

October 6, 2023

Township of Leeds and the Thousand Islands
P.O. Box 280
1233 Prince Street
Lansdowne, Ontario
K0E 1L0

Attention: Lindsay Lambert
seniorplanner@townshipleeds.on.ca

VIA E-MAIL

**Re: Peer Review of Stationary Noise Assessment
507-515 1000 Islands Parkway
Lansdowne, Ontario
VCL File: 123-0297**

Dear Ms. Lambert:

We have completed our review of the “Stationary Noise Assessment, 507-515 1000 Islands Parkway, Lansdowne, Ontario”, prepared by Gradient Wind, dated May 1, 2023. Additional information regarding the facility operations was also provided for our review in an email dated August 31, 2023 (attached as Appendix A to this letter). Our findings and recommendations are outlined herein.

1.0 COMMENTS

We have these comments regarding the acoustical model and modelling scenarios:

- The email stated the operations at the repair shop consist of: “Typical vehicle maintenance operations like tire changes, oil changes, minor repairs etc. to our fleet of trucks, excavators and workboats.”. The repairs are done using air tools, powered hand tools, portable welders, etc.
 - The model does not account for any tool/repair noise associated with the repair shop building. How has the repair shop noise been accounted for in the noise assessment?
 - How often are these repairs completed?
- Table 2 shows that noise associated with the fabrication shop doors has been modelled with a sound power level of 84 dBA, operating for 100% of the worst-case daytime, evening and nighttime hour. What does the 84 dBA sound level in the table represent and how was it calculated?
- The truck route noise source has been modelled at a height of 1.5 m. The height of the engine exhaust on a tractor trailer is typically higher. What does the 1.5 m height represent?

- Regarding the outdoor open storage areas, the email states: “The East side of the boat ramp typically sees more construction related items like excavators, rock, fabricated steel beams etc.”

With the exception of a loader moving near the boat launch ramp, the model does not appear to include any noise sources associated with moving to the goods to/from the east open storage area. Why is activity across the whole east open storage area not modelled?

- The model shows a loader idling at the south side of the repair shop. There is no loader movement shown in this area. What does a loader idling at this location for an entire hour represent?
- Regarding the types of material stored in the outdoor areas, the email states, “Steel and wood are dropped off on the west side of the fabrication shop (Bldg. 3) Granular material and armour stone are dropped off closer to the water at the seawall, also typically on the east side of the Fabrication shop.”
 - The model appears to show material drop off near the site entrance (S14 on Figure 2) and near the water (S13 on Figure 2). The drop off location shown in the model (S14, near the site entrance) does not seem to be consistent with description of the material drop off location provided in the email (at the west side of the fabrication shop).
 - The truck route does not appear to extend down to the drop off site near the water (S13).
- Regarding the impulsive noise sources, the email states, “On a very busy day our facility could receive as many as 4 trucks per hour dropping off materials. This is a peak, and not an average number. A peak one-hour block might look like two dump trucks dropping gravel to go to an island, with another transport delivering steel pipe and perhaps a 4th transport bringing steel beams to us. Sometimes setting the steel product down on racks produces an impulse sound. However, operators are trained to set down raw materials gently to prevent damaging materials and minimize noise impacts.”
 - Figure 6 appears to show an equal number of impulses at S13 and S14. Does this represent 2 impulses associated with the dump trucks at S13 (near the water) and 2 impulses associated with setting the products down at S14 (near the entrance)?
 - The location of S14 does not appear to be consistent with steel being dropped off at the west side of the fabrication shop.
 - Please provide details regarding how the steel beams are unloaded to clarify how the process generates no more than 2 impulses.
- All of the receptors appear to have been modelled at a height of 1.5 m. This height would typically represent a ground-floor plane of window or outdoor point of reception. Google Streetview imagery of the areas shows that some of the dwellings appear to have second storeys. Please clarify how the worst-case receptor height was chosen for the plane of window receptors.
- Was topography included in the model? From Google Streetview imagery, the grade level at the dwelling to the west of the site (represented by R7) appears to be elevated relative to the grade level at the facility.
- The guideline limits for the outdoor points of reception were calculated using the ambient sound levels due to road traffic. The traffic data used to calculate the ambient sound levels do not include data for the 0700 hour. If the 0700 hour has the lowest daytime traffic volumes, the guideline limits for the outdoor points of reception may be lower than those used in the report. (It is noted that the predicted sound levels meet the minimum exclusion limits regardless.)

Other comments regarding the report are:

- On page 2 of the report, the text states that there are twelve receptor locations. The tables and figures show ten receptors. This appears to be a typographical error in the text.
- On page 4, the evening Outdoor Point of Reception (OPOR) and Plane of Window (POW) limits are reversed in Table 1.
- On page 6, the text states that “sensor locations” are described in Table 3. This appears to be a typographical error and “receptor locations” was likely intended.
- On page 8, the text states that the locations of the impulsive sources are labelled S12-S13 on Figure 2. These impulse sources appear to be labelled as S13 and S14 on Figure 2.
- On page 9, the “Sound Level Limits” in Table 9 shows “N/A” for the OPOR receptors during the evening. There are evening sound level limits for OPORs defined in NPC-300. It is noted that the sound levels at the OPOR receptors are predicted to meet the evening guideline exclusion limits regardless.
- On page 10, the evening and nighttime periods are shown to have the same sound level limits. NPC-300 defines different sound level limits for these two time periods. It is noted that the predicted sound levels meet the minimum exclusion limits regardless.



