

CBM-Caledon Quarry

CAART COMMENT SUMMARY TABLE RESPONSE #2 – [NOISE]

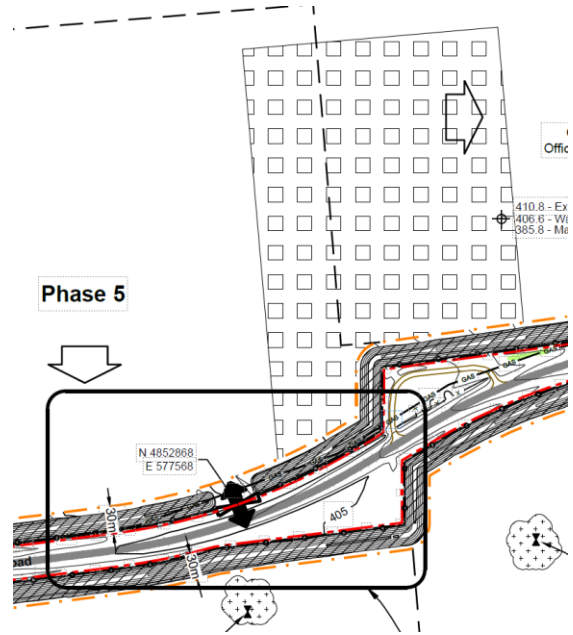
Please accept the following as feedback from the Caledon Aggregate Review Team (CAART). Fully addressing each comment will expedite the potential for resolution of the consolidated CAART comments and individual agency objections. **Additional comments may be provided once a response has been prepared to the comments raised below and additional information provided.**

Colour Code	Description
	Resolved
	Resolved subject to additional information being provided to CAART Reviewers (e.g, Implementation Guide, Report Addendums)
	Response provided, but no further action taken or required by Project Team

Initial CAART Comments (Date)	Page / Section	Applicant Response June 25, 2025	CAART Response (January 15, 2026)	Applicant Response (March 23, 2026)	CAART Response
NPC-300 requires a predictable worst case assessment. How were the worst-case operational locations and scenarios determined. In particular, how the simultaneous pit and quarry extraction locations determined needs to be explained.	Noise Assessment Report	The predictions were made for different locations of the equipment operating within the areas associated with specific extraction phase (i.e., Phase 1 to Phase 7). For each identified equipment location, the resulting noise level at relevant receptors corresponding to the worst-case scenario was calculated and if required, a suitable set of noise controls were proposed. The assessment of the concurrent operations of the quarry and the pit was completed for Phase 5 (quarry extraction and operation of the processing plant) and Phase 6 (aggregate extraction). The equipment was located within the areas of the Phase 5 and Phase 6. No additional extraction equipment was considered for this scenario (i.e., two extraction loaders operating in the Phase 5 lands and one extraction loader within the Phase 6 lands).	It is not clear if the response is proposing equipment restrictions during Phases 5 and 6. This also seems to contradict the mitigation recommendation in the report which states the number of loaders shall be reduced in Area 6 (Phase 5) from 3 to 2. The response also does not state how the simultaneous worst case pit and quarry extraction locations were determined. 6.1.3.3 of the report also states that quarry operations occur in Phases 4, 5 and 6. Clarification is needed.	Area 6 (the south part of Phase 5) indicates the area of operations where there is the need for restriction of equipment (i.e., number and equipment sound power levels). The design of the operations for this area is based on two loaders operating. The third loader will be relocated to support the pit operations within Phase 6. Please note, the north part of Phase 5 can be extracted using three loaders, however no pit extraction is considered to be occurring within Phase 6 when extraction is occurring in the northern part of Phase 5. The worst-case concurrent pit and quarry operations scenario, WSP completed various modelling iterations to analyze noise emissions from the equipment associated with pit (Phase 4, Phase 5, Phase 6 and Phase 7) and quarry operations (Phase 1 to Phase 7). Based on the results of the analysis, the highest noise levels from concurrent operations were identified for equipment locations associated with quarry operation in the south part of Phase 5 and pit operation in Phase 6. Please note, due to resource availability, the pit operations will occur in the area covered by Phase 4, Phase 5, Phase 6 and Phase 7 (i.e., Southern part of Main Area and Caledon South Area).	It remains unclear how the worst case was determined. Currently there do not appear to be any restrictions on the Site Plans or recommendations in the Noise Report preventing pit and quarry operations from occurring simultaneously in the same phase. Having the worst case as quarry operations in Phase 5 (southern limit of extraction) and pit operations in Phase 6 (central area of extraction) does not seem to represent the permitted worst case operations. It seems that concurrent pit and quarry operations in Phases 5, 6 or 7 could result in higher off-site sound levels.
Section 1.1 in the Noise Study states the permanent processing plant will be installed on the quarry floor	Noise Assessment Report	WSP conservatively modelled the permanent processing plant located on the surface of the local quarry floor extracted to approximately 397 m, resulting in the processing plant resting for the	Response resolves the comment.		

