

Our ref: 11210029-LTR-3

August 23, 2022

Mrs. Lynne Banks
Development and Legislative Coordinator
Township of Puslinch
7404 Wellington Road 34 Puslinch, Ontario
N0B 2J0

**Response to Peer Review of Acoustic Assessment Report, Hydrovac Facility Zoning By-Law
Amendment Application**

Dear Mrs. Banks

1. Introduction

GHD prepared an Acoustic Assessment Report (AAR), dated January 7, 2021, on behalf of 2374868 Ontario Inc., to support an application for a MECP ECA (Air & Noise) for the hydrovac facility (Facility) located at 6678 Wellington Road 34 in Cambridge, Ontario (Site). The ECA application and supporting documents also were provided to the Township of Puslinch when it was submitted to the MECPAs part of an application for a Zoning By-Law Amendment, the Township of Puslinch retained Valcoustics Canada Ltd. (Valcoustics) to review and provide comments on the Acoustic Assessment Report. On July 19, 2022, the Township of Puslinch provided a letter dated June 27, 2022 (VCL File: 122-0269) which provided Valcoustics comments.

This letter provides GHD's response to the Valcoustics comments. For convenience, each comment is copied in italics below and the response follows.

2. Acoustic Assessment Review Comments

2.1 Peer Review Comments

Valcoustics Comment No. 1:

The noise assessment has applied the Ministry of Environment, Conservation and Parks (MECP) noise guideline requirements of NPC-300. This is considered appropriate.

GHD Response No. 1:

Concur.

Valcoustics Comment No. 2:

The proposed waste processing facility is considered a stationary noise source. NPC-300 defines a stationary noise source as “a source of sound or a combination of sources of sound that are included and normally operated within the property lines of a facility and includes the premises of one person as one stationary noise source, unless the dominant source of sound on those premises is construction”. From the information provided, it is not clear if the adjacent extractive operation is part of the same site as the proposed waste processing operation. As a minimum, it appears that truck traffic shares part of the site and the entrance. The noise assessment needs to assess all the sources operating on the site and not just the new sources associated with the proposed waste processing facility.

GHD Response No. 2:

Comprehensive and detailed information on the hydrovac operations and Site and adjacent Capital Paving (Capital) traffic are provided in the Design and Operations (D&O) Report and Traffic Study submitted with the Zoning By-Law Amendment application in December 2021. The adjacent aggregate extractive operation business is not part of the waste processing operation. Though the properties share an entrance, they are independent sites and owned by separate companies. As such, only the sources associated with the waste processing facility were considered in the AAR.

However, to address this comment, GHD conservatively assessed the additional truck traffic from the Capital Paving to have 5 trucks/hour based on information provided in the Traffic Study. The cumulative assessment of the proposed Facility based on this increase in number of trucks does not change the compliance status with applicable noise limits for the proposed waste processing operation.

Since the conservative addition of adjacent facility truck traffic noise demonstrates compliance with NPC-300 noise limits an update to the AAR is not required unless so requested by the MECP during a review of the ECA application.

Valcoustics Comment No. 3:

It is not clear from the information presented within the report if vacant lots that would permit a noise sensitive use exist in the area. As per NPC-300, such vacant lots need to be included as receptors in the noise impact assessment.

GHD Response No. 3:

Vacant lots that would permit a noise sensitive use have been considered in the selection process of worst-case Points of Reception. According to the Township of Puslinch bylaws, the permitted uses for land zoned as Extractive does not allow for residential dwellings or any other land uses that would likely be noise sensitive. Additionally, all agricultural zoned land on the southern part of the Property and properties adjacent to the Property currently already have dwellings and, therefore, are unlikely to have additional future dwellings added as Township of Puslinch **agricultural** zoning allows for a maximum of 1 dwelling per lot.

Valcoustics Comment No. 4:

The report indicates that the Class 2 guideline limits have been applied at all receptor locations. However, justification for Class 2 has not been provided. There is a concern that at least the receptors to the north of the facility may not be in a Class 2 area.

GHD Response No. 4:

The area noise profile is dominated by Regional Highways Wellington Road 34 and Wellington Road 32. GHD notes POR8 to the north is approximately equidistant from Wellington Road 32 as POR1 is to Wellington Road 34, therefore GHD believes it is reasonable to apply Class 2 guideline limits as both would be dominated during the daytime by road traffic and human activity, while during nighttime hours would be dominated by natural noises typical of a Class 2 Area.

Valcoustics Comment No. 5:

Section 6.1 of the report indicates the worst-case assessment was based on measured sound pressure levels. However, no measurement data is provided in the report. The report then goes on to say CadnaA was used to model the potential noise impacts which contradicts the prior statement.

Clarification is needed.

GHD Response No. 5:

This was an inadvertent typographical error in the report and all sound levels used were based on equivalent values from GHD's noise library or published references.

Valcoustics Comment No. 6:

The modelling assumptions indicate a maximum reflection order of 1 was used to complete the assessment. A minimum 1 (and ideally at least 2) order of reflection should be used in the model.

GHD Response No. 6:

This was an inadvertent typographical error in the report, the CadnaA model used a max reflection order of 2.

Valcoustics Comment No. 7:

The ground absorption coefficients used in the model are not considered appropriate. Often 1 is used for absorptive ground (grass and crop land) and 0 is used for hard, sound reflective surfaces (gravel areas, haul road, ponds, etc.). Hard surfaces can provide some sound absorption. If hard ground absorption is to be accounted for then the soft ground cannot be assumed to be perfectly absorptive.

GHD Response No. 7:

GHD has completed numerous of acoustic assessments accepted by the MECP assigning the ground absorption for grass/soft ground to be 1, gravel ground to be 0.5, asphalt and other hard surfaces to be 0.25, and water surfaces to be 0.

These values are appropriate based on GHD's experience and accepted practice and using more conservative values would not change the assessment results and compliance evaluation.

Valcoustics Comment No. 8:

The sound absorption coefficient used to model the reflective buildings is missing from the report.

GHD Response No. 8:

Buildings were modelled with a smooth façade with a standard 0.21 absorption coefficient.

Valcoustics Comment No. 9:

The report concludes that any future equipment that contributes less than 30 dBA at the PORs does not require further assessment. Even though it is agreed that a single source at this level is insignificant, if multiple sources at this level are added, they could contribute to the off-site noise impacts. Thus, our recommendation is that any changes to the proposed operation should not proceed without a proper acoustical assessment.

GHD Response No. 9:

GHD provided this recommendation as a best practice guide to reduce the likelihood of impacting the overall noise level at the PORs acknowledging that significant proposed equipment or operations require a detailed assessment and if required an amendment to the ECA (Air & Noise).

Valcoustics Comment No. 10:

The noise source summary in Appendix C seems to indicate that the reference sound level for the truck route comes from a UK reference. North American references/standards should be used for motor

vehicle traffic since sound emission requirements and vehicle types are different between Europe and North America.

GHD Response No. 10:

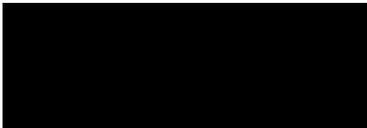
The United Kingdom's Department of Environment Food and Rural Affairs (DEFRA) *Update of Noise Database for Prediction of Noise on Construction and Open Sites, 2005 and 2006* is a standard noise reference database that is used and accepted globally based on numerous reviewed and approved ECA applications submitted to the MECP for like equipment.

3. Conclusion

We trust that the responses contained herein address the comments in Valcoustics review of the AAR.

Should you have any questions on the above, please do not hesitate to contact us.

Regards



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