2.0 CONCLUSIONS

A review of the stationary noise source assessment prepared by Gradient Wind has been completed. There appear to be some inconsistencies between the description of the facility operations and the modelling scenarios shown in the report. Additional information regarding the modelling scenarios is also required before we can agree with their conclusion that the noise emissions from the facility will comply with the MECP noise guideline limits.

If there are any questions of if additional information is need, please let us know.

Yours truly,

VALCOUSTICS CANADA LTD.

Per: 

Seema Nagaraj, Ph.D., P.Eng.

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Enclosures

APPENDIX A

EMAIL REGARDING FACILITY OPERATIONS

Seema Nagaraj

From: Lindsay Lambert <seniorplanner@townshipleeds.on.ca>
Sent: August 31, 2023 4:07 PM
To: Seema Nagaraj
Subject: FW: Kehoe Marine, Leeds & 1000 Islands-Peer Review/Our File: 123-0297

Hi Seema,

Earlier this afternoon, we received the following responses to your questions.

- What does the facility do? **Manufacture floating and stationary docks for private and commercial uses. We also receive and deliver building materials (lumber, granular, concrete, armour stone) etc. to island or waterfront construction projects.**
- Will there be rooftop mechanical units for any buildings? **No.**
- What kinds of activities will happen (and what kinds of tools will be used) in the repair shop? **Typical vehicle maintenance operations like tire changes, oil changes, minor repairs etc. to our fleet of trucks, excavators and workboats. – air tools, powered hand tools, portable welders etc.**
- What kinds of goods are kept in the open storage areas? **Primarily Inert materials - typically steel pipe, wood, and steel beams in addition to construction materials like clear stone, armour stone, lumber, concrete anchors etc. Equipment like trailers, excavators, silt fence, turbidity booms, drills, etc. as well as finished docks and new boat lifts.**
- Are there different uses for the open storage area near the driveway and the open storage area at the east side of the boat ramp? **We try and keep area nearest to the 1000 Islands Parkway neat and tidy with easily stackable materials (wood, steel pipe, finished docks etc.). The East side of the boat ramp typically sees more construction related items like excavators, rock, fabricated steel beams etc.**
- Loader and excavator sources are shown on the model. What are they used for? **Moving material from trucks on shore onto barges at the waterfront.**
- Forklifts are shown moving around the yard. What are these forklifts transporting? Where are they transporting them from/to? **Forklifts unload new transport deliveries as needed and move raw materials from the storage area into the fabrication shop.**
- The model includes “material drop-off activities”. What kinds of materials are dropped off at the facility? **Transports deliver our raw materials for fabrication (primarily wood and steel). Additionally we receive shipments of things like armour stone, lumber and granular materials for transport to jobsites by water. We cast concrete anchors east of the fabrication shop (Bldg. 3) as needed.**
- Where are these materials dropped off? **Steel and wood are dropped off on the west side of the fabrication shop (Bldg. 3) Granular material and armour stone are dropped off closer to the water at the seawall, also typically on the east side of the Fabrication shop.**
- The analysis assumes a maximum of 4 impulses in a one-hour period. These impulses are due to “dropping off materials” or “dump truck gates”. The model also appears to account for 4 trucks per hour at the site. Please provide more information about the truck activities and how the maximum number of impulses was derived. **On a very busy day our facility could receive as many as 4 trucks per hour dropping off materials. This is a peak, and not an**

average number. A peak one hour block might look like two dump trucks dropping gravel to go to an island, with another transport delivering steel pipe and perhaps a 4th transport bringing steel beams to us. Sometimes setting the steel product down on racks produces an impulse sound. However operators are trained to set down raw materials gently to prevent damaging materials and minimize noise impacts.

- The report states, “Sound data for stationary noise sources is based on Gradient Wind’s experience with similar sources, tuned for correlation with measured data”. Please clarify how the data used in the analysis was derived (e.g. measurements at existing facility, etc.). **Sound data was derived from the onsite measurements of various activities which were occurring on site during Gradient Wind’s site visit. Gradient Wind cross-referenced the derived sound power data from the measurements with our own internal data base to insure they were appropriate and in line with industry expectations.**
- Table 8 shows “noise measurement correlation”. Were these measurements done with all sources operating? Is road traffic noise included at T6? **At location T6 includes noise from Kehoe Marine activities, however it excludes traffic noise along the 1000 Islands Parkway. During the measurement period the measurements would be paused when cars were passing along the roadway. Therefore, measurements were taken during the gaps when no vehicles were passing the site.**

Please let me know if you have any additional questions.

Thank you,
Lindsay



Lindsay Lambert, M.Pl. MCIP RPP (She/Her)

Senior Planner

Township of Leeds and the Thousand Islands

P.O. Box 280, 1233 Prince Street, Lansdowne, ON K0E 1L0

Tel: 613-659-2415 ext. 226 Toll Free: 1-866-220-2327

Fax: 613-659-3619

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