

January 21, 2026

**Denise Holmes**, CAO/Clerk  
Township of Melancthon  
157101 Highway 10  
Melancthon L9V 2E6

Provided via email: [dholmes@melancthontownship.ca](mailto:dholmes@melancthontownship.ca)

**RE: Natural Heritage Peer Review for Strada Pit/Quarry Aggregate Application at West Half Lots 11 to 14, Concession 3, Township of Melancthon, County of Dufferin**

Dear Denise,

Thank you for the opportunity to provide natural heritage peer review services for the Proposed Strada Pit/Quarry - Class A, Below Water Pit and Quarry. North-South Environmental (NSE) was retained to review the Natural Environment Assessment (Natural Resource Solutions Inc. [NRSI] January 2025) and supplementary materials.

The application is for a Class A licence under the Aggregate Resources Act to permit below water table extraction on the site of Strada's currently licenced and active pits in the Township of Melancthon.

We reviewed the following submission materials and supporting documentation to inform our comments:

- Strada Pit/Quarry Natural Environment Assessment (NEA)<sup>1</sup> (NRSI January 2025)
- Strada Pit/Quarry Level 1 and 2 Hydrogeological Assessment (Tatham Engineering and Earthfx January 2025)
- Strada Pit & Quarry Site Plans (MHBC January 2025)
- Township of Melancthon Official Plan (2017)
- Dufferin County Official Plan (August 2025 consolidation)

Based on our review, we do not recommend acceptance of the NEA as submitted. Several substantive concerns and gaps were raised through the review. At a high level, the NEA:

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<sup>1</sup> The Natural Environment Report (NER) is the recommended report title in the provincial information standards (MNR August 2020). Peer review comments refer to the NEA (NRSI January 2025) as the Natural Environment Report (NER).

- does not include a clear study area.
- does not include a complete natural heritage characterization.
- does not provide a complete summary of the proposed activities.
- does not include a complete impact assessment - not all proposed activities are included; not all impact types are considered; not all features are assessed.
- does not include ecological rationale to support conclusions.
- does not include a complete natural heritage policy review or conformity assessment.

A comment response matrix has been prepared to organize the comments and provide a means to track responses and follow up. Substantive and overarching comments are included at the top of the table; detailed comments follow and are provided by section. Sections and page numbers from the NEA have been included for convenience. The page number references are those shown in the PDF (e.g., ###/599).

Based on the nature of the substantive items identified, detailed comments on Wetland Removal and Offsetting (section 7.3.4), Ecological Restoration and Enhancement (section 8.0), Monitoring (section 9.0) and the Summary (section 10.0) have not been provided. It is anticipated that updates / revisions to the NER to address these comments may alter these sections and as such, it is most efficient and effective that comments be developed based on an updated submission.

Please let me know if there are any items that you'd like me to address or discuss further.

Sincerely,



Shannon Catton, M.Sc.  
Senior Ecologist, North-South Environmental

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<b>Substantive Comments</b>					
SC 1	n/a	<p>The study area is unclear. Please provide a clearly identified study area on all maps and include the following areas:</p> <ul style="list-style-type: none"> <li>Proposed limit of extraction - above and below water table</li> <li>Licence boundary - existing and proposed</li> <li>120m adjacent lands - from the proposed licence boundary</li> <li>Zone of influence for each operational phase</li> </ul> <p>These areas should be shown and referred to consistently throughout the NER and other submission materials.</p>			
SC 2	n/a	<p>The natural heritage characterization is incomplete. Updates to the NER are necessary to address missing / gaps in feature identification, mapping and assessments. Please ensure that all natural features are included and addressed in the NER. The following are examples of the issue; they are not a comprehensive list of gaps and inconsistencies.</p> <ul style="list-style-type: none"> <li>Most features have been grouped into NAT complexes; however, some features are shown independent / separate from the NAT complexes. These separate features have not been assessed for significance, impacts or mitigation.</li> <li>Inconsistencies in presentation of vegetated communities; some are shown on the mapping without ELC boundaries, descriptions, etc.</li> </ul>			

<sup>1</sup> For convenience purposes, page numbers are shown as ##/599 in reference to the PDF report.

