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Municipality of West Grey

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REDFORD PIT EXPANSION – NOISE IMPACT ASSESSMENT PEER REVIEW

WSP Canada Inc. (WSP) was retained by the Municipality of West Grey (the Municipality) to conduct a peer review of the Noise Impact Assessment (NIA) prepared by Howe Gastmeier Chapnik Limited (HGC), dated July 22, 2025 for a proposed expansion of Redford gravel pit at 133832 Allan Park Road which is the north half of Lot 20, Concession 5 NDR, in the Municipality of West Grey, Ontario (the Site). This letter summarizes WSP's peer review comments.

1 BACKGROUND

WSP understands that the Site as per Operations Plan provided by Skelton Brumwell & Associates Inc. dated November 2023 in Appendix of the NIA, is proposing a 20.8-hectare area to be licenced and approximately 14.5 hectares to be the area of the extraction. The site is aiming to get a Class "A", Category 3 licence. The Site would be an expansion to the east of an approved operating Redford Pit.

As per the Ministry of the Natural Resources (MNR) Pits and Quarries online portal, the existing pit is located on Lot 19, Concession 5 NDR and the registered location name is Bentinck Pit. The existing pit has an MNR aggregate licence number of 624883 with an authorized area of 40.8 hectares, with a maximum annual tonnage 100,000.

The Site is located to the immediate west of Allan Park Road, 1 kilometer south of Concession Road 6 NDR and 0.5 kilometer north of Concession Road 4 NDR.

The Site is currently zoned Agriculture (A1) and Natural Environment (NE) as per West Grey municipal zoning by law 2006-37. As per Grey County Property Report, the current use is a farm with a residence and with secondary structures (farm outbuildings). The existing shop and house on the site will be re-purposed to onsite office and maintenance use, if not needed they will be demolished.

The proposed gravel pit aims to extract and ship 300,000 tonnes annually. No extraction below the water table is proposed.

As per the Operational Plan, the proposed gravel pit operations will be from 07:00 am to 7:00 pm, Monday to Friday for crushing and 6:00 am to 7:00 pm, Monday to Friday and 7:00 am to 12:00 pm on Saturday for extraction, loading and shipping with no Sunday operations.

Potential equipment to be used on-site for daily operations as per the NIA include: front-end loaders, crusher, screener, generator, and trucks. HGC completed a NIA to support this proposed development.

1.1 Other Surrounding Pits

Other aggregate pits existing or proposed in the area include:

- **Bentinck Gravel Pit** – 382063 Concession Road 4 NDR.
 - J.T. Excavating Ltd., Noise Impact Study prepared by Valcoustics Canada Ltd. August 17, 2023, peer reviewed by WSP dated May 27, 2025). This pit is located 430 metres east of the proposed Site.
- **J.R. McLaughlin Pit** – 133690 Allan Park Road (Lot 20, Concession 4 NDR).
 - J.R. McLaughlin pit, has an application on the Environmental Registry of Ontario for a licence to remove over 20,000 tonnes of aggregate annually. As per Ministry Reference #626604, a notice was updated on August 14, 2025, to advise the public that there has been no change to the status of the proposal, and it is still being considered. This pit is located 530 metres south from the proposed Site.

2 VERSION HISTORY

The history of the reports submitted to the municipality and the Peer Review on the submitted studies are noted in Table 1 below.

Table 1: Version History

Date	Title	Company
July 22, 2025	Noise Impact Assessment, Walker Aggregates Redford Pit Expansion Municipality of West Grey, Ontario	Howe Gastmeier Chapnik Limited
November 27, 2025	Walker Aggregates Redford Pit Expansion – Noise Impact Assessment Peer Review	WSP Canada Inc.

