NOVA SCOTIA
Environment and Climate Change

Comment Index

New Annan Quarry Expansion Project, Colchester County

Publication Date: March 6, 2025

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Nova Scotia Mi'kmaq

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1	Kwilmu'kw Maw-Klusuaqn (KMK)	February 12, 2025
2	Native Council of Nova Scotia (NCNS) / Maritime Aboriginal Aquatic Resources Secretariate (MAARS)	February 14, 2025

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Number	Source	Date Received
1	6 Anonymous Public Comments	January 15 to February 14, 2025

Health Canada Santé Canada

Human Health Considerations in Impact Assessment

Health Canada (HC) provides the following generic considerations for evaluating human health impacts in environmental/impact assessment (EA/IA). Please note that this is not an exhaustive list of human health concerns that may result from projects, and that issues will vary based on project specifics. Please also note that HC does not approve or issue licenses, permits, or authorizations in relation to the IA. HC's role in Impact Assessment is founded in statutory obligations under the Canadian Impact Assessment Act, and its knowledge and expertise can be called upon by reviewing bodies (e.g., Impact Assessment Agency of Canada, review panels, Indigenous groups and/or other jurisdictions). In the absence of such a request from one of the above noted groups, HC is unable to carry out a comprehensive review of the project. However, HC is able to accommodate specific requests for human health advice and guidance related to provincial environmental assessments within a reasonable timeframe.

HC currently possesses expertise in the following areas related to human health: air quality, recreational and drinking water quality, traditional foods (country foods), noise, and methodological expertise in conducting human health risk assessment. Based on Health Canada's "*Guidance for Evaluating Human Health Impacts in Environmental Assessment*", please consider the following information on these topics to assist in your review.

	Consideration	**Reference Document**
Receptor Location(s)		
Please ensure the registration document clearly identifies the locations of all receptors that may be impacted by the proposed project, including any receptors located along the transportation route, if applicable.	• It is important to clearly describe the location and distance from the proposed site(s) to all potential human receptors (permanent, seasonal or temporary), taking into consideration the different types of land uses (e.g. residential, recreational, industrial, etc.), and identifying all vulnerable populations (e.g. in schools, hospitals, retirement or assisted living communities). Note that the types of residents and visitors in a particular area will depend on land use, and may include members of the general public and/or members of specific population subgroups (Indigenous peoples, campers, hunters, etc.)	*Health Canada. 2023. Guidance for Evaluating Human Health Effects in Impact Assessment: Human Health Risk Assessment. Healthy Environments and Consumer Safety Branch, Health Canada, Ottawa, Ontario.* *https://publications.gc.ca/collections/collection_2024/sc-hc/H129-54-6-2023-eng.pdf*
	• If there is the potential that project-related activities could affect human receptors, impacts to human health should be considered.	

Atmospheric Environment		
Project impacts to the atmospheric environment include changes to air quality and noise, and can occur in both the construction, operation and decommissioning phases of the project. Project impacts to air quality are commonly caused by emissions from equipment or vehicles as well as by dust. Noise impacts are commonly caused by equipment as well as by activities such as blasting.	• If there are receptors that could be affected by project-related activities, impacts to the atmospheric environment should be considered. Changes to the atmospheric environment that may impact human health include: ○ impacts to air quality (dust or fumes including $PM_{2.5}$, NO_x, SO_x, PAHs) ○ increased noise from construction or operations	*Health Canada. 2023. Guidance for Evaluating Human Health Impacts in Impact Assessment: Noise. Healthy Environments and Consumer Safety Branch, Health Canada, Ottawa, Ontario* https://publications.gc.ca/collections/collection_2024/sc-hc/H129-54-3-2023-eng.pdf *Health Canada. 2023. Guidance for Evaluating Human Health Effects in Impact Assessment: Air Quality. Healthy Environments and Consumer Safety Branch, Health Canada, Ottawa, Ontario.* https://publications.gc.ca/collections/collection_2024/sc-hc/H129-54-1-2023-eng.pdf
	• If there are receptors who could be impacted by project-related noise, it may be necessary to inform receptors prior to loud activities, such as blasting.	
	• If there is the potential for impacts to human receptors from noise and/or air quality changes from the project, the proponent should consider establishing mitigation measures. If complaints are received additional mitigation measures may be required.	
Recreational and Drinking Water Quality		
The proponent should consider whether any nearby waterbodies are used for recreational (i.e. swimming, boating, or fishing) or drinking water purposes, as well as whether there are any drinking water wells in the area potentially impacted by the project. Nearby drinking and/or recreational water quality may be impacted by	• If there is the potential for impacts to drinking and/or recreational water quality from the project site, the proponent should consider establishing mitigation measures. If complaints are received additional mitigation measures may be required.	*Health Canada. 2023. Guidance for Evaluating Human Health Effects in Impact Assessment: Drinking and Recreational Water Quality. Healthy Environments and Consumer Safety Branch, Health Canada, Ottawa, Ontario.* https://publications.gc.ca/collections/collection_2024/sc-hc/H129-54-2-2023-eng.pdf

accidents or malfunctions, such as a fuel spill; by dust and increased sediment runoff; and by other chemical discharges to the environment. Additionally, wells in the area potentially impacted by the project may be impacted by activities such as blasting.	• The proponent should consider preparing a response plan in the event of an accident or malfunction with the potential to impact drinking and/or recreational water quality. Response plans should include a spill response kit, adequate spill response training, and a communication plan to notify all recreational and drinking water users in the impacted area as well as all relevant authorities. • In some cases, for projects that are likely to have an impact on drinking and/or recreational water quality, the proponent should consider conducting water monitoring prior to the start of the project (to establish a baseline). Monitoring would continue throughout the construction, operation and decommissioning phases of the project (as applicable) to monitor for any changes in water quality or quantity.	
Country Foods		
If there are plants or animals present in the area potentially impacted by the project that are consumed by humans, there may be potential for impacts to country foods. The proponent should consider all country foods that are hunted, harvested or fished from the area potentially impacted by the project. Impacts to country foods may occur from the release of contaminants into soil or water (including from an accident or spill) or from deposition of air borne contaminants.	• If there is the potential for impacts to country foods from the proposed project, the proponent should consider establishing mitigation measures. If complaints are received additional mitigation measures may be required. • The proponent should consider preparing a response plan in the event of an accident or malfunction with the potential to impact country foods. Response plans should include a spill response kit, adequate spill response training, and a communication plan to notify all potential consumers of country foods in the impacted area as well as all relevant authorities.	*Health Canada. 2023. Guidance for Evaluating Human Health Effects in Impact Assessment: Country Foods. Healthy Environments and Consumer Safety Branch, Health Canada, Ottawa, Ontario.* *https://publications.gc.ca/collections/collection_2024/sc-hc/H129-54-5-2023-eng.pdf*

For more information on HC's guidelines for evaluating human health impacts in environmental assessments, please see:

*Health Canada. 2023. Guidance for Evaluating Human Health Impacts in Impact Assessment: **Noise**. Healthy Environments and Consumer Safety Branch, Health Canada, Ottawa, Ontario*
https://publications.gc.ca/collections/collection_2024/sc-hc/H129-54-3-2023-eng.pdf

Appendix B of this guidance document provides a checklist that may be beneficial in verifying that the main components of a noise environmental assessment are completed.

*Health Canada. 2023. Guidance for Evaluating Human Health Effects in Impact Assessment: **Air Quality**. Healthy Environments and Consumer Safety Branch, Health Canada, Ottawa, Ontario.*
https://publications.gc.ca/collections/collection_2024/sc-hc/H129-54-1-2023-eng.pdf

Appendix A of this guidance document provides a checklist that may be beneficial in verifying that the main components of an air quality environmental assessment are completed.

*Health Canada. 2023. Guidance for Evaluating Human Health Effects in Impact Assessment: **Drinking and Recreational Water Quality**. Healthy Environments and Consumer Safety Branch, Health Canada, Ottawa, Ontario.*
https://publications.gc.ca/collections/collection_2024/sc-hc/H129-54-2-2023-eng.pdf

Appendix A of this guidance document provides a checklist that may be beneficial in verifying that the main components of a water quality environmental assessment are completed.

*Health Canada. 2023. Guidance for Evaluating Human Health Effects in Impact Assessment: **Country Foods**. Healthy Environments and Consumer Safety Branch, Health Canada, Ottawa, Ontario.*
https://publications.gc.ca/collections/collection_2024/sc-hc/H129-54-5-2023-eng.pdf

Appendix A of this guidance document provides a checklist that may be beneficial in verifying that the main components of a country foods environmental assessment are completed.

*Health Canada. 2023. Guidance for Evaluating Human Health Effects in Impact Assessment: **Human Health Risk Assessment**. Healthy Environments and Consumer Safety Branch, Health Canada, Ottawa, Ontario.*
https://publications.gc.ca/collections/collection_2024/sc-hc/H129-54-6-2023-eng.pdf

Appendix B of this guidance document provides a checklist that may be beneficial in verifying that the main components of a human health risk assessment are completed.

NOVA SCOTIA
Environment and Climate Change

Barrington Place
1903 Barrington Street
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Halifax, Nova Scotia
Canada B3J 2P8

Date: January 24, 2025

To: Mark McInnis, Environmental Assessment Officer

From: Janet MacKinnon Executive Director SAS/ Protected Areas and Ecosystems

Subject: **New Annan Quarry Expansion Project, Colchester County**

Scope of review:
This review focuses on the following mandate: Protected Areas

List of Documents Reviewed:
Protected Areas Interactive Map

Details of Technical Review:
Distance to Nearest Protected Areas

Key Considerations: (provide in non-technical language)

- No Concerns

Impact Assessment Agency of Canada | Agence d'évaluation d'impact du Canada

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1801 Hollis Street
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Bureau 200
1801 rue Hollis
Halifax, NE B3J 3N4

January 27, 2025

Mark McInnis
Environmental Assessment Office
Policy Division, EA Branch
Nova Scotia Department of Environment and Climate Change
Mark.McInnis@novascotia.ca

SUBJECT: New Annan Quarry Expansion Project, Colchester County

Mark McInnis:

Thank you for the opportunity to review the registration document for New Annan Quarry Expansion Project (the Project), received on January 8, 2025.

The federal environmental assessment process is set out in the *Impact Assessment Act* (IAA). The *Physical Activities Regulations* (the Regulations) set out a list of physical activities considered to be "designated projects" under the IAA.

The relevant entry in the Regulations for this type of project is:

> *19(f) The expansion of an existing mine, mill, quarry or sand or gravel pit, in the case of an existing stone quarry or sand or gravel pit if the expansion would result in an increase in the area of mining operations of 50% or more and the total production capacity would be 3 500 000 t/year or more after the expansion.*

Although the increase in the area of mining operations for the proposed Project is greater than 50%, it is understood that the total production capacity of the quarry will be 50,000 t/year which is less than the threshold of the Regulations.

While it is the responsibility of proponents to determine whether their proposed project includes physical activities described in the Regulations of the IAA, based on the information submitted to the Province of Nova Scotia on the proposed Project, the Impact Assessment Agency of Canada (IAAC) is of the opinion that, as proposed, the project does not appear to be described in the Regulations. As such, the proponent would not be expected to submit an Initial Project Description of a Designated Project. If the project changes from what has been described in its provincial registration, the proponent is advised to contact IAAC if, in their view, any proposed project activities may be described in the Regulations.

The proponent is advised that under section 9(1) of the IAA, the Minister may, on request or on the Minister's own initiative, by order, designate a physical activity that is not prescribed by regulations made under the Regulations if, in the Minister's opinion, the carrying out of that physical activity may cause adverse effects within federal

jurisdiction or direct or incidental adverse effects. Should IAAC receive a request for a project to be designated, IAAC would contact the proponent with further information.

Please note that for physical activities not described in the Regulations, should the Project be carried out in whole or in part on federal lands, section 82 of the IAA would apply if any federal authority is required to exercise a power, duty or function under an Act other than IAA in order for the Project to proceed, or if a federal authority is providing financial assistance for the purpose of enabling the Project to be carried out. In that case, that federal authority must ensure that any Project assessment requirements under the applicable sections of the IAA are satisfied.

We also note that in proceeding with the Project, the proponent may still be required to obtain or seek amendment to other federal regulatory permits, authorizations and/or licences.

The proponent is encouraged to contact IAAC at (902) 426-0564 if it has additional information that may be relevant to IAAC or if it has any questions or concerns related to the above matters.

Erin Norton

A/ Project Manager, Atlantic Regional Office
Impact Assessment Agency of Canada / Government of Canada
Erin.Norton@iaac-aeic.gc.ca / Tel : 902-399-8838

Gestionnaire de projet p.i., bureau de l’atlantique
Agence d'évaluation d'impact du Canada / Gouvernement du Canada
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NOVA SCOTIA

Department of Municipal Affairs

8th Floor North, Maritime Centre
1505 Barrington Street
PO Box 216
Halifax, NS B3J 2M4

DATE: January 29, 2025

TO: Mark McInnis, Environmental Assessment Officer

FROM: Christina Lovitt, Provincial Director of Planning

SUBJECT: **NEW ANNAN QUARRY EXPANSION PROJECT, COLCHESTER COUNTY**

Scope of Review:
This review focuses on the Department of Municipal Affairs' mandate, Statements of Provincial Interest and engagement with municipalities.

Document Reviewed:
Registration Document

Details of Technical Review:
The project site is not zoned; Colchester is creating a new plan for unplanned areas. The proposed zoning for the property, based on draft documents, is Rural General, which would permit aggregate-related industries. A notification letter was sent to the Municipality in October 2024, and the proponents met with Deputy Mayor Sherry Martell to provide an overview of the project.

Statements of Provincial Interest:

- Drinking Water: No anticipated impact. The French River Watershed Designation Area for Tatamgouche is in very close proximity to the site (portions of the area are in abutting properties). Based on designation mapping, however, there are no areas of the designated protected water area in the study area (PID 20098935).
- Agricultural Land: No anticipated impact. Based on the Canada Land Inventory Soil Capability maps, the area appears to have class 7 soils, which would not be suitable for agriculture.
- Flood Risk: No anticipated impact. The Salmon and North Rivers Flood Risk Areas are within this plan area but are not in close proximity to the study area. The Municipal Flood Line Mapping has not been completed for this area.
- Infrastructure: No anticipated impact. There is no water or sewer servicing in this area.
- Housing: No anticipated impact. The site is remote, and there are no permanent residences within 800 metres of the study area. The proponents do not anticipate an increased impact to residential uses.

Key Considerations *(provide in non-technical language)*:
There is no outstanding information and/or conditions. All components considered under DMA's areas of mandate have been adequately addressed.

Fisheries and Oceans Canada | Pêches et Océans Canada

Bedford Institute of Oceanography
1 Challenger Drive
P.O. Box 1006, Station P500
Dartmouth, Nova Scotia B2Y 4A2

Date: January 31, 2025

To: Mark McInnis, Environmental Assessment Officer

From: Kelley Fraser, Regulatory Review Biologist, Fish and Fish Habitat Protection Program

Subject: New Annan Quarry Expansion, Colchester County, Nova Scotia

Scope of review:
Fisheries and Oceans Canada (DFO) is responsible for administrating the fish and fish habitat protection provisions of the *Fisheries Act* (FA), the *Species at Risk Act* (SARA), and the *Aquatic Invasive Species Regulations*.

DFO's review focused on the impacts of the works outlined in the New Annan Quarry Expansion Project Environmental Assessment Registration Document to potentially result in:

- the death of fish by means other than fishing and the harmful alteration, disruption or destruction of fish habitat, which are prohibited under subsections 34.4(1) and 35(1) of the *Fisheries Act*;
- effects to listed aquatic species at risk, any part of their critical habitat or the residences of their individuals in a manner which is prohibited under sections 32, 33 and subsection 58(1) of the *Species at Risk Act*; and
- the introduction of aquatic species into regions or bodies of water frequented by fish where they are not indigenous, which is prohibited under section 10 of the *Aquatic Invasive Species Regulations*.

Recommendations: (provide in non-technical language)

DFO makes the following recommendations to the proponent:

- The site (southeastern section) is adjacent to an unnamed watercourse that provides cold water stream habitat to the headwaters of Fourmile Brook, a tributary of Waughs River, which is considered to be fish habitat for a number of fish species. The proponent should provide further information on whether the work, undertaking or activity has the potential to directly or indirectly impact surface water and fish and fish habitat within this unnamed watercourse;

- Water levels in Nova Scotia fluctuate seasonally and with precipitation events and fish often take advantage of these fluctuations to trigger migration; therefore, DFO does not recommend using low water levels as a rationale to conclude there is no access to habitat upstream. Furthermore, certain species, such as the American Eel, can navigate around many natural or anthropogenic obstructions and migrate under lower flow conditions;

- Several wetlands will be infilled due to the expansion of the quarry. The alteration or destruction of these wetlands may result in hydrological effects on nearby watercourses and thus have the potential to cause impacts to fish and fish habitat through reduced flows. The EARD does not contain sufficient information to make any determination on

water quantity impacts on fish and fish habitat associated with the alteration or destruction of these wetlands. The proponent should conduct a hydrological assessment on the effects of wetland destruction or alterations as well as quarry expansion on flows on the potentially affected waterbodies. The proponent is encouraged to use the methods within DFO's Framework for Assessing the Ecological Flow Requirements to Support Fisheries in Canada (https://waves-vagues.dfo-mpo.gc.ca/Library/348881.pdf) while conducting their assessment;

- If blasting will be conducted, refer to Wright and Hopky 1998 (https://publications.gc.ca/collections/Collection/Fs97-6-2107E.pdf) for Guidelines for the Use of Explosives In or Near Canadian Fisheries Waters; and

- Refer to DFO's website, https://www.dfo-mpo.gc.ca/pnw-ppe/index-eng.html, for further information on DFO's regulatory review process and for further measures to protect fish and fish habitat.