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		<ul style="list-style-type: none"> <li>• Features noted on aerial imagery are missing from the NER. A complete list of all natural heritage features within the proposed extraction area, proposed licenced area, the 120m adjacent lands and the zone(s) of influence is needed.</li> <li>• The NER states that its focus is on the natural features and functions that are hydrologically sensitive. This creates an incomplete characterization of the natural features and functions and may result in an incomplete and inaccurate impact assessment. For example, the Melancthon Pit #2 site excludes vegetation communities and species data that are terrestrial. All features and functions - terrestrial and hydrological - should be included in the NER.</li> </ul>			
SC 3	n/a	<p>The impact assessment is incomplete:</p> <ul style="list-style-type: none"> <li>• Features known to be present on the landscape are not currently included in the impact assessment.</li> <li>• Terrestrial features have been inconsistently addressed.</li> <li>• Not all types of impacts were assessed, including the timing and duration of each phase, the total time of extraction, blasting vibrations, etc.</li> <li>• Surface water impacts on the adjacent and surrounding features have not been assessed for all phases and sub-phases.</li> <li>• Cumulative impacts are incomplete. Cumulative impacts occur at two scales: 1) the phased progression of extraction operations within the proposed expansion itself and 2) also</li> </ul>			

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		the surrounding aggregate licences and extraction operations.			
SC 4	n/a	The description of the proposed extraction operations is incomplete. This description should be consistent with that presented in the water resources report and serve as a framework to help inform the impact assessment.			
SC 5	n/a	The mitigation is incomplete as it has not addressed all impacts. Further, the efficacy and certainty of the proposed mitigation measures are unknown.			
SC 6	n/a	The NER does not address all relevant policies (including those in the Township's OP) and it does not include the required policy conformity assessment and concluding statements.			
General / advisory	n/a	Please ensure that all referenced sources are the most current version. It should be confirmed whether there are changes to policies, interpretation or application. For example, the consolidated Dufferin County OP was updated in 2025.			
General / advisory	n/a	Figures in the Tatham and Earthfx report (Appendix XII) do not contain the complete natural heritage feature dataset. NAT complexes, wetlands, SWH, watercourses and fish habitat are missing. These features need to be added to the figures. Please clarify if the missing features were included or excluded from assessments completed by Tatham and Earthfx. If simply a graphical error on mapping; please update figures. If these were missed; updates to these analyses, reports and figures are required. The NER			

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		will similarly need to be updated to integrate these features, assess impacts and provide mitigation measures.			
<b>Technical Comments</b>					
<b>Introduction</b>	<b>S 1.0</b>				
1	S 1.1	The study area is defined/applied inconsistently throughout the NER and uses inconsistent naming references. Please update the NER (including mapping) to clearly and consistently identify and define the study area.			
2	S 1.1 Pg 11	<p>Priority natural features (NAT-## complexes) are identified in the NER based on NRSI “biologist experience and professional judgement”. Natural feature identification is defined in the NHRM. This approach is recommended for the NER to ensure consistency and use of industry-accepted practices and standards and should have been applied / revised once field data and interpretation of results was completed.</p> <p>To streamline efforts and ensure consistent and clear data, it is recommended that features identified through fieldwork be incorporated into the existing NAT complexes (using methods from the NHRM). If, based on field results, some NAT complexes should be consolidated into a single unit, please update the NAT complex labels to include both original references to facilitate cross referencing (e.g., NAT-##/NAT-##).</p>			
<b>Relevant Policies, Legislation and</b>	<b>S 2.0</b>				

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<b>Planning Studies</b>					
3	S 2.2	The Township's OP summary of relevant policies is incomplete, and it does not address the land use designations applicable to the subject lands. The subject lands consist of Extractive Industrial, Agricultural and Environmental Protection designations, Environmental Conservation overlay and Site Specific Policies (Schedule A-1). Please revise the NER to include all relevant policies and how each applies to the subject lands and the proposed development activities.			
4	S 2.7	Given the recent amendments to the ESA, and with the SCA to be enacted in 2026, please update the policy and species at risk-related sections.			
5	S 2.0	The federal SARA is not included in this section; however, this is relevant legislation to include in the NER. It already applies to migratory birds that are also SARA Schedule 1 and aquatic SAR, and it will effectively become the primary legislation for those species once the SCA is proclaimed.			
<b>Summary of Background Information</b>	<b>S 3.0</b>				
6	S 3.0 Maps 1-1; 1-2	Background secondary source mapping should be shown 'as provided' by the source. Maps 1-1 and 1-2 show features with modifications (assumed to be based on field work conducted). Please revise to use unmodified data in this section; revisions based			