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<p>once adequate space is available. However, the introduction and the Site Plans state “following the extraction of Phase 7, the area under the main processing plant will be extracted”. These statements are contradictory and imply that the permanent processing plant will not be located on the quarry floor which could result in higher off site sound levels.</p>		<p>duration of the majority of quarry lifespan on a plateau (first lift) above the rest of the quarry floor extracted to the maximum depth of approximately 381 m. This is consistent with the proposed ‘Final’ extraction sequence in which the area associated with the Facility Pad Area below the processing plant will be extracted last. WSP did not report the sound levels associated with the Final extraction phase (i.e., removal of the material underneath of the processing plant) as the predicted levels associated with extraction of this area and operation of the processing plant and other equipment at its final placement (i.e., final depth of the quarry) will be additionally reduced due to quarry wall screening. Upon further discussion with CBM the May 2025 version of the Site Plans (MHBC) were modified to read in Section J3 as follows:</p> <p><i>3. Processing equipment in the Main Area will initially be portable and shall be situated in the location identified on the Noise Mitigation Schematic on this drawing or drawing 3 of 4. As operations progress and the top of bedrock is exposed, a permanent processing plant will be constructed within the facility pad area (Main Area) as shown on the plan view of this drawing. Once the permanent processing plant is operational within the facility pad area, the temporary processing plant in the Main Area shall be dismantled.</i></p> <p><i>In Phase 6 (South Area) a processing plant consisting of a primary crusher and primary screen (relocated from the Main Area) shall be constructed in the location identified on the Noise Mitigation Schematic on this drawing or drawing 3 of 4 once sufficient area is extracted within Phase 6. During Phase 6, the remaining permanent processing equipment located in the facility pad area (Main Area) will remain operational until extraction of the facility pad area is required in Phase 7. Prior to the extraction of aggregate from beneath the facility pad area in Phase 7, the remaining permanent processing equipment in the facility pad area will be dismantled and portable processing equipment will be relocated to the quarry floor in the Main Area for the duration of the operation.</i></p>			

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It is not clear whether quarry operations and pit operations occurring simultaneously were part of the noise assessment. Are the 5 haul truck trips and the loader used for the pit operation in addition to the equipment limits for the quarry operation? If not, which loader has been diverted to the pit operational area?	Noise Assessment Report	The pit and quarry concurrent operations were discussed in Section 6.1.3.3 with the results shown in Table 9 in Section 7.3.4. Conservatively, an additional 5 round truck trips were considered for aggregate extraction, however in reality no additional equipment (beyond that specified in Table 1) is expected to be used. One of three loaders available for operations will be used to extract sand and gravel material at the pit face, with the two remaining loaders used for quarry operations to load blasted rock material.	Response resolves the comment.		
<p>Section 2.0 of the report outlines the equipment associated with the operations that were considered in the noise assessment. We have these questions regarding the equipment included and the operational information:</p> <p>a. The introduction to the report indicates there will be a separate aggregate recycling area. Equipment associated with the aggregate recycling operation does not appear to have been included in the assessment.</p>	Noise Assessment Report Section 2.0	<p>It is assumed that the aggregate recycling area will be served by plant loaders already accounted for in the operations of the processing plant. Equipment (i.e., portable crushing plant) associated with the aggregate recycling operations has been assessed and the results are presented in Addendum Technical Memorandum provided in Attachment A. The equipment was considered to be located near the permanent processing plant within the pad marked on the Figure below. A portable crushing plant meeting a sound power level of 116 dBA was considered, with a source height of 2.5 m. The equipment will be operated behind a C-shaped noise barrier with the height of 3 m above the top edge of the portable plant. The May 2025 Site Plan (MHBC) will be updated to add the following:</p> <p><i>A portable crushing plant shall be used to support occasional aggregate recycling operations. The portable plant shall have the maximum sound power level of 116 dBA and the equipment shall be placed behind a C-shaped noise barrier extending at minimum 3 m above the top edge of the equipment. The noise barrier shall be placed a minimum distance of 10 m from the equipment. Prior to operation of the equipment, noise measurements shall be carried out by a qualified professional to confirm equipment noise emissions and performance of the noise barrier. If any modifications to the equipment and the barrier are needed, those shall be verified by a qualified professional prior implementation.</i></p>	<p>a) A figure showing the location of the aggregate recycling plant and the recommended sound barrier is not provided below and is not in the noise study addendum.</p> <p>In the note to be added to the site plan, the minimum 10 m separation distance likely needs to be a maximum 10 m separation distance since having the sound barrier further from the source(s) reduces its effectiveness.</p>	<p>a) Revised figure (Figure 2) is included in Attachment A. The text of Site Plans Note 8 v., has been updated to read ...<i>within 10 m of the equipment.</i></p>	Response resolves the comment.

