

December 9, 2015

Township of East Garafraxa
RR#7, 374028 6th Line
Orangeville, Ontario
L9W 2Z3

Attention: Ms. Susan Stone

**Re: Peer Review of Noise Control Study
Tri-County Pit
East Garafraxa, Ontario
Our File No.: 115-303**

VIA E-MAIL

Dear Ms. Stone:

We have completed our review of the following:

- “*Proposed Tri-County Aggregates East Garafraxa Pit, Noise Control Study*”, dated February 3, 2015, prepared by Aercoustics Engineering Limited;
- “*Existing Features Plan*”, dated 23 February 2015, prepared by Long Environmental Consultants Inc.;
- “*Operational Plan*”, dated 23 February 2015, prepared by Long Environmental Consultants Inc.;
- “*Progressive and Final Rehabilitation Plan*”, dated 23 February 2015, prepared by Long Environmental Consultants Inc.

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 a combination of Class 2 and 3 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. The noise control study indicates that residence at R11 is not a noise sensitive receptor location since it is the landowners’ residence. We agree that this residence can be considered not sensitive provided it is occupied by the owner of the pit lands or is kept vacant. We disagree that the residence remains not sensitive if it is rented or leased to other occupants. Thus, if the residence is to be rented or leased, then it must be considered a sensitive receptor and included as part of the noise control study.

3. Aercoustics Engineering Limited (AEL) should confirm:
 - 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 Tri-County Pit site as well as for the entire potential extraction areas of other gravel pits in the area; and
 - that the noise mitigation recommendations have been appropriately implemented into the Site Plans since the Site Plans reference a draft version of the noise control study.
4. 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.
5. Table 2 and Table A (in the recommended noise controls) should be revised to indicate that Loading and Shipping operations are permitted 06:00 to 07:00 Monday to Friday and 07:00 to 12:00 hours on Saturday.
6. Construction activities should be restricted to the daytime period (i.e. 07:00 to 19:00 hours) Monday to Friday and should not be permitted on statutory holidays and weekends.
7. The Ministry of Environment and Climate Change (MOE) noise guidelines require the noise impact assessment be completed on a predictable worst case basis. The operating scenario assessed assumes that the shipping loaders are only operating at a 50% duty cycle. Our expectation is that the shipping loaders would operate at or close to a 100% duty cycle when the facility is busy. Thus, this assumption should be reviewed to ensure a predictable worst case operational scenario is assessed.
8. One of the noise control measures recommended by the noise control study is to construct an acoustic enclosure around the processing plant for Stage 2 of the pit and beyond. Specific details of this enclosure need to be provided and included on the Site Plans. Specifically, the following should be provided:
 - the minimum height of the enclosure;
 - the maximum distance between the enclosure and the crushers and screens;
 - the recommended orientation of the enclosure (i.e. which direction the loud end should point);

- maximum size of the opening into the enclosure to allow access to the processing plant;
 - etc.
9. Detailed noise mitigation recommendations are provided for each “stage” of the gravel pit operation. However, the boundary of each “stage” is not shown on the figures in the noise control study nor on the Operational Plan. Thus, the boundary of the stages should be clearly shown on Figures 3 to 8.
 10. Various berms are recommended over the life of the gravel pit operation to mitigate off site sound exposures. All of the recommended berms are shown in blue. On the Stage 1 drawing, it is not possible to distinguish between Berm A and Berm B. For clarity, different berms should be shown in different colours.
 11. The noise control recommendations for Stage 1 include having the shipment truck haul route in a minimum 3 m deep cut out. Additional detail regarding how this cut out will be created and how the noise impacts will be mitigated are needed. Presumably, this cut out needs to be created before extraction in Stage 1 commences. The 3 m depth likely means that aggregate is being removed to create the cutout. Is this aggregate being stockpiled? If so, how and when will this material be processed? A schematic should be added to the Site Plans to demonstrate how the 3 m cut out for the haul route will be created.
 12. The recommended direction of extraction for Stage 2 (Figure 4) is towards R06. However, the figure appears to show extraction progressing away from R06. Clarification is required.
 13. The noise control recommendations for Stage 3 indicate the direction of extraction is to be towards R02. However, Figure 6 shows the direction of extraction towards R06 and the figure appears to show the direction of extraction progressing away from R06. Clarification is required.
 14. The noise control recommendations for Stages 3 and 4 indicate that the extraction loaders are to be no more than 30 m from the working face. The direction this maximum separation needs to be maintained is needed. Presumably, for Stage 3, the acoustical screening is required for R02. Thus, the loaders must be no more than 30 m south of the working face.
 15. The report indicates that up to 100,000 tonnes of concrete will be imported to the site for recycling. Additional detail regarding this operation is needed. Will the imported concrete be stockpiled on the site prior to processing? If so, where will these stockpiles be located? And how will the concrete be moved from these stockpiles to the processing plant?

16. Additional detail regarding the potential noise impacts that are expected to occur along the off site haul route are needed. Typically, the procedure outlined in the draft MOE Noise Guidelines for Landfill Sites is used. The potential noise impacts along the haul route should be evaluated and categorized so that the residents are aware of the potential changes.
17. The Official Plan for the Township of East Garafraxa states “*Development may be permitted where the cumulative impact of development will not have detrimental effects on the environment...*”. The proposed gravel pit is in an area where there are other gravel pit operations. Thus, a cumulative noise assessment is needed to address the above policy in the Official Plan.
18. 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 Aercoustics develop a noise monitoring program that will check off site sound exposures at strategic times over the life of the gravel pit.
19. The noise study should develop a procedure for addressing noise complaints. This procedure should outline what information is to be retained on site, how the complaints were addressed and what, if any, additional noise mitigation was implemented on the site to address the complaint. The complaint procedure should be incorporated onto the Site Plans.

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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cc: Christine Gervais
Rob Stovel