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		on field outcomes (with justification / explanation) is to occur after presentation of field work to describe existing conditions.			
7	S 3.1.2 Pg 22	Fresh-moist woodlands rely on hydrology and hydrogeology to maintain their form and function. The NER should be revised to include these vegetation communities in the field surveys, feature characterizations and impact assessment.			
8	S 3.1.3 Maps 1-1; 1-2	The background review mapping for fish habitat data (including DFO critical habitat of aquatic SAR, aquatic survey points and line segments, watercourses and waterbodies, data accessed through the local CAs, etc.) is unclear and incomplete. Please revise the report to clearly identify this data.			
9	S 3.2 Table 1 Appendix II	Turtle wintering area and seeps and springs appear to be present within the subject lands; however, these SWH types were not flagged in Table 1. Please revise the NER to include these habitats or provide clear rationale for their exclusion.			
10	S 3.3 Table 2 Appendix III	<ul style="list-style-type: none"> <li>a) Please update the SAR screening list to include all SAR bat species, as well as any other SAR additions since the NER screening was completed.</li> <li>b) Please update the study area terminology (as discussed in earlier comments).</li> </ul>			
<b>Field Methodology</b>	<b>S 4.0</b>				
11	S 4.0 Table 3	Various aspects of the field methods are unclear or not provided. It is unclear which surveys were completed via roadside, via air photo interpretation or via ground truthing. It is also unclear when (year) these surveys were completed and where (i.e., feature and			



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		property). These details need to be provided / clarified for the subject lands and the 120m adjacent lands, in particular. Further, field investigations were not completed at some features within the 120m adjacent lands (e.g., SWD/SWT) or within the zones of influence (e.g., fish habitat/watercourses). These features should be clearly identified. Field investigations should be completed for these features unless land access / permission has been denied. If these features cannot be accessed, please provide the approach used in assessing them through the NER. Further, clearly indicate in the field survey summary table which surveys were completed via roadside assessment, air photo interpretation and ground truthed.			
12	S 4.0 Pg 27	The NER states that surveys completed between April-August 2021 were done entirely from roadside, yet elsewhere in the report, the NER states that field surveys occurred on properties outside of the subject lands in 2021. Please clarify.			
13	S 4.1 Pg 37	It is unclear when (i.e., year), where and how (i.e., roadside or ground-truthed) ELC was completed throughout the study area, and particularly the subject lands. Please clarify when the most recent ELC data was collected by feature and property, including the subject lands.			
14	S 4.5 Pg 39	Salamander trap surveys were not conducted in the SAS1-3 'north' feature on the Melancthon Pit #2 site. This feature should be surveyed for salamanders to determine presence / use. If salamander trapping surveys are not completed, this feature should			

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		be assumed amphibian breeding SWH and managed accordingly in the NER.			
15	S 4.7 Pg 40	Water feature identification and characterization and fish habitat assessments are incomplete and may be inaccurate. Surveys were not completed during spring freshet. Surveys at this time of year are important to properly identify water features and to inform further aquatic fieldwork. Without this data, water features could be missed. Please complete this fieldwork and revise the NER accordingly.			
16	S 4.7 Pg 41	It is unclear which aquatic habitat assessment locations and fish community / e-fishing stations were surveyed on which dates. It is also unclear why surveys were completed at some locations but not others. Please include / clarify these details in the NER.			
17	S 5.1.1 Pg 43	Please provide a figure with groundwater monitoring station locations, as these are not shown on Fig. 3.11 in the Earthfx 2024a report.			
<b>Existing Conditions</b>	<b>S 5.0</b>				
18	S 5.0 Pg 42	The existing conditions are incomplete due, in part, to the focus on species and ecological communities that are sensitive to hydrological change. Terrestrial vegetation communities and descriptions are not included. All natural features and functions within the subject lands, 120m adjacent lands and zones of influence should be included in the NER.			
19	S 5.0 Pg 42	The TRCA (2017) report was developed to determine the level of risk a proposed development could have on the ecological integrity of a wetland through changes to its hydrology. The report addresses			

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		<p>two scenarios that can impact a wetland water balance: 1) when there is an alteration to the surface water catchment area of the wetland; 2) when water taking is &gt;50,000 L/day. There are several circumstances where the report states its assessment/approach is not applicable, including where a catchment area is &gt;2,500 ha. Notwithstanding the limitations and applicability of the evaluation criteria and the project study area, the intended purpose of the TRCA (2017) report was not meant to be applied to aggregate extraction applications.</p> <p>Wetland plant species are defined by OWES (MNR 2022) and ELC (Lee et al. 1998). Please update the NER (including Appendix V) to include the Wetland Plant List (Appendix 10; MNR 2022) and the Wetness Index (Table 8; Lee et al 1998; Oldham et al 1995) when completing the ELC units and feature characterization assessments.</p>			
20	S 5.1.1 Pg 42	Include mapping that shows the extent of the three groundwater systems, L1, L4 and L6, and the existing natural features in the study area.			
21	S 5.1.2 Maps	ELC mapping is inconsistently identified on the 120m adjacent lands. Please update mapping so that it is consistent and complete.			
22	S 5.1.4 Pg 50	<ul style="list-style-type: none"> <li>a) Watercourse identification, flow direction, fish community and aquatic habitat stations and thermal regimes are incomplete and unclear. Update mapping to clearly identify these features within the study area.</li> <li>b) Watercourses that were removed from the background review mapping should be identified and ecological rationale provided. Please include an overall figure that</li> </ul>			

