NOVA SCOTIA
Environment

Comment Index

Kemptown Quarry Development Project

Publication Date: 22 May 2025

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

Newfoundland and Labrador Office
901- 10 Barter's Hill
St. John's NL A1C 6M1

Bureau de Terre–Neuve-et-Labrador
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April 10, 2025

Jeremy Higgins
Policy Division, Environmental Assessment Branch
Government of Nova Scotia
Jeremy.Higgins@novascotia.ca

SUBJECT : Kemptown Quarry Development Project, Colchester County

Dear Jeremy Higgins:

Thank you for the opportunity to review the registration document for the Kemptown Quarry Development Project (the Project), received on March 27, 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.

IAAC reviewed the Regulations and notes that item 19(f) is relevant for this type of project:

> *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 appears to be greater than 50%, it is understood that the total production capacity of the quarry will be between 50,000 and 100,000 tonnes per year which is less than the threshold identified in 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 Kemptown Quarry Development 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.

Samantha Zabudsky

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Outlook

25-NS-006 Kemptown Quarry Development Project, Upper Kemptown, Colchester County, NS

From Fazeli,Maryam (elle | she, her) (ECCC) <Maryam.Fazeli@ec.gc.ca>
Date Wed 2025-04-16 09:50
To 'Higgins, Jeremy W' <Jeremy.Higgins@novascotia.ca>
Cc Hingston,Michael (il | he, him) (ECCC) <Michael.Hingston@ec.gc.ca>; Aikens,Marley (elle | she, her) (ECCC) <Marley.Aikens@ec.gc.ca>

1 attachment (1 MB)
BatSAR_SurveyGuidance_2_EN_Treed_Habitats_ONMNRF_2017.pdf;

Hello Jeremy,

Environment and Climate Change Canada (ECCC) has reviewed the EA Registration Document (EARD) for Chapman Bros Construction Ltd's proposed Kemptown Quarry Development Project, located near Kemptown, NS, and we offer the following comments.

Attachments and References

- Ontario Ministry of Natural Resources and Forestry (OMNRF) 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.
- Environment and Climate Change Canada (ECCC) 2022. *Guidelines for Effective Wildlife Response Plans.* https://www.canada.ca/en/services/environment/wildlife-plants-species/national-wildlife-emergency-framework.html

Wildlife and Wildlife Habitat

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 (NS NR) 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.

   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

4. 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

5. 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

Turtle SAR

6. 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

7. 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.

   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

8. 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.

9. 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 nests 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's Canada's Wildlife Service (CWS) should be consulted in a timely manner in advance of any proposed decommissioning activities for species-specific considerations.

Pileated Woodpecker

10. Quote (pg. 27): *"A Pileated Woodpecker was heard at one location in 2023. The species will not be nesting on the site, as there are no large trees which would be suitable for nesting."*

    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 suitable 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

Fuel Leaks and Emergency Response

11. Table 4 (pg. 16) should include a potential interaction between “Flora & Fauna Species & Habitat” Valued Environmental Component (VEC) and the “Accidents (Fires/Oil & Fuel Spills)” and “Site Runoff Management” Project Components, as even a small oil/fuel spill or other harmful substance can have serious effects on migratory birds. 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 *Migratory Birds Convention Act* (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.

    Additionally, 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; and

- 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.

Wetlands

12. 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 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; and
    - Maintain a 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

Noise Disturbance

13. 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; and

- The proponent should keep all construction equipment and vehicles in good working order and loud machinery should be muffled if possible.

Lighting

14. 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

15. Quote (pg. 27): *"During recovery and revegetation of abandoned areas, the seeding in and succession of local forest species will provide habitat for a moderate diversity of animal species which will change with time."*

    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.

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/fisheries-act-registry/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).

Please note that specific requests for ECCC advice should be directed to ECCC's environmental assessment window for coordination at: FCR_Tracker@ec.gc.ca.

Please let me know if you have any questions.

Regards,

Maryam Fazeli
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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)

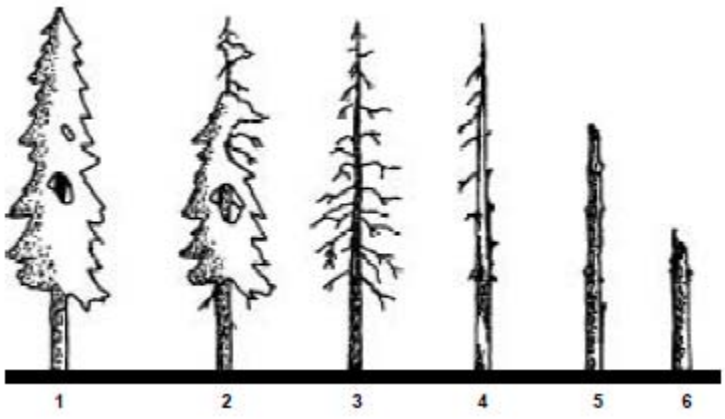
- any oak tree ≥10cm dbh
- any maple tree ≥10cm dbh IF the tree includes dead/dying leaf clusters
- any maple tree ≥25cm dbh

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.