This information can be provided through the NSECC watercourse and/or wetland alteration approval process(es), and/or through submission of a DFO Request for Review application to DFO to allow DFO staff to conduct a regulatory review of the project to identify potential impacts to fish and fish habitat, and to determine if an authorization under the *Fisheries Act* and/or a *Species at Risk* permit is required.

NOVA SCOTIA
Public Works

J.W. Johnston Building
1672 Granville Street
6th Floor
Halifax, Nova Scotia
Canada B3J 2N2

Date: February 3, 2025

To: Mark McInnis, Environmental Assessment Officer

From: Department of Public Works, Environmental Services – Jason Rae, P.Eng., Manager

Subject: **New Annan Quarry Expansion Project, Colchester County, Nova Scotia**

Scope of review:
This review focuses on the following mandate: Traffic Engineering and Road Safety_____

List of Documents Reviewed:
New Annon Quarry Expansion Project Environmental Assessment

Details of Technical Review:
The Proponent is proposing to transition an existing aggregate pit located in East New Annan, Colchester County into a quarry. Truck volumes are not anticipated to be significantly different from existing volumes, so impact to the provincial road network beyond what it is now is expected to be minimal.

- The registration document references Truro Road, Highway 256, Highway 311 and Highway 104, however; the actual transportation route is not explicitly mentioned.
  Route 256 between Route 246 and Route 311 is double chipseal and not meant for continuous heavy loads, the Proponent should discuss this with the NSDPW Area Office.

- There are various "Transportation" sections throughout the report. Consolidation of all these sections into one section is preferable for review of transportation concerns and issues.

- In Section 6.2.7 Transportation (page 15), the Proponent states that "*heavy trucks moving through the area and trucks turning can be a hazard to local traffic. The entrance road has good sightlines, but a long stretch of road on either side which does not have significant on – turning traffic, which could lead to vehicles along Truro Road encountering quarry traffic unexpectedly.*" Also, in Table 14 Summary of Impacts for Transportation indicates that collision with trucks are identified as potentially significant, with mitigation measures identified as setting lower speed limits for trucks to avoid collisions, using good directional signage for slow moving vehicles, and speed policy in the vicinity of the quarry. There is also suggestion of

placing warning signs and speed limit signs in areas leading up to the quarry. This wording seems to imply that this might be a current issue and since the pit has been operational for more than 20 years, a collision history query was completed by NSDPW for the roads in question here (Truro Road, and the intersections of Truro Road/Hwy 256, and Truro Road/Hwy 311) was requested to assess if there have been collisions with trucks coming out of the pit or travelling on Truro Road to the Highway 256 and Highway 311 intersections. The collision history query indicated that any collisions on these roads did not have pit trucks as a contributing factor. The mitigating measures suggested are appropriate once it transitions into a quarry, and out of abundance of caution should be used now as well.

- Transportation is also referenced as a Valued Environmental Concern in Table 2 (page 12), with references to erecting signage. The Proponent has indicated that it will be done to comply with any NSDPW requirements. While informational signage for the site is mentioned, this would normally apply to any guide, warning or regulatory signage. These types of signs must be approved by the local Area Manager for any provincially owned roads.

- In Section 6.2.8 Residential Use, there is wording that "*accidental loss of gravel and rock products from trucks can be hazardous*". While this is true, it needs to be emphasized that properly securing any loads is a direct legal responsibility of the Proponent.

- The Proponent has also identified that new to this expansion, there will be drilling and blasting activities. Frequency is estimated at 1-2 times per year for blasting, however; any impacts on provincially owned roads need to be appropriately mitigated. All permitting and discussions must be obtained and approved from the local NSDPW Area Office.

Key Considerations: (provide in non-technical language)

1. The Proponent should clarify the transportation route.
2. Mitigation measures for collisions are appropriate and should be in place now out of abundance of caution.
3. The Proponent must receive approval from the local Area Manager prior to erecting signage on provincially owned roads.
4. Properly securing loads to remove the risk of accidental loss of gravel and rock is the legal responsibility of the Proponent.
5. The Proponent must receive approval for the NSDPW Area Office prior to conducting blasting activities near provincially owned roads.

Public works is a substantial aggregate consumer in the region of Colchester County through both Capital Construction and Maintenance activities. Private industry expanding their capabilities, in accordance with the applicable regulatory review, in the region would enhance our access to said aggregate. This should lead to more competitive pricing and reduce any supply constraints which may have been present in the past.

NOVA SCOTIA
Environment and Climate Change

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Halifax, Nova Scotia
Canada B3J 2P8

Date: February 5, 2025

To: Mark McInnis, Environmental Assessment Officer

From: Air Quality Unit

Subject: **New Annan Quarry Expansion Project, Colchester County, NS**

Scope of review:
This review focuses on the following mandate: Noise

List of Documents Reviewed:

- *Registration Document and Appendix Part 1*
- *Appendix Part 2*

Details of Technical Review:

Municipal Enterprises Limited (MEL) proposes to expand the existing NSECC approved New Annan aggregate pit from a less than four-hectare pit to a 17.42-hectare quarry to supply aggregate for the local construction industry. If approved, it is anticipated that operations will involve the extraction of up to 50,000 tonnes/year during years in which the quarry is active. However, the annual quantity may vary depending on local demand and associated project requirements. Other than the proposed increase in size and the addition of blasting (1-2 times/year) to the scope of site activities, it is expected that continued use of the site will be identical, or very similar, to historic use of the pit.

The proponent has not included any baseline noise monitoring/modelling at the site or provided expected sound levels produced by equipment/operations at the site.

The proponent states that noise mitigation will include maintaining appropriate operational buffers, maintaining vehicles and heavy equipment in operational order, and giving attention to traffic patterns around the site to reduce the need for heavy equipment to use back-up signals.

The proponent states that the pit could possibly operate 7 days/week. During load and haul activities the site is typically operated during daylight hours (approximately 12 hours/day), and although uncommon, during crushing activities the site may be operated 24 hours per day.

The proponent states that blasting will follow the guidance in the NSECC Pit and Quarry Guidelines and that noise from operations at the pit will adhere to the sound level limits in the NSECC Pit and Quarry Guidelines. However, if approved, the site would be required to comply with the permissible sound levels (PSLs) outlined in the NSECC Guidelines for

Environmental Noise Measurement and Assessment (GENMA) (2023) for a rural environment.

Aside from the addition of blasting, noise from the proposed expansion of the pit is expected to be similar to that already produced at the site, since there is no anticipated change in the operational scope of the pit. However, in the absence of any noise monitoring/modelling, it is unclear if the proposed expansion has the potential to exceed maximum PSLs in GENMA.

Key Considerations: (provide in non-technical language)
The Air Quality Unit notes the following key considerations:

- It is unclear if the proposed expansion has the potential to exceed the appropriate GENMA permissible sound levels at the nearest receptor (rural classification).
- It is unclear how effective noise management and mitigation will be in the absence of a Noise Management Plan with a clear chain of responsibility for actions, including timely complaint resolution.

NOVA SCOTIA
Environment and Climate Change

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Halifax, Nova Scotia
Canada B3J 2P8

Date: February 5, 2025

To: Mark McInnis, Environmental Assessment Officer

From: Air Quality Unit

Subject: **New Annan Quarry Expansion Project, Colchester County, NS**

Scope of review:
This review focuses on the following mandate: Air Quality

List of Documents Reviewed:

- *Registration Document and Appendix Part 1*
- *Appendix Part 2*

Details of Technical Review:

Municipal Enterprises Limited (MEL) proposes to expand the existing NSECC approved New Annan aggregate pit from a less than four-hectare pit to a 17.42-hectare quarry to supply aggregate for the local construction industry. If approved, it is anticipated that operations will involve the extraction of up to 50,000 tonnes/year during years in which the quarry is active. However, the annual quantity may vary depending on local demand and associated project requirements. Other than the proposed increase in size and the addition of blasting (1-2 times/year) to the scope of site activities, it is expected that continued use of the site will be identical, or very similar, to historic use of the pit.

Impacts on air quality from this project are most likely to occur during clearing/grubbing, blasting/crushing activities, operation of heavy equipment, loading/unloading of materials, and onsite routine operations. These activities are most likely to contribute to increases in concentrations of total suspended particles (TSP), while vehicle emissions are likely to contribute to increases in fine particles ($PM_{2.5}$) and nitrogen oxides.

The proponent states that dust mitigation measures will include the use of water sprays, gravelling work areas, and reducing vehicle speeds. Other than the addition of blasting, the proponent states that site activities are not expected to increase and air emissions from the quarry are expected to be the same or similar to those produced by the existing pit.

No ambient air quality monitoring is included in the EA registration document, however the proponent states that ambient air quality monitoring will be conducted at the request of NSECC, in accordance with the terms and conditions of the Industrial Approval.

Key Considerations: (provide in non-technical language)

The Air Quality Unit notes the following key considerations:

- The use of dust management methods, along with best operating practices e.g., no idling, would minimize air quality impacts.
- It is unclear how dust will be mitigated and managed without an effective Dust Management Plan, including clear chains of responsibility for actions, including timely complaint resolution.

NOVA SCOTIA
Environment and Climate Change

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Date: February 5, 2025

To: Mark MacInnis, Environmental Assessment Officer

From: Water Branch, Sustainability & Applied Science Division

Subject: **New Annan Quarry Expansion, Colchester County, Nova Scotia**

Scope of review:

This review focuses on the following mandate surface water quality and quantity, groundwater quality and quantity, and wetlands.

List of Documents Reviewed:

Environmental Assessment Registration Document (EARD) Submission, including Appendices.

Details of Technical Review:

Surface Water

The EARD states that the headwater tributary of Fourmile Brook, which is located east of the existing gravel pit and an associated pond, is the only fish habitat at the site, with brook trout being found at several locations within this stream. These areas are outside of the proposed development area; however, these watercourses may be impacted by runoff that contains fine-grained material, as they are down-gradient from quarry activities. The surface water management plan (SWMP) should be designed to mitigate those potential impacts. Though the EARD states that most precipitation is predicted to infiltrate the quarry floor with little runoff from the quarry predicted, larger storms can overwhelm this infiltration capacity and the infiltration rate can decrease over time. This has the potential for increased runoff and subsequent buildup of fine-grained materials on the quarry floor that may cause sediment releases to downstream watercourses. To mitigate the risks to water quality and fish habitat in the brook and pond, a site-wide erosion and sedimentation control (ESC) plan should be designed to minimize impact to aquatic habitat in the receiving waters, with the habitat requirements of brook trout in mind.

The EARD states that a surface water management plan will be developed for the site as part of the subsequent IA process and will include specific surface water controls and erosion and sediment control strategies. Additional details are required as part of the submission for the Industrial Approval amendment application to support an assessment of proposed mitigations.

A reference to retaining surface water in the fractured quarry floor requires more detail. Should water be retained in the fractured quarry floor or elsewhere on the project site, details (e.g., locations for retaining water, details of settling pond) are required as part of the submission for the Industrial Approval amendment application.

The submission states that surface water runoff from the quarry is intermittent and is not expected to affect overall flow characteristics in downstream areas significantly. The submission also states that the proposed quarry expansion will have a negligible effect on local hydrology if

typical mitigation methods, such as onsite water management, are used. Details on mitigations were not provided. Details are required as part of the submission for the Industrial Approval amendment application.

The water balance estimated that the change in surface water runoff in Fourmile Brook, will be from 0 to 5.2%. Water (for washing and dust control) will either be sourced onsite through retained surface water or imported from offsite. It is also noted that the values in Tables 3 within the Appendix F Water Balance Assessment outlining the % change for Catchment Area A represent the % change for the entire watershed area (~90 ha), and do not represent the % change for specifically the quarry area, which is much smaller. As a result, the % change in runoff from the quarry area itself will be larger and requires adequate assessment and mitigation so that potential impacts to the hydrological regime of the downstream water resources are considered and mitigated. The submission states that a monitoring program will be included with the surface water management plan. Surface water monitoring locations will be identified and monitored to establish baseline surface water quality and will allow for ongoing monitoring to ensure that any potential hydrology impacts are identified. Monitoring details (e.g., locations) are required as part of the submission for the Industrial Approval amendment application, including acceptable baseline monitoring locations in areas unimpacted by current and proposed activities. Additionally, sample locations for 'high flow' total suspended solids monitoring should be selected such that upstream flow is unimpacted by any quarry activities.

The potential presence of uranium has been noted in the rock formations in the area. A geological assessment was carried out, which concluded that "no bedrock uranium occurrences have been identified to date in the project area and no obvious indicators of significant risk of uranium presence in the proposed quarrying area were identified"; however, since rock formations at the site have potential for uranium occurrence, Municipal Enterprises Limited (MEL)indicated they plan to conduct regular and ongoing testing for uranium of the rock being extracted from the quarry. MEL geologists will conduct inspections of the rock face and will include uranium and other heavy metals as part of their surface water and groundwater monitoring program.

MEL developed a Contingency Plan for pit and quarry operations, which includes procedures and processes for responding to environmental emergencies including spill or release occurrences that could impact groundwater in the area. The Contingency Plan could be expanded to include potential impacts to surface water as well as impacts to surface water associated with elevated uranium.

The degree of any interactions with the Gully Lake Wilderness Area or other nearby protected areas are not expected to change, although occasional blasting may be heard as far as the Gully Lake Wilderness Area.

NSECC staff that visited the site on October 24, 2024, observed that the driveway near the entrance appeared to have partially washed out. This driveway crosses the unnamed watercourse at the eastern end of the site. To prevent future impacts to this watercourse, this crossing should be assessed and work undertaken, as required.

The EARD also states that they expect that the IA will continue to include conditions relating the restrictions around fuels and lubricants used onsite, such as not refueling within 30 m of a waterbody. It is important to take these preventative measures to mitigate the risks to water quality and fish habitat in surface waters near the site activities.

Groundwater

MEL proposed to expand the working footprint of the existing New Annan pit and transition the site into a quarry for the purpose of extracting and supplying aggregate for the local construction industry. The proposal includes typical pit and quarry activities, including clearing and grubbing of vegetation and overburden, drilling and blasting of bedrock, crushing, screening, and stockpiling of aggregate products. According to the EARD, historic and future excavation is not expected to take place below the bedrock water table and there will be no pumping of groundwater, although the actual depth of the bedrock water table at the site is unknown. The EARD also notes, "if aggregate extraction below the groundwater table is required in the future, a Hydrological Study will be completed and an application to amend the IA will be submitted to NSECC".

According to the EARD, there are no permanent residences within 800 meters of the study area and one seasonal residence approximately 520 meters from the site. The report notes that impacts to private wells are not anticipated, due to the significant separation distance, although it was also noted that "drinking water wells associated with the nearest residences along Truro Road in the same aquifer as the quarry could be affected by periodic blasting" and "the impact of the project on water supplies and residential wells is expected to be minimal, with little or no change from previous operations at the pit".

In their EARD, MEL states "As part of the subsequent IA process, a groundwater monitoring program will be developed, and a network of groundwater monitoring wells will be constructed to establish baseline groundwater quality as well as existing groundwater table elevations. The monitoring well network will allow for on-going monitoring to ensure that any potential groundwater impacts are identified".

The potential presence of uranium has been noted in the rock formations in the area. A geological assessment was carried out, which concluded that "no bedrock uranium occurrences have been identified to date in the project area and no obvious indicators of significant risk of uranium presence in the proposed quarrying area were identified"; however, since rock formations at the site have potential for uranium occurrence, MEL indicated they plan to conduct regular and ongoing testing for uranium of the rock being extracted from the quarry, MEL geologists will conduct inspections of the rock face, and surface and groundwater will also be monitored for uranium and other heavy metals.

MEL developed a Contingency Plan for pit and quarry operations, which includes procedures and processes for responding to environmental emergencies including spill or release occurrences that could impact groundwater in the area. The Contingency Plan could be expanded to include potential impacts to groundwater associated with elevated uranium.

Wetlands

The proponent has provided a general overview of the wetlands within the study area and identified five wetlands. The EARD did not provide enough information on the wetlands to predict whether adverse environmental effects on the wetlands will occur. The following information was not provided:

- Wetland Delineation methods, and field forms including hydric soils and hydrology. Only vegetation was mentioned in the wetland descriptions.
- WESP-AC Functional Assessment results were not included in the documents. WESP-AC functional assessments (WESP-AC WSS Interpretation Tool) should be completed to determine if wetlands are classified as Wetlands of Special Significance (WSS) functionally.
- The proponent has proposed no alteration to wetlands 3 and 4 since they are outside of the proposed expansion area, however it is unclear if potential indirect alterations could occur due to site run-off. Mitigation through a surface water management plan and wetland monitoring should be completed to determine if indirect alterations such as changes in the wetland hydrology have occurred.