3 PEER REVIEW COMMENTS AND RESPONSES

3.1 Redford Pit Expansion – Noise Impact Assessment

WSP’s comments on the Noise Impact Assessment (NIA) are the following:

Section 1.0 Introduction

- 1) The NIA mentions that the purpose of the NIA was to assess the potential impact of noise from the proposed Redford Pit expansion at neighbouring sensitive receptors (i.e. residential dwellings) in accordance with Ministry of the Environment, Conservation and Parks (MECP) noise guidelines. WSP agrees that the applicable provincial noise guidelines and criteria were used. *No response required.*

Section 2.0 Description of Site and Surrounding Area

- 2) The NIA description and Figure 1 both accurately reflect the location of where the Site is located within the municipality of West Grey Ontario as per Operational Plan provided. *No response required.*
- 3) The NIA mentions that aggregate extraction, processing, and shipping will be conducted within and from the expansion from Monday to Saturday between 07:00 and 19:00, with no operations on Sundays or statutory holidays. WSP notes that the operational plan provided in the Appendix mentions that extraction, loading and shipping will be conducted an hour earlier (i.e. 06:00) which means operations will be conducted during nighttime hours [where a more restrictive noise limit would apply] and on Saturdays from 07:00-12:00. *These are conflicting messages, please confirm which set of hours are correct, and please update the NIA if required to address the potential impact of operations during nighttime hour, if applicable.*
- 4) Based on available information, WSP generally agrees with the existing sensitive receptors chosen for the noise impact study as shown in Figure 2 of the report, with the exception of not identifying receptors to the west and north. The closest noise sensitive receptors that were chosen are the closest to the expansion lands, namely to the east of the Site. Although the receptors to the west may be the closest to the existing lands, they could be impacted by the proposed activities in the expansion lands. Based on the information available, it is understood this application includes the proposed increase in annual tonnage from 100,000 to 300,000 tonnes annually. For completeness, modelling results should be provided for the receptors to the west and to the existing receptors or potential (i.e. vacant lands) to the north. *Please update the NIA to include the assessment of receptors to the west and north.*
- 5) Within the NIA, Outdoor receptors were identified for R02 through R05. *Please provide justification for not including outdoor receptors for R01 or R06 through R08.*
- 6) Based on available information, WSP agrees with the inclusion of the vacant lot receptor (VL1) to the east and that the location was selected in accordance with the guidance provided in MECP publication NPC-300. WSP notes there are two other vacant lots to the immediate north of the expansion that were not included in the assessment. *Please provide justification as to why the two (2) vacant lots to the north were not included in this assessment.*
- 7) WSP agrees that ambient background sound levels at receptor locations would be dominated by natural sounds and that all points of reception would be best categorized as Class 3 acoustical environment under MECP NPC-300 guideline. *No response required.*

Section 3.0 Criteria for Acceptable Sound Levels

- 8) WSP notes that the criteria listed in the NIS is the correct noise guideline for land use planning for Ontario, the Ministry of the Environment, Conservation and Parks (MECP) NPC-300. *No response required.*
- 9) WSP notes the NIA does not mention it reviewed and considered the West Grey Noise Control Bylaw No. 55-2016. *Please confirm that the West Grey Noise Control Bylaw was considered and how it could impact site construction or operation activities.*
- 10) The NIA correctly defines what a Class 3 area is as per MECP NPC-300. *No response required.*
- 11) The NIA correctly identifies that if background levels exceed the exclusionary limits, then that background sound level becomes the criteria. However, for this assessment the MECP exclusionary limits were applied

as per observations background sound levels may fall below exclusionary minimum limits during the quietest hour. *No response required.*

- 12) As per the Operational Plan, the permitted hours for operation for site activities such as extraction, loading and shipping during Monday to Friday are from 06:00 to 19:00. The NIA mentions that activities are only from 07:00 – 19:00 and thus only daytime criteria is mentioned and reflected in this section. *As per comment #3 above, please update and address nighttime activities assessed against nighttime MECP NPC-300 criteria, if applicable.*
- 13) The NIA correctly identifies that temporary sound produced during preparation and rehabilitation of extraction areas, or the sound produced by highway trucks on public roads, or by auditory warning devices are not covered under MECP NPC-300 guideline. WSP agrees that even though NPC-300 only governs stationary sources within the Site, the NIS should address potential noise impacts of the truck traffic on public roadway. As the application references an increase to the annual tonnage from 100,000 to 300,000 there is a potential impact to the onsite and off-site truck traffic. *Please confirm if the assessment of onsite truck traffic (i.e. 28 inbound and 28 outbound) considered the predictable worst-case hourly truck volumes that represent an annual tonnage of 300,000. Please update the NIA to discuss the potential noise impact from the proposed increased traffic along public roadways (i.e. haul route analysis).*
- 14) The NIS correctly points to MECP Publication NPC-115, of which any equipment used for construction activities (i.e. site preparation and rehabilitation) should satisfy the noise emission requirements of the MECP document NPC-115. *WSP recommends that noise level emissions for construction equipment that will be used should be specified and included on final Site Plans. No response required.*
- 15) WSP notes that back-up beepers can be a source of nuisance complaints and therefore recommends alternative technologies such as broadband alarm should be used on the equipment operating at the site. In addition, the internal haul routes should be designed to minimize the need for reversing to reduce the use of backup arms as well. *Recommendation under Noise Control Measures should be included. No response required.*
- 16) WSP also notes that tailgate banging can be a source of nuisance complaints, and recommends a policy be implemented onsite that minimizes tailgate banging when unloading dump trucks onsite, if they were to occur, also be included. *Recommendation under Noise Control Measures should be included. No response required.*