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		<p>The May 2025 Site Plan (MHBC) Section O, 8 Noise a, page 3 will be updated to include following entry:</p> <table border="1" data-bbox="730 322 1336 655"> <thead> <tr> <th>Source ID</th> <th>Source Description</th> <th>Quantity</th> <th>Overall Sound Power Level [dBA]</th> </tr> </thead> <tbody> <tr> <td>Aggregate Recycling Plant</td> <td>Portable Aggregate Recycling Plant</td> <td>1</td> <td>116</td> </tr> </tbody> </table> <p>a. The location of recycled aggregate operations and stockpiles will be limited to the extent of pad where the permanent processing plant is located as shown in the figure below (hatched area).</p> 	Source ID	Source Description	Quantity	Overall Sound Power Level [dBA]	Aggregate Recycling Plant	Portable Aggregate Recycling Plant	1	116			
Source ID	Source Description	Quantity	Overall Sound Power Level [dBA]										
Aggregate Recycling Plant	Portable Aggregate Recycling Plant	1	116										
<p>b. The hydraulic breaking of blast rock at the active face does not appear to have been included as a noise source. An appropriate sound level adjustment for this noise source, as per NPC-104, should also be included.</p>		<p>b. As mentioned in the report in Section 1.1, it is expected that an excavator, equipped with a hydraulic rock breaking attachment, may be infrequently required to break oversized blast rock. Considering the infrequent and short-term usage of such equipment coupled with its location in the proximity of the extraction face (noise screening), the noise emission from its operations is expected to not significantly contribute at the relevant PORs. WSP completed an analysis to confirm the noise screening performance of operating such equipment near the working face. Based on the</p>	<p>b) Response resolves the comment. c) Response resolves the comment. d) Response resolves the comment.</p>										

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<p>c. Truck movements associated with the aggregate recycling operation do not appear to have been accounted for in the assessment.</p> <p>d. It is not clear how many haul truck movements (26 or 31) have been included in the assessment.</p>		<p>above, the rock breaker was not quantitatively included in the assessment of the site operational noise.</p> <p>c. Any use of the aggregate recycling area assumes the same total number of truck trips in the predictable worst-case hour. When required, some site equipment will be diverted to serve the recycling operations. No additional equipment is expected to be required for the aggregate recycling area. Therefore, no net increase of truck trips is considered. The maximum number of equipment i.e., processing loaders and shipment trucks will remain as indicated in Table 1 of the noise report and the table provided in Note O, Section 8 – Noise of the Site Plans.</p> <p>d. The assessment of the quarry operations considers 26 round trips from the extraction area to the processing plant. An additional 5 round trips were conservatively assumed for the scenario considering concurrent operation of the quarry and sand and gravel pit extraction (i.e. 31 round trips).</p>			
<p>Regarding Table 1: Site Noise Source Summary :</p> <p>a. The sound power levels used in the model (Noise Source Library in Appendix E) for the screen, primary crusher and secondary crusher are significantly lower than the sound power levels published in Table 1. Clarification is needed.</p> <p>b. The highway truck sound power level of 103 dBA is lower than what we typically use and is lower than what we have seen WSP use for other similar applications.</p> <p>c. The haul truck sound power level of 107 dBA is lower than what we typically see for large, off-road haul trucks. Additional information to</p>	<p>Noise Assessment Report Table 1</p>	<p>a. The sources representing the permanent processing plant are modelled as a combination of vertical and horizontal area sources with the PWL of the equipment provided in Appendix E being expressed in intensity (i.e. dBA per 1m² as specified in CadnaA PWL library) broken down into components. The PWL values provided in Table 1 are expressed as an overall PWL, incorporating all equipment components (i.e. sides and top) and the resultant PWL considering the intensity (dBA per 1m²) and equipment’s surface area.</p> <p>b. WSP considered a typical highway truck for shipment of processed material to market, and a PWL of 103 dBA was used for a typical highway truck. This emission is based on WSP’s database of similar sources as measured in the recent past. It should be noted that many of the previous files being referred to by Valcoustics are files that commenced in and around 2017. WSP has a revised dataset that represents these noise sources based on more recent sound emission data from newer equipment that more accurately reflects what is available for use in the market.</p>	<p>Response resolves the comment</p>		

