

August 21, 2015

Town of Caledon
6311 Old Church Road
Caledon, Ontario
L7C 1J6

Attention: Mr. Brandon Ward, Senior Development Planner
Development Approval and Planning Policy Department

Re: Peer Review of Noise Impact Study
Limebeer Pit
Caledon, Ontario
Our File No.: 115-094

VIA E-MAIL

Dear Mr. Ward:

We have completed our review of the following:

- “*Limebeer Aggregate Application, Noise Impact Study*”, dated April 2014, prepared by Aercoustics Engineering Limited;
- “*Existing Features Plan*”, dated 10 September 2014, prepared by MHBC;
- “*Operation Plan*”, dated 10 September 2014, prepared by MHBC;
- “*Rehabilitation Plan*”, dated 10 September 2014, prepared by MHBC; and
- “*Cross Sections*”, dated 10 September 2014, prepared by MHBC.

Our comments are outlined herein.

1. The noise study has appropriately applied the Ministry of Environment and Climate Change (MOE) noise guidelines. We agree that the area is Class 2 and that the application of the exclusion limits is appropriate. It also appears that the study has appropriately considered noise sensitive development on vacant lots.
2. Aercoustics Engineering Limited (AEL) should confirm:
 - the speed used in the model for the off road trucks when they travelling on the site;
 - that the upper storey of the dwellings were used as the point of reception;

- that hard, sound reflective ground was used in the analysis for the extracted area on the Limebeer Pit site as well as for the entire potential extraction area of other gravel pits in the area (unless they have been rehabilitated to soft, sound absorptive ground) and for the Caledon Community Recycling Centre; and
 - that the berm heights shown on the Operational Plan meet the requirements of the noise report since only a few spot elevations are shown on Figures 5 through 10 in the Noise Study.
3. We have reviewed the information noted above. Without AEL's actual CadnaA model, it is not possible to review their calculations in detail. Thus, we request a copy of AEL's CadnaA model so that the analysis procedures, results and mitigation requirements can be confirmed.
 4. The recommended noise controls for Phase 2 are that a berm is to be constructed when extraction is within 100 m of the northeast extraction limit and that the front end loader is to operate within 20 m of the working face when extraction is within 75 m of the northeast extraction limit. Review of Figure 4 appears to indicate that the analysis accounts for the working face being more than 100 m from the northeast extraction limit which increases the acoustical screening of the pit operations. Thus, confirmation is needed that the guideline limits are met for this scenario when the working face is at the 100 m setback distance.
 5. These modifications to the noise control recommendations on the Operation Plan are recommended:
 - The front end loader used for extraction of aggregate at the working face is to operate at the bottom elevation of the pit;
 - Off-road trucks used to transport aggregate from the working face are to operate at the bottom elevation of the pit to the greatest extent possible;
 - The equipment sound emission limit should be provided as a sound pressure level (i.e. 81.5 dBA at 15 m) at a reference distance instead of as a sound power level since audit checks of equipment will typically be done using a sound level meter which measures sound pressure and not sound power; and
 - Equipment used for construction activities must have sound emission levels in compliance with MOE Publication NPC-115 Construction Equipment.

6. Gravel pit operations typically include a noise monitoring program to confirm that off site sound exposures are in compliance with the noise guideline limits. It is recommended that AEL develop a noise monitoring program that will check off site sound exposures at strategic times over the life of the gravel pit.

If there are any questions or if additional information is needed, please do not hesitate to call.

Yours truly,

VALCOUSTICS CANADA LTD.

Per:


John Emeljanow, P.Eng.

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