Section 4.0 Description of Pit Operations

- 17) The description of operational plans in this section for Phase 1 and 2 matches what is displayed in Figure 3 Operational Plans. *No response required.*
- 18) As per the NIA, the worst-case operations and equipment used at the Redford Pit expansion phases include:
 - Working face - one (1) extraction loader at pit floor.
 - Hauling - one (1) front end loader will be used to transport material between the working face and the processing area.

- Processing Area – one (1) permanent processing plant (crusher, screener, generator) that will be located within the area as shown in the Operational Plan. As per Appendix A, this area will also include front-end loaders or excavators, however it was not included in the analysis given that it will be acoustically insignificant relative to the balance of equipment in the processing area.
- Shipping – Twenty-eight (28) shipping trucks between the processing area and off-site via the existing Redford Pit main entrance on Concession Road 4. (Number provided in Appendix A)

WSP has the following comments and recommendations:

- a) WSP recommends that the equipment list, quantity and noise levels used per equipment as shown in Appendix A should be included in the Operational Site Plans, along with the maintained perimeter stockpile noise control. *No response required for the NIA.*
- b) WSP notes that no figure was provided which shows where each piece of equipment was modelled that represented Table 1 worst-case predicted pit sound levels at selected receptors. Therefore, referring to sample calculation provided in Appendix C for locations and what was modelled, it appears that hauling activities (front end loader between extraction working face and processing plant) were not included in the analysis. *Please provide justification or please update to include hauling activities with number of trips per a worst-case hour during day and night, if applicable (see Comment #3).*

Section 5.0 Assessment Methodology

- 19) Calculations were performed using the predictive computer model CADNA/A software which uses the implementation of International Standards Organization (ISO) Standard 9613-2. WSP notes that the noise prediction model used, and the correct ISO 9613-2 was used in the assessment is consistent with industry practice. *No response required.*
- 20) The NIA did not provide what reflections and ground attenuation absorption values were used within the analysis. *Please provide Cadna configurations used in the analysis for confirmation.*
- 21) The noise emissions if they were modelled as either; a stationary point source (e.g. loaders, processing plants) or as a line source (e.g. haul routes) were not mentioned within the NIA or shown on any figures. *Please provide confirmation.*
- 22) Details of the modelling assumptions provided in Appendix A, as noted previously in Comment #3, confirmation on Operational hour as it deviates from what is listed on current provided Operational Plan is requested. *See comment #3.*
- 23) WSP generally agrees with the reference sound power levels that were listed in Table A1 of the NIA for the various equipment. They are similar to, but on the lower end of the range for the Processing Area and Highway Trucks when compared to other aggregate pit operations to which WSP has been involved with. *In an effort to protect the public and the environment, WSP recommends a condition be included in the NIA and Operation Plan requiring that a post-commissioning acoustic audit be completed by a Professional Engineer to confirm the sound emissions of the operating equipment meet the maximum levels presented in the NIA. If the sound emissions of the equipment are higher than those assessed the assessment completed in the NIA will need to be updated.*