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<p>support this sound power level is needed.</p> <p>d. The 26 unloading events in an hour excludes the 5 loads from the pit operation. Why was the pit unloading not included?</p> <p>e. What time duration was used for the unloading events?</p> <p>f. As per Note 1, what other adjustments beyond time weighting were included in the assessment?</p> <p>g. What source heights were used for each noise source?</p>		<p>c. The PWL of 107 dBA used for the haul truck is the limiting value for the haul truck that the truck will be required to operate at and could consider the presence of additional noise controls from a standard haul truck. From WSP's experience, this can be accomplished with truck-mounted noise controls that could include the combination of; a muffler replacement, installation of louvers on engine cooling radiator and lagging elements of truck's undercarriage. WSP has worked with equipment operators in the past where these types of sources were successfully implemented.</p> <p>d. Based on WSP's experience, the unloading of material extracted from a sand and gravel pit is acoustically insignificant when compared to the unloading of material extracted from quarry operations. Accordingly, the unloading activities of the pit material were not quantitatively assessed.</p> <p>e. A total of 6 minutes in a given hour was considered for the unloading operations. This corresponds to approximately 14 seconds per truck.</p> <p>f. The number of trucks and their speed (adjustment to the overall PWL) were used to model noise emissions from the haul trucks.</p> <p>g. The heights of the noise sources, as considered in the noise assessment has been provided in the table below.</p> <table border="1" data-bbox="724 1413 1317 1826"> <thead> <tr> <th>Equipment</th> <th>Source Height [m]</th> </tr> </thead> <tbody> <tr> <td>Generator</td> <td>4</td> </tr> <tr> <td>Screen 1-2</td> <td>4</td> </tr> <tr> <td>Jaw crusher</td> <td>4</td> </tr> <tr> <td>Cone crusher</td> <td>5</td> </tr> <tr> <td>Loader PP</td> <td>2.5</td> </tr> <tr> <td>Loader EX</td> <td>2.5</td> </tr> <tr> <td>Drill 1-2</td> <td>1.5</td> </tr> <tr> <td>Screen 1-7</td> <td>4.75</td> </tr> </tbody> </table>	Equipment	Source Height [m]	Generator	4	Screen 1-2	4	Jaw crusher	4	Cone crusher	5	Loader PP	2.5	Loader EX	2.5	Drill 1-2	1.5	Screen 1-7	4.75			
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<p>Regarding Section 4.0 of the report discussing the PORs:</p> <p>a. The noise guideline limits apply equally at all noise sensitive PORs. What are considered the most sensitive PORs and why are only these being considered?</p> <p>b. Heritage Impact Assessments appear to have been done for five locations. Why are only two heritage residences considered in the noise study?</p> <p>c. What receptor height was used for the heritage residences?</p> <p>d. How were the vacant lots included in the assessment?</p> <p>e. Why were the individual receptors divided into 14 groups and each not assessed individually?</p> <p>f. What is the difference between a potential vacant lot and a vacant lot?</p> <p>g. Why are RPOR004 and RPOR12 deemed Class 2 receptors? The northernmost of the dwellings represented by RPOR004 is almost 200 m to the north of Charleston Sideroad and benefits from acoustical screening.</p>	Noise Assessment Report Section 4.0	<p>b. All existing residences and vacant lots located in the proximity of the site were considered as sensitive Points of Reception (PORs) and the noise levels from the Site operations (for each extraction phase) were predicted at all PORs. WSP modelled all forty-seven (47) identified PORs and the report presents the results at the 14 Representative PORs representing all existing and vacant lots PORs identified.</p> <p>c. All five locations assessed in the Heritage Impact Assessment were considered in the noise assessment. The following table provides a correlation between the Heritage Impact Assessment and the noise assessment.</p> <table border="1"> <thead> <tr> <th>Heritage Impact Assessment Locations</th> <th>Corresponding Noise Assessment PORs</th> </tr> </thead> <tbody> <tr> <td>1420 Charleston Sideroad</td> <td>Not assessed, intended as CBM Field office</td> </tr> <tr> <td>18667 Mississauga Road</td> <td>POR046 (RPOR013)¹</td> </tr> <tr> <td>18501 Mississauga Road</td> <td>POR047 (RPOR014)¹</td> </tr> <tr> <td>18722 Main Street</td> <td>POR013 (RPOR003)²</td> </tr> <tr> <td>1055 Charleston Sideroad</td> <td>Not assessed, barn within Project Boundary</td> </tr> </tbody> </table> <p>Notes: (1) Location of RPOR is the same as POR (2) Results reported for most impacted POR of a group of individual receptors in specific area, please refer to Noise Study Table 2 for more details</p> <p>d. A height of 4.5 m was used to represent heritage receptors.</p> <p>e. The vacant lots were identified following the guidance of MECP NPC-300 and are based on a review of property parcel map obtained from the Ontario GIS database. Where applicable, the vacant lot receptors were modelled at distances from adjacent roads consistent with other residences existing in the same area.</p>	Heritage Impact Assessment Locations	Corresponding Noise Assessment PORs	1420 Charleston Sideroad	Not assessed, intended as CBM Field office	18667 Mississauga Road	POR046 (RPOR013) ¹	18501 Mississauga Road	POR047 (RPOR014) ¹	18722 Main Street	POR013 (RPOR003) ²	1055 Charleston Sideroad	Not assessed, barn within Project Boundary	Response resolves the comment		
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<p>RPOR012 appears to be further from Charleston Sideroad than RPOR011 which was deemed Class 3.</p>		<p>f. All receptors in the area adjacent to the project site were considered in the noise model calculations. The noise levels were predicted for all identified receptors. However, for clarity of the report, representative receptors (for a group of receptors) were introduced. The levels presented for each identified representative receptor correspond to the highest predicted noise level.</p> <p>g. For the purpose of the assessment there is no difference between a 'potential vacant lot' and 'vacant lot'. The designation of a 'potential vacant lot' was applied to a vacant lot that is zoned to allow for sensitive land use but appears to be less accessible for the construction of a home (i.e. dense woodlot), where a 'vacant lot' receptors was used for lots that appeared to be more accessible for the construction of a home. Both types of empty lots were conservatively considered as vacant lots that could accommodate sensitive land use.</p> <p>h. The RPOR004 was classified as a Class 2 receptor due to fact that the acoustical environment is made up of road traffic along Main Street and Charleston Side Road. Baseline noise monitoring was completed along the Main Street for a period of 10 days. The minimum recorded daytime hourly sound levels were 52 dBA. It should be noted that the Main Street monitor was located at a greater distance from Charleston Sideroad than RPOR004. When the influence of Charleston Sideroad is considered, the ambient sound level is expected to increase. In the case of ROPR012, this receptor is located slightly further from Charleston Sideroad than the RPOR011, however it is more influenced by traffic along the section of Mississauga Road located north of Charleston Sideroad servicing the village of Alton. In completing a conservative assessment, WSP considered less traffic along Mississauga Road south of Charleston Sideroad servicing Cataract.</p>			
<p>For the outdoor PORs the report states "the outdoor POR will be protected during the night-time as a consequence of</p>	<p>Noise Assessment Report Section 5.0</p>	<p>Outdoor noise receptors were also considered in the analysis of daytime operations. If the OPOR noise levels were higher than the POWPOR, the OPOR level were reported for the POR those</p>	<p>Response resolves the comment</p>		