Key Considerations: (provide in non-technical language)

Surface Water

Though the site is operational only intermittently, it is important to mitigate any potential risks to water quality and quantity in the surface waters near the activity as they provide habitat for brook trout, an economically and ecologically significant species in Nova Scotia. As part of achieving the mitigations outlined in the submission, it is recommended that erosion and sediment control plans focused on mitigating risks to surface water quality and quantity be developed by a qualified professional prior to further site development taking place. As part of this, it is recommended that this be supported by a design basis that clearly articulates what water quality objectives will be achieved because of these mitigations (e.g., reduction of Total Suspended Solids to a defined level prior to discharge).

It is recommended that a detailed surface water management plan be required prior to the expansion of the quarry, and that it includes specific considerations related to how the potential increases to flows will be mitigated (e.g., site water management retention/settling ponds with engineered outlet structures). Any proposed mitigation measures are recommended to be supported by sufficient assessment and justification to enable effective Departmental review. It is noted that that as part of mitigating changes to surface water quantity, the proposed works are likely to require additional site water management features that are not currently described in the submission.

Though the probability of encountering uranium at the site is low, contingency plans prepared in advance for this scenario could help protect water resources and fish habitat if it is encountered. The related monitoring suggested in the EARD and geological assessment would also help to mitigate these risks.

Groundwater

The EARD provided information to determine the potential environmental sustainability of the proposed expansion, in relation to groundwater. Minimal to no impact to groundwater and residential wells associated with the proposed project is expected, provided operations are maintained above the water table as stated in the EARD.

The Proponent plans to install a network of groundwater monitoring wells and implement a groundwater quality and water level monitoring program to establish baseline conditions and assess impacts to groundwater on an ongoing basis. The groundwater monitoring program can also be used to establish the actual depth to groundwater to confirm work remains above the groundwater table. NSECC typically defines work above the groundwater table as work conducted at a minimum of 1 m above the annual high-water table level, as measured in a permanent monitoring well network. Should excavation occur below the water table or if the proponent plans to excavate below the water table, a hydrogeological study should be conducted, as noted in the EARD.

Impacts to groundwater quality, from activities on site, are likely to be negligible, provided the proponent implements the monitoring and contingency plans as noted above.

The EARD mentions the potential for aggregate washing. If the operation of the quarry requires more than 23 000 L of water per day, from either a source of groundwater or surface water, water withdrawal approval will be required.

Wetlands

The information provided in the EARD is insufficient in identifying the potential environmental impacts on wetlands. Wetland delineations and WESP-AC functional assessments are required for all wetlands that could be altered directly or indirectly. The proponent is required to complete delineations and WESP-AC functional assessments for all wetlands within the EA study area and confirm which ones are considered wetlands of special significance.

A detailed surface water management plan is required prior to the quarry's expansion, which should include specific considerations related to how the potential increases to flows to wetlands not directly altered will be mitigated.

The proponent is required to submit a Wetland Alteration Approval Application for review and approval for any wetlands proposed to be directly or indirectly altered and complete any necessary compensation and monitoring. The proponent should utilize Nova Scotia’s Wetland Alteration Application’s Guided Template for the permit applications.

NOVA SCOTIA
Environment and Climate Change

Barrington Place
1903 Barrington Street
Suite 2085
Halifax, Nova Scotia
Canada B3J 2P8

Date: January 27, 2025

To: Mark McInnis, Environmental Assessment Officer

From: Environmental Health Consultant, Environmental Health and Food Safety Unit, Sustainability and Applied Science Division

Subject: **New Annan Quarry Expansion Project, Colchester County, NS**

Scope of review:
This review focuses on the following mandate: Environmental Health

List of Documents Reviewed:

- **EARP**
- **Appendix Part 1**
- **Appendix Part 2**

Details of Technical Review:

The project proposal, Municipal Enterprises Limited, proposes to expand the current pit's footprint at 3967 Truro Road, East New Annan, Colchester County, Nova Scotia. The Project will consist of expanding the quarry from a 4-hectare pit to a quarry covering a maximum of 17.42 hectares, with expected activities similar to historical/current uses.

Based upon the review to the documents noted above, and in particular potential for health impacts related from air quality, noise and drinking water wells, no additional Environmental Health concerns that lie outside of the current assessment of impact, mitigation measures, or existing legislative requirements.

Key Considerations: (provide in non-technical language)

Environmental Health Concerns are either addressed within the provided documents, assessed for and deemed no negative effect, or are already covered withing existing legislative requirements. There are no additional un-addressed health related considerations based upon the information provided for this project.

NOVA SCOTIA
Environment and Climate Change

Barrington Place
1903 Barrington Street
Suite 2085
Halifax, Nova Scotia
Canada B3J 2P8

Date: February 5, 2025

To: Mark McInnis, Environmental Assessment Officer

From: Climate Change Division

Subject: **New Annan Quarry Expansion Project, Colchester County, NS**

Scope of review:
This review focuses on the following mandate: Climate change adaptation and mitigation

List of Documents Reviewed:
Environmental Assessment Registration Document

Details of Technical Review:

Adaptation

Section 7.0 *Impacts of the Environment on the Project* provides a brief overview of climate change impacts and adaptation considerations. The proponent has provided a partial description of how the climate is changing relevant to the location but has not included specific historical or projected climate change data. The section does not use a risk assessment framework to assess climate change impacts, although several risks and adaptation measures are identified and discussed, including for extreme rainfall, high winds, and drought.

Mitigation

The proponent does not provide a detailed analysis of greenhouse gas (GHG) emissions but likely assumes they are negligible, estimated to be below 10,000 tonnes of CO_2 per year. The primary sources of GHG emissions associated with the project include fuel combustion from heavy machinery, transportation, and land clearing. While the projected emissions are expected to be low, the proponent has not presented a quantified estimate of GHG emissions or evaluated the potential carbon storage loss resulting from the clearing of forest areas.

Key Considerations: (provide in non-technical language)

Adaptation

We suggest the proponent consider using 30-years of historical climate averages and extremes and climate data over the lifetime of the project to understand how the climate is changing and identify relevant climate hazards to the undertaking.

The proponent has not specifically assessed risks and impacts from climate change or proposed adaptation measures over the lifetime of the project. We suggest the proponent consider using a risk assessment framework to assess risks and plan adaptation measures to reduce risks.

The proponent is encouraged to review climate change-adjusted IDF curves through Canada's national climate data portal (ClimateData.ca), which may be helpful for designing stormwater management infrastructure as part of the process to create a Surface Water Management Plan and an Erosion and Sediment Control Plan (identified in Section 7.0).

Mitigation

The proponent is encouraged to quantify GHG emissions for various stages of the project (construction, operational) and determine opportunities for reducing emissions.

NOVA SCOTIA
Natural Resources
Energy

1701 Hollis St.
PO Box 698
Halifax, NS B3J 2T9

Date: February 5, 2025

To: Mark McInnis, Environmental Assessment Officer

From: Department of Natural Resources, Department of Energy

Subject: **New Annan Quarry Expansion Project, Colchester County, NS**

Scope of review:
This review focuses on the following mandate: Geoscience health and safety, mineral exploration, mineral development, abandoned mines openings, authorities and approvals required from the Land Services Branch, biodiversity, species at risk, wildlife species and habitat conservation.

List of Documents Reviewed:

Geoscience and Mines Branch:

- New Annan Quarry EARD document and Appendices (Parts 1 through 9).
- Mineral Occurrence Database (MODB, Version 12, 2024)
- Google Earth
- Provincial Geoscience Atlas
- GIS Files
- Nova Scotia's Registry of Claims (NovaROC)
- Open File Map ME 2018-005, Preliminary Bedrock Map of the Eastern Cobequid Highlands, Nova Scotia, scale 1:35 000, by T.G. MacHattie 2018

Land Services Branch:

- Environmental Assessment Registration Document
- Appendices 1-9
- GIS shapefiles

Wildlife Branch:

- Environmental Assessment Registration Document – New Annan Quarry Expansion Project, and Appendices.

Details of Technical Review:

Geoscience and Mines Branch:
It is noted that the geological characterization of the proposed site identifies and proposes mitigation measures should geohazards (ARD, uranium bearing bedrock) be encountered. Geological maps included in application display relative location to planned project footprint.

Of note, while no bedrock uranium occurrences have been identified to date in the Project area, the underlying Byers Brook Formation is deemed prospective for the occurrence of uranium mineralization. Systematic monitoring was recommended in the contracted Geological Assessment (EARD Part 9).

The quarry expansion will see the operations migrate from a surficial gravel deposit to volcanic-hosted bedrock deposit. Changes with respect to aggregate quality should be monitored accordingly through this transition and operation phase.

Mineral Occurrences
The proposed Project Area is a high level for mineral potential using the 2009 model. No exploration licences are located near the Project Area >5 km. It is not anticipated that the proposed project will result in any negative impacts to the nearby mineral exploration licences.
The East New Annan Aggregate deposit is located just East of the Project Area. In addition, several aggregate occurrences are in the immediate area.

Land Services Branch:
Based on the information provided, the Project is located on privately owned land, and it does not include/or adjoin Crown lands. No authorities or approvals are required from the Land Services Branch unless the scope of the project changes to include Crown lands.

Wildlife Branch:
Overall, the Municipal Enterprises Limited, New Annan Quarry Expansion Project, Colchester County, is a comprehensive document and of sufficient quality to assess risks to wildlife and wildlife habitat.

The project area overlaps with mainland moose core habitat and a moose concentration area. Moose sign was recorded during wildlife surveys, but targeted moose surveys were not conducted.

Owls surveys were conducted on May 12, 2024, and breeding birds were surveyed on June 5, 2024, and June 22, 2024. Migratory bird surveys were not conducted. Barred Owl and Great Horned Owl were detected across the study area. A second year of wildlife surveys would be required to definitively determine presence/absence of SAR/SOCI and inform the development of a Wildlife Management Plan which would identify appropriate mitigations to minimize disruption to bird populations and ensure regulatory compliance.

The EARD suggests American Woodcock were relatively numerous and believed to be migrating through the area. Woodcock were observed during the timing window for

breeding, and some habitat is present in the study area. Further information on breeding evidence including mating or courtship behaviour is required to support that the individuals observed were migrating and not breeding.

Wetlands 3 and 4 are located outside of the proposed expansion area and contain plant species of conservation concern (*Carex rosea & Carex tribuloides*). Potential impacts to wetland structure and function and associated SOCI plant communities is under the mandate of the Department of Environment and Climate Change.

Based on information provided in the EARD, the project area does not likely support suitable bat habitat.

Key Considerations: (provide in non-technical language)

Geoscience and Mines Branch:

1. Allow periodic controlled access to any mineral right holders that may continue to explore the area for economic mineralization of critical minerals.

2. The reviewer for GMB is in alignment with Mercator's recommendations regarding monitoring for aggregate quality changes as well as for occurrences of uranium mineralization. Monitoring of quarry conditions for both acid generating rock potential (ARD) and potential uranium occurrences as development progresses should be undertaken and measures in place as part of the Proponent's Environmental Protection Plan (EPP).

Land Services Branch:

No further comments.

Wildlife Branch:

Based upon a review of the information submitted, the following recommendations are provided:

- Obtain all necessary permits to undertake the project as required under legislation related to wildlife, species at risk, watercourses and wildlife habitat alterations.
- Provide digital waypoints and/or shapefiles for all species detected during flora and fauna surveys, including Species at Risk and Species of Conservation Concern to DNR (those species listed and/or assessed as at risk under the *Species at Risk Act, Endangered Species Act*, COSEWIC, as well as all S1, S2 and S3 species). Data should adhere to the format prescribed in the DNR Template for Species Submissions for EAs and is to be provided within two (2) months of collection.
- Develop a Wildlife Management Plan (WMP) in consultation with DNR and ECCC which includes at minimum:

    - Communication protocol with regulatory agencies.
    - General wildlife concerns (e.g., human-wildlife conflict avoidance).
    - Education sessions and materials for project personnel on Species at Risk, non-Species at Risk-wildlife, and other important biodiversity features they

may encounter on-site and how to appropriately respond to those encounters, including guidance for reporting and managing bat sightings or occurrences.
- Noise, dust, lighting, blasting, and herbicide use mitigation and monitoring.
- Emergency response plans for accidental spills, pollution, chemical exposure, and fire.
- A blasting plan with a completed pre-blast survey, a blast monitoring plan, and a blast damage response plan.
- Apply best management practices to prevent erosion, and sedimentation from entering any watercourses or wetlands. Develop protocol for regular monitoring of these systems to ensure proper functioning during significant weather events.
- Apply standard best management practices for any material stockpiles to avoid creating artificial habitat for wildlife.
- Quarries and burrow pits are known to provide suitable habitat for nesting turtles, and there may be some suitable habitat in the open water ponds for Snapping turtles and Eastern Painted turtles. An annual turtle nesting monitoring plan is recommended to protect and mitigate against potential impacts to nesting or hatchling turtles in the project area. This will identify needs around use of turtle exclusion fencing or other measures to reduce the potential for access to artificial nesting opportunities.
- Measures to protect and mitigate against adverse effects to migratory birds during construction and operation. The incidental take of migratory birds, as well as their nests and/or eggs, is not permitted under the *Migratory Birds Convention Act* and the *NS Wildlife Act*. Mitigations include avoidance of certain activities (such as vegetation clearing) during the regional nesting period for most birds, buffer zones around discovered nests, limiting activities during the breeding season around active nests, restricting lighting use at night during seasonal migration periods, and other best management practices. These practices may include the use of directional lighting projected downward, eliminating all unnecessary lighting, and covering only the areas needing illumination.
- Mitigation measures consistent with recovery documents (federal and/or provincial recovery and management plans, COSEWIC status reports) to avoid and/or protect Species at Risk/Species of Conservation Concern discovered or with the potential to be found in the Study Area, including mitigations to avoid the destruction of critical and core habitat.
- Monitoring and mitigation measures for bank swallows to ensure any stockpiles or banks have a slope of less than 70 degrees to deter bank swallow nesting in high disturbance areas.
- Areas of avoidance or mitigation should be clearly flagged and visible to workers.
- It is recommended that the proponent ensures standard practices are established during development, construction, and operation of the site to prevent wildlife interactions that may result in entanglement, entrapment, or injury. As part of daily operations staff should be trained to survey the site, identify issues, and consult as appropriate for solutions when wildlife is found

to be utilizing artificial or existing habitat conditions during the operation of the site.
    - Details on monitoring and inspections to assess compliance with the WMP.
- Employ standard operational practices to minimize external lighting during nighttime operations to mitigate potential influence on the behaviour of migratory birds including but not limited to, the use of directional lighting projected downward, eliminate all unnecessary lighting and cover only the areas needing illumination.
- In consultation with NSDNR establish a decommissioning and site reclamation plan to revegetate areas that are no longer operational with native plant species to aid in the control of invasive species that may be in the process of becoming established. The goal is to restore conditions that are similar to pre-existing conditions, allowing natural communities to reestablish.
- Describe the impacts of the project on landscape-level connectivity for wildlife and habitat (e.g., habitat fragmentation, loss of intact forested habitat, increased road density). Include an assessment of the cumulative effects of the project on landscape-level connectivity and habitat loss, and the measures proposed to mitigate those effects.
- Recommendations specific to this project, to contribute to development of appropriate mitigations:
    - Conduct an additional year of breeding bird and owl surveys
    - Conduct migratory bird surveys
    - Conduct dedicated mainland moose surveys

NOVA SCOTIA
Fisheries and Aquaculture

Armoyan Centre
1800 Argyle Street
Suite 603
Halifax NS B3J 3N8

Date: February 5, 2025

To: Mark McInnis

From: Lesley O'Brien-Latham, Executive Director, Policy and Strategic Advisory Services

Subject: New Annan Quarry Expansion Project, Colchester County

Scope of review:
The scope of this review follows the Department of Fisheries and Aquaculture's legislated mandate to develop, promote and support fishing, aquaculture, seafood processing and sportfishing in Nova Scotia.

List of Documents Reviewed:
- New Annan Quarry EARD with Appendix final – Parts 1-9
- MEL-EA-Registration-Document

Details of Technical Review:
Aquaculture:
Upon review of the EA registration documents, DFA has determined that if the proposed mitigation and monitoring steps are applied appropriately, it should result in a low risk of negative effects on aquaculture sites and rockweed leases.

There are a total of 0 rockweed leases and 16 aquaculture sites within 25km of the proposed project. Of these, 13 are marine shellfish and plants sites, 0 are marine finfish sites, and 3 are land-based aquaculture facilities.

Expansion of the quarry is not anticipated to create any additional dust or sediment, as activities will be the same as what is currently occurring. Dust management will be achieved through the use of water spray systems designed to reduce air borne dust originating from crushing operations and from construction vehicle movement by gravelling working areas and reducing vehicle and equipment speed. Monitoring of airborne particulate emissions will be conducted in accordance with the Pit and Quarry Guidelines and the Industrial Approval for the quarry. Industry standards and best practices will be followed during all phases of operations. These active mitigation and monitoring steps identified in the EA registration documents should result in low risk of negative effects of sedimentation on aquaculture sites, if applied appropriately.