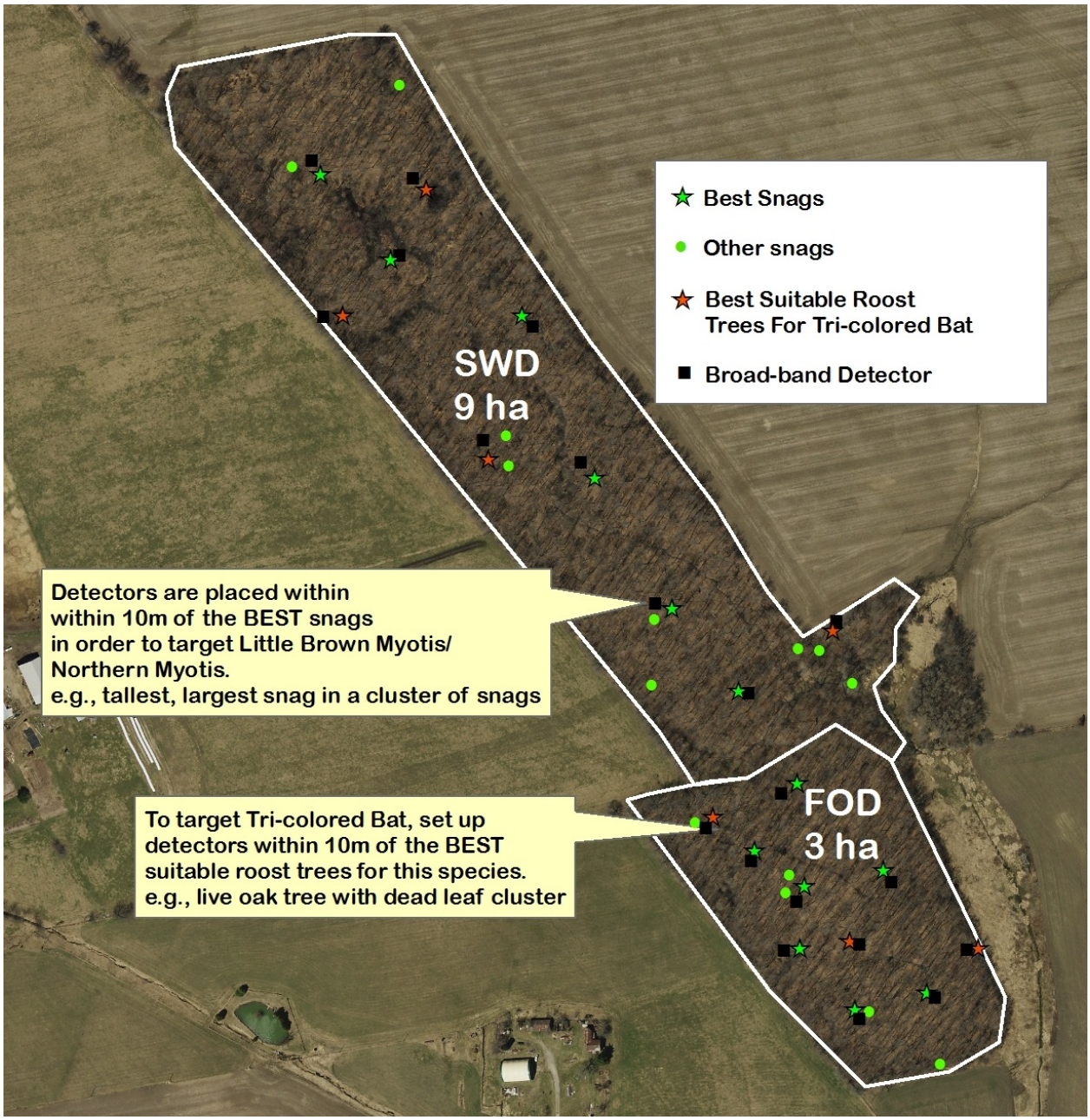


Figure 2: Hypothetical example illustrating the location and density of acoustic detectors i.e., 4/ha to a maximum of 10 per ELC ecosite.

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?			
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				☐ 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

NOVA SCOTIA
Department of Municipal Affairs

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

DATE: April 17, 2025

TO: Jeremy W. Higgins, Environmental Assessment Officer

FROM: Christina Lovitt, Provincial Director of Planning

SUBJECT: **KEMPTON QUARRY DEVELOPMENT PROJECT, COLCHESTER COUNTY**

Scope of Review:
This review focuses on the following Department of Municipal Affairs' (DMA) mandates: Statements of Provincial Interest and engagement with municipalities.

Document Reviewed:
Registration Document

Details of Technical Review:
There is currently no zoning in the area. The new plan, approved by Council but not yet in effect, has the subject property in the Rural Industrial (RM) Zone, which permits aggregate-related industries with conditions. Contact was made with the Mayor and three district Councillors via an early engagement letter of 19 November 2024. A Public Consultation meeting was held on 11 December 2024 and was attended by representatives from the municipality.

Statements of Provincial Interest:

- Drinking Water: No anticipated impact. The French River Watershed Designation Area for Tatamagouche is the closest municipal water supply; however, based on designation mapping, there are no areas of the designated protected water areas near the study area.
- 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 indicated that the property is outside of known floodplains.
- Infrastructure: No anticipated impact. There is no water or sewer servicing in this area.
- Housing: No anticipated impact. A concentration of seasonal and permanent residences is located near the proposed quarry site.

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.

NOVA SCOTIA
Environment and Climate Change

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

Date: April 24, 2025

To: Jeremy Higgins, Environmental Assessment Officer

From: Air Quality Unit

Subject: **Kemptown Quarry Development Project, Colchester County, NS**

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

List of Documents Reviewed:

- *Part 1*
- *Part 2*
- *Part 3*

Details of Technical Review:

Chapman Bros Construction Ltd. (the Proponent) proposes to expand the existing <4 ha Kemptown Quarry to 30.6 ha. The existing quarry has been in operation since the spring of 2023 and is currently operating as a temporary quarry to supply Nova Scotia Department of Public Works projects. If approved, Chapman Brothers intends to continue quarry operations on the property using existing infrastructure as the quarry expands over the next several decades. It is anticipated that future production will supply 50,000 to 100,000 tonnes of aggregate per year, for 50 years or more.