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meeting the sound level limit at the adjacent POW". It is not clear why only the nighttime is considered for the outdoor POR since there is no nighttime guideline limit at an outdoor POR. During the daytime and evening periods, when there is a MECP noise guideline limit, the outdoor POR is potentially up to 30 m closer to the noise source(s) than the building façade. Confirmation that the daytime guideline limits will be met at all locations considered to be part of the outdoor POR is needed.		values were reported for. In assessing the OPOR, the area within 30 m of the home was considered at the height of 1.5 m. It should be noted that most PORs are considered at a height of 4.5 m, which generally resulted in higher predicted noise levels when compared to OPORs.			
In describing the qualitative impact of a change in sound level along the off-site haul route, it is not clear why the report uses guidance provided by the MECP Landfill Guidelines but uses the description provided by Bies and Hansen. The report should rely on the qualitative ratings already contained in the MECP Landfill Guideline where sound level increases of 3 to 5 dBA are deemed noticeable.	Noise Assessment Report	WSP acknowledges that, for clarity, the report should reference only one guidance document to assess the potential changes in noise levels due to traffic namely, the MECP Landfill Guidance as it is used for similar assessment for projects across Ontario. The reference to Bies and Hansen was provided to provide an additional published reference. The sole use of the MECP landfill guideline will not change the findings of the assessment.	Response resolves the comment		
To calculate the sound levels at the receptor locations, ground absorption factors of 0.2 and 1.0 were used for the pit/quarry floor and all other areas, respectively. The 0.2 value is considered reasonable and realistic for the pit and quarry floors. However, the value of 1.0 is unrealistically high to be used for all other areas. Using too high a sound absorption coefficient will result in underpredicted sound levels at the receptors.	Noise Assessment Report	A ground absorption of 1 was used for surfaces associated with areas covered by vegetation (i.e., fields, grassed lands and/or woodlots). The modelling conservatively did not consider shielding provided by intervening structures (i.e. woodlots). It is WSP's opinion that the use of a ground factor of 1 is appropriate to represent acoustically soft areas such as the areas described above.	While it is agreed that excluding the attenuation provided by woodlots is conservative and would justify the use of a higher ground absorption coefficient, review of Figure 1 in the noise report indicates there is very little to no tree cover to the west and to some receptors to the east of the site.	WSP included this sentence to provide a general statement indicating the fact that woodlots or any other intervening structures were conservatively not included in the noise model. It is acknowledged that there are areas where woodlots do not exist between the Site and the off-Site receptors. However, the intervening lands are typically either natural cover or farmland, both of which are generally considered acoustically absorptive.	Response resolves this comment