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		shows the above watercourse, fish habitat information and the study area.			
23	S 5.1.4 Pg 50	Fish habitat identification is incomplete. It is characterized within some NAT complexes. Fish habitat that is not a component of an NAT complex has not been characterized. Please update the NER to include characterization and assessments of all fish habitat in the study area.			
24	S 5.1.4 Pg 50	Please treat Brook Trout habitat that was identified in the background review as confirmed in the study area unless it has been demonstrated as absent through appropriate field effort. Please also update the NER to clearly identify, describe (including associated watercourse) and map Brook Trout observations recorded during the field program.			
25	S 5.13.1 Pg 128 Map 2-12	ELC mapping on the Prince site shows the agricultural field as winter wheat (based on 2017 data); however, the report states that the field was fallow in 2022. Please confirm the vegetation community. If the field is no longer in agricultural production / rotation, please complete grassland breeding bird field surveys using the appropriate provincial survey protocols.			
26	S 5.13.1 Pg 128 Table 49	Table 49 states that the MAM2 inclusion on the Prince site is a "dug cattle watering hole that is now naturalizing; it is not considered significant." The previous use of the wetland does not preclude it from being assessed for amphibian and reptile habitat suitability. If the habitat is suitable, appropriate turtle surveys and amphibian surveys will need to occur to verify SWH, or if survey effort is not			

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		possible, SWH will be (assumed) confirmed and managed accordingly.			
27	S 5.14.1 Pg 132 Table 50	Regarding the vernal pool inclusion on the Bonnefield site: <ul style="list-style-type: none"> <li>- Please include on Map 2-13;</li> <li>- Please include a species list (botanical) and not simply state that wetland vegetation was absent;</li> <li>- Please include additional description including water presence and depth(s), pool / pond size, species observed, etc.;</li> <li>- Please provide ecological rationale for not conducting calling amphibian surveys. If suitable habitat is present; complete surveys and integrate results into the NER.</li> </ul>			
28	S 5.15.1 Pg 137 Table 54	Data is missing from Table 54 including the terrestrial vegetation communities, the SWM4-1, both SAS1-3 wetlands and species, including Black Ash on the Melancthon Pit #2 site. Please update the NER to include this information.			
29	S 5.15.2 Pg 139 Map 5-14	Eastern Meadowlark habitat mapping does not reflect the written description in the report. Please revise habitat mapping to include the full extent of the habitat both on the subject lands and the adjacent lands.			
30	S 5.15.2 Pg 139 Map 5-14	Please update Map 5-14 to show the Bank Swallow location as indicated in the NER.			

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31	S 5.15.2 Pg 142 Map 2-14	ANR-07B is not included on Map 2-14. Please revise mapping and the included data in the assessment of SWH for amphibian breeding.			
32	S 5.15.2 Pg 144 Map 2-14	Amphibian egg mass stations and results are unclear. The three stations shown on Map 2-14 do not correspond with either MAM2-2 community; however, the NER states that egg masses were identified at the southernmost MAM2-2. Please confirm and update the location of each egg mass station and its corresponding results.			
33	S 5.15.2 Pg 144	Salamander trapping was not completed in the southern MAM2-2, despite habitat suitability: presence of water and full choruses of Wood Frogs and Spring Peepers. Please complete surveys to assess for salamander presence or assume presence and treat accordingly. Please update assessment of SWH for amphibian breeding habitat accordingly.			
<b>Natural Feature Significance and Sensitivity</b>	<b>S 6.0</b>				
34	S 6.0	Natural feature identification is incomplete and incorrect. Missing or misidentified features include: <ul style="list-style-type: none"> <li>- Wetlands</li> <li>- Significant woodlands</li> <li>- SWH</li> <li>- SAR</li> <li>- Water features and fish habitat</li> </ul> Details are provided in the comments below. Please update the NER to include all features and areas.			

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35	S 6.0	<p>Site specific policies relating to part of the west half of lots 11 and 12, Concession 3, O.S. (policy 5.4.2 (j) and Schedule A-1 Melancthon OP) state that "...the lands designated "Environmental Protection" in part of the West Half of Lots 11 and 12 Concession 3, O.W., shall be used only for purposes relating to the conservation of natural features and wildlife habitat." The Environmental Protection designation in this area consists of</p> <ul style="list-style-type: none"> <li>- the SAS1-3 north and south (provincially significant) wetlands (also SWH for amphibian breeding and confirmed for SAR bat habitat),</li> <li>- the MAM2-2 north and south wetlands (also SWH for amphibian breeding and confirmed for SAR bat habitat),</li> <li>- part of the CUM1 (Eastern Meadowlark SAR habitat and amphibian corridor),</li> <li>- western section of NAT-19 (also PSW, significant woodland, SWH for amphibian breeding, bat maternity roosting and special concern breeding bird Eastern Wood-pewee, SAR bat habitat, SAR Black Ash habitat.</li> </ul> <p>Please update the NER to include relevant policy definitions and criteria to the natural heritage characterization considerations/assessment.</p>			
36	S 6.1.2 Pg 149	<p>Fish habitat identification is incomplete in the study area. It is characterized as a component of some NAT complexes. Some watercourses / fish habitat are shown outside of / not a component of an NAT complex, yet these features have not been characterized. For example, a watercourse is shown connecting the NAT-19 and the</p>			