- 24) As noted in Comment #18, WSP recommends the equipment list, quantity and noise levels used per equipment as shown in Appendix A should be included in the Operational Site Plans. The Operational Site Plans should also reference the required minimum 7-metre-high maintained perimeter stockpile noise control. *No response required with respect to the NIA.*
- 25) Confirmation of face height used in the analysis for the various phases of and confirmation how close the equipment was modelled to the working face. *Please provide further information. Was the referenced 9. meter-high working face considered throughout the entirety of extraction? If so, does the resource depth, considering existing local topography allow for the consideration of a 9-meter-high working face over the entire site?*
- 26) As per Appendix C it appears that the noise source heights used in the modelling analysis include 2.4 metres for trucks and front-end loaders and 3 metres for processing plant, WSP agrees. *No response required. However, of note, as the modelling results at offsite receptors are based on the height of the equipment in relation to local shielding (i.e. local barriers or working faces) using equipment with higher emission points could require modifications to the proposed mitigation measures. Therefore, supporting the requirements for the acoustic audit as requested in Comment #23.*
- 27) WSP recommends that the two (2) berms that are listed in Appendix Table B1 and shown in Figure 5 be included in final site plans. WSP notes that the heights associated with Berm 2 are not the same. In Figure 5 it is shown as a barrier being 5 metres above grade, where as Appendix Table B1 shows 5.5 metres above grade. *Please update*
- 28) WSP recommends that the equipment restrictions within the area marked on Figure 5 such as the extraction front end loader with a sound power level not greater than 104 dBA be included in final site plans. *No response required for the NIA.*
- 29) WSP agrees that advancements of equipment or different configurations may allow additional equipment substituted for certain activities while still meeting MECP noise guidelines as long it can be reasonably demonstrated and confirmed through documentation by a professional acoustical engineer prior to modification. *No response required.*

Section 6.0 Assessment Results

- 30) The NIA does not accurately reflect the proposed operational hours based on the Operational Plan provided, currently only daytime hours are assessed as per Table 1. *See comment #3.*
- 31) The NIA provides the predicted worst-case noise impact from the proposed facility operations during Phase 1 though 2 due to processing extraction noise sources on the nearby sensitive receptors as shown in Table 1. WSP notes that modelling files that were provided in the Appendix C of the NIA were only provided for one scenario, therefore WSP can not confirm that the worst-case results were used. (i.e. R02 in Appendix C matches Table 1, Phase 2 results of 44 dBA, however R04 which in Table 1 shows 45 dBA in Phase 2 is shown to be 46 dBA in Appendix C). *Please provide sample calculations that shows the worst-case predicted for both phases of extraction that aligns with the numbers shown in Table 1.*

Section 6.1 Existing Receptors

- 32) As per presented results in Table 1, predicted sound levels do comply with MECP guideline limits at all existing points of reception under worst-case operating scenarios. However, before WSP agrees a number of outstanding comments such as operating hours, equipment used and locations and confirmation on worst-case scenario used comments must be addressed. *See comment #3, #18b and #31.*

Section 6.2 Vacant Lots

- 33) As per the results presented in Table 1 and in Appendix C, WSP agrees that sound levels do not comply with MECP limits. The NIA mentions that given the size of the lot, it is not practical to develop noise control measures at this time. WSP agrees that there is a lot of variability due to the various potential locations a receptor could be built. However as per NPC-300, compliance must be demonstrated at all receptors. Thus, noise control recommendations should be provided for the assumed construction location and then noted that an updated Noise Impact Assessment should be conducted by a qualified acoustical engineer within 12 months following a pit operator receiving notification of a building permit issued for a noise-sensitive use on the property designated as VL1 to determine if changes to the proposed recommendations are needed. *Please update.*
- 34) WSP notes this section will need to be updated regarding vacant lots to the north of the proposed expansion that were not included in the assessment. *See comment #6.*