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<p>The report indicates a minimum working face height of 6 m has been accounted for. It is not clear if this is for the pit, the quarry or both. Clarification is needed.</p>		<p>The 6 m referenced in the report was for the pit. The statement in the report was not clear as the minimum working face height considered was not 6 m for the entirety of the pit area. The depth of the sand and gravel resource ranges between 2 and 6 m within the Site. In completing the assessment, the actual known depth of the resource was considered in the modelling (i.e., working face of the pit resource varied between 2 and 6 m at various locations within the pit).</p>	<p>The response resolves the comment. The noise control requirement on the Site Plans should be revised to require pit extraction to occur in a single lift for the full depth of the resource.</p>	<p>This statement has been added to the Site Plans Note 8 I., to read: <i>Pit extraction will occur in a single lift for the full depth of the available resource</i></p>	
<p>Regarding the proposed noise controls:</p> <ul style="list-style-type: none"> a. The Temporary Processing Plant scenario requires a gap in the property line sound barrier to allow access to the office and laboratory. The length and location of this gap need to be clearly indicated to ensure the required noise mitigation is not compromised. b. 13 m high sound barriers are to be constructed within 20 m to the north, east and west of the processing plant. How are these sound barriers to be constructed since there does not appear to be adequate space in the 20 m allowance for the side slopes of a berm? Is all equipment within the processing plant to be within 20 m of the barrier? c. The report states “the haul truck noise emissions will need to be reduced with the installation of on-equipment noise controls (i.e. intake silencers, acoustic 		<ul style="list-style-type: none"> i. The gap is marked in Figure 2. The width of the gap of the property line berm, located east of the temporary processing plant, is only approximately 80 m and therefore the noise mitigation performance is not substantially compromised. j. The barrier located around the processing plant is considered to be an acoustic barrier located in the proximity of the processing plant. It is not expected that a 13 m high barrier will be constructed instead of a berm. The requirement for the equipment to be located within 20 meters of the barrier is based on the equipment layout considered and it is applicable to the closest assessed acoustically significant source. Please note, the final design of the barrier will be confirmed once the final layout of the processing plant is available. The barrier performance will be confirmed through measurements once the equipment is operating onsite. A note will be added to the May 2025 version of the Site Plan (MHBC) that requires an audit of the barrier performance through the on-site measurement of noise levels. The note reads as follows: <ul style="list-style-type: none"> ▪ <i>Prior to the commencement of operations of the temporary processing plant, noise measurements to determine performance of the proposed noise barriers shall be undertaken by a qualified professional.</i> ▪ <i>Prior to the commencement of operations of the permanent processing plant, noise measurements to determine performance of the proposed noise barriers shall be undertaken by a qualified professional.</i> 	<ul style="list-style-type: none"> a) Figure 2 in the noise study does not appear to show the gap in the property line sound barrier. b) The notes should be revised to confirm that operations will not commence until the measurements have been made, the noise assessment has been updated, and the required noise mitigation measures have been implemented. Any changes to the noise mitigation requirements will likely require the site plans to be revised. c) Response resolves the comment. 	<ul style="list-style-type: none"> a) Revised figure is provided in Attachment A. b) The following notes on the Site Plans have been updated for both the temporary processing plant (8 g.) and permanent processing plant (8 i.) Site Notes. <p>To read as below, the highlighted text sections are added to the existing notes 8 g., and 8 i.:</p> <p><i>Note 8 g.)</i></p> <ul style="list-style-type: none"> ▪ <i>Prior to the commencement of operations of the temporary processing plant, noise measurements to determine performance of the proposed noise barriers shall be undertaken by a qualified professional. If measurements indicate MECP noise limits are not being met at an adjacent sensitive receptor, the licensee will reduce operations as directed by the qualified professional to ensure operations will be brought back into compliance with MECP noise limits. Prior to full operations being permitted to continue in the affected area, a qualified professional shall advise on the required revisions to the operation and mitigation measures to ensure MECP limits will be met and once full operations continue noise measurements will be completed by a qualified professional to ensure the operation is in compliance with MECP noise limits.</i> <p><i>Note 8 i.)</i></p> <ul style="list-style-type: none"> ▪ <i>Prior to the commencement of operations of the permanent processing plant, noise measurements to determine performance of the proposed noise barriers shall be undertaken by a qualified professional. If measurements indicate MECP noise limits are not being met at an adjacent sensitive receptor, the licensee will reduce operations as directed by the qualified professional to ensure operations will be brought back into compliance with MECP noise limits. Prior to full</i> 	<ul style="list-style-type: none"> a) Response resolves the comment b) The notes should be revised to require all necessary noise mitigation to comply with MECP noise limits be in place prior to the processing plants being permitted to operate on the site, apart from the brief period needed to perform these noise measurements when mitigation requirements have not yet been determined.

Initial CAART Comments (Date)	Page / Section	Applicant Response June 25, 2025	CAART Response (January 15, 2026)	Applicant Response (March 23, 2026)	CAART Response
lagging)". To what sound power level do the haul truck sound emissions need to be reduced to? Can an example of where this has been successfully implemented in the past be provided.		k. The haul truck PWL, after the implementation of the required additional noise controls, is 107 dBA. WSP staff have worked with clients across Ontario investigating and implementing similar types of controls. These include metal foundries in south and eastern Ontario and mine sites in northern Ontario.		<i>operations being permitted to continue in the affected area, a qualified professional shall advise on the required revisions to the operation and mitigation measures to ensure MECP limits will be met and once full operations continue noise measurements will be completed by a qualified professional to ensure the operation is in compliance with MECP noise limits.</i>	
Sample calculations and background traffic information used to prepare the haul route analysis are missing from the report. In addition, have the truck volumes associated with aggregate recycling been included in the assessment?		Sample calculations have been provided in Attachment B. As indicated in response e) sub c. the operation of aggregate recycling is assumed to be completed using the equipment diverted from other areas within the project site (i.e. processing / sales operations). It is not expected there will be an increase in truck traffic for the worst-case hour with the consideration of truck traffic associated with the aggregate recycling.	The background traffic information to support the sample calculation has not been provided. Regarding the sample calculation: <ul style="list-style-type: none"> • Are the 600 and 672 vehicles hourly volumes? • How do these volumes break down into automobiles, medium trucks and heavy trucks? • The predicted Leqs are very high, at what distance from the roadway centreline do they apply and how does this relate to a typical dwelling setback along the haul route? 	600 and 670 refers to hourly number of vehicles before and after the introduction of the Project traffic, respectively. From information available from the TIS work, the traffic breakdown considered for the traffic assessment is: <ul style="list-style-type: none"> ▪ Without project traffic: 90% cars, 2.6% medium trucks and 7.4% heavy trucks ▪ With project traffic: 80.3% cars, 2.4% medium trucks and 17.3% heavy trucks The noise levels were predicted at a distance of 25 m from the centreline of the road, which is similar to the setback associated with POR020. It is acknowledged that the predicted levels are high, this is due to the conservative consideration of the POR020 setback. As the assessment of impact at all PORs is based on a relative change before and after the introduction of the Project, there is little difference in the assessment results if a setback of 25m or 100m is used.	Response resolves the comment.
Table 9 presents the analysis results with pit operations occurring. It is not clear how the resulting sound levels with the pit operations (Table 9) can be lower than those with just the quarry operating in Phase 6 (Table 8). If the results provided in Table 9 are from the pit operations alone, why have they not been combined with the quarry operations? Clarification is needed.		Table 9 represents the predicted noise levels from the Phase 6 pit operations and includes Phase 5 quarry operations that can occur concurrently. Table 8 is representation of the quarry alone for Phase 6 and 7 of the quarry operations. To understand the noise levels associated with the pit alone one would need to complete a comparison of Table 5 (i.e., Phase 5 of the quarry alone) and Table 9 (i.e., Phase 6 pit operations and includes Phase 5 quarry operations that can occur concurrently).	The response provided does not respond to the question that was asked. Why are the Table 9 (pit and quarry operating) lower than those in Table 8 (only quarry operating)?	The differences between the predicted noise levels presented in Table 8 and Table 9 are associated with the different location of the extraction equipment and degree of noise screening provided by the pit and quarry working faces. When comparing results in Table 8 (worst case Quarry in Phase 6 and Phase 7) and Table 9 (worst case Pit in Phase 6 and Quarry in Phase 5), noise levels presented in Table 9 are higher for almost all receptors excluding RPOR009, RPOR010, and RPOR011. The predicted results at RPOR009, RPOR010, and RPOR011 are higher in Table 8 due to the fact that extraction in Phase 6 and Phase 7 for the Quarry activities are closer to these receptors than the scenario summarized in Table 9 (i.e. worst-case Pit in Phase 6 and Quarry in Phase 5).	It is not clear that the sound levels presented in Table 8 of the Noise Report are from quarry operations alone. This is not stated in the report. Given that the sound levels at POR009 are lower for the worst case scenario in Table 9 (Pit in Phase 6 and Quarry in Phase 5), it is not clear how the description of the worst case scenario presented in the response to the first comment in this table is valid.
Regarding the Site Plan Noise Control Notes: a. In addition to limiting the sound power level for		l. The number of pieces of equipment is stated in Section 8.0 and presented in Table 1 (quantity). The provided quantity is considered a maximum number of pieces of the same type of equipment	a) The table should also indicate there are further restrictions on the maximum amount of equipment (such as a single drill in Area 1) beyond the maximums shown in the	a) Limitations are included in the Site Notes in Section 8. The table in the Site Note was revised to include footnotes indicating the reduced number of equipment where	a) The Site Notes should be revised to indicate that the quantity indicated in the table and the notes to the table are the maximums