There is no mention of power supply disruption in the EA registration documents. If a power disruption is required during this project, outages should be planned whenever possible and adequate notice should be given to aquaculturists to allow back-up power sources to be utilized to prevent equipment disruptions. Aquaculture facilities can be negatively affected by unexpected power outages. These implications can vary depending on the species, the scale of the operation, the duration of the power outage, and the specific technologies used. Power disruptions to equipment can be detrimental to aquatic animal health through inability to maintain water flow, monitor and maintain water conditions, or feeding system operations. Fluctuations in environmental

conditions caused by power outages can generate cumulative stress and weaken the immune systems of aquatic animals, making them more susceptible to disease. Interruptions in power can also affect data logging and record-keeping systems, making it challenging to track daily production and feeding data.

The project does not require local water withdrawal and DFA does not anticipate any risk of interference with the groundwater table or affect any of the aquaculture sites located nearby. An on-site groundwater monitoring program will be developed, and a network of groundwater monitoring wells will be constructed to establish baseline groundwater quality as well as existing groundwater table elevations. The monitoring network will allow for on-going monitoring to ensure that any potential groundwater impacts are identified.

A contingency plan for pit and quarry operations has been developed, which includes procedures and processes for responding to environmental emergencies (including spill or release occurrences that could potentially impact groundwater in the area). Spill response, clean-up, and reporting will be in accordance with applicable NSECC Regulations.

Marine:
The proposed development appears to pose negligible impacts to NSDFA's marine fisheries interests.

There is one licensed NS marine commercial buyer/processor located within Colchester County where the proposed quarry expansion is to be located. Five Islands Clam Plant is located 97km West of the prosed site. Since there appears to no proposed marine activities throughout the lifecycle of the proposed quarry expansion, NSDFA concluded that the proposed quarry expansion would pose a negligible impact to the operations of the licensed commercial fisheries facility.

Regarding marine commercial fisheries in the area, lobster is the most lucrative fishery adjacent to the proposed site. The waters adjacent to the proposed site are known as Lobster Fishing Area (LFA) 35. Fishing in LFA 35 occurs from October 14th to December 31st and opening again from the last day in February until July 31st, respectively. Since the project is land-based with no proposed marine activities, it poses negligible impacts to lobster and other commercial marine fisheries adjacent to the project area.

There is communal-commercial, Food, Social, and Ceremonial (FSC), and livelihood fishing conducted within LFA 35 in the waters adjacent to the proposed site. The Indigenous community, Millbrook First Nation, located adjacent to the proposed site, possesses these licenses. Since the project is land-based with no proposed marine activities, it poses negligible impacts to the lobster and other commercial marine fisheries (harvested by Millbrook First Nation) adjacent to the proposed site.

Inland:
The proposed project expansion area will not directly impact fish or fish habitat through expansion/operational activities. Impacts to brook trout (identified during the evaluation) indirectly occur through runoff into the wetlands adjacent to the current pit, as was stated in section 6.3.6 of the document.

The proponent has discussed development of a surface water management plan and monitoring to ensure quarry meets guidelines; contingency plan for spills was also developed.

Table 14 indicates a forested buffer will be maintained around wetlands and streams and the headwater tributary of Fourmile Brook (Waughs River tributary) will be avoided.

No information on physical characteristics of unnamed watercourse was provided by the proponent

to assess.

This EA relied on minnow trapping as a sole method of catching fish, which is inadequate for determining the presence of all species within the unnamed brook section of the project area, based off schematics provided by proponent and google earth satellite imagery as no figures of unnamed brook were included in the documentation. Electrofishing is more appropriate and would provide a more accurate assessment whether other species are present. The Waughs River supports brook trout, brown trout, and Atlantic salmon fisheries.

Given small size of unnamed tributary, and wetlands 3 & 4, this project is unlikely to impact sportfishing in the local area

Key Considerations: (provide in non-technical language)

Aquaculture:

- Risks to aquaculture sites from sediments, groundwater contamination, and surface water runoff appear to be minimal yet need to be monitored and mitigated appropriately.
- The applicant should be made aware of the aquaculture operations within the area and ensure mitigations are implemented appropriately.
- If power disruptions are going to occur, the applicant needs to update their plans and provide appropriate mitigations for review.

Marine:

- Based on the activities proposed, and with adherence to the environmental policies and guidelines, there is negligible risk to adjacent commercial marine fisheries activities and NSDFA's interests.

Inland:

- General construction and operation of the proposed quarry should not pose a risk to local sportfishing, if sufficient care is taken to avoid sedimentation issues within the unnamed tributary that flows into Fourmile Brook.
- The EA showed the presence of brook trout within the study area, but the methodology used (minnow trapping) is not the most accurate method when assess the presence of other fish given that similar habitats have also contained other salmonids such as Atlantic Salmon, brown trout.

Project proponent should be made aware of:

- the Fisheries and Coastal Resources Act,
- Provincial Aquaculture License and Lease Regulations,
- Provincial Aquaculture Management Regulations,
- the Nova Scotia Rock Weed Harvesting Regulations,
- the Department's Site Mapping Tool for more information on the location of aquaculture sites and leases in the area of their proposed project

NOVA SCOTIA

Agriculture

60 Research Drive
Suite A
Bible Hill, Nova Scotia
B6L 2R2

Date: January 28, 2025

To: Mark McInnis, Environmental Assessment Officer

From: Heather Hughes, Executive Director, Policy and Corporate Services, Nova Scotia Department of Agriculture

Subject: New Annan Quarry Expansion Project
East New Annan, Colchester County, Nova Scotia

Thank you for the opportunity to review the documents for the above-noted project. No agricultural impacts are anticipated given that:

- The project is located on Class 7 land, defined as ‘having no capacity for arable culture or permanent pasture’.
- There is no agricultural land within a 2 km radius of the project location. 99.5% of land within the 2 km buffered zone is Class 7 land.
- The nearest agricultural land is 2.5 km from the project site and is wild blueberries.

NOVA SCOTIA
Communities, Culture, Tourism and Heritage
Special Places Protection

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Halifax, Nova Scotia, Canada B3H 3A6
902-424-6450 T
SPP@novascotia.ca E

Date: February 5, 2025

To: Mark McInnis, Environmental Assessment Officer

From: Beth Lewis, Director of Special Places Protection

Subject: **New Annan Quarry Expansion Project, Colchester County, NS - Environmental Assessment Registration**

Scope of review:
This review focuses on the following mandate: ***Archaeology and Geology***

List of Documents Reviewed:
EA Document
HRP Final Report A2023NS210

Details of Technical Review (Archaeology):

Key Considerations: (provide in non-technical language):

There are no archaeological concerns at this time.

Details of Technical Review (Geology):

The project proposal describes the bedrock geology correctly as Carboniferous Byers Brook Formation, which is composed of igneous rocks that will not contain any fossils. The surficial geology of the overlying gravel is not anticipated to contain significant amounts of fossils. There are no concerns about palaeontology resources encountered in the project area.

Key Considerations:

NOVA SCOTIA
Environment and Climate Change

Banc Place
30 Damascus Road
Suite 115
Halifax, Nova Scotia
Canada B4A 0C1

Date: February 5, 2025

To: Mark McInnis, Environmental Assessment Officer

From: ICE Division

Subject: **New Annan Quarry Expansion Project, Colchester County, NS**

Scope of review:

This review focuses on the following mandates:

- surface water (quantity, quality)
- groundwater (quantity, quality)

List of Documents Reviewed:

Document's name	Section / Appendix
naq-registration-document-and-appendix-part1	• Sections: 1 to 9, 11 • Appendix C - Rock Sulphur Content Analysis Results • Appendix D - Biophysical Assessment: New Annan Quarry Expansion
naq-appendix-part2	• Appendix D - Biophysical Assessment: New Annan Quarry Expansion
naq-appendix-part3	• Appendix D - Biophysical Assessment: New Annan Quarry Expansion
naq-appendix-part6	• Laboratory results TSS & pH (Appendix F of the Biophysical Assessment: New Annan Quarry Expansion)
naq-appendix-part7	• Appendix F - Water Balance Assessment
naq-appendix-part8	• LiDAR DEM Sketch - July 17, 2024
naq-appendix-part9	• Appendix G - Geological Assessment

Details of Technical Review:

The Registration Document underlines several Valued Environment Components identified with the New Annan Quarry Expansion. For this purpose, the following components will be reviewed and combined under the two mandates surface water (quantity, quality) and groundwater (quantity, quality): Groundwater, Hydrology Water Quality, Freshwater Aquatic Environments Wetlands, Water supplies and Residential wells.

Surface Water (quantity, quality)

Several surface water features were identified in the catchment where the quarry will be located. These were included in the Water Balance Assessment to estimate changes in surface water flows (estimated between 0 to 5.2%).

However, even if the assessment presents the most conservative scenarios with a pervious/impervious surface, this doesn't appear to account for all the surface water features identified in Biophysical Assessment: New Annan Quarry Expansion, Envirosphere (Figure 16, p. 18), nor assess the change in baseflow (groundwater flows) during operation/post-operation of this site or the potential reduced flows to the unnamed watercourse located east/east southeast of this site (headwaters of Fourmile Brook flowing north from the southeast corner as shown on Figure 15 Appendix D - Biophysical Assessment: New Annan Quarry Expansion, Envirosphere, p.17).

This leads to incertitude in the approach underlined in the Water Balance assessment report, with the potential for greater changes of flow.

In addition, the unnamed water course was assessed as fish bearing and changes in baseflow and surface water runoff could potentially impact fish/fish habitats.

While washing aggregates could occur at this site, the applicant advised that flows will not significantly impact the downstream areas and water usage on-site would be primarily for dust control. However, no assessment was presented to support these conclusions. If this type of activity occurs at the site, additional measures are recommended.

From a water quality perspective, the applicant completed a series of analysis to address the potential for Acid Rock Drainage (ARD) and uranium occurrence were completed on quarry bedrock:

- sulphur content was determined <0.001% or <0.03 kg H_2SO_4/tonne which is below the provincial threshold of 0.4% or 12.51 kg H_2SO_4/tonne (Registration document, p.22 and Appendix C).
- levels of radioactivity (scintillometer and pXRF) were generally within or slightly higher than expected background levels and are representative of felsic volcanic rocks (Geological Assessment, Mercator Geological Services, 2024, Section 7.3 Drill Core Radiometric Assessment, p.27-29).
    - Further assessments will have to be undertaken during the advancement of the quarry face towards the western part of the site (use of scintillometer or spectrometer) (Geological Assessment, Mercator Geological Services, 2024, Section 9.0 Conclusions and Recommendations, p.31).
    - If samples are >10 times regional background levels, representative samples should be analyzed for uranium by a certified geochemical laboratory licensed to do so (Geological Assessment, Mercator Geological Services, 2024, Section 9.0 Conclusions and Recommendations, p.31).

Some preliminary samples were collected at 11 locations within and at proximity of the property where pH and Dissolved Oxygen were below CCME guidelines with generally low TSS.

As there is no current surface water monitoring at this site, it is difficult to fully assess the extent of potential changes associated with the proposed expansion.

However, it is understood by the applicant that a surface water monitoring program is expected as part of a Terms and Conditions of the EA approval and subsequently into the IA approval which

will identify the surface water monitoring locations as well as establish the baseline for water quality. A surface water management plan will also be developed to ensure mitigation measures are in place to avoid surface water impacts to the unnamed watercourse and wetlands (WL3, WL4). Details of both plans will have to be provided to ensure adequate protection of surface water receptors (quantity and quality).

Groundwater (quantity, quality)

The applicant advised in the Registration document that site activities are "(…) not expected to influence groundwater aquifers over a broader area (…)". In addition, "(…) deep bedrock water table (…)" was not encountered (Registration document, p.21).

From this, it is understood that hydrogeological condition in the surficial formation has already been affected.

No hydrogeological assessment was completed in the past to determine baseline condition of this site nor possible change in the baseflow due to future expansion of the pit. This includes the impact on partly or entirely altering the wetlands on-site or at its proximity. It is to note that all wetlands were identified as partly groundwater fed and as such demonstrate the presence of a surficial water table.

Furthermore, expanding site activities to a greater area will further change the local hydrogeological condition with possible drop in static water level (water quantity). Some activities like blasting could affect any existing or future water supply in proximity of the excavation area. Based on 2013 well logs data base, only one seasonal structure was confirmed. However, the data base is not 100% accurate and newer dwellings may not be accounted for. A well survey could confirm on the field, within 800 meters radius of the site, the number of permanent structures, type of water supply.

The EA registration document didn't present an assessment of the radius of influence resulting from the excavation of the site. This assessment would help evaluate the potential impact on the adjacent properties of the site.

As mentioned in the previous section (Surface Water (quantity, quality)), potential for ARD or uranium occurrence was assessed. It was determined that additional measures for uranium occurrence will have to be undertaken during operation of the quarry to ensure the groundwater quality is not impacted.

It is expected by the applicant that a groundwater monitoring program be part of Terms and Conditions of the EA approval and subsequently into the IA approval (Registration document, p.21). Such program will gather baseline data including water quality and water quantity (static water level/elevation) which will be used to assess compliance.

Key Considerations:

Further assessments should be completed by the applicant to establish robust baseline data (surface/groundwater (quantity, quality)) and to develop adequate plans such as surface water, groundwater monitoring plans (including adequate parameters, frequency) and surface water management plan.

This will ensure that the necessary data are collected based on site specifics and will be used to confirm or invalidate the assumptions made throughout the EA registrations documents.

In addition to the above assessments, a well survey should be implemented to ensure the accurate location of nearby water supplies and an evaluation of the radius of influence due to a larger pit would help determine the potential effects due to on-site activities.

The above considerations will assist the applicant in developing appropriate mitigation measures to ensure reduced impacts (quantity/quality) occur on receptors such as private wells, wetlands (WL3 and WL4), unnamed watercourse, aquifer.

From:	Wade,Suzanne (ECCC)
To:	McInnis, Mark
Cc:	Hingston,Michael (il | he, him) (ECCC); Wade, Suzanne (EC); Aikens,Marley (elle | she, her) (ECCC); Morais,Tania (elle | she, her) (ECCC)
Subject:	FW: Environmental Assessment - New Annan Quarry Expansion Project, Colchester County, NS (EAS# 25-NS-001)
Date:	February 10, 2025 10:48:23 AM
Attachments:	BatSAR_SurveyGuidance_2_EN_Treed_Habitats_ONMNRF_2017.pdf

Good Morning Mark,

Environment and Climate Change Canada's Canadian Wildlife Service (ECCC-CWS) have reviewed the EA Registration Document (EARD) for Municipal Enterprises Limited's (MEL) proposed New Annan Quarry Expansion Project, located near East New Annan, NS, and we offer the following comments.

WILDLIFE COMMENTS

Attachments and References

- Ontario Ministry of Natural Resources and Forestry 2017. *Survey Protocol for Species at Risk Bats within Treed Habitats, Little Brown Myotis, Northern Myotis & Tri-Colored Bat* (attached). **Note**: there is a 2022 update, but our expert recommends the Phased approach described in the 2017 guidance.
- ECCC 2022. *Guidelines for Effective Wildlife Response Plans.* https://www.canada.ca/en/services/environment/wildlife-plants-species/national-wildlife-emergency-framework.html.

General Comments

1. Given that the project is registered under Nova Scotia's (NS) *Environmental Assessment Regulations*, it remains the discretion of the province whether sufficient information has been provided to assess the potential effects of the Project under their jurisdiction and responsibility. ECCC does not have any permits (or authorizations) or approvals in relation to the proposed project. Any advice provided by ECCC is intended to support Nova Scotia Environment and Climate Change (NS ECC) Environmental Assessment review process. The Proponent is responsible for identifying measures which ensure their compliance with the federal *Migratory Birds Convention Act* (MBCA) and the *Species at Risk Act* (SARA).

2. ECCC notes that the Province of NS's Department of Natural Resources and Renewables (NS DNRR) holds technical expertise, jurisdiction, and management authority for birds not protected by the MBCA (e.g., raptors) and terrestrial species at risk (SAR) including bats, reptiles, amphibians, land-mammals, insects, plants, and lichen. ECCC advice on these species is derived from federal recovery strategies

produced as per the Species at Risk Act and are focused on species recovery. SAR are a shared responsibility between the federal government and the provinces and ECCC comments reflect this.

3. Proponents are encouraged to share and store wildlife survey data with the Atlantic Canada Conservation Data Center. Information on data contributions can be found at: http://accdc.com/en/contribute.html.

4. If considering wildlife protection, mitigation, monitoring and adaptive management plans as part of potential approval conditions related to avifauna and/or migratory bird SAR, ECCC recommends clarifying what elements are expected to be included, and that the consultation process is clear for all parties.

Species at Risk (SAR) and Critical Habitat (CH)

General

5. For projects undergoing environmental assessment, ECCC recommends that adverse effects of the project on SAR and CH are identified, and, if the project is carried out, that mitigation measures are taken to avoid or lessen those effects. We recommend that mitigation measures:

   - be consistent with best available information including any Recovery Strategy, Action Plan or Management Plan in a final or proposed version; and

   - respect the terms and conditions of the *Species at Risk Act* (SARA) regarding protection of individuals, residences, and critical habitat of Extirpated, Endangered, or Threatened species.

   We also recommend follow-up monitoring to verify impact predictions, and adequacy of mitigation measures, and adaptive management in the event that species at risk or their critical habitat are adversely affected by the project.

