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September 16, 2025

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**Re: Proposed Site Plan Amendment to Licenses #3514 and #607841
Duntroon Quarry and Duntroon Quarry Expansion – Environmental Noise Review
RWDI Reference No. 2409751**

Dear Mr. Kehl,

RWDI was retained by Walker Aggregates Inc. (“WAI”) to review a proposed amendment to Aggregate Resources Act (“ARA”) Licences 3514 and 607841 for their Duntroon Quarry and Duntroon Quarry Expansion (the “Subject Site”).

WAI is looking to deepen portions of the Subject Site and requested that RWDI examine whether there were potential concerns with the deepening from an environmental noise perspective and to ensure that appropriate mitigation is in place. Currently, extraction is permitted to 490 metres above sea level (“MASL”) in certain portions of the operation and to a depth of 500 MASL in other locations. The proposed amendment would allow for extraction between 485 and 490 MASL across the entire mineral resource extraction area. WAI has indicated there are no changes proposed to the extent of excavation, existing plant locations and equipment operating on site.

RWDI reviewed the approved Aggregate Resources Act (ARA) Site Plans for both the Duntroon Quarry and Duntroon Quarry Extension with Ministry of Natural Resources Midhurst District Office (MNR) approval stamps dated April 14, 2015, and September 4, 2014, respectively. Based on the information provided to RWDI, we confirmed that there are no proposed changes to the extent of excavation, existing plant locations and equipment operating on site. Therefore, the only change to potential environmental sound exposure at the receptors assessed will be the base elevations.



RWDI reviewed two Sound Impact Analysis reports prepared by Valcoustic Canada Ltd. (Valcoustics) for the Duntroon Quarry and Duntroon Quarry Expansion. The expansion licence boundary as shown in the updated Sound Impact Analysis dated October 4, 2007 (the Valcoustics report), Figure 2 Site Plan, differs slightly in extent from the MNR approved site plan, however the acoustical berm indicated in the south-western portion of the site plan appears to be in the same location. The proposed direction of excavation development phases also differs from the MNR approved stamped plan. Given the rudimentary (i.e., geometric spreading) sound propagation methodology of the two Valcoustic sound impact analysis reports, the variations in site plan and development phases are inconsequential to the overall conclusions presented in the Valcoustics report issued October 4, 2007.

RWDI notes the cumulative noise impacts presented in the Valcoustics report, indicate the “predictable worst case sound exposures (...) is 3 dBA higher or potentially 3 dBA above the guideline limit.” The Valcoustics report also states “the expected sound exposures at the receptors will generally be less than the predictable worst case determined in the noise assessment.” A summary of the predicted results is as follows:

1. The worst case daytime sound exposures for the highest impacted residences evaluated, denoted R1, R2 and R3, as shown in the Valcoustics report Table 1, presents mitigated combined sound exposure levels that meet the MECP NPC-300 Table B-1 Class 2 Area receptor daytime (07:00 to 19:00) exclusion limit criteria value of 50 dBA.
2. The R1, R2 and R3 predicted the evening (19:00 to 23:00) and nighttime (23:00 to 07:00) mitigated sound exposure levels, as shown in the Valcoustics report Table 2, meet the NPC-300 Table B-1 and Table B-2 Class 2 Area exclusion limit criteria value of 45 dBA.
3. The predicted mitigated daytime level for R4 meets the NPC-300 Class 3 Area limit of 45 dBA.
4. The worst-case evening and nighttime mitigated sound exposures for all residences are below NPC-300 Class 2 Area and Class 3 Area exclusion limit evening values of 45 dBA and 40 dBA, respectively.

There is a recommendation that rock drilling and asphalt plant activities occur only during daytime hours of 07:00 to 19:00 hours. The Valcoustics report states R1 and R2 may be removed because of future operations at the neighbouring Highlands Quarry, due to the residences occupying those development lands. The habitational status of R1 and R2 is unknown at the time of writing.