Impacts on air quality from this project are most likely to occur during blasting/drilling/crushing activities, clearing/grubbing, 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 will include the use of water sprays, reducing vehicle speeds on gravel roads, and minimizing idling. The Proponent states that an environmental protection plan is expected to be put in place and followed during all phases of operation, and air emissions from the proposed expansion are expected to be the same or similar to those produced by the existing quarry.

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 Pit and Quarry Guidelines and the Nova Scotia Air Quality Regulations. The Proponent should refer to the NSECC Air Assessment Guidance Document when developing an ambient air monitoring plan.

Key Considerations:

The Air Quality Unit notes the following key considerations:

- The use of dust management methods, along with best operational practices 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

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

Date: April 24, 2025

To: Jeremy Higgins, Environmental Assessment Officer

From: Air Quality Unit

Subject: **Kemptown Quarry Development Project, Colchester County, NS**

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

List of Documents Reviewed:

- *Part 1*
- *Part 2*
- *Part 3*

Details of Technical Review:

Chapman Bros Construction Ltd. (the Proponent) proposes to expand the existing <4 ha Kemptown Quarry to 30.6 ha. The existing quarry has been in operation since the spring of 2023 and is currently operating as a temporary quarry to supply Nova Scotia Department of Public Works projects. If approved, Chapman Brothers intends to continue quarry operations on the property using existing infrastructure as the quarry expands over the next several decades. It is anticipated that future production will supply 50,000 to 100,000 tonnes of aggregate per year, for 50 years or more.

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 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 blasting may occur 1-2 times per year following the guidance in the NSECC Pit and Quarry Guidelines. The Proponent states that noise from operations 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) for a rural environment.

Noise from the proposed expansion is expected to be similar to that already produced at the site, since there is no anticipated change in the operational scope.

Key Considerations:

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

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

Date: April 17, 2025

To: Jeremy Higgins, Environmental Assessment Officer

From: Janet MacKinnon SAS- Protected areas

Subject: **Kemptown Quarry Development Project, Colchester County, NS**

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

List of Documents Reviewed:
Interactive map
WAPA

Details of Technical Review: None

Key Considerations: (provide in non-technical language)
None

NOVA SCOTIA
Fisheries and Aquaculture

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

Date: April 24, 2025

To: Jeremy W. Higgins

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

Subject: Kemptown Quarry Development Project, Colchester County

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

List of Documents Reviewed:
- Environmental Assessment Registration Document for__ Kemptown Quarry Development Final Feb 26 2024_Parts 1-6
- Environmental Assessment Registration Document for a Class 1 Undertaking – Section 9 (1) of the Nova Scotia Environment Assessment Regulations February 2025

Details of Technical Review:
Marine:
This development appears to pose negligible impacts to DFA's marine fisheries interests.

There is one licensed NS marine commercial fish buyer/processor located within Colchester County where the proposed quarry expansion is to be located. Five Islands Clam Plant is located 100km West of the proposed site. Since there appears to be no connectivity to the marine environment with no proposed marine activities throughout the lifecycle of the proposed quarry expansion, 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 annually 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.

With regards to impacts to Indigenous communities, there is communal-commercial, Food, Social, and Ceremonial (FSC), and moderate livelihood fishing conducted within LFA 35 in the waters adjacent to the proposed site. The Indigenous communities, Millbrook First Nation and Sipekne'katik First Nation, are located adjacent to the proposed site and possess these licences. 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 and Sipekne'katik First Nation) adjacent to the proposed site.

Aquaculture:
There are a total of 0 rockweed leases and 4 aquaculture sites within 25km of the proposed project. Of these, 4 are land-based aquaculture facilities.

Operation of heavy equipment, rock drilling, blasting, rock crushing, operation of an asphalt plant, as well as onsite routine operations contribute to increased dust and particulate levels. Trucks from the quarry traveling along the unpaved access road raise dust; mitigations include voluntarily reducing speed and possibly use of dust suppressant. High turbidity levels can affect the ability of fish gills to absorb dissolved oxygen. Sediment can house pathogens and undesired microorganisms, increasing the risk of disease outbreaks among aquatic species. The results can range from reduced growth to morbidity.

Dust emissions from the quarry are expected but will be mitigated by the use of particle separators on equipment and use of water sprays on exposed working and laydown areas. Monitoring of airborne particulate emissions will be conducted; an environmental protection plan will be put in place and followed during all phases of operations. These active mitigation and monitoring steps 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 reviewed document; 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. Excavation will not take place below the deep bedrock water table. There will be no pumping of groundwater and therefore no dewatering of associated bedrock aquifer.

Water quality leaving the quarry via surface or groundwater is not expected to be impacted significantly outside the development area. No watercourses leave the site, and the quality of surface water runoff is expected to be high, because of management measures to reduce erosion and sedimentation on the quarry floor; the low-contaminant characteristics of the bedrock; and the location of the site which is high in the local catchment area. During operations, environmental management activities such as monitoring for water quality may be put in place at the site. Monitoring wells which will be drilled into the bedrock at several locations around the active area, will measure groundwater level and quality. The mitigation and monitoring steps have been provided and, if applied appropriately, should

result in low risk of negative effects on aquaculture sites.

