

**J.E. COULTER
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LIMITED**

Consulting Engineers in
Acoustics, Noise & Vibration

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July 10, 2024

Township of Leeds and the Thousand Islands
P.O. Box 280
1233 Prince Street
Lansdowne, Ontario
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Attention: Lindsay Lambert

**Re: Response to Valcoustic's Peer Review of Acoustic Review Report
Pecks Marina Boat Storage
Leeds and Thousands, Ontario**

J.E. Coulter Associates Limited has reviewed the peer review comments from Valcoustics regarding the above noted development dated September 15, 2023. An updated Noise Report is attached. It is noted that the Site Plan has been modified such that the buildings have been shifted further south. The sound levels have been recalculated based on this new setback.

Our responses (in red) to the peer review are as follows:

- a. The operational scenarios and the determination of a predictable worst case hour consisting of 2 trucks arriving and departing appears reasonable. However, with only 2 trucks arriving and departing per hour, it is unclear in the Report how these activities were distributed/allocated to the six overhead doors. For the predictable worst case hour, it should be assumed that the 2 trucks will use the 2 overhead doors closest to each receptor. For Receptors R1 to R4, that would be the two most westerly doors in the westerly building. For Receptors R5 to R8, that would be the two most easterly doors in the easterly building. Clarify and provide rationale for the analysis method or update it accordingly.

J.E. Coulter Associates Limited Comment:

The text in the report has been modified to explain the modelling rationale used as follows: The analysis assumed that 2 trailers per hour at each door would enter the site throughout the day for a total of 4 movements per hour per door (a total 24 movements total per hour for both buildings, a worst case scenario). At this level of activity, there is no noise impact. No changes to the calculations or recommendations.

- b. In addition to truck movements, some quantity of truck engine idling should be included as a noise source, which would occur while the overhead doors are opening and the

trailer is being maneuvered and coupled/uncoupled. A brief (5 minute) duration of engine idle per movement is likely appropriate and the analysis should be updated accordingly.

J.E. Coulter Associates Limited Comment:

The report has been adjusted to include engine idling for 5 minutes per hour for each truck.

- c. It is unclear from the Report whether the reference sound level in Table 4 for the overhead doors was obtained through sound measurements taken elsewhere or based on manufacturer's/empirical sound data. Please clarify.

J.E. Coulter Associates Limited Comment:

Data is sourced from in-house data with a standard roll-up door generating 78 dBA at 1.5m (continuous operation). The proponent has indicated that the manufacturer/model for the access doors has not been selected at this time. The doors are to include a quiet belt drive system. Once the information on the door mechanical drive system is available, the Acoustic Consultant should review to ensure no noise impacts are expected. The text in the report has been updated.

- d. Receptors R7 and R8 appear to be transposed in the figures and text of the Report. Revise report to correct/clarify.

J.E. Coulter Associates Limited Comment:

The figure has been corrected.

- e. The rendering of the boat storage facility in Figure 3 shows that there may be a small office area at the northwest corner of the westerly building. However, this cannot be confirmed since floor plans were not provided. While the Report indicates that there is no HVAC equipment interfacing with the exterior, please confirm that office areas, if provided, will not be air conditioned.

J.E. Coulter Associates Limited Comment:

The text in the report has been updated. The office area will include a Mitsubishi split thermo pumps. It has been assumed the sound power level is 65 dBA (57 dBA at 1m), typical for these type of units.

- f. Appendix B is missing. Please provide.

J.E. Coulter Associates Limited Comment:

Corrected. Traffic data included.

- g. As indicated in the CadnaA tables in Appendix C, single band, 500 Hz reference sound power levels were used for all of the stationary sources instead of the complete spectrum. Please provide explanation why single band data was used, otherwise, update analysis to include full spectral sound data.

J.E. Coulter Associates Limited Comment:

In a number of cases, manufacturers supply only a single “A”-weighted sound levels which is included in the report. Using the 500 Hz octave band is a good representative frequency for mechanical ventilation or vehicular sources. Impulse sound level are always a single number dBA(I) value. The report has been updated to include both full spectrum (trucks) and single values (HVAC).

- h. The reference sound levels provided in Table 4 of the Report for all sources seem reasonable. However, for the Impulse Noise (S3) we are unable to correlate the reference sound power level of 105 dBA in Table 4 of the Report with the Lw column in the “CadnaA - Impulse Sounds - Daytime” tables in Appendix C. Please explain the derivation of the Lw values.

J.E. Coulter Associates Limited Comment:

The report used a reference impulse sound level of 105 dB PWLA for the coupling and decoupling of the boat trailers. As the impulses have been logarithmically averaged over the six door openings assuming equal probability that any door could be used), the average level of each impulse is lower and when summed together to achieve a total impulse sound level of 105 dBA(I). As a worst case scenario, it has been assumed that 9 or more impulses could be generated per hour and thus MECP exclusion limits were used. If it is assumed that 2 trailers per hour enter the site and decouple at the east and western doors closest to the receptors, the noise criterion limit would be 75 dBA for 2 impulse per hour, which is also met as well.

- i. Appendix C is incomplete. Please provide all of the CadnaA Source Tables for the analysis. (Alternatively, the acoustic model itself could be provided.).

J.E. Coulter Associates Limited Comment:

Expanded CadnaA Source Tables are provided.

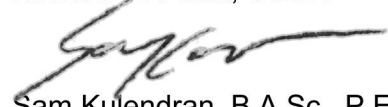
We trust the above will assist in expediting this project. Should there be any questions, please do not hesitate to contact the undersigned.

Yours truly,

J. E. COULTER ASSOCIATES LIMITED

Howard Patlik

Howard R. Patlik, C.E.T.

A handwritten signature in dark ink, appearing to read 'Sam Kulendran', with a stylized flourish at the end.

Sam Kulendran, B.A.Sc., P.Eng.