Bank Swallow

6. The Bank Swallow (SARA-listed Threatened) is a colonial, burrow-nesting aerial insectivore known to nest in large piles of soil left unattended/un-vegetated at work sites. If migratory birds take up occupancy of these piles, any industrial activities will cause disturbance to these migratory birds and inadvertently cause the destruction of nests and eggs, which is prohibited under SARA. ECCC offers the following general recommendations for avoiding and minimizing impacts of the project on Bank Swallow:

   - To discourage nesting, the proponent should consider measures to cover or to deter birds from nesting in these large piles of unattended soil during the breeding season. The Government of Canada guidance document "*Bank Swallow (Riparia riparia) in Sandspit and Quarries*" (GoC 2020) offers advice in preparing mitigation measures in the management of stockpiles during construction activities: https://species-registry.canada.ca/index-en.html#/documents/1602.

- Be aware of the risk of nesting Bank Swallows in project footprint, and educate site workers about this risk, and what constitutes a contravention of the SARA and the MBCA.

- Manage site activities to reduce the risk of Bank Swallows initiating a colony within their project footprint.

- Protect Bank Swallow colonies that establish within the footprint of the project until such a time the colony is no longer active and fledglings have naturally left the area.

- Understand what constitutes an active bank swallow residence. The period when nests would be considered active would include not only the time when birds are incubating eggs or taking care of flightless chicks, but also a period after chicks have learned to fly, as Bank Swallows return to their colony to roost after fledging. *A Bank Swallow Residence Description* (GoC 2019) is available at: https://species-registry.canada.ca/index-en.html#/documents/3521

Nightjar SAR

7. ECCC notes that the proponent completed owl surveys in May and standard breeding bird (i.e., dawn) surveys in June. The proponent indicated that no Common Nighthawk (SARA-listed Special Concern) were observed during these surveys; however, these surveys are not sufficient to detect Common Nighthawk at project sites, as this species is crepuscular/nocturnal and breeds later than most owls. Dedicated surveys are required to detect this species during the breeding season.

   ECCC recommends that the proponent conduct a nightjar survey (targeting Common Nighthawk and Eastern Whip-poor-will [SARA-listed Threatened]) following Birds Canada's Canadian Nightjar Survey Protocol (available at Canadian Nightjar Survey - Birds Canada | Oiseaux Canada). The timing for nightjar surveys is tied to the lunar cycle, and survey windows for Eastern Whip-poor-will change annually. The Proponent should therefore refer to Birds Canada guidance for appropriate dates for the present survey year.

   In the event that nightjar are detected, mitigation measures to avoid both direct and indirect impacts on individuals should be described, and a monitoring plan to verify EA predictions and adequacy of mitigation measures should be proposed.

   For sites where activities are not ongoing when spring dispersal of this species occurs, active nest surveys of the cleared areas prior to the start of project activities may be carried out successfully by skilled and experienced observers using appropriate methodology. Should any nests or unfledged chicks be discovered, protection by an appropriate-sized buffer is expected.

   The *Recovery Strategy for the Common Nighthawk (Chordeiles minor) in Canada (2016) [Final]* is available at: https://species-registry.canada.ca/index-en.html#/species/986-668#recovery_strategies

Recovery Strategy for the Eastern Whip-poor-will (Antrostomus vociferus) in Canada (2018) [Final] is available at: https://species-registry.canada.ca/index-en.html#/species/1047-719#recovery_strategies

Turtle SAR

8. ECCC notes that the following turtle SAR have been recorded within 20 km of the Project area: Snapping Turtle (SARA-listed Special Concern), Eastern Painted Turtle (SARA-listed Special Concern), Wood Turtle (SARA-listed Threatened)

ECCC recommends consulting management and recovery documents to inform development of mitigation strategies to avoid direct and indirect impacts to these species, if observed during project activities:

- Management Plan for the Snapping Turtle (*Chelydra serpentina*) in Canada [Final] (2020), available at: https://species-registry.canada.ca/index-en.html#/species/1033-710#management_plans.
- The Recovery Strategy for Wood Turtle (*Glyptemys insculpta*) in Canada [Final] (2020), available at: https://species-registry.canada.ca/index-en.html#/consultations/2864

Bat SAR

9. Little Brown Myotis, Northern Myotis, and Tri-colored Bat are small, insectivorous bats listed as Endangered on Schedule 1 of the SARA. The Hoary Bat, Eastern Red Bat, the Silver-haired Bat have been assessed as Endangered by the Committee on the Status of Endangered Wildlife in Canada (COSEWIC). ECCC recommends that proponents consider these Species of Conservation Concern as though they are at risk, in the event that they become listed during the lifetime of the Project.

   ECCC is of the opinion that any additive mortality of the SARA listed bat species in White-nose Syndrome (WNS) affected areas has the potential to be biologically important. The mortality of even a small number of remaining individuals, particularly breeding adults, or disturbance to maternity roosts or hibernacula, has the potential to negatively impact the survival of local populations, their recovery, and potentially, the development of resistance to the fungus that causes WNS.

   Based on the information provided, we agree that it is unlikely that bat hibernacula characteristics are present in the Project Area which has no underground or subterranean features. Our records show that the closest bat hibernacula are located 41 and 58 km from the project area.

   Appendix D (Biophysical Assessment) states: *"The absence of old stands, with abundance standing deadwood structures (i.e., snag and cavity trees) suggests the species* [SAR bats] *is not common or present at the study site; however, it is very likely that bats do occur closer where there are foraging and roosting habitats (e.g., wet areas, large diameter old or dead trees)."* However, in Appendix D the proponent indicates that there are "patches of mature mixed-wood" in the project area, which would provide suitable maternity roosting habitat for SAR bats.

   Therefore, ECCC recommends that the Proponent complete a SAR bat maternity

roosting habitat suitability assessment at the project site. The assessment should determine the characteristics (age, height, size/dbh of trees) of the habitat proposed to be removed during project operations, as well as map the forest cover types (including age and height) of the area being potentially removed in order to provide a better understanding of potential impacts to bats during the maternity roosting period. For this assessment, we recommend completing, at minimum, Phase I of the attached *Survey Protocol for SAR Bats in Treed Habitats* (maternity roosts) (ON, 2017). If Phase I identifies suitable habitat that could be impacted by project activities, proponents should proceed to Phase II of the protocol.

If bats or maternity roosts are detected, mitigation measures to avoid both direct and indirect impacts on individuals and habitat (e.g. maternity roosts) should be described, and a monitoring plan to verify EA predictions and adequacy of mitigation measures should be proposed.

Migratory Birds

Avoidance of Incidental Take

10. ECCC recommends that activities that may result in incidental take of migratory bird nests or eggs, such as tree or shrub removal, occur outside the migratory bird nesting period. ECCC supports the proponent's commitment to avoid clearing activities during this time.

    ECCC notes that nest searches in complex habitats (e.g., forests, grasslands, wetlands) ahead of clearing activities during the breeding season are not recommended by CWS as they are unlikely to be successful, and incidental take would still be likely to occur.

    The Proponent should also consider that some species of migratory birds, including the Killdeer and the threatened Common Nighthawk, may be attracted to cleared areas for nesting. In such a case, nest surveys may be carried out successfully by skilled and experienced observers using appropriate methodology. It should be noted that species such as Killdeer have highly mobile chicks. Should any nests or unfledged chicks be discovered, it is expected that these would be protected by an appropriate-sized buffer. Monitoring from a distance should be conducted to verify that the size of the buffer zone is adequate. While buffers to protect nests from disturbance may be flagged, nests should never be approached and marked using flagging tape, spray paint, or other similar material, as this increases the risk of nest predation.

11. Certain species of migratory birds may nest on the sides of buildings, bridges or other pieces of infrastructure. Additionally, some species may nest on equipment, if they are left unattended/idle for long periods of time.

    ECCC recommends the following beneficial management practices:

    - The proponent should ensure that project staff are aware of the potential of migratory bird bests on infrastructure, buildings, and bridges, if applicable.
    - If a nest is discovered, the proponent should conduct no activities around the nest that may cause the nest to be abandoned or destroyed. Activities should be suspended until the chicks have fledged and left the area.

- If the proponent anticipates that birds may nest on infrastructure, the proponent should install anti-perching and nesting exclusion devices (e.g. snow fencing, chicken wire fencing, etc.) before any nest attempts are made.

If there is ultimately a need to decommission a building or structure used for nesting by migratory birds, ECCC-CWS should be consulted in a timely manner in advance of any proposed decommissioning activities for species-specific considerations.

Pileated Woodpecker

12. ECCC notes that Pileated Woodpecker was observed during dawn breeding bird surveys completed at the site (Table 5).

The Migratory Birds Regulations have been modernized, and the new *Migratory Birds Regulations, 2022* came into force on July 30, 2022. Previously, the *Migratory Birds Regulations* (MBR) provided year-round protection for nests from being disturbed, destroyed or taken, anywhere in Canada where they were found, for as long the nest existed, for all 395 migratory bird species that are included in the *Migratory Birds Convention Act*. The *Migratory Birds Regulations, 2022* (MBR 2022) change protection from all nests of migratory birds always being protected to most nests being protected only when they contain a live bird or viable egg. This supports conservation benefits, as the nests of most migratory birds only have conservation value when they are active (contain a bird or viable egg), and also provides flexibility and predictability for stakeholders to manage their compliance requirements as they undertake activities on the landscape that may affect migratory bird nests.

For 18 species of migratory birds identified on Schedule 1 of the MBR, 2022, including the Pileated Woodpecker, the amended regulations provide year-round nest protection until they can be deemed abandoned. If the nest of a Schedule 1 species has not been occupied by a migratory bird for the entirety of the waiting time indicated in the MBR 2022, it is considered abandoned and to no longer have high conservation value for migratory birds.

Should there be a need to clear vegetation in nesting habitat for this species, the Proponent should conduct a survey for Pileated Woodpecker nesting cavities. Since the Pileated Woodpecker is one of the species listed on Schedule 1 of MBR, 2022, the nesting cavities of this species are protected year-round, including when they are not occupied by a migratory bird or viable eggs.

In the event that a Pileated Woodpecker nesting cavity is ultimately abandoned, and a proponent wishes to destroy this unoccupied nest, they must submit a notification through the Abandoned Nest Registry, and if the nest remains unoccupied by Pileated Woodpeckers and other migratory bird species for 36 months, it may at that point be destroyed by cutting down the tree.

A Pileated Woodpecker Cavity Identification Guide is available for reference at: Pileated Woodpecker Cavity Identification Guide .

Further information on the *Migratory Bird Regulations, 2022* is available at:

- Migratory Birds Regulations, 2022 (justice.gc.ca)

- New Migratory Birds Regulations, 2022 - Canada.ca
- Continued evolution of the Migratory Birds Regulations, 2022 - Canada.ca
- Notice: Abandoned Nest Registry - Canada.ca
- Fact sheet: Nest Protection under the Migratory Birds Regulations, 2022 - Canada.ca
- Frequently Asked Questions: Migratory Birds Regulations, 2022 - Canada.ca
- Service standards and performance: permits for Migratory Birds Regulations

Noise Disturbance

13. ECCC does not agree with the following statement on page 25: *"Other quarry activities such as blasting and vehicular operation and movement are not expected to interact significantly with wildlife and therefore are not a concern."*

    Anthropogenic noise produced by construction and human activity can have multiple impacts on birds, including causing stress responses, avoidance of certain important habitats, changes in foraging behavior and reproductive success, and interference with songs, calls, and communication. Activities that introduce loud and/or random noise into habitats with previously no to little levels of anthropogenic noise are particularly disruptive.

    ECCC recommends the following best management practices:

    - The proponent should develop mitigations for programs that introduce very loud and random noise disturbance (e.g., blasting programs) during the migratory bird breeding season for their region.
    - The proponent should, where possible, prioritize construction works in areas away from natural vegetation while working during the migratory bird breeding season. Conducting loud construction works adjacent to natural vegetation should completed outside the migratory bird breeding season.
    - The proponent should keep all construction equipment and vehicles in good working order and loud machinery should be muffled if possible.

Wetlands

14. ECCC advocates for the conservation of wetlands, especially in areas where wetland losses have already reached critical levels (e.g., NB, NS, PE, southern Ontario, Prairies), regionally important wetlands, and wetlands used by avian SAR and SOCC as part of their lifecycle (e.g., Canada Warbler, Chimney Swift, Olive-sided Flycatcher Common Nighthawk, Lesser Yellowlegs, Greater Yellowlegs, Spotted Sandpiper, Upland Sandpiper, etc.).

    ECCC advocates for planning, siting, and designing a project in a manner that considers wetland mitigation options in a hierarchical sequence – avoidance, minimization, and as a last resort, compensation.

To promote wetland conservation, ECCC-CWS recommends the following general beneficial management practices:

- Developments on wetlands should be avoided.
- Where development does occur in the vicinity of wetlands, a minimum vegetation buffer zone of 30 metres should be maintained around existing wetland areas.
- Hydrological function of the wetland should be maintained.
- Runoff from development should be directed away from wetlands.

Maintain a 30-metre buffer from the high water mark of any water body (1:100 Flood Zone) in order to maintain movement corridors for migratory birds. Please see https://www.canada.ca/en/environment-climate-change/services/avoiding-harm-migratory-birds/reduce-risk-migratory-birds.html for further information concerning buffer zones.

Additional "Standard" Advice

Lighting

- Lighting for the safety of the employees should be shielded to shine down and only to where it is needed, without compromising safety.
- Street and parking lot lighting should also be shielded so that little escapes into the sky and it is directed where required. LED lighting fixtures are generally less prone to light trespass and should be considered.

Invasive Species

ECCC recommends that a variety of species of plants native to the general project area be used in revegetation / reclamation efforts. Should seed mixes for herbaceous native species for the area not be available, it should be ensured that plants used in revegetation efforts are not known to be invasive.

ECCC also recommends that measures to diminish the risk of introducing invasive species be developed and implemented. These measures could include:

- cleaning and inspecting construction equipment prior to transport from elsewhere (not limited to out of province equipment) to ensure that no plant matter is attached to the machinery (e.g. use of pressure water hose to clean vehicles prior to transport); and

- regularly inspecting equipment prior to, during and immediately following construction in wetland areas and in areas found to support Purple Loosestrife to ensure that plant matter is not transported from one construction area to another.

Fuel Leaks and Emergency Response

Since even small spills of oil can have serious effects on migratory birds, every effort should be taken to ensure that no oil spills occur. The Proponent should ensure that all precautions are taken by staff to prevent fuel leaks from equipment, and contingency plans in case of oil spills should be prepared. Furthermore, the proponent should ensure that contractors are aware that under the MBCA, *"no person shall deposit or permit to be deposited oil, oil wastes or any substance harmful to migratory birds in any waters or any area frequented by migratory birds."*

Events involving a polluting substance should be reported to the 24-hour environmental emergencies reporting system: **1-800-565-1633**.

Bird mortality incidents of 10 or more birds in a single event, or an individual species at risk, should be reported via ECCC-CWS Main Office **(506) 364-5044** or via email to SCFATLEvaluationImpact-CWSATLImpactAssessment@ec.gc.ca.

The Proponent should ensure that provisions for wildlife response are identified in emergency prevention & response plans. The following information should be included:

- Mitigation measures to deter migratory birds from coming into contact with polluting substance (e.g. oil);
- Mitigation measures to be undertaken if migratory birds and/or sensitive habitat becomes contaminated;
- The type and extent of monitoring that would be conducted in relation to various spill events.

ECCC-CWS "*Guidelines for Effective Wildlife Response Plans"* (available at https://publications.gc.ca/collections/collection_2023/eccc/cw66/CW66-771-2021-eng.pdf) are recommended as a reference in the development of emergency prevention and response.

Applicable Legislation

Migratory Birds Convention Act
The federal *Migratory Birds Convention Act* (MBCA) and its regulations protect migratory birds and their eggs and prohibit the disturbance, damage, destruction or removal of migratory bird nests that contain a live bird or a viable egg. Migratory birds are protected at all times; all migratory bird nests are protected when they contain a live bird or viable egg; and the nests of 18 species listed in Schedule 1 of the MBR 2022 are protected year-round. These general prohibitions apply to all lands and waters in Canada, regardless of ownership. For more information, please visit: https://www.canada.ca/en/environment-climate-change/services/avoiding-harm-migratory-birds/reduce-risk-migratory-birds.html.

For migratory birds that are listed as Endangered, Threatened or Extirpated on Schedule 1 of the *Species at Risk Act* S.32 (protection of individuals) and S.33 (protection of residences) apply to all land tenure types in Canada. For some migratory bird species listed under the *Species at Risk Act* (SARA), the residence prohibition will protect nests that are not active but are re-used in subsequent years (please note that the residence of a migratory bird may not necessarily be limited to their nest).

Section 5.1 of the MBCA describes prohibitions related to depositing substances harmful to migratory birds:

> "5.1 (1) No person or vessel shall deposit a substance that is harmful to migratory birds, or permit such a substance to be deposited, in waters or an area frequented by migratory birds or in a place from which the substance may enter such waters or such an area.

(2) No person or vessel shall deposit a substance to be deposited in any place if the substance, in combination with one or more substances, result in a substance – in waters or an area frequented by migratory birds or in a place from which it may enter such waters or such an area – that is harmful to migratory birds."

The proponent is responsible for ensuring that activities are managed to ensure compliance with the MBCA and associated regulations.

In fulfilling its responsibility for MBCA compliance, the proponent should take the following points into consideration:

- Information regarding regional nesting periods can be found at https://www.canada.ca/en/environment-climate-change/services/avoiding-harm-migratory-birds/general-nesting-periods.html. Some species protected under the MBCA may nest outside these timeframes.