Inland:
The Kemptown Quarry will not impact freshwater environments at the site; there are no watercourses in the proposed development area, and a single artificial pond and associated wetland occurring in the northeast corner of the site will not be included in the developed area of the quarry [for detailed information on this topic, refer to Appendix A, Sections 4.2.2 and 5.4.5].

The quarry is unlikely to generate significant quantities of contaminants or suspended sediments that could impact any freshwater habitat.

Key Considerations: (provide in non-technical language)
Chapman Bros Construction Ltd.'s proposed quarry expansion in Upper Kemptown, NS is subject to environmental assessment policies and guidelines. Based on the activities proposed, and with adherence to the environmental policies and guidelines, there should be negligible risk to local fish and fish habitat; adjacent commercial marine fisheries activities or DFA's interests.

Risks to aquaculture sites from sediments, water quality or quantity disruption, and surface water runoff 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.

Proponent should be made aware of:
- the Fisheries and Coastal Resources Act,
- Provincial Aquaculture License and Lease Regulations,
- Provincial Aquaculture Management Regulations, and
- the Nova Scotia Rock Weed Harvesting Regulations.
- They should also be directed to the Department's Site Mapping Tool for more information on the location of sites and leases in the area of their proposed project.

NOVA SCOTIA
Public Works

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

Date: April 17, 2025

To: Jeremy Higgins, Environmental Assessment Officer

From: Department of Public Works, Environmental Services – Brent MacDonald, P.Eng., Manager

Subject: **Chapman Bros Construction Limited Kemptown Quarry Development Project, Colchester, Nova Scotia**

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

List of Documents Reviewed:
Kemptown Quarry Development Project Environmental Assessment

Details of Technical Review:
The Proponent is expanding an existing quarry at Kemptown Quarry (1417 Kemptown Road) which has been operational since 2023. The future production is expected to replace current production. The existing access will not be changed.

The Nova Scotia Department of Public Works provides the following comments on this EA Registration Document:

1. Section 3.3 - Steps Taken to Address Public Concerns - States that for trucks leaving the site there will be a request of "adherence to speed limits and a reduction in speed near residential properties near the quarry." Although reduction in speeds can be requested as a matter of policy, adhering to this, would need to be done in a safe manner in any case. Adherence to speed limits in general is a legal requirement, it is not something that would need to be requested.

2. There are several Transportation sections within the report which give conflicting information. A statement in two of the sections is not clear and states "the entrance road has good sightlines but long stretch of highway on either side which do not have significant on turning traffic." It is unclear what this is referring to. However, the next statement indicates "effect can be mitigated by applicable warning signs placed far enough in advance of the access road." Another Transportation section indicates that "access to the quarry from Kemptown Road is unobstructed with good sightlines and is not expected to be hazardous. Given that this is an existing quarry, there would be historical information that would support any requirement for such signage and would be in a position to be known at this point and addressed appropriately. Since Kemptown Road is a provincially

owned road, any warning signage request would need to be approved through the local Area Manager's office.

3. Section 6.2.8 references "the generation of dust, flying stones, and loss of product from trucks along Kemptown Road." It is a legal requirement that the Proponent secures the loads properly to prevent this from happening. Additionally, Section 6.2.8 Residential Use mentions these transportation related issues (dust, flying stones, loss of product), however; this is not mentioned in the previous Section 6.2.7 Transportation. Section 6.2.8 also mentions Appendix A, Sections 4.3.12 and 5.3.8 for more detailed information, these sections pertain to Residential Use and not transportation (which is where these issues should be identified as well as proper mitigation measures. Section 4.3.8 does not mention these issues. Section 5.3.8 re-iterates the issues identified in Section 6.2.8, with mitigation identified as "best management practices" without identifying the main issue: proper securing of the load. There is also a reference to providing signage with phone numbers and contact persons, which is sufficient for minor issues but is not an appropriate mitigation measure to handle loss of product.

4. Blasting is referenced in different sections of the report. Although the frequency is identified as once or twice a year when the site is active, any mitigation measures that may be required on any provincially owned roads (mainly Kemptown Road) would need to be developed by the proponent and approved through the local Area Manager.

Key Considerations: (provide in non-technical language)

1. Any signage required must be approved by the local Area Manager's office.
2. The Proponent must identify how the concern of dust and flying stones from trucks will be addressed.
3. Issues like product loss must be included in the transportation sections along with proper mitigation measures.
4. The Proponent must seek approval for blasting through the local Area Manager's office.

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.

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: April 23, 2025

To: Jeremy Higgins, Environmental Assessment Officer, EA Branch

From: Donald Sam, Hydro and Flows, Regulatory Review Biologist, Fish and Fish Habitat Protection Program

Subject: Kemptown Quarry Development Project, 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 Kemptown Development Project Environmental Assessment Addendum 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:

DFO makes the following recommendations to the proponent:

- There is potential fish and fish habitat present at the site. 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.

- 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.

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. This review will identify potential impacts to fish and fish habitat and determine if an authorization under the *Fisheries Act* and/or a *Species at Risk* permit is required.

NOVA SCOTIA
Environment and Climate Change

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

Date: April 24, 2025

To: Jeremy Higgins, Environmental Assessment Officer

From: Water Resource Management Branch

Subject: **Kemptown Quarry Development Project, Colchester County, NS**

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

List of Documents Reviewed:
EARD; Appendices.