Initial CAART Comments (Date)	Page / Section	Applicant Response June 25, 2025	CAART Response (January 15, 2026)	Applicant Response (March 23, 2026)	CAART Response
<p>equipment to be used on the site, the amount of each type of equipment also needs to be limited.</p> <p>b. Proposed barriers are indicated as potentially being stockpiles. Detail on how stockpiles will be used to provide the required noise mitigation and how the stockpiles will be maintained is needed.</p> <p>c. Drills shall include manufacturer installed noise controls resulting in a maximum sound power level of 116 dBA. Can manufacturer's data confirming their noise mitigation package will achieve the recommended sound power level limit be provided? Also, in the Area 1 and Area 4 scenarios, what sound power level was used for the unmitigated drill?</p> <p>d. The Site Plans should include all of the noise mitigation measures recommended in the noise study. These mitigation measures appear to be missing:</p> <p>a. The recommended haul truck noise mitigation.</p> <p>b. Temporary and permanent processing plants are not to operate simultaneously.</p> <p>c. Changes in location of the processing equipment should be evaluated by a qualified acoustical consultant to ensure the noise guideline limits are met at all noise sensitive receptor locations prior to proceeding.</p> <p>d. Minimum pit face height.</p>		<p>present on the site at any given time and any departure from these quantities will require verification by a qualified acoustical specialist. The May 2025 version of the Site Plan (MHBC) has been updated to include these quantities and, as such, a Site Plan amendment would also be required if these change.</p> <p>m. The stockpiles will, when present, provide additional noise screening. However, due to the spatial and temporal characteristic of stockpiles, they were conservatively not included in noise predictions. The statement was provided to identify that the assessment of off-site Project sound levels is expected to be conservative as the potential shielding provided by the stockpiles were not considered in the assessment but if in-place would provide additional screening.</p> <p>n. Manufacturer data is provided in Attachment C. Based on the manufacturer's data, the equipment-mounted noise controls are capable of reducing the drill's PWL from 127 dBA (unmitigated) to 115 dBA (mitigated) accounting for a 12 dB overall noise reduction. For the purpose of assessment, the drill was considered to be already equipped with the noise reduction and a PWL of 116 dBA was conservative considered which is 1 dB higher than PWL provided by the manufacturer. When the term unmitigated is used for the drill WSP is referring to the fact that no additional mitigation (i.e., local barriers) is required. However, it was determined that additional local noise barriers will be required for a drill to operate in specific areas of the site. These specific areas requiring the additional noise mitigation (i.e., local barriers) have been identified in the report and on the Site Plan.</p> <p>o.</p> <p>(1) Additional information will be added to the May 2025 version of the Site Plans (MHBC). Haul trucks used for the transportation of extracted material shall meet a be maximum sound power level as specified in Table 21. The Site Plans note reads: <i>Haul trucks shall be equipped with additional noise controls reducing the equipment sound power level to 107 dBA. Prior usage the performance of the</i></p>	<p>Table. These additional equipment limits are to be included in the Site Plan notes.</p> <p>b) The statement in the report "Proposed barriers can be constructed of earth berms, product stockpiles..." should be revised to reflect this response.</p> <p>c) Response addresses the comment.</p> <p>d) (1) Not clear what the highlighted section is intending to say.</p> <p>d) (2) Response addresses the comment</p> <p>d) (3) Response addresses the comment.</p> <p>d) (4) The note as written does not ensure the face height will be the minimum height required according to the noise modelling and would potentially allow a lower face height when a higher face is needed. Wording needs to be revised. The requirement may be that extraction be done in a single lift to the bottom elevation of the pit.</p> <p>d) (5) Response addresses the comment.</p>	<p>applicable. The revised Table 1 is provided in Attachment B for readability.</p> <p>b) WSP report indicates the location and dimensions of the noise barriers proposed for temporary and permanent processing plants. The report indicates that the identified barriers can be constructed of various materials so long as the minimum required surface density of 20 kg/m² is met. The expectation is that the barrier, once constructed, will remain in place for the duration of operations. The report also indicates that any stockpiles located between the source and the receiver could provide acoustical attenuation. However, in completing a conservative assessment, recognizing that stockpile locations and heights will change over the life of the Project, stockpiles were not included in the assessment as barriers).</p> <p>d) (1) Indicates the requirement for the proponent to verify whether the installed noise controls meet the required noise reduction (i.e., equipment PWL of 107 dBA). The Site Plan Note 8 q., has been revised to read "<i>Prior to usage of haul trucks, the performance of the installed noise controls shall be verified by a qualified professional</i>".</p> <p>d) (4) The Site Plan Note 8 l., has been updated to read <i>Pit extraction will occur in single lift for the full depth of the available resource.</i></p>	<p>permitted to operate on the site.</p> <p>b) Response addresses the comment.</p> <p>d)(1) The Site Plan note should be revised to require sound level measurements be done to confirm the maximum sound power level of the haul trucks does not exceed 107 dBA (maximum sound pressure level of 75 dBA at 15 m).</p> <p>d)(4) Response resolves the comment.</p>