Further to this review, RWDI references established environmental sound propagation attenuation methodology to explain the forthcoming conclusions. The overall sound attenuation term, $A_{\text{propagation}}$, from source to receiver can be sub-divided into several purely physical effects as shown here:

$$A_{\text{propagation}} = A_{\text{div}} + A_{\text{atm}} + A_{\text{gr}} + A_{\text{bar}} + A_{\text{misc}} + C_{\text{refl}}$$

where:

$A_{\text{propagation}}$ is the overall sound attenuation from source to receiver,

A_{div} is the attenuation as a result of geometrical spreading,

A_{atm} is the attenuation as a result of air absorption,



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A_{gr} is the attenuation due to ground absorption/reflection,
 A_{bar} is the free-field-diffraction attenuation of a barrier,
 A_{misc} is the attenuation due to miscellaneous effects (weather variability, other dispersions), and
 C_{refl} is the correction due to the contribution of reflections.

Given the analysis methodology of the Valcoustics report considers solely geometric spreading as stated, reducing the base elevations for sound sources from 500 MASL to 485 to 490 MASL will not materially change the results, recommendations or conclusions presented. All the key sources of noise emissions at the Subject Site (i.e., the primary crusher and processing plant) are not anticipated to move locations, and therefore reducing the base elevations will only result in greater vertical separation from the excavating sound sources located at pit bottom to potential residential receptor locations, thereby potentially reducing predicted daytime, evening, and nighttime sound exposure levels. No additional mitigation measures beyond the measures presented in the Valcoustics report, and outlined on the ARA Site Plans, are required to ensure that the Subject Site continues to comply with the requirements of MECP NPC-300.

Therefore, based on this review, there is appropriate mitigation already in place to meet the relevant provincial standards and that the Subject Site can continue to operate with the change in permitted extraction depth. No changes are recommended to Licenses No. 3514 and 607841 and the measures existing on the ARA Site Plans, are sufficient.

Please do not hesitate to contact me if you have any questions.

Yours truly,

RWDI AIR Inc.

A handwritten signature in black ink, appearing to read 'Michel Parent'.

Michel Parent, C.E.T.
Senior Acoustical Consultant

MP/AUV/hta

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STATEMENT OF LIMITATIONS

This report entitled *“Proposed Amendment to Licenses #3514 and #607841 – Duntroon Quarry and Duntroon Quarry Expansion – Environmental Noise Review”* was prepared by RWDI AIR Inc. (“RWDI”) for Walker Aggregates Inc., (“Client”). The findings and conclusions presented in this report have been prepared for the Client and are specific to the project described herein (“Project”). The conclusions and recommendations contained in this report are based on the information available to RWDI when this report was prepared. Because the contents of this report may not reflect the final design of the Project or subsequent changes made after the date of this report, RWDI recommends that it be retained by Client during the final stages of the project to verify that the results and recommendations provided in this report have been correctly interpreted in the final design of the Project.

The conclusions and recommendations contained in this report have also been made for the specific purpose(s) set out herein. Should the Client or any other third party utilize the report and/or implement the conclusions and recommendations contained therein for any other purpose or project without the involvement of RWDI, the Client or such third party assumes any and all risk of any and all consequences arising from such use and RWDI accepts no responsibility for any liability, loss, or damage of any kind suffered by Client or any other third party arising therefrom.

Finally, it is imperative that the Client and/or any party relying on the conclusions and recommendations in this report carefully review the stated assumptions contained herein and to understand the different factors which may impact the conclusions and recommendations provided.



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REFERENCES

Ontario Ministry of the Environment and Climate Change (MOECC), August 2013, Publication NPC-300, *Environmental Noise Guideline Stationary and Transportation Sources – Approval and Planning*

Valcoustics Canada Ltd., September 2005, *Duntroon Quarry Proposed Quarry Expansion*, Project: 103-153

Valcoustics Canada Ltd., September 2005 Updated: October 4, 2007, *Duntroon Quarry Proposed Quarry Expansion*, Project: 103-153

International Organization for Standardization (ISO), 1994, International Standard ISO 9613-1:1994, *Acoustics –Attenuation of Sound during propagation outdoors. Part 1: Calculation of the absorption of sound by the atmosphere.*

International Organization for Standardization (ISO), 1996, International Standard ISO 9613-2:1996, *Acoustics – Attenuation of sound during propagation outdoors – Part 2: General method of calculation*