Details of Technical Review:

Surface Water

The site falls within the Salmon River primary watershed, straddles the watershed divide between the 1DH-6 and 1DH-4 secondary watersheds, is at the highest point in the local landscape, and is not home to any watercourses standing on or crossing the site. There is a standing pond on the property that the proponent indicates was created by historic logging activities on the property. The nearest watercourse originates approximately 150m downstream of the SE corner of the site. The primary source of surface water onsite will be precipitation, much of which is anticipated to directly enter the water table through percolation. Any excess runoff – that which does not percolate – will either be managed through surface water management infrastructure or will runoff into the vegetated lands surrounding the property.

The EARD states that the water quality of any surface water runoff is anticipated to be high because the measured water quality in standing water on-site is high, the bedrock has naturally low contaminant characteristics, the site is high in the catchment, the rock has low sulphur content and is not acid generating. The EARD also states that the proponent will install the following mitigation measures to reduce the potential for surface water contamination: erosion and sedimentation control measures on the quarry floor, compliance with provincial ESC guidance material, standard blasting practices to reduce the risk of nitrate releases, the operation of a closed-loop aggregate washing system, and the installation of surface management measures including settling ponds and retention ponds.

The proposal indicates that the standing pond at the NE corner of the property and its associated wetland will not be developed but also indicates that “these features may be removed due to requirements for practical quarry development”. It is therefore uncertain if these features will be impacted or not.

The proponent indicates that it intends to monitor water quality in surface water runoff and anticipates that it will meet all guidelines established by the Canadian Council of the Ministers of the Environment for the protection of freshwater aquatic life.

Surface runoff to the west is anticipated to be negligible due to the local topography and alignment of the site's western edge with the secondary watershed boundary. The EARD indicates that the proponent expects a negligible effect on local hydrology, with a tiny decrease in runoff volume projected for the unnamed brook originating near the southeast corner of the site, ranging from -0.1% to -0.5% from present.

Groundwater

The site is underlain predominantly by granite bedrock, with a thin veneer of glacial till and surface soil. Groundwater occurs within the bedrock as well as in shallow till at the site and the actual depth of the water table is not known. According to the EARD, the effect on overall groundwater distribution and flow are expected to be negligible.

The EARD states that the deep bedrock water table will be below the floor of the quarry, and there will be no pumping of groundwater and no dewatering of the associated bedrock aquifer. It is also stated that a groundwater monitoring program will be developed which will establish baseline groundwater quality and quantity prior to the quarry development and will provide regular monitoring to ensure that any potential impacts associated with the quarry development are identified.

Permanent homes and seasonal residences are in the vicinity of the quarry, which obtain their water supply from a mix of dug wells and drilled wells. The EARD identified ten private wells, two of which are drilled wells, within 1 km of the project. It was noted that wells drilled in the same aquifer as the quarry, such as those associated with residences along Kemptown Road, may be affected by periodic blasting but that water quality is not expected to be affected by quarry operations. The EARD states that a complaint management procedure is expected to be put in place for the quarry and monitoring of wells undertaken to provide information to determine if wells have been affected. There will also be contingency plans in place for hazardous material spills and management of harmful substances at the site.

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)..

It is unclear whether wetlands will be impacted since the EARD states, "Ponds and wetlands will be avoided; however they may be required to be removed because the location will affect practical development of the quarry, in which case appropriate regulatory approvals will be obtained prior to physical disturbance, and appropriate compensation for the loss will be arranged". Potential direct and indirect impacts should be included in the EARD.

Key Considerations:

Surface Water

The EARD indicates that the standing pond in the NE corner of the site may be removed to facilitate the practical development of the quarry. The proponent should confirm if the pond constitutes a watercourse in accordance with the provincial Guide to Altering Watercourses and, complete the applicable regulatory process (Notification or Approval), if either apply.

Groundwater

It is stated the quarry will not extend below the water table; however, the actual depth of the water table is unknown. A groundwater monitoring program is necessary to identify baseline conditions, including the seasonal high water table in both bedrock and the overlying till, and to monitor the effects of the project on groundwater quality and quantity during quarry operations.

Where data indicates the excavation may extend below the seasonal high water table, the estimated groundwater zone of influence from the quarry excavation area should be determined using calculated analytical drawdown predictions or numerical modeling. The estimated groundwater zone of influence can be used to evaluate drawdown effects on adjacent receptors, i.e., surface water, wetlands, and water supply wells.

The EARD states that wells drilled in the same aquifer as the quarry, such as those associated with residences along Kemptown Road, may be affected by periodic blasting. A baseline well survey, including water quality and quantity, should be conducted for private wells within 1 km of the quarry. A complaint management procedure should also be implemented, as indicated in the EARD.

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.

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
Communities, Culture, Tourism and Heritage
Special Places Protection

1747 Summer Street, 2nd Floor
Halifax, Nova Scotia, Canada B3H 3A6
902-424-6450 T
SPP@novascotia.ca E

Date: April 23, 2025

To: Jeremy Higgins, Environmental Assessment Officer

From: Beth Lewis, Director of Special Places Protection

Subject: **Kemptown Quarry Development Project, Colchester County, NS**

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

List of Documents Reviewed:
EA Document

Details of Technical Review (Archaeology):

The contents of the EA Review are in-line with the conclusions and recommendations of the ARIA report. As long as the ARIA report's recommendations are followed, we have no concerns at this time.

The investigating archaeologists ascribed the proposed development as having low potential for encountering archaeological resources protected under the Special Places Protection Act (SPPA). No further archaeological mitigation was deemed necessary.

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

Please note that the EA document should append the archaeology report approval letter from John Cormier, Coordinator of Special Places, dated December 20, 2023. This letter outlines the ARIA that took place for the study area and the resulting recommendations.