Section 6.3 Cumulative Impacts

- 35) The NIA notes there are the following applications for ARA licences to the MNRF within the vicinity of the proposed Redford Pit expansion: Bentinck Gravel Pit at 810 metres east (382063 Concession Road 4, NDR) and J.R. McLaughlin Pit 530 metres south (133690 Allan Park Road). WSP notes that the Bentinck Gravel Pit is actually 430 metres east of the proposed expansion. *No further response required.*
- 36) The NIA mentions that the likelihood that either pit would be simultaneously operating under worst-case conditions as it pertains to noise impacts at receptors located between them and the proposed Redford Pit expansion is low, and that if it were to occur it would be a minor excess of 3 dBA. *Although WSP agrees that there is the low probability of each site operating at the predictable worst-case condition concurrently, please justify a combined noise level of 3 dB, when there is the possibility of three (3) pits operating simultaneously.*
- 37) WSP recommends that the licensee should undertake a noise audit of the Redford Pit expansion operation to ensure that the MECP noise guidelines continue to be met upon the operating of Bentinck Gravel pit and/or J.R. McLaughlin Pit. The noise audit shall be undertaken by a qualified acoustical engineer with the results submitted to the MNRF, the Municipality of West Grey. Should MECP guidelines be found to be breached, the licensee shall undertake operational design changes to ensure compliance. *This audit would be a receptor-based audit, which is in addition to the audit recommended in Comment # 23.*

Section 7.0 Conclusions & Recommendations

- 38) The NIA defines what the acoustical shield will be comprised of (i.e. overburden or extracted/processed aggregate materials). If the acoustical shielding were to be stockpiles the following questions come to mind:

- a) How is the pit owner to ensure a 7-meter stockpile (perimeter berm around processing plant) be maintained at that height for the entirety of site operations. *The Operational plans will need to include this information.*
 - b) Stockpile at that height would have a sloped angle of repose. The distance between the top crest of the stockpile (i.e. where the stockpile is at a height of 7m) and plant will need to be considered. Has Walker confirmed that they can operate the site meeting these requirements. The maximum distance between the processing plant and the portion of the stockpile meeting the minimum height of 7m should be identified in the Operational Plans. *The Operational plans will need to include this information. Please confirm these distances were considered in the modelling.*
 - c) The proposed barriers are almost entirely surrounding the processing plant and are very close to it, is this practical for maintenance and accessibility. *Please provide more information as requested in item 39b above.*
- 39) WSP agrees that any changes to proposed expansion plans that may affect offsite sound levels should be reviewed by a qualified acoustical consultant and any modifications to the recommended noise control measures should be incorporated into the final site plans, and WSP further recommends that prior to any modification, the licensee shall provide MNRF with written notice. *No response required.*
- 40) WSP recommends that an off-site audit should be conducted within 6 months of the start of extraction in the pit expansion while processing operations are being undertaken on the site to confirm MECP noise guideline limits are not exceed, and that the acoustic audit should be done by a qualified acoustical engineer. *No response required.*
- 41) As noted in Comment #15 and 16, WSP recommends alternative technologies such as broadband alarm should be considered on the equipment operating at the site. In addition, the internal haul routes be designed to minimize the need for reversing to reduce the use of backup arms as well. In addition, WSP recommends a policy be implemented onsite that minimizes tailgate banging when unloading dump trucks onsite is also included. *Recommendation to be included.*
- 42) The NIA recommends several barriers which are illustrated in Figures 5 (Appendix Table B1) providing location and heights. WSP recommends that barrier locations, heights and length should be reviewed if there's a change in the design or grade elevations and in addition, these recommendations specified in Appendix B should be included in final site plans. *No response required at this time.*
- 43) The NIA recommends and indicates on all figures for each Phase where the Permanent Processing Plant can be located and at approximately 292 MASL. WSP recommends this should be included in final Operational Site Plans. *No response required.*

4 CONCLUSIONS

As described above, the overall study was completed in general accordance with the typical MECP procedures and standard practices for Ontario.

WSP recommends that a review of the final Operational Site Plans with noise recommendations incorporated should be completed to verify the recommendations were correctly transcribed incorporated into the final site plan.

Overall, the results of the study indicate that predicted worst case levels of the sensitive receptors surrounding the facility are expected to be within the relevant noise criteria provided the noise controls mentioned in Appendix B are implemented and strictly adhered to. The noise controls recommended should be implemented in the final Operational Site Plans. Once WSP receives the requested information and has the opportunity to review, we will be able to confirm if we agree with the findings of the assessment.

HGC is requested to provide a response addressing WSP's concerns and clarifications in order to complete the peer review process of the NIA.

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