- Most migratory bird species construct nests in trees (sometimes in tree cavities) and shrubs, but several species nest at ground level (e.g., Common Nighthawk, Killdeer, sandpipers), in hay fields, pastures or in burrows. Some bird species may nest on cliffs or in stockpiles of overburden material from mines or the banks of quarries. Some migratory birds (including certain waterfowl species) may nest in head ponds created by beaver dams. Some migratory birds (e.g., Barn Swallow, Cliff Swallow, Eastern Phoebe) may build their nests on structures such as bridges, ledges or gutters.

- One method frequently used to minimize the risk of destroying bird nests consists of avoiding certain activities, such as clearing, during the regional nesting period for migratory birds.

- The risk of impacting active nests or birds caring for pre-fledged chicks, discovered during project activities outside the regional nesting period, can be minimized by measures such as the establishment of vegetated buffer zones around nests, and minimization of activities in the immediate area until nesting is complete and chicks have naturally migrated from the area. It is incumbent on the proponent to identify the best approach, based on the circumstances, to complying with the MBCA.

Further information can be found at https://www.canada.ca/en/environment-climate-change/services/avoiding-harm-migratory-birds.html

Species at Risk Act

The Species at Risk Act (SARA) "General prohibitions" apply to this project. In applying the general prohibitions, the proponent, staff and contractors, should be aware that no person shall:

- kill, harm, harass, capture or take an individual;
- possess, collect, buy, sell or trade an individual, or any part or derivative;
- damage or destroy the residence of one or more individuals.

General prohibitions only apply automatically:

- on all federal lands in a province,
- to aquatic species anywhere they occur,
- to migratory birds protected under the Migratory Birds Convention Act (MBCA) 1994 anywhere they occur.

Section 33 of SARA prohibits damaging or destroying the residence of a listed threatened, endangered, or extirpated species. For migratory bird species at risk (SAR), this prohibition immediately applies on all lands or waters (federal, provincial, territorial and private) in which the species occurs.

For project assessments, SARA requires:
79 (1) Every person who is required by or under an Act of Parliament to ensure that an assessment of the environmental effects of a project is conducted, and every authority who makes a determination under paragraph 82(a) or (b) of the *Impact Assessment Act* in relation to a project, must, without delay, notify the competent minister or ministers in writing of the project if it is likely to affect a listed wildlife species or its critical habitat.

(2) The person must identify the adverse effects of the project on the listed wildlife species and its critical habitat and, if the project is carried out, must ensure that measures are taken to avoid or lessen those effects and to monitor them. The measures must be taken in a way that is consistent with any applicable recovery strategy and action plans.

ECCC notes that all comments it provides concerning species at risk that are not migratory birds derive from federal recovery/management plans as posted on the Species at Risk Registry (https://www.canada.ca/en/environment-climate-change/services/species-risk-public-registry.html), and thus comments may not be comprehensive to the body of knowledge for the species.

For species which are not listed under SARA but are listed under provincial legislation only or that have been assessed and designated by the Committee on the Status of Endangered Wildlife in Canada (COSEWIC), it is best practice to consider these species in EA as though they were listed under SARA.

WATER QUALITY

Pollution prevention and control provisions of the *Fisheries Act* are administered and enforced by ECCC. Subsection 36(3) of the *Fisheries Act* prohibits “anyone from depositing or permitting the deposit of a deleterious substance of any type in water frequented by fish, or in any place under any conditions where the deleterious substance, or any other deleterious substance that results from the deposit of the deleterious substance, may enter such water”.

It is the responsibility of the proponent to ensure that activities are managed so as to prevent the release of substances deleterious to fish. In general, compliance is determined at the last point of control of the substance before it enters waters frequented by fish, or, in any place under any conditions where a substance may enter such waters. Additional information on what constitutes a deposit under the *Fisheries Act* can be found here:

https://www.canada.ca/en/environment-climate-change/services/managing-pollution/effluent-regulations-fisheries-act/frequently-asked-questions.html

ACCIDENTS AND MALFUNCTIONS

Hazardous materials (e.g. fuels, lubricants, hydraulic oil) and wastes (e.g. waste oil) should be managed so as to minimize the risk of chronic and/or accidental releases. For example, the proponent should encourage contractors and staff to undertake refueling and maintenance activities on level terrain, at a suitable distance from environmentally sensitive areas including watercourses, and on a prepared impermeable surface with a collection system.

The proponent is encouraged to prepare contingency plans that reflect a consideration of potential accidents and malfunctions and that take into account site-specific conditions and sensitivities. The Canadian Standards Association publication, *Emergency Preparedness and Response,* CAN/CSA-Z731-03, reaffirmed 2014), is a useful reference.

All spills or leaks, such as those from machinery or storage tanks, should be promptly contained and cleaned up (sorbents and booms should be available for quick containment and recovery), and reported to the 24-hour environmental emergencies reporting system (Maritime Provinces 1-800-565-1633).

ECCC's preference is that any documents and requests for advice from the proponent be submitted and coordinated through NS ECC as part of their EA process via the ECCC-EA window (FCR_Tracker@ec.gc.ca).

If you have any questions, please let me know.

Suzanne Wade

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Survey Protocol for Species at Risk Bats within Treed Habitats

Little Brown Myotis, Northern Myotis & Tri-Colored Bat

April 2017

Ontario Ministry of Natural Resources and Forestry

Guelph District

Ontario

Introduction

This document describes Guelph District's recommended protocol for confirming presence/absence of Little Brown Myotis, Northern Myotis and Tri-colored Bat, where it is determined that suitable habitat for the establishment of maternity roosts is present.

This document replaces any previous versions of the survey protocol, and may be updated periodically as new information becomes available.

Note that those undertaking projects that may impact anthropogenic structures and isolated trees considered suitable habitat for bats should refer to Guelph District's *Survey Methodology for the Use of Buildings and Isolated Trees by Species at Risk (SAR) Bats*.

Little Brown Myotis (*Myotis lucifugus)*, Northern Myotis (*Myotis septentrionalis*) and Tri-colored Bat (*Perimyotis subflavus*) are listed as provincially endangered and receive species and general habitat protection under the *Endangered Species Act, 2007* (ESA).

Where the habitat of an endangered or threatened species is not prescribed by regulation, the ESA defines habitat as an area on which a species depends on, directly or indirectly, to carry out its life processes. Such processes include reproduction, rearing, hibernation, migration or feeding, as well as places being used by members of the species.

Throughout eastern North America, a disease known as white-nose syndrome (WNS), which is caused by the fungus *Pseudogmnoascus destructans*, is the primary cause of the decline of Little Brown Myotis, Northern Myotis and Tri-colored Bat populations. Where population numbers have significantly decreased due to WNS, the relative magnitude of other threats (e.g., habitat destruction) may increase. This is because the mortality or displacement of a small number of the remaining individuals can have a major impact on the survival of local populations and their recovery.

Many bat species are known to have high fidelity to their hibernacula and maternity roost sites. It is not uncommon for bats to return to the same roost tree or group of trees in successive years. Some bats switch roost trees periodically within the same treed area over the summer, likely to avoid predators or parasites or in search of a warmer or cooler roost.

Of the SAR bats species noted in this protocol, Little Brown Myotis is the most frequently encountered species in treed communities due to higher population numbers relative to other SAR bat species. Little Brown Myotis establishes maternity roosts within tree cavities and under loose or exfoliating bark, especially in wooded areas located near water. Foraging habitat includes over water and in open areas between water and forest. Favoured prey consists of aquatic insects (e.g., mayflies, midges, mosquitos and caddisflies). In agricultural environments, Little Brown Myotis tend to follow linear wooded features, such as hedgerows, for commuting and foraging.

Northern Myotis is less frequently encountered relative to Little Brown Myotis but selects similar maternity roost space. Northern Myotis roosts within tree crevices, hollows and under the bark of live and dead trees, particularly when trees are located within a forest gap. Northern Myotis switch roost trees more frequently compared to other SAR bat species (i.e., every 1-5 days) and are relatively

slow flyers. Northern Myotis is adapted to hunting in cluttered environments, such as within the forest along edges, where it gleans and hawks its prey (primarily moths).

Tri-coloured Bat establishes maternity roosts within live and dead foliage within or below the canopy. Oak is the preferred roost tree species, likely because oaks retain their leaves longer than other trees. Maples are also thought to be important for roosting, although maples are selected far less often compared to oaks. Some studies have shown that Tri-colored Bat prefers dead leaves over live leaves, especially if the dead leaves are situated on a live tree i.e., along a broken branch. Other documented roost sites include dogwood leaves, within accumulations of pine needles, in squirrel nests and in tree cavities. Within a forest, the location of maternity roost trees varies from dense woods to more open areas, although roosts are rarely found in deep woods. Although Tri-colored Bat switches roosts over the summer, this species has very high site fidelity to particular leaf clusters within a season. Foraging occurs along forested riparian corridors, over water (e.g., ponds and rivers) and within gaps in forest canopies. This species is an insect generalist, feeding on species such as leafhoppers, ground beetles, flies, moths and flying ants. The Tri-colored Bat is less frequently encountered compared to Little Brown Myotis and Northern Myotis. Unlike other SAR bats, Tri-colored Bat rarely roosts in buildings, and therefore relies heavily on treed areas for rearing its young.

Note: Confirmation of individual maternity roost trees is extremely challenging. Exit surveys are not always reliable, since SAR bats are known to periodically switch roost trees within a treed area over the summer. In addition, techniques used to confirm maternity roost trees, such as mist netting, are quite invasive and therefore not recommended.

The survey protocol that follows focuses on confirming presence/absence of Little Brown Myotis, Northern Myotis and Tri-colored Bat within treed habitats considered suitable for the establishment of maternity roosts, which is sufficient information to apply species and habitat protection under the ESA.

If an Ecological Land Classification (ELC) ecosite is determined to be suitable for the establishment of maternity roosts, trees with suitable attributes are present, and SAR bats are detected during the maternity roost season (June), it can be concluded with a high degree of certainty that the ELC ecosite represents the habitat most in use during the breeding season for roosting, feeding, rearing of young and resting.

Phase I: Bat Habitat Suitability Assessment

Little Brown Myotis, Northern Myotis and Tri-colored Bat establish maternity roosts in treed areas consisting of deciduous, coniferous or mixed tree species. For bats that roost under bark or within cracks, hollows or crevices, tree species is important only as it relates to its structural attributes. For example, trees that retain bark for longer periods or are more susceptible to fungal infections/attract cavity excavators are more likely to provide appropriate roosting space.

Following the completion of ELC mapping of a study area, any coniferous, deciduous or mixed wooded ecosite, including treed swamps, that includes trees at least 10cm diameter-at-breast height

(dbh) should be considered suitable maternity roost habitat. For cultural treed areas, such as plantations, consultation with the Ministry of Natural Resource and Forestry (MNRF) is recommended to determine if these habitats may be suitable for the species.

If suitable habitat is to be impacted by a proposed activity, project proponents should proceed to Phase II. It is recommended that the proponent contact the MNRF to discuss the need for additional work with respect to SAR bats.

Phase II: Identification of Suitable Maternity Roost Trees

As previously described, Tri-colored Bat primarily roosts in tree foliage (mainly oak), while Little Brown Myotis and Northern Myotis select loose bark, cracks and cavities. Because of these differences, two separate field data sheets should be completed by the proponent to identify and map suitable roost trees for Tri-colored Bat (Appendix A) and Little Brown Myotis/Northern Myotis (Appendix B). The data collected in Phase II will help inform the positioning of acoustic monitoring stations in Phase III.

The timing of field visits is important in order for an observer to be able to clearly identify tree attributes that are suitable for the establishment of maternity roosts:

- **Tri-colored Bat**: field visits should take place during the leaf-on season the same year that acoustic monitoring is to be conducted so that foliage characteristic (i.e., dead/dying leaves along a dead branch) can be observed.

- **Little Brown Myotis/Northern Myotis**: field visits should occur during the leaf-off period so that the view of tree attributes (hollows, cracks etc.) is not obscured by foliage.

Note that for large ecosites (e.g., >10 ha) where a thorough walk-through may not be possible or practical, the proponent should discuss the study design for Phase II with the MNRF prior to undertaking field work.

i) Tri-colored Bat

Leaf roosts are shaped like umbrellas with a “roof” and a hollow core where bats rest. Studies have shown that oak leaves are the preferred roost site. Maple leaves are also selected, although less commonly. It is thought that Tri-colored Bat may prefer roost trees in open woodlands, as opposed to deep woods.

Within each ecosite identified as suitable maternity roost habitat in Phase I, the following trees should be documented on the field data sheet (Appendix A)

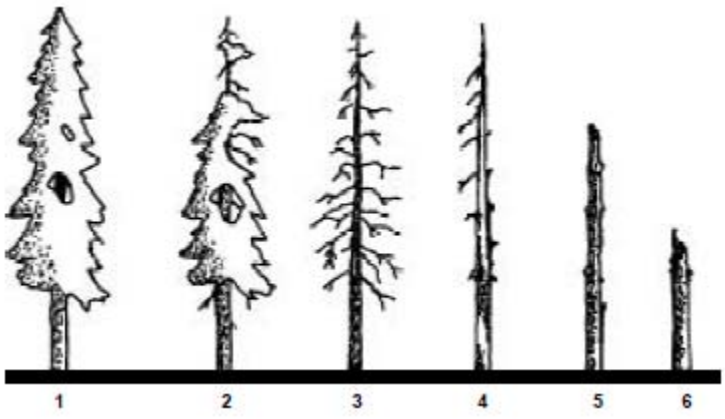
- any oak tree ≥10cm dbh
- any maple tree ≥10cm dbh IF the tree includes dead/dying leaf clusters
- any maple tree ≥25cm dbh

ii) Little Brown Myotis and Northern Myotis

Within each ecosite identified as suitable maternity roost habitat in Phase I, all “snags” should be identified and relevant information recorded on the field data sheet provided in Appendix B.

For purposes of this exercise, a "snag" is any standing live or dead tree ≥10cm dbh with cracks, crevices, hollows, cavities, and/or loose or naturally exfoliating bark.

During the field visit, the Decay Class should be noted for each snag (see Figure 1). Snags in an early stage of decay (which also includes healthy, live trees) may be preferred by Little Brown Myotis and Northern Myotis if suitable attributes for roost space are present. However, since SAR bats will also roost in snags outside of Class 1-3, any snag >10cm dbh with suitable roost features should be documented. For trees with cavities, the entrance can be high or low ("chimney-like") on the tree.



1. Healthy, live tree
2. Declining live tree, part of canopy lost
3. Very recently dead, no canopy, bark intact, branches intact
4. Recently dead, bark peeling, only large branches intact
5. Older dead tree, 90 percent of bark lost, few branch stubs, broken top
6. Very old dead tree, advanced decay, no branches, parts of the stem have rotted away

Figure 1: Snag classification (Decay Class 1-3 is considered an early decay stage)[1]

In addition, proponents should be aware that some tree species, such as shagbark hickory, silver maple and yellow birch, have naturally exfoliating bark that may be suitable for establishing maternity roosts. Trees ≥10cm dbh exhibiting these characteristics should be considered "snags" as per the definition above and included on the field data sheet provided in Appendix B.

Note: For efficiency (especially for larger ecosites e.g., >10 ha), a proponent may choose to undertake snag density surveys while conducting the work required in Phase II. For a detailed methodology, refer to Phase IV of this protocol.

[1] Watt, Robert and Caceres, M. 1999. Managing snags in the Boreal Forests of Northeastern Ontario. OMNR, Northeast Science & Technology. TN-016. 20p.

Phase III: Acoustic Surveys

Within each ELC ecosite determined to be suitable maternity roost habitat in Phase I, acoustic surveys are recommended to confirm presence/absence of Little Brown Myotis, Northern Myotis and Tri-colored Bat. As described below, acoustic detectors should be placed in the best possible locations in order to maximize the probability of detecting all three SAR bats species. The data collected in Phase II should be used to select optimal locations for monitoring. The trees to be targeted for acoustic monitoring will typically be a subset of the trees documented in Phase II.

Density and Optimal Location of Acoustic Monitoring Stations:

Multiple stations may be required to cover an ecosite adequately (see example in Figure 2). Based on the microphone range of most broadband acoustic detectors (20-30m), **4 stations/hectare** is needed for full coverage of an ELC ecosite.

Strategic placement of acoustic detectors is critical for the successful isolation of high-quality bat calls. Recommended positioning is to locate acoustic detectors **within 10m of the best potential maternity roost trees**. To increase the probability of detecting all three SAR bat species, detectors should be divided proportionally to target suitable roost trees (if present) for Tri-colored Bat and Little Brown Myotis/Northern Myotis.

Prior to undertaking acoustic surveys, it is recommended that the proponent discuss the proposed location of acoustic monitoring stations with the MNRF.

(i) Tri-colored Bat

Although Tri-colored Bat will roost within both live and dead foliage, it appears that reproductive females may prefer clusters of dead leaves, especially if they are situated on a live tree. Using the information collected on the field data sheet (Appendix A), the best suitable maternity roost trees for Tri-colored Bat should be selected according to the following criteria (in order of importance):

If oaks are present:

- Live oak with dead/dying leaf clusters
- Dead oak with retained dead leaf clusters
- Live oak (no dead leaf clusters) with the largest dbh (>25cm)
- Oak within a forest gap

If oaks are absent:

- Live maple with dead/dying leaf clusters
- Dead maple with retained dead leaf clusters
- Live maple (no dead leaf clusters) with the largest dbh (>25cm)
- Maple within a forest gap

Note that if a cluster of tree species with attributes preferred by Tri-colored Bat is present, this may be a good area to target acoustic monitoring.