Also, on page 20 of the EA document, under Section 6.2.5, please include the ARIA permit number held by Davis MacIntyre & Associates in 2023, A2023NS159.

Details of Technical Review (Geology):

The bedrock geology in the project area is Devonian aged granite so there is no anticipation of encountering fossils with the project.

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

No concerns from a palaeontology point of view.

NOVA SCOTIA

Agriculture

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

Date: April 24, 2025

To: Jeremy Higgins, Environmental Assessment Officer

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

Subject: Kemptown Quarry Development Project
Kemptown, 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 soils which are defined as having "no capability for arable culture or permanent pasture."
- Within a 2 km buffer around the site are Class 3, 4, 6 and 7 soils. Less than 1% of the buffered area is Class 3 soils defined as having “moderately severe limitations that restrict the range of crops". Less than 10% of the area is Class 4 which has “severe limitations that restrict the range of crops”. Class 6 soil occupies about 6% of the buffered area and has “capability only to produce perennial forage crops”.
- Six productive blueberry fields exist within the buffered area, with the closest being just 360 m from the project site. These fields have been in close proximity to the quarry which opened in 2023.
- The nearest registered farm is ~3.1 km from the edge of the 2 km boundary and is classified as “Field Crops”.

NOVA SCOTIA
Environment and Climate Change

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

Date: April 24, 2025

To: Jeremy Higgins, Environmental Assessment Officer

From: Lori Skaine, Executive Director, Climate Change Division

Subject: Kemptown Quarry Development Project**, Colchester County, Nova Scotia**

Scope of review:
This review focuses on the following mandate: Climate Change Mitigation and Adaptation

List of Documents Reviewed:
Environmental Assessment Registration Document

Details of Technical Review:

Climate Adaptation

Section 4. *Existing Environment* provides a brief overview of current climate conditions onsite, including winds, mean annual snowfall and precipitation, average daily temperatures and wind patterns. Historical averages from 1981-2010 were used for temperature and precipitation data, including for the hydrogeological assessment in Appendix B. Do acknowledge that frequence and severity of extreme weather events are expected to increase due to climate change.

Section 7.0 *Impacts of the Environment on the Project* provides a brief overview of weather events relevant to the location. The section does not use a risk assessment framework to assess climate change impacts, although several risks are identified, including high rainfall and snow melt events, high winds, and high temperatures. Runoff management is cited as an adaptation measure. Changing climate is only mentioned insofar as it may increase the operating season for transportation projects, increasing demand for the quarry's outputs.

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)

Climate Adaptation

We suggest the proponent consider using forecasted climate data over the lifetime of the project (50 years) to understand how the climate is changing and identify relevant climate hazards to the undertaking. The proponent is encouraged to access data through Canada's national climate data portal (ClimateData.ca). Climate change-adjusted IDF curves may be helpful for developing a groundwater monitoring program (Section 6.3.2 Groundwater) and designing a surface water management system (Section 6.3.3 Hydrology). We suggest the proponent consider using a risk assessment framework to assess risks and plan adaptation measures to reduce risks over the lifetime of the project.

Mitigation

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

NOVA SCOTIA
Natural Resources and Renewables
Energy

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

Date: April 24, 2025

To: Jeremy Higgins, Environmental Assessment Officer

From: Department of Natural Resources and Department of Energy

Subject: **Kemptown Quarry Development Project, Colchester County, NS**

Scope of review:
This review focuses on the following mandates:

- Authorities and approvals required from Land Services Branch,
- Geoscience health and safety, mineral exploration, mineral development, abandoned mines openings,
- Biodiversity, species at risk, wildlife species and habitat conservation.

List of Documents Reviewed:

Land Services Branch:

- Environmental Assessment Registration Document
- Appendices A-G

Geoscience and Mines Branch:

- Kemptown Quarry Development EARD document and Appendices (Parts 1 through 6).
- Mineral Occurrence Database (MODB, Version 12, 2024)
- Google Earth
- Provincial Geoscience Atlas
- Nova Scotia's Registry of Claims (NovaROC)
- Open File Map ME 1982-9, Geological Map of the Cobequid Highlands, Nova Scotia, scale 1:50, 000, by Donohoe and Wallace

Wildlife Division:

- Kemptown Quarry Development Project - Environmental Assessment Registration Document and Appendices

Details of Technical Review:

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.

Geoscience and Mines Branch:
The Kemptown Quarry project geological characterization identifies that acid rock drainage (ARD) preliminary sampling has been conducted and returned below threshold concentrations. Proposed mitigation measures are in place should geohazards be encountered for ARD and erosion and sedimentation. Geological maps included in the application display the relative location of ARD in the planned project footprint.

Mineral Occurrences:
The proposed Project Area is considered to have a high level of mineral and potential aggregate using the 2009 model. No exploration licenses are located in the Project Area. The nearest exploration license is in the prospective Cobequid-Chedabucto Fault 500 m to the south of the Project Area. The surrounding area has been explored for historic Iron mining and Iron-ore-copper-gold (IOCG) type deposits containing other critical minerals. It is not anticipated that the proposed project will result in any negative impacts to the nearby mineral exploration licenses.

The Dexter Aggregate deposit is located adjacent to the Project Area to the north. In addition, several aggregate occurrences are in the immediate area.

Wildlife Division:
Overall, the Kemptown Quarry Development Project Environmental Assessment Registration Document (EARD), is a comprehensive document and of sufficient quality to assess risks to wildlife and wildlife habitat.