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		SWD/SWT to the south. This watercourse continues south of County Road 17 into NAT-02. Characterization and assessment of all watercourses / fish habitat are to be included in the NER study area.			
37	S 6.2.1 Pg 165	The NER states that the CUP3-2 was assessed against the definition of woodland in the County's OP (2017) and the evaluation criteria in the NHRM. Based on these definitions and criteria, the NER states that the CUP3-2 is not a significant woodland. However, upon review of the County's OP (2025) and provincial evaluation criteria, this woodland is considered a woodland under the County's OP (Schedule E) and meets the definition of significant. Further, it is identified on the Township's OP (2017) Schedule E as a significant woodland. Of important note, the Township has verified that it has not approved the removal of this plantation. Please update the NER to address the significance assessment and information on removal / retention.			
38	S 6.2.2 Pg 166 Map 7	The SAS1-3 (south wetland) is mapped and identified incorrectly. This feature is part of the NAT-19 complex and should be mapped as part of the SWM4-1. The wetland communities that compose most of NAT-19 are mapped as unevaluated wetland. Unevaluated wetlands (such as those within NAT-19) should be assumed and managed as provincially significant unless an OWES evaluation confirms that they are 'not provincially significant'. Please update and revise the NER and mapping accordingly.			



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39	S 6.2.3.4 Pg 169	Please reassess and update the species at risk and habitats in the NER (and mapping) to reflect changes to the SARO list and the new Protected Species in Ontario List (PSOL), the new definition of habitat under the amended ESA, and the interim / preliminary habitat summaries prepared by the MECP (August 2025).			
40	S 6.2.3.4 Pg 169	The NER states that SAR bat habitat is assumed within the subject lands, apart from the hedgerow and CUP3-2 located on the former Prince property. The NER also states that the removal of this hedgerow and the CUP3-2 has been approved under the existing ARA licence.  These SAR assessments were completed in 2017, prior to the addition of three bat species being added to the SARO list. Interim habitat summaries for SAR bats under the amended ESA (which are intended to persist under the new SCA) are being applied by the province as of August 2025. Identification of, and impacts to, SAR bat habitat should be reviewed (and possibly updated) in the NER to ensure compliance with provincial legislation.			
41	S 6.2.4.1 Pg 170	The SWH existing conditions are incomplete and incorrect. <ul style="list-style-type: none"> <li>- For example, on the Melancthon Pit #2 site, the features were assessed for significance and confirmed not significant. However, based on a review of the data, the SAS1-3 north pond and the two MAM2-2 wetland features meet the criteria to confirm amphibian breeding SWH.</li> <li>- This type of SWH is defined as the wetland area plus a 230m radius of woodland area.</li> </ul>			

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		<ul style="list-style-type: none"> <li>- Amphibian breeding SWH also requires a travel corridor connecting the wetlands and woodlands.</li> </ul> <p>Please update the SWH assessments, characterizations and mapping.</p> <p>In accordance with the precautionary principle where habitat suitability exists and data is not provided (e.g., vernal pool in woodland on Bonnefield site, MAM2-2 on Prince site), SWH is to be assumed for each feature and assessed for impacts accordingly.</p>			
42	S 6.2.4.1 Pg 171	Egg mass observation data are inconsistent (section 5 pg. 144 and section 6 pg. 171). Section 5 states that egg masses were observed in the southern MAM2-2, and section 6 states that the southern SAS1-3 contained egg masses. Please clarify and update the NER.			
<b>Impact Assessment</b>	<b>S 7.0</b>				
43	S 7.1 Pg 175	<p><b>Description of the proposed undertaking</b></p> <p>Please provide more detail in the summary of the proposed undertaking to include the sequence and timing of proposed activities (impacts, mitigation, rehabilitation), including:</p> <ul style="list-style-type: none"> <li>- A list of the proposed activities (phases, sub-phases, water management plan components, mitigation measure implementation, etc.) and the anticipated order and timing of each.</li> <li>- A list of the proposed natural feature encroachments and removals, including the size in area, anticipated order and timing (in relation to the list of proposed activities).</li> </ul>			