(ii) Little Brown Myotis and Northern Myotis

Bats that roost under tree bark or within crevices or cavities frequently select the tallest and largest diameter snags, which often extend above the forest canopy. This is because larger snags better retain solar heat, which benefits the pups. Tall trees within a forest gap or along an edge may also have a less obstructed flight approach for bats.

Using the information collected on the field data sheet completed in Phase II, the best suitable maternity roost trees for Little Brown Myotis/Northern Myotis should be selected using the following criteria (in order of importance):

- Tallest snag
- Snag exhibits cavities/crevices often originating as cracks, scars, knot holes or woodpecker cavities
- Snag has the largest dbh (>25 cm)
- Snag is within the highest density of snags (e.g., cluster of snags)
- Snag has a large amount of loose, peeling bark (naturally occurring or due to decay)
- Cavity or crevice is high on the tree (>10 m) or is “chimney like” with a low entrance
- Tree is a species known to be rot resistant (e.g., black cherry, black locust)
- Tree species provides good cavity habitat (e.g., white pine, maple, aspen, ash, oak)
- Snag is located within an area where the canopy is more open
- Snag exhibits early stages of decay (Decay Class 1-3)

Note: The sole purpose of the above-listed criteria is to determine the best placement of acoustic monitors in order to maximize the probability of detecting Little Brown Myotis and Northern Myotis. The listed criteria are NOT intended for any type of snag “ranking”. Snags that do not include any of the above characteristics may still be used as a maternity roost site. For example, the absence of snags >25 cm dbh by no means indicates that there is no potential maternity roost habitat present on a site.

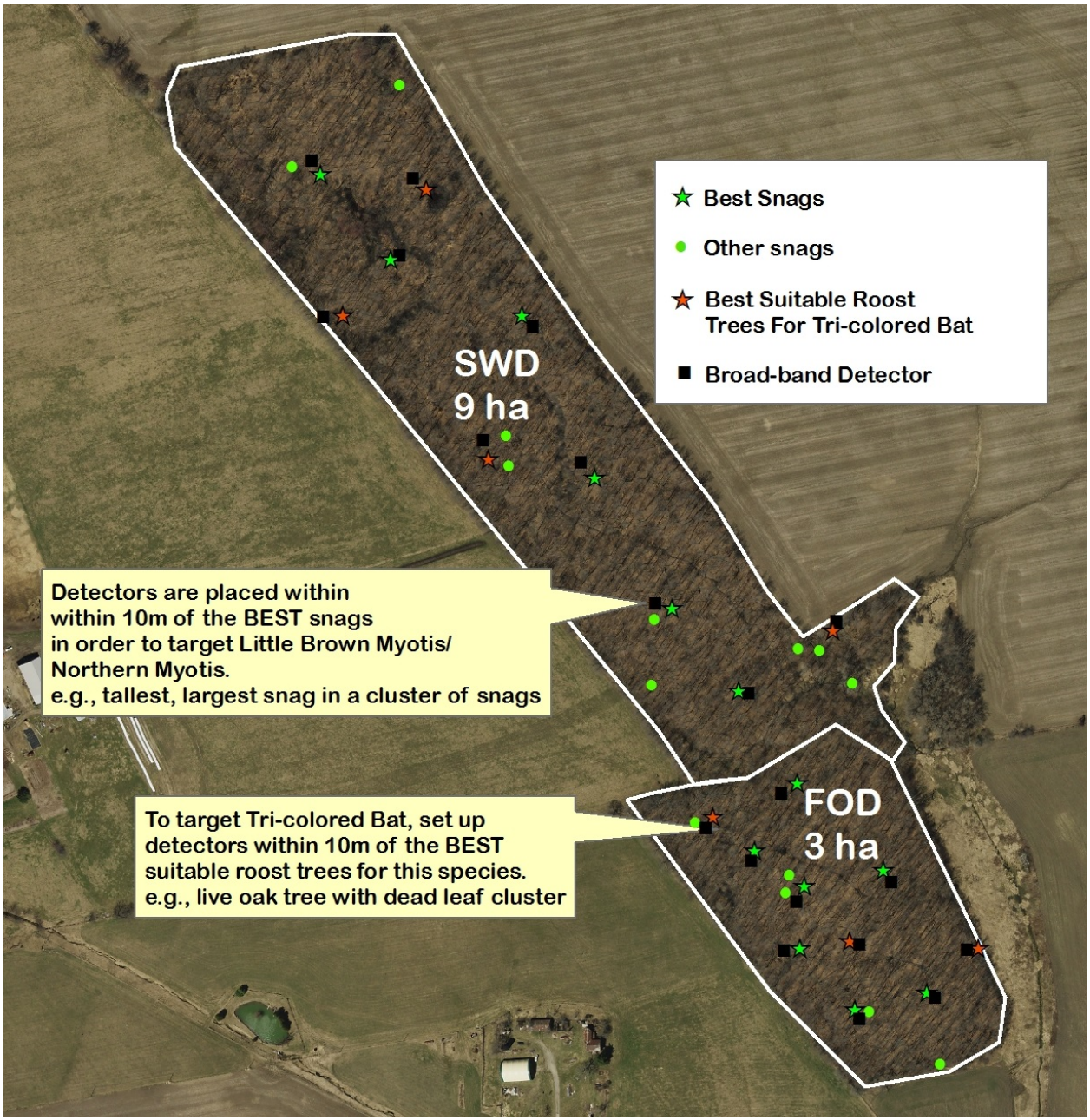


Figure 2: Hypothetical example illustrating the location and density of acoustic detectors i.e., 4/ha to a maximum of 10 per ELC ecosite.

Timing and Weather Conditions:

Acoustic surveys should take place on **evenings between June 1st and June 30th, commencing after dusk and continuing for 5 hours**.

Surveys should occur on warm/mild nights (i.e., ambient temperature >10°C) with low wind and no precipitation. At least 10 visits on nights that align with the above conditions where no SAR bat activity is detected are required to confirm absence.

Note that project proponents may cease survey work at any point once documentation of all three SAR bats species presence occurs.

Recommended Equipment Guidelines for Best Results:

- Broadband detectors (full spectrum) should be used. These may be automated systems in conjunction with computer software analysis packages or manual devices with condenser microphones.
- Acoustic monitoring systems should allow the observer to determine the signal to noise ratio of the recorded signal (e.g., from oscillograms or time-amplitude displays). These provide information about signal strength and increase quality and accuracy of the data being analysed.
- Microphones should be positioned to maximize bat detection i.e., situated away from nearby obstacles to allow for maximum range of detection and angled slightly away from prevailing wind to minimize wind noise.
- The same brand and/or model acoustic recording system should be used throughout the survey (if multiple devices are required), as the type of system may influence detection range/efficiency. If different systems are used, this variation should be quantified.
- Information on the equipment used should be recorded, including information on all adjustable settings (e.g., gain level), the position of the microphones, and dates and times for each station where recording was conducted.

Analysis:

Analytical software should be used to interpret bat calls and process results. Data should be analysed to the species level (as opposed to the genus level) in order to confirm presence/absence of SAR bats. Note that MNRF may request a copy of the raw acoustic data file when reviewing the results of the work completed in Phase III.

Additional Notes:

Project proponents should be aware that information about the number of bat passes detected in an area does not allow for an estimate of the number of bats present because there is not a 1:1 relationship between the number of passes and the number of bats responsible for those passes. It is not possible to distinguish between several bat passes made by a single bat flying repeatedly through the study area vs. several bats each making a single pass. Therefore, bat passes cannot provide a direct estimate of population densities.

Next Steps:

If Little Brown Myotis and/or Northern Myotis are detected, project proponents should proceed to Phase IV (Snag Density Survey). If only Tri-colored Bat is detected, snag density is not relevant and the proponent can proceed directly to Phase V (Complete an Information Gathering Form).

Phase IV: Snag Density Survey

Snag density information may be useful when the MNRF is considering the potential impact of a proposed activity on Little Brown Myotis and/or Northern Myotis. Snag density for each suitable ELC ecosite should be noted on the field data sheet provided in Appendix B. Surveys should take place during the leaf-off period so that the view of tree cavities, cracks and loose bark etc., is not obscured by foliage.

Snag density is a qualitative assessment of a treed ecosite, not a method of determining presence/absence of maternity roost habitat. There is no minimum threshold in terms of the number of snags/ha for an ELC ecosite to be considered suitable maternity roost habitat. However, an ELC with 10 or more snags/ha may be considered to be high quality potential maternity roost habitat. This information may be relevant when considering overall benefit in cases where a s.17(2)c permit under the ESA is required.

For smaller ecosites (e.g., <10 ha), snag density (# of snags/ha) can be calculated by dividing the number of snags mapped in Phase II by the total area of the ecosite.

Example:

ELC ecosite	Size (ha)	# of snags	Snag Density
WOD-M4	3.1	14	4.5 snags/ha
FOD-M2	0.8	9	11.25 snags/ha

For larger ecosites (e.g., >10 ha), sample plots can be used to estimate snag density within the suitable ELC ecosite, as follows:

- Select random plots across the represented ELC ecosite
- Survey fixed area 12.6m radius plots (equates to 0.05 ha)
- Survey a minimum of 10 plots for sites up to 10 ha, and add another plot for each additional ha up to a maximum of 35 plots
- Measure the number of suitable snags in each plot
- Use the formula πr^2 to calculate the number of snags/ha (where r=12.6m)
- Map the location of each snag density plot and record the UTM location using a GPS
- Calculate snag density for the ELC ecosite (snags/ha)

Example: **ELC Ecosite FOD-M2 (12 ha)**

# of sample plots	Total # of snags in sample plots	# of sample plots x r	Area of plots (πr^2)	Snag Density
12	48	12 x 12.6m = 151.2m	$3.14(151.2m)^{2} =$ $71784.9m^2$ = 7.18 ha	48 snags in 7.18 ha = 6.7 snags/ha

Phase V: Complete an Information Gathering Form

If SAR bats are detected during Phase III, the proponent should complete an Information Gathering Form (IGF) and submit it to the MNRF, Guelph District Office (esa.guelph@ontario.ca) for review. The IGF is available by searching the form repository on the government of Ontario website: http://www.forms.ssb.gov.on.ca/mbs/ssb/forms/ssbforms.nsf.

The MNRF will determine whether an activity is likely to kill, harm or harass a listed species and/or damage or destroy its habitat. The MNRF requires all of the necessary details and results from this survey protocol to be included on the IGF in order to make this determination.

For more information on overall benefit permits, including submission guidelines, process and timelines, please visit: https://www.ontario.ca/page/species-risk-overall-benefit-permits.

Appendix A – Suitable Maternity Roost Trees for Tri-colored Bat

Include all oak trees ≥10cm dbh (if present). If oaks are absent, include maples ≥10cm dbh IF dead/dying leaf clusters are present; and maples >25cm dbh if no dead/dying leaf clusters are present.

Project Name: Survey Date(s):

Site Name: Observer(s):

ELC Ecosite:

Tree#	Tree Species ID	Tree Status (live/dead)	Dbh (cm)	Tree Structural & Locational Attributes (check all that apply)	Easting	Northing	Notes
				☐ dead/dying leaf cluster ☐ cavity ☐ open area/forest gap ☐ forest edge ☐ interior ☐ preferred tree species within 10m?			
				☐ dead/dying leaf cluster ☐ cavity ☐ open area/forest gap ☐ forest edge ☐ interior ☐ preferred tree species within 10m?			
				☐ dead/dying leaf cluster ☐ cavity ☐ open area/forest gap ☐ forest edge ☐ interior ☐ preferred tree species within 10m?			
				☐ dead/dying leaf cluster ☐ cavity ☐ open area/forest gap ☐ forest edge ☐ interior ☐ preferred tree species within 10m?			
				☐ dead/dying leaf cluster ☐ cavity ☐ open area/forest gap ☐ forest edge ☐ interior ☐ preferred tree species within 10m?			
				☐ dead/dying leaf cluster ☐ cavity ☐ open area/forest gap ☐ forest edge ☐ interior ☐ preferred tree species within 10m?			
				☐ dead/dying leaf cluster ☐ cavity ☐ open area/forest gap ☐ forest edge ☐ interior ☐ preferred tree species within 10m?			

Appendix B – Suitable Maternity Roost Trees for Little Brown Myotis/Northern Myotis

Include all <u>live and dead</u> standing trees ≥10cm dbh with loose or naturally exfoliating bark, cavities, hollows or cracks.

Project Name: Survey Date(s):

Site Name: Observers(s):

ELC Ecosite: Snag Density (snags/ha):

Tree #	Tree Species ID	dbh (cm)	Height Class[2]	Snag attributes (check all that apply)	Easting	Northing	Notes
				☐ cavity[3] ☐ loose bark ☐ crack ☐ knot hole ☐ other snag within 10m? ☐ Decay Class 1-3?[4]			
				☐ cavity ☐ loose bark ☐ crack ☐ knot hole ☐ other snag within 10m? ☐ Decay Class 1-3?			
				☐ cavity ☐ loose bark ☐ crack ☐ knot hole ☐ other snag within 10m? ☐ Decay Class 1-3?			
				☐ cavity ☐ loose bark ☐ crack ☐ knot hole ☐ other snag within 10m? ☐ Decay Class 1-3?			
				☐ cavity ☐ loose bark ☐ crack ☐ knot hole ☐ other snag within 10m? ☐ Decay Class 1-3?			
				☐ cavity ☐ loose bark ☐ crack ☐ knot hole ☐ other snag within 10m? ☐ Decay Class 1-3?			
				☐ cavity ☐ loose bark ☐ crack ☐ knot hole ☐ other snag within 10m? ☐ Decay Class 1-3?			
				☐ cavity ☐ loose bark ☐ crack ☐ knot hole ☐ other snag within 10m? ☐ Decay Class 1-3?			
				☐ cavity ☐ loose bark ☐ crack ☐ knot hole ☐ other snag within 10m? ☐ Decay Class 1-3?			
				☐ cavity ☐ loose bark ☐ crack ☐ knot hole ☐ other snag within 10m? ☐ Decay Class 1-3?			

[2] **<u>Height Class</u>**: 1 = Dominant (above canopy); 2 = Co-dominant (canopy height); 3 = Intermediate (just below canopy); 4 = suppressed (well below canopy)

[3] The approx. height of the cavity should be noted. Note that cavities with an entrance near the ground may also be used by bats if they are "chimney-like".

[4] **<u>Decay Class</u>**: 1 = Healthy, live tree; 2 = Declining live tree, part of canopy lost; 3 = Very recently dead, bark intact, branches intact

Kwilmu'kw Maw-klusuaqn Negotiation Office
Mi'kmaq Rights Initiative
Our Rights. Our Future.

75 Treaty Trail
Truro, NS B6L 1W3

Tel (902) 843 3880 **Fax** (902) 843 3882
Toll Free 1 888 803 3880
Email info@mikmaqrights.com
www.mikmaqrights.com

February 12, 2025

Mark McInnis
Environmental Assessment Officer
Nova Scotia Environment and Climate Change
Barrington Place
1903 Barrington Street, Suite 2085
PO Box 442, Halifax, NS B3J 2P8

RE: Consultation with the Mi'kmaq of Nova Scotia on the New Annan Quarry Expansion Project

I write requesting consultation under the *Terms of Reference for a Mi'kmaq-Nova Scotia-Canada Consultation Process* (ToR) as ratified on August 31, 2010, on the above noted project.

An Offer to Consult letter was not sent to our office. We would like to clarify with the Provincial Government that the Mi'kmaw Nation in Nova Scotia has a general interest in all lands, waters and resources in Nova Scotia, therefore, an Offer to Consult should have been sent to our office. We would like to highlight the due diligence of the proponent for notifying our office of their intent to register an Environmental Assessment in a communication to our office on January 6, 2025 prior to their registration on January 15, 2025.

We look forward to the Province making the necessary adjustments to elevate relationship building with the Mi'kmaq of Nova Scotia

EA Review

Our team at Kwilmu'kw Maw-klusuaqn (KMK) has reviewed the EA registration, Municipal Enterprises Limited New Annan Quarry Expansion, Nova Scotia Nova Scotia: Registration Document for a Class 1 Undertaking Under Section 9 (1) of the Nova Scotia Environment Assessment Regulation Quarry Review and has found that values and concerns have not fully been addressed.

6.2 Socio-economic Components

Has a Mi'kmaw Ecological Knowledge Study (MEKS) been conducted? If not, one is requested that one is completed prior to expansion approval.

6.2.5 Archaeological/Cultural/Historical

The KMK Archaeology Research Division (ARD) has reviewed an Archaeological Resource Impact Assessment (ARIA), A2023NS210, for the New Annan Pit Expansion Project located in Colchester County. The ARIA was conducted by Cultural Resource Management Group Limited (CRM Group) involving a background study, field reconnaissance, and a single exploratory shovel test designed to "search for, document, interpret, and make management recommendations for cultural heritage resources and areas of archaeology" (CRM Group, A2023NS210: i). The results of the study determined that no areas of high potential were identified in the ARIA due to "construction-related ground disturbance within the previously developed gravel pit, and the steep slope, swampy conditions, distance from navigable watercourses, and lack of recorded evidence of activity within undisturbed portions" (CRM Group, A2023NS210: 42). Therefore, the Study Area was ascribed as low potential and cleared of the requirement for any additional archaeological investigations.