The study area falls within endangered mainland moose core habitat and concentration area. The closest moose observation record is 5.3 km from the study site. Although the terrestrial habitat is unlikely to support a moose population, there is a possibility of occasional transient movement through the study area. However, it is not considered suitable for long term occupancy. Guidelines and reporting for moose observations can be addressed in the Wildlife Management Plan.

Two years of biological and environmental surveys were carried out in 2023 and 2024, including breeding bird and owl surveys, terrestrial habitat, wetland and aquatic environment surveys, wildlife and spring and fall botany surveys. There were no species at risk found in the study area, but American Beech (S3S4 ranking) was found in a regenerated forest in the southwest corner of the study area.

There are no areas of modeled occurrences of boreal felt lichen in the study area, and as most forest cover has been removed through recent harvest or is regenerating, lichen surveys were not undertaken. It is unlikely the current habitat structure would support rare lichens.

Section 5.4.9 mentions that Species at Risk furbearers, including American Marten and Canada Lynx, have not been trapped recently in the area. Department of Natural Resources (DNR) recommends that the proponent provide a reference for the trapping data and any other details to support these conclusions in the Wildlife Management Plan

While night operations are expected to be avoided, mitigation measures should be established to reduce impacts of light pollution on the site in the event that activities become extended after dark.

Based on the habitat information provided in the EARD, the study area is not likely to support suitable bat habitat. Guidelines and reporting for any bat observations can be addressed in the Wildlife Management Plan.

Key Considerations: (provide in non-technical language)

Business Investment and Export Development Branch:
No comments.

Land Services Branch:
No comments.

Forestry Division:
No comments.

Clean Energy Division:
No comments.

Geoscience and Mines Branch:
No considerations. DNR recommends that the proponent allow periodic controlled access to any mineral right holders so that they may continue to explore the area for economic mineralization of critical minerals.

Wildlife Division:
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.

- The project area is within moose core habitat. It is illegal to disturb, harm or destroy any threatened or endangered species, their dwellings or habitually occupied habitats.

- Provide digital waypoints and/or shapefiles for all flora and fauna surveys, including for Species at Risk and Species of Conservation Concern to Department of Natural Resources (DNR) (those species listed and/or assessed as at risk under the *Species at Risk Act*, *Endangered Species Act*, Committee on the Status of Endangered Wildlife in Canada (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.
    - A reference for American Marten and Canada Lynx EARD trapping data and any other details to support conclusions about Species at Risk (SAR) furbearer trapping records. A mitigation plan may be required if sufficient information is not provided.
    - Mitigations, including:
        - 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.
        - Measures to protect and mitigate against adverse effects to migratory birds during all Project phases. 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 Nova Scotia *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.
        - Apply standard best management practices for any material stockpiles to avoid creating artificial habitat for wildlife. For example, 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.

    - 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.
    - 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.
    - Quarries and burrow pits are known to provide suitable habitat for herpetofauna. There may be suitable habitat for snakes such as Maritime Garter Snake, Northern Redbelly Snake, and Eastern Smooth Green Snake. However, due to specific habitat conditions, it is unlikely that wood turtles, snapping turtles, or painted turtles will be present. Measures, and guidelines can be established to manage any observations or encounters, further minimizing impacts on these species.

- Develop a plan to prevent the spread of invasive species both on and off site in consultation with DNR. The plan should include monitoring, reporting, and adaptive management components.
- In consultation with DNR establish a decommissioning and site reclamation plan to revegetate areas that are no longer operational with native plant species or seed sources 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.

NOVA SCOTIA
Environment and Climate Change

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

Date: April 16, 2025

To: Jeremy Higgins, Environmental Assessment Officer

From: ICE division - Regional Hydrogeologist

Subject: **Kemptown Quarry Development Project, Colchester County, NS**

Details of Technical Review:

The current Environment Assessment is to evaluate the potential impacts due to the quarry's expansion from 4 ha to 30.6 ha. The Registration Document underlines several Valued Environment Components identified with the Kemptown 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): Hydrology, Water Quality, Freshwater Aquatic Environments, Wetlands, Water supplies & Residential Wells.

Surface Water (quantity, quality)

Water Features Identified:

- Wetlands, ponds, and two unnamed watercourses within 500m of the study area.

Key Issues:

1. **Wetlands Disturbance:** Uncertainty about how wetlands within the property will be disturbed and to what extent (partial or complete alteration). Wetland alteration may be sought by the proponent.
2. **Pond Origin:** Unclear if the identified pond is naturally formed or artificially created, and if the "dugout" is an extension of the pond.
3. **Unnamed Watercourses:** Two watercourses identified outside the area lack detailed descriptions (width, depth, seasonal flow).
4. **Sedimentation Pond:** Plans to develop a sedimentation pond for excess runoff are unclear. No proposed monitoring for water quality/quantity at the outfall, which is crucial due to potential increases in suspended solids during site clearing.
5. **Runoff Volume:** Uncertainty if the sedimentation pond will collect enough runoff for dust suppression and aggregate wash.
6. **Watershed Delineation:** Discrepancies in watershed delineation methodology and figures. Water balance changes may be underestimated due to incomplete quarry development data.
7. **Baseline Data:** No proposed baseline data collection for quantity and quality at the unnamed watercourses.
8. **Monitoring Frequency:** Proposed bi-annual monitoring does not account for seasonal fluctuations; quarterly monitoring may be more appropriate.
9. **Monitoring Location:** SW2 location may be too downgradient to assess the impact of on-site activities on the brook.