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		<ul style="list-style-type: none"> <li>- A list of the proposed creation and restoration of features - also in order and timing (in relation to feature encroachments and removals).</li> <li>- Progressive rehabilitation commencement and completion activities should also be summarized with anticipated timing (in relation to the items listed above).</li> </ul>			
44	S 7.2	<p><b>Approach to Impact Assessment</b></p> <p>The impact assessment is unclear and incomplete:</p> <ul style="list-style-type: none"> <li>- The area(s) of impact are unclear (e.g., the zone of influence changes based on the extraction phase/sub-phase).</li> <li>- It does not include a complete list of the proposed activities (phases, sub-phases, creation of infiltration ponds, creation of mitigation measures, etc.) and the potential impacts related to each.</li> <li>- It does not include a complete list of the types of impacts that could occur (timing/duration/temporal impacts, successive/cumulative impacts through operational phases and sub-phases, time lag between impact and mitigation, blasting vibrations, etc.).</li> <li>- It has not assessed impacts on all natural features (e.g., fish habitat, in general, is unclear/missing).</li> <li>- It does not address impacts to surface water and those natural features that rely on surface water.</li> <li>- It has not assessed impacts on the NHS (Environmental Protection and Conservation features and areas, as a system).</li> </ul>			

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		<ul style="list-style-type: none"> <li>- It has not considered cumulative impacts, regarding internal project expansions (above-ground to below-ground) and external aggregate operations.</li> <li>- It has not provided a clear understanding of the extent of the impacts without mitigation. Please include this information to illustrate how the mitigation is effective.</li> <li>- The impact conclusions on the natural features are not supported or based on ecological rationale or evidence.</li> </ul>			
45	S 7.3	<p><b>Direct Impacts</b></p> <p>Natural features and areas have been proposed for removal and encroachment. Some of these are protected by local OP policies that do not permit land use changes from Environmental Protection to Extractive Industrial. Some of these features are also protected by local and provincial policies that do not permit site alteration or development. Please revise the NER so that these features are avoided and buffered.</p>			
46	S 7.3.1; 7.3.2 Pg 177-178	The NER does not state the amount of natural feature area impacted by the proposed encroachments and removals; please clarify in the NER. Details should include size of feature, amount proposed for removal / encroachment, amount to remain.			
47	S 7.3.2 Pg 178	Please clarify whether the creation of the south infiltration pond and the central infiltration pond will require further extraction, and whether/how the proposed impacts have been assessed and mitigated.			
48	S 7.3.2 Pg 178	The south SAS1-3 wetland is a contiguous part of the SWM4-1 (NAT-19) treed swamp. The wetland is mapped as unevaluated. As stated			

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		in earlier comments, without an OWES assessment, the wetland is to be assumed and managed as provincially significant. Impacts, including removals and encroachments, are not permitted in a PSW. This feature should be avoided and buffered.			
49	S 7.3.3.1 Pg 180-181	Habitat descriptions for SAR have been updated by MECP as of August 2025 to address the changes to the definition of 'habitat' under the amended ESA (and the anticipated SCA). These should be reviewed updated/revised in the NER. Further, the bat active period has been revised to accommodate migratory SAR bats and is now April 1 - November 30. If Eastern Small-footed Bat is present, the active window is March 16 - November 30. Please ensure the most current and applicable bat avoidance windows are included in the NER.			
50	S 7.3.3.2 Pg 181	The SAS1-3 and MAM2-2 wetland features are amphibian breeding SWH. This type of SWH is defined as the wetlands and any wooded habitat within 230 m of the wetland limits. This SWH type also requires a travel corridor for amphibian movement between the wetlands and the wooded habitat. Therefore, the amphibian breeding SWH includes the four wetlands, two woodlands and the amphibian corridor connection. The extent of habitat, as described here, is not captured in the NER. As such, the proposed impacts to SWH are incomplete. Removal and encroachment impacts are not permitted for these features. Please update the NER to avoid and buffer these features and areas.			

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		Removal of amphibian breeding SWH (assumed) is proposed on the Bonnefield site (vernal pool) and Prince site (MAM2-2). Please update the NER to include impacts to the features and ecological functions.			
51	S 7.4 General	<b>Indirect Impacts</b> The unmitigated impacts, mitigation and residual impacts on the watercourses, fish habitat and wetlands are unclear. The NER states that there will be hydrological changes (groundwater drawdown, increases and decreases to streamflow) in the study area, even after mitigation has been applied. The NER also states no anticipated negative impact to the natural features in the study area. No ecological evidence and rationale are provided to support these conclusions. The NER should include ecological interpretations of all unmitigated and residual impacts to all features and areas and the NHS in the study area.			
52	General	It is unclear which features rely on a surface water hydrological regime. Please clearly identify these features and the anticipated impacts to their reliance on and access to surface water.			
53	General	Blasting vibrations can have a negative impact on Brook Trout spawning habitat. Brook Trout are present throughout the study area. Please assess vibration impacts to determine which fish habitat features will be affected; spawning habitat for this species should be identified to properly understand the extent of the impacts.			
54	S 7.4.1	There are inconsistencies between the impact assessment in the NER and the water resources report (Tatham and Earthfx, 2025).			