We do not support clearances without subsurface testing. Mi'kmaw archaeological sites have developed since time immemorial and may not be identified from the surface character of the current landscape, one cannot conclusively eliminate potential for Mi'kmaw archaeological heritage without subsurface testing. Although one exploratory shovel test was conducted, it was excavated to a depth of 30cms below surface. The goal of the shovel test was to "capture any previously existing soil profile within the Study Area not impacted by the recent commercial excavation and to investigate the depth and composition of sediment stratigraphy" (CRM Group, A2023NS210: 38). The test was used to assist in the evaluate the area's surficial geology and archaeological potential. One test is not sufficient to eliminate the potential to identify Mi'kmaw cultural belongings. The archaeological record of this area is poorly documented, yet the Study Area includes multiple ponds and an unnamed tributary of Fourmile Brook. Any time there is a watercourse, named or unnamed, regardless of size or velocity, and whether there is terracing or not, there is a heightened probability of encountering Mi'kmaw archaeological heritage. Often, smaller streams or rivers have been, and sometimes continue to be, used by Mi'kmaq on journeys by foot because they not only provide a safe and clear route of travel, but provide fresh water, plants to harvest, and a variety of aquatic resources. We consider any construction project that may exist within proximity to a watercourse or wetland, regardless of size, to have elevated potential for encountering Mi'kmaw belongings.

We consistently recommend in areas that will undergo impact, that subsurface testing be undertaken to confirm the presence, or lack of presence, of archaeological heritage. This is especially important in landscapes which will undergo significant permanent mechanical alteration associated with quarry activities. We wish to clarify that negative tests and negative

evidence are considered relevant and important data, regardless of suspected disturbances or classifications of low potential to exhibit archaeological resources.

The Assembly of Nova Scotia Mi'kmaw Chiefs expects a high level of archaeological diligence with evidence-based decisions grounded in an understanding of the subsurface environmental data. The Maw-lukutijik Saqmaq (Assembly of Nova Scotia Mi'kmaw Chiefs) expects subsurface data, adequate to eliminate concern for presence, protection, and management of Mi'kmaw archaeological and cultural heritage as part of assessment of potential in advance of any development. Disturbance is defined, for archaeological purposes, as the dislocation of soils and/or sediments, such as that by heavily treaded or tracked vehicles, as well as purposeful excavation by heavy equipment.

We would recommend that all areas impacted be subjected to shovel testing prior to any development (both high and low potential areas) to eliminate concern for presence, protection, and management of Mi'kmaw archaeological and cultural heritage as part of assessment. We strongly recommend subsurface data, adequate to eliminate concern for presence, protection, and management of Mi'kmaw archaeological and cultural heritage as part of assessment of potential in advance of any development. Without subsurface testing, the *evidence* of a lack of concern in impact areas does not exist. We wish to clarify that negative tests and negative evidence are considered relevant and important data.

6.3 Biophysical Components

6.3.1 Air Quality, Noise and Light

Air Quality

Contamination of food sources for fauna and Mi'kmaq harvesters is a major concern with particulate. How can the proponent and the province guarantee these food sources will not become contaminated? What are the proposed monitoring locations for particulate? Have there been exceedances of the current limits outlined in the Industrial Approval? There are concerns with cumulative effects of particulate over the lifespan of the project. There are several watercourses near the project area, how does the proponent plan to monitor the health of these watercourses to ensure particulate does not adversely affect fish and fish habitat? The Mi'kmaq expect to be included in the development of a monitoring plan through comment and review.

Will monitoring for NO2 and SO2 be conducted onsite? It is recommended that monitoring locations be established.

Light

Over 70% of avian species are at night, with 30% relying solely on an undisrupted nighttime ecology. In addition to this, over half of the insect population is nocturnal. Lighting in remote areas significantly and negatively alters the performance of the night ecology in that area. Dark sites are becoming less, it is important to acknowledge this moving forward on any and all development. Hence, we are recommended that night lighting be limited and/ or amber or red lighting be used.

Noise

Have there been studies conducted to assess how noise will affect local wildlife? If so, please provide for our review. Particular attention should be paid to fish and fish habitat.

Are any bat hibernacula within 5km of the project?

6.3.2 Groundwater & 6.3.3 Hydrology/Water Quality

It is expected that the Surface Water Management Plan, Groundwater Management Plan and Environmental Protection Plan will be developed with input from the Mi'kmaq through review and comment.

6.3.4 Fresh Water Aquatic Environments/6.3.6 Fish and Fish Habitat

Any effects to fish and fish habitat are effects to Mi'kmaq rights, it is encouraged to set the boundary at 50 metres from the watercourse rather than the regulated 30 metres.

Is a Fisheries Act Authorization application anticipated for this project? There are concerns with fish and fish habitat health of the Fourmile Brook.

6.3.5 Wetlands

Wetlands support thousands of aquatic, terrestrial, and flora species. In addition to playing an important role for Mi'kmaw who inhabited and steward the forest since time immemorial, they are essential for maintaining a healthy biodiversity within and over arching ecosystem. It is expected that a Wetland Monitoring and Compensation Plan will be developed with input from the Mi'kmaq through review and comment. Special care should be taken into consideration for Wetlands 3 and 4 containing plant species of conservation concern.

6.3.7 Flora and Fauna Habitat

It is expected that the Wildlife Management Plan will be developed with input from the Mi'kmaq through review and comment.

Finally, the Mi'kmaw Nation in Nova Scotia has a general interest in all lands, waters and resources in Nova Scotia as the Mi'kmaq have never surrendered, ceded, or sold the Aboriginal Title to any of its lands in Nova Scotia. The Mi'kmaq have a Title claim to all of Nova Scotia and as co-owners of the land and its resources it is expected that any potential impacts to Rights and Title shall be addressed.

Yours in Recognition of Mi'kmaw Rights and Title,

Director of Consultation
Kwilmu'kw Maw-Klusuaqn

C.C:
Beata Dera, Nova Scotia Office of L'nu Affairs

Maritime Aboriginal Peoples Council

The Maritime Regional Aboriginal Leaders
Intergovernmental Council of Aboriginal Peoples
Continuing to Reside on Traditional Ancestral Homelands

Forums

- Leaders Congress
- MAPC Commissions/Projects
- MAARS Secretariate
- IKANAWTIKET SARA
- MAPC Administration

MAPC Regional
Administrative Office
80 Walker St Unit 3,
Truro, Nova Scotia
B2N 4A7

Tel: 902-895-2982
Fax: 902-895-3844
Toll Free: 1-855-858-7240
Email: frontdesk@mapcorg.ca

Governmental
APRO Councils

Native Council of
Nova Scotia
P.O. Box 1320
Truro, Nova Scotia
B2N 5N2

Tel: 902-895-1523
Fax: 902-895-0024
Email: chieflaugustine@ncns.ca

New Brunswick Aboriginal
Peoples Council
320 St. Mary's Street
Fredericton, New Brunswick
E3A 2S4

Tel: 506-458-8422
Fax: 506-451-6130
Email: chief@nbapc.org

Native Council of
Prince Edward Island
6 F.J. McAuley Court
Charlottetown
Prince Edward Island
C1A 9M7

Tel: 902-892-5314
Fax: 902-368-7464
Email: chief@ncpei.com

February 14th, 2025

Dexter Construction

Box 48100
Bedford, NS, B4A 3Z2

RE: New Anaan Quarry Expansion

On behalf of the Native Council of Nova Scotia (NCNS), and the Maritime Aboriginal Aquatic Resources Secretariate (MAARS) we would like to thank you for taking the time to discuss the New Annan Quarry Expansion on October 2nd, 2024.

At this time, MAARS and NCNS do not have any commentary to provide related to this proposed undertaking; however, we would like be kept apprised to any developments or changes to the project.

For contextual purposes, for over forty years, the three Native Council partners of the Maritime Aboriginal People's Council (MAPC) have continued to be the Aboriginal Peoples Representative Organizations representing and advocating for the Rights and issues of the Mi'kmaq/Wolastoqiyik/ Peskotomuhkati/Section 91 (24) Indians, both Status and non-Status, continuing to reside on their unceded Traditional Ancestral Homelands. In the early 1970s, the communities recognized the need for representation and advocacy for the Rights and Interests of the off-Reserve community of Aboriginal Peoples, "the forgotten Indian". Women and men self-organized themselves to be the "voice to the councils of government" for tens of thousands of community members left unrepresented by Indian Act-created Band Councils and Chiefs. Based on the Aboriginal Identity question, Statistics Canada (2021 Census - 25% sample) enumerate 25,415 off-Reserve Aboriginal Persons in New Brunswick, 42,580 in Nova Scotia, and 2,865 in Prince Edward Island.

Each Native Council in their respective province asserts Treaty Rights, Aboriginal Rights, with Interest in Other Rights confirmed in court decisions, recognized as existing Aboriginal and Treaty Rights of the Aboriginal Peoples of Canada in Part II of the Constitution Act of Canada, 1982. Each Native Council has established and maintains Natural Harvesting Regimes, and each have a co-management arrangement with DFO for Food, Social, and Ceremonial use of aquatic species, through the: Najiwsgetaq Nomehs (NBAPC), the Netukulimkewe'l Commission (NCNS), and the Kelewatl Commission (NCPEI).

The Native Council of Nova Scotia was organized in 1974 and represents the interests, needs, and rights of Off-Reserve Status and Non-Status Section 91(24) Indians/Mi'kmaq/Aboriginal Peoples continuing on our Traditional Ancestral Homelands throughout Nova Scotia as Heirs to Treaty Rights, Beneficiaries of Aboriginal Rights, with Interests to Other Rights, including Land Claim Rights.

The Native Council of Nova Scotia (NCNS) Community of Off-Reserve Status and Non-Status Indians/Mi'kmaq/Aboriginal Peoples supports projects, works, activities and undertakings which do not significantly alter, destroy, impact, or affect the sustainable natural life ecosystems or natural eco-scapes formed as hills, mountains, wetlands, meadows, woodlands, shores, beaches, coasts, brooks, streams, rivers, lakes, bays, inland waters, and the near-shore, mid-shore and off-shore waters, to list a few, with their multitude of in-situ biodiversity. Our NCNS Community has continued to access and use the natural life within those ecosystems and eco-scapes where the equitable sharing of benefits arising from projects and undertakings serve a beneficial purpose towards progress in general and demonstrate the sustainable use of the natural wealth of Mother Earth, with respect for the Constitutional Treaty Rights, Aboriginal Rights, and Other Rights of the Native Council of Nova Scotia Community continuing throughout our Traditional Ancestral Homeland in the part of Mi'kma'ki now known as Nova Scotia.

We appreciate the opportunity to engage on the New Annan Quarry Expansion directly with the proponent, MEL and Dexter Construction. We look forward to further dialogue as we continue to advocate for the rights of Off-Reserve Status and Section 91(24) Indians/Mi’kmaq/Aboriginal Peoples of Nova Scotia.

Advancing Aboriginal Fisheries and Oceans Entities
Best Practices, Management, and Decision-making

Habitat Impact Advisor, MAARS Executive Director, MAARS & MAPC Projects

CC: , Chief & President, NCNS
, Netukulimkewe’l Commission, NCNS

From: @eastlink.ca
To: Environment Assessment Web Account
Subject: Proposed Project Comments
Date: January 17, 2025 12:30:34 PM

Project: new-annan-quarry-expansion Comments: What or how will this project affect the water table in the area! Also environmental repercussions to surrounding waterways and animal habitat?? I own property in the area and this is a grave concern of mine!! Name: Email: @eastlink.ca Address: Municipality: Salmon river email_message: Privacy-Statement: agree x: 67 y: 15

From:
To: Environment Assessment Web Account
Subject: New Annan Quarry Expansion Project
Date: January 17, 2025 3:59:16 PM

As a resident of the property on the south side of the New Annan Quarry, we strongly feel that we have endured a enough already.
To my knowledge the regulations require permission from adjoining property owners for the location to blast. They badgered my parents, who refused their blasting, and they have badgered me as well. And have gone so far as to couch their ask with veiled threats, saying that they would have no issue with digging right to the property line. For 2 generations we have refused and will continue to do so.
Last spring they opened the quarry early to provide gravel for Truro road north of the 256. The trucks completely destroyed the road. They then lied to to the department of highways, moving equipment or some such garbage, while really running large gravel filled trucks on a dirt road in January. The road remained horribly dangerous until mid summer. the local residents were frustrated with noone to listen to our concerns.
while I realize that quarry are a necessity in our world, this quarry has residence on all sides. surely there is better location to ruin the land.

From:
To: Environment Assessment Web Account
Subject: New Annan Quarry Expansion Project
Date: January 17, 2025 4:10:19 PM

Greetings

I have done further research and realized that this is not the Quarry abutting my property. This appears to be further up Truro Road

Apologizes for any confusion

cheers,

From:
To: Environment Assessment Web Account
Subject: Proposed Project Comments
Date: January 19, 2025 10:06:25 PM

Project: new-annan-quarry-expansion Comments: What provisions for acid, arsenic other toxic minerals runoff from exposed rock Is there a reclamation bond to enforce cleanup when the site is finished in the anticipated 40 years? Who is monitoring the effect of dust what is the mitigation strategy? Especially in nesting season? Just because the area has suffered â?~clear cuttingâ?T does not mean it doesnâ?Tt matter what effect the quarry has that area - they suggest it doesnâ?Tt matter How are effects on gully lake being monitored Overall the report is very cavelier about the effects saying the biggest issue is truck traffic blasting. Quarry has much more subtle greater impact than they suggest Name: Email: r@me.com Address: Municipality: Earltown email_message: Privacy-Statement: agree x: 71 y: 24

From: hotmail.com
To: Environment Assessment Web Account
Subject: Proposed Project Comments
Date: February 11, 2025 9:19:09 PM

Project: new-annan-quarry-expansion Comments: I am writing in response of the request by Sinclair Quarry on Truro Rd. East New Annan, NS to expand. My observation from the mapping covers a much broader area from 4 Mile brook located on Hwy #256 to where the pit is on the Truro Rd. where this Quarry has been in operation for 20 years. The other quarry owned by the aforementioned is to the south of our property on the Truro Rd. located by the Silica Pond. I have lived in this area for 45 years and subsequently have been dealing with the hauling of materials from all of these QUARRYS OVER THE YEARS. From my experiences there has not been any consideration for the Residents in our community. Chloride not applied before Hauling. Trucks driving at unsafe speeds causing Danger to the Public and Residents. I appose the proposition to expand the project to blast and expand the operation to provide material for road construction. I am very concerned in the further development of Blasting. The Negative impacts of this to our community could be a detrement. The effects could have long term changes to our Water Tables and affect our wells. As well our basement foundations could be at risk. Other negative impacts include the Noise as well as the increased traffic on the roads. In closing I would like your Department to strongly reject any further developement to this project. As residents of our Community there are numerous reasons why we do not want this project to be Granted. The Safety, Noise, increased traffic which is detremental to our Safety and Peace. But more concerning is the changes to water tables and wells and foundations. May you highly take consideration to our grave concerns as residents and base your decisions on the information provided by all Residents who will be directly affected for a long period of time. Thankyou for your attention to this matter. Sincerely,
Name: Email: @hotmail.com Address:
Municipality: Tatamagouche email_message:
Privacy-Statement: agree x: 60 y: 26

From:
To: Environment Assessment Web Account
Subject: Re: the proposed expansion of the New Annan Quarry, Colchester County
Date: February 14, 2025 7:30:18 PM

I am writing this email on behalf of myself, and my three sons who own a property in East New Annan o

whose properties are located on the Truro Road, also in East New Annan.
We wish to express our concerns re: the
Impact this will have, potentially, on the East New Annan community and surrounding areas.

#1 How will this expanded quarry affect the water table in the area ---- wells, brooks, natural springs, etc.

#2. What will the effect be on wild life? Have studies been done to address these issues? That said, without a doubt, the 17+ hectares of land that is, or will be, displacing the natural habitat Of wildlife, includind birds and possibly fish life in the near by brooks and streams.

#3. What will be the impact on the surrounding communities, including East New Annan and Tatamagouche
Mountain from the blasting when the quarry materials are being extracted?
This is a peaceful, beautiful area and we can only speculate how this will disturb
The quality of rural life there. It is not a remote area distanced from the population.
Furthermore, will the blasting affect the foundations of near by homes? Will blasting be done randomly or at set times, so the residents have some idea of what to expect?

#4. The final question is the impact of traffic caused by quarry activity. This includes the 2 communities already mentioned but also the populations and homes along the traffic routes. Speed limits and adherence to them. The routes most often used to/from the quarry. Will there be a # residents can phone if they have a concern or complaint, and that this can be done quickly and efficiently, and fairly?
Regarding road conditions, will the roads be regularly salted to control the dust from quarry traffic so that air pollution is minimized? We are asking that these, and any other issues experienced by those people and residents living in the areas affected will be addressed and closely monitored for
All concerned.
In closing, we appreciate that road maintenance is very important and support that the expanded quarry will provide a very important resource. However, to be mindful of the people living there and the impact it can have on their way of life.

Yours respectfully,