sound levels in the backyards of the receptors along Bleams Road are shielded by the residential structures, which results in sound levels approximately 10 dB lower than the levels in the front yards. Additionally, the sound levels from the gravel pit at these receptors would be the loudest when the wind was blowing from the south; while at the same time, a southern wind would provide the lowest background sound levels from Bleams Road for the receptors that are located south of the road. It would appear that the rear yards noise criterion point for the houses south of Bleams Road should be 47, not 50 dBA L_{eq} .

The noise report provided neither measured nor calculated sound values for the rear outdoor amenities of these residences. The measured sound levels implies that the rear yards of the

residences located are closer to Class 3, and the appropriate criteria that would apply is the average measured noise of the roadway traffic or 45 dBA L_{eq} , whichever is higher.

NPC-233, one of the report's references, states in Section 8-4 that the sound level analysis should include mapping of the existing level of road traffic in the vicinity of the proposed site and the increase in such traffic due to the plants operation, projected for at least 10 years into the future. The truck routes to/from the gravel pit and the recycling plant have not been considered in the report and no acoustical mapping for the haul routes has been provided as requested in *NPC-233*. The intent of the request in *NPC-233* is to ensure that the planners understand the implications of the new facility at larger distances, in order to encourage a selection of haul routes that minimize the noise impact.

The report mentions that a permanent crushing plant located on site may be used as a recycling plant. However, the report does not consider the impacts of additional truck traffic associated with hauling in and out of the recycling material. Nor does the report provide a detailed plan for the location and estimate of the need for mitigation for such a plant.

Summary

1. The backyards of the residences on Bleams Road north of the gravel pit have been incorrectly assumed to be located in a Class 2 area.
2. Noise monitoring at 2115 and 2183 Bleams Road showed that the ambient sound levels from the road traffic on Bleams Road were mostly 2 to 3 dB below the 50 dBA 1-Hour L_{eq} exclusion limit for a Class 2 area. The measured sound levels imply that the rear yards of the residences in the worst-case scenario are closer to Class 3 area.
3. The truck routes to/from the gravel pit and the recycling plant have not been considered in the report and no acoustical mapping for the haul routes has been provided as requested in *NPC-233*.
4. The report does not provide details about the recycling plant or an acoustic analysis and the necessary mitigation that might be required.

We trust the above will assist in your review of this project. Should there be any questions, please do not hesitate to contact the undersigned.

Yours truly,

J. E. COULTER ASSOCIATES LIMITED

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JEC:BC:pt

APPENDIX