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		<ul style="list-style-type: none"> <li>The water resources report assesses the hydrological and hydrogeological impacts for extraction phases (and sub-phases) 1, 2 and 4 (it is unclear why phase 3 is excluded).</li> </ul> <p>The impact assessment in the NER is incomplete; impact assessment is limited to specific extraction / operational phases.</p> <ul style="list-style-type: none"> <li>The NER impact assessment initially states its focus is on select extraction phases 1, 2c, 4a and rehabilitation.</li> <li>It then states that the impact assessment will more specifically focus on Phases 4a and rehabilitation.</li> </ul> <p>Please update the NER to provide a complete impact assessment for all aspects of the proposed activities, including each phase and sub-phase of the project and ensure consistency among technical reports.</p>			
55	S 7.4.1.1 Pg 190	The NER states that the proposed water management strategy will not fully address the amount of groundwater drawdown. Please provide further information about the residual impacts and how these will be mitigated.			
56	S 7.4.1.1 Pg 191 Map 7	The NER states that increases and decreases to streamflow are predicted for watercourses in the study area. Clearly identify all watercourses / fish habitat within each proposed zone of influence.			
		Please update the NER to include discussion of the potential impacts to each watercourse / fish habitat feature, proposed			

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		mitigation and residual impacts. An ecological interpretation should be provided that explains the effect(s) of (residual) impacts.			
57	S 7.4.1.2	The NER includes some content regarding the predicted groundwater effects in various parts of the study area; however, these impacts are discussed only during / for phase 4a. Hydrological impacts should be assessed for each phase and sub-phase. Please update the NER to include a complete impact assessment for all natural heritage features during all phases.			
58	S 7.4.1.2	<p>Impacts to Black Ash trees and their habitat are unclear and unsupported ecologically.</p> <p>The NER notes the following impacts on wetlands supporting Black Ash:</p> <ul style="list-style-type: none"> <li>- Groundwater drawdown</li> <li>- Groundwater mounding</li> <li>- Increases of surface water contributions</li> <li>- Increased prevalence of wetter conditions</li> <li>- Habitat will shift from a perched system to a discharge system</li> <li>- Return to baseline conditions at rehabilitation phase</li> </ul> <p>The NER concludes that “the soil moisture in the substrate that supports the existing Black Ash trees will not change to the extent that the health of trees would decline or the spatial extent of suitable habitat would be reduced...” No rationale or evidence is presented in the NER to support this conclusion. Please note that the provincial Recovery Strategy for Black Ash (Catling et al. 2022) states that “hydrological changes ... may cause local declines in Black Ash or</p>			



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		<p>impact tree health. Changes in the amount and timing of precipitation could directly cause mortality of Black Ash since it is sensitive to changes in water availability... Water stress can also make Black Ash more susceptible to infestation by Emerald Ash Borer.”</p> <p>Please update the NER to:</p> <ul style="list-style-type: none"> <li>• Describe moisture regime requirements and sensitivity of Black Ash and the associated swamp wetland community hydrologic change.</li> <li>• Explain and provide quantitative information on the nature/type, extent, duration and magnitude of anticipated soil moisture changes.</li> <li>• Describe how the requirements and sensitivity of the species and habitat compare to the proposed condition(s) and any potential impacts that may result.</li> </ul> <p>Please also note that impacts to a protected species at risk and/or its habitat will require consultation with MECP.</p>			
59	S 7.4.1.7 Pg 234	<p>The NER states that the NAT-19 complex will experience the following impacts:</p> <ul style="list-style-type: none"> <li>- Groundwater drawdown</li> <li>- Groundwater mounding</li> <li>- Increases of surface water contributions</li> <li>- Increased prevalence of wetter conditions</li> <li>- Wetland habitat will shift from a perched system to a discharge system</li> <li>- Return to baseline conditions at rehabilitation phase</li> </ul>			