Initial CAART Comments (Date)	Page / Section	Applicant Response June 25, 2025	CAART Response (January 15, 2026)	Applicant Response (March 23, 2026)	CAART Response
e. Minimum quarry face height.		<p><i>installed noise controls shall be verified by a qualified professional.</i></p> <p>(2) The May 2025 version of the Site Plans (MHBC) will be updated to identify that the temporary and permanent processing plants shall not operate concurrently at any time thorough the lifetime of the Site. The Site Plans note reads: <i>At any point of the Site lifetime the temporary and permanent processing plant shall not operate concurrently</i></p> <p>(3) The May 2025 version of the Site Plans (MHBC) will be updated to identify that any changes in location or modification of the processing equipment shall be evaluated by a qualified acoustical consultant, prior to use, to ensure the noise guideline limits are met at all noise sensitive receptor locations. The Site Plan note reads: <i>Prior to use any changes in location or modification of the processing equipment shall be evaluated by a qualified acoustical consultant to ensure the noise guideline limits are met at all noise sensitive receptor locations</i></p> <p>(4) The May 2025 version of the Site Plans (MHBC) will be updated to reflect that a minimum pit face height of 2 m to 6 m, based on resource depth, in the direction of the nearest offsite receptor shall be maintained. If for some reason this minimum face height cannot be maintained the noise levels at offsite receptors shall be evaluated by a qualified acoustical consultant. The Site Plan note reads:</p> <p><i>A minimum pit working face of 2 m to 6 m, based on resource depth, in the direction of the nearest offsite receptor shall be maintained. If the specified minimum height of the pit working face cannot be maintained, noise levels at the offsite receptors shall be evaluated by a qualified acoustical consultant to confirm compliance with the applicable noise limits.</i></p> <p>(5) The May 2025 version of the Site Plans (MHBC) will be updated to reflect that a minimum quarry working face of 14 m shall be maintained in the direction of the nearest offsite receptor. If for some reason this minimum face height cannot be maintained the noise levels at offsite receptors shall be evaluated by a</p>			

Initial CAART Comments (Date)	Page / Section	Applicant Response June 25, 2025	CAART Response (January 15, 2026)	Applicant Response (March 23, 2026)	CAART Response
		<p>qualified acoustical consultant. The Site Plan note reads:</p> <p><i>A minimum quarry working face of 14m in the direction of the nearest offsite receptor shall be maintained. If the specified minimum height of the quarry working face cannot be maintained, noise levels at the offsite receptors shall be evaluated by a qualified acoustical consultant to confirm compliance with the applicable noise limits.</i></p>			
<p>The Terms of Reference provided in Appendix A indicate that Golder (now WSP) will complete a noise monitoring program where existing baseline noise levels will be documented. The results and findings from the baseline noise monitoring report are missing from the report.</p>		<p>Noise monitoring was completed to provide additional data to support establishing the noise limits at the Project specific PORs (MECP Class 2 or 3). Baseline measurement results are not typically included as part of application supporting documents. Document summarizing the results of noise baseline measurements is provided in Attachment D. A table summarizing the results of baseline noise measurements completed in 2021 is provided in response g) sub g.</p>	<p>Response addresses the comment</p>		