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		<p>The NER also states that negative impacts will not occur due to the water management plan, which includes a surface water outlet at the southwest corner of NAT-19. This outlet is located outside the subject lands. Location of the outlet outside of the subject lands and licenced area raises several concerns that require clarification:</p> <ul style="list-style-type: none"> <li>• Maintenance - ensuring installation and maintaining the outlet in good working order (and as intended) as the key mitigation measure to address hydrologic impacts.</li> <li>• Monitoring - access for monitoring and ability to modify if changes are necessary to achieve mitigative objectives.</li> <li>• Access - site access to conduct and manage for the proposed duration.</li> </ul> <p>The NAT-19 complex is an assumed PSW. Development and site alteration are not permitted within a PSW, and development and site alteration are not permitted on the adjacent lands to the PSW unless there will be no negative impacts on the PSW and its ecological functions.</p> <p>The NER does not adequately demonstrate that no negative impact has been achieved. Updates to the NER are required to provide evidence and rationale that support the 'no negative impact' conclusion presented, including:</p> <ul style="list-style-type: none"> <li>• Explain and provide quantitative information on the nature/type, extent, duration and magnitude of anticipated hydrologic changes.</li> <li>• Discuss the feature requirements and existing hydrologic conditions and the potential impacts that may result.</li> </ul>			

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		<ul style="list-style-type: none"> <li>Discuss the conditions and ecological implications once mitigation has been applied.</li> </ul>			
60	General	<p>The NER consistently concludes 'no negative impacts' with implementation of mitigation measures, but lacks quantification of effects (pre-mitigation), quantitative mitigative outcomes and clear analysis of how the changes that will occur (changes in condition) will alter ecological form and function of natural features.</p> <p>This applies to all features where hydrologic changes will occur as a result of the proposed activities. Updates to the NER are required to provide evidence and rationale that support the 'no negative impact' conclusions presented.</p>			
61	S 7.1 Pg 175/176	<p><b>Mitigation measures</b> include:</p> <ul style="list-style-type: none"> <li>- a water management plan and</li> <li>- the creation of a new wetland.</li> </ul> <p>The efficacy and certainty of the proposed mitigation measures are not provided. Additionally, the proposed central infiltration pond and the proposed wetland creation are not permitted in the locations proposed due to local and provincial policies.</p> <p>The conclusion of no negative impact is heavily reliant on the water management plan, which is heavily reliant on the central infiltration pond and the creation of wetland habitat. Limited information is provided in the NER on:</p> <ul style="list-style-type: none"> <li>Quantified hydrologic impacts</li> </ul>			

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		<ul style="list-style-type: none"> <li>How the water management plan is addressing the noted impacts</li> <li>Supporting data to demonstrate anticipated efficacy of the water management plan</li> <li>Proposed contingency measures should issues arise with the various aspects of the water management plan</li> </ul> <p>Please revise the NER to address this information.</p>			
62	S 7.3.4 Pg 183	<p><b>Wetland Removal and Offsetting</b></p> <p>The proposed creation of the wetland is a significant component of the water management plan. As stated in the NER, the success of the implementation of the water management plan depends, in part, on the wetland creation.</p> <p>The proposed wetland creation is not permissible in the proposed location. However, should wetland creation be proposed, a revised plan will be reviewed during the second round of peer review if substantive concerns and comments are adequately addressed. Regarding the details provided in the NER, please address the following, should wetland creation be proposed:</p> <ul style="list-style-type: none"> <li>- Native vegetation species - determine species to use based on those that are identified in the surrounding wetlands.</li> <li>- Salvage and reuse the topsoil and soils in the correct layers/horizons and seedbank in the new wetland.</li> <li>- Complete water balance assessment to ensure appropriate and similar hydrological measures in the new wetland.</li> </ul>			

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		<ul style="list-style-type: none"> <li>- Water discharge to wetland will go through a dissipater prior to entry.</li> <li>- Conduct water quality monitoring.</li> <li>- Salamanders are confirmed in some of the existing wetlands (and assumed in the others); ensure appropriate hydrologic conditions that support breeding salamander functions including hydroperiods - both rewetting and drying - and depths. Larval dispersal occurs beyond June; therefore, water depths must be extended to capture the necessary period to support these functions.</li> <li>- Surface water outflow location, timing, volumes and anticipated impacts to outlet and/or downstream features.</li> </ul>			
<b>Ecological Restoration and Enhancement</b>	<b>S 8.0</b>				
63	S 8.0 S 10.1 Pg 254	Based on extensive comments raised on the content of the NER, updates / revisions to the rehabilitation plans are expected. A revised plan will be reviewed during the second round of peer review if substantive concerns and comments are adequately addressed.			
<b>Monitoring</b>	<b>S 9.0</b>				
64	S 9.0 S 10.1 Pg 257	Based on extensive comments raised on the content of the NER, updates / revisions to the ecological monitoring plan are expected. A revised plan will be reviewed during the second round of peer			

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		review if substantive concerns and comments are adequately addressed.			
<b>Summary</b>	<b>S 10.0</b>				
65	S 10.0	Based on extensive comments raised on the content of the NER, updates / revisions are expected. A revised summary will be reviewed during the second round of peer review if substantive concerns and comments are adequately addressed.			