Groundwater (quantity, quality)

The registration documents advised negligeable impacts to the groundwater (quantity, quality) are expected since excavation will occur above the deep bedrock water table with a quarry floor remaining at about 275 m above mean sea level (masl) (Part 1, p.2). Also, it is anticipated that most of the runoff would infiltrate in the quarry floor due to fractured bedrock (granite).

Groundwater Impact:

- **Negligible impacts** to groundwater quantity and quality are expected as excavation will occur above the deep bedrock water table, with the quarry floor remaining at about 275 m above mean sea level (masl).
- Most runoff is anticipated to infiltrate the quarry floor due to fractured granite bedrock.

Concerns Raised:

1. **Topography and Water Table**:
    - The site is on high ground (approx. 290 m elevation), acting as a groundwater recharge area.
    - The depth to the water table is unknown, but a shallow water table is expected due to thin, well-drained stony till (0.5 to 5 m thick).
    - Site development may affect this shallow water table, with no assessment provided on the impact to nearby private water supplies.
2. **Quarry Expansion and Blasting**:
    - Occasional blasts (1-2 times a year) are expected to have limited impact on nearby groundwater supplies.
    - A well field survey recorded 19 occupied dwellings within 1 km, all likely relying on private wells.
    - Gaps in the well database necessitate a thorough survey before expansion to assess impacts on private wells, alongside a complaint management procedure and proposed groundwater monitoring.
3. **Water Quality**:
    - The bedrock is non-acid generating, with low risk of nitrate contamination from explosives.
    - Uncertainty remains about the location of the fuelling area and measures to minimize water contamination.
4. **Groundwater Monitoring Program**:
    - Proposed installation of three monitoring wells (one upgradient, two downgradient) based on a 20 ha quarry development, not the planned 30.6 ha.
    - Data collection frequency (bi-annual) does not reflect seasonal variations, requiring adjustments to the monitoring plan.

Key Considerations:

1. **Baseline Data**: Further assessments should be conducted to establish robust baseline data for surface and groundwater (quantity and quality) and develop monitoring plans.
2. **Well Survey**: Complete a well survey detailing the type of well, construction specifics, and water quality.
3. **Wetland Alteration**: Determine if wetlands will be altered to assess the need for wetland alteration approval.
4. **Runoff**: Ensure sufficient runoff for dust suppression and aggregate wash; if insufficient, identify an alternative source and obtain necessary approvals if required.

NOVA SCOTIA
Environment and Climate Change

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

Date: April 16, 2025

To: Jeremy Higgins, Environmental Assessment Officer

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

Subject: **Kemptown Quarry Development Project, Colchester County, NS**

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

List of Documents Reviewed:
EARD

Details of Technical Review:

The purpose of the proposed undertaking is to expand the existing <2 ha Kemptown aggregate quarry up to 30.6ha within the next 50 years. The quarry is located at 1417 Kemptown Road, in the community of Upper Kemptown, Colchester County. Levels of activity including blasting, crushing, asphalt production, and heavy equipment operation, will be similar to current operations and with continued estimated production of an average of 25,000-50,000 tones of aggregate annually based on market demands. Aggregate from the Kemptown Quarry is used locally for provincial road construction projects.

A review of the above noted documents was undertaken with a particular focus on the potential for health impacts related to air quality, noise, drinking water wells. Environmental Health impacts related to this project have been assessed within the EARD and mitigation measures provided.

Key Considerations:

Environmental Health impacts have been identified and assessed, and mitigation measures established to protect human health, and/or are subject to additional legislative or regulatory requirements that further protect health. There are no additional un-addressed health related considerations based upon the information provided for this project.

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522 Church Street
Indian Brook, NS
B0N 2H0
Tel: 902.758.2049
Fax: 902.758.2017

May 2, 2025

Jeremy Higgins
A/ Environmental Assessment Officer
Nova Scotia Environment and Climate Change, EA Branch
1903 Barrington Street, Suite 2085
PO Box 442, Halifax, NS B3J 2P8

RE: Engagement Letter regarding the Kemptown Quarry Development Project, Colchester County, NS. – Sipekne'katik Governance Initiative, Phase 3 Initial Response

Consultation File Number: 4-4-CBCL-KQD-01

Dear Mr. Higgins;

This letter follows up regarding the engagement letter on the proposed development of the Kemptown Quarry in Colchester County, sent to Chief Gloade by Nova Scotia Environment and Climate Change (NSECC), and transferred to the Sipekne'katik Governance Initiative (SGI) on April 2, 2025.

Before starting any further conversation on this proposed project, we would like to restate that Sipekne'katik First Nation (SFN) is **NOT** part of the Kwilmu'kw Maw'klusuaqn Negotiation Office (KMKNO) and, therefore, will not be consulting under the TOR. We have our community-based consultation protocol, the **SGI,** which shall be used and implemented for all projects contemplated by the Province to remain consistent with the recognition and affirmation of existing Aboriginal and Treaty Rights in **Section 35** of the *Constitution Act* (1982), and within the legal parameters established by the Supreme Court of Canada concerning the Duty to Consult.
Please note that the length of the SGI Protocol process may not accord with the proponent's proposed project timeline or legislated timelines imposed by the federal and provincial governments. Nonetheless, our process needs to be followed by the Province as soon as any project or decision is contemplated to ensure meaningful consultation. If a project commences without proper consultation respecting the Band's process, the ability to avoid, minimize, or mitigate potential impacts to Sipekne'katik's **Section 35** Rights is lost. In this case, any continuing attempts at consultation will not be respectful of the Band's Treaty and Aboriginal Rights, including Aboriginal Title. Instead, it will be directed at compensation for adverse impacts on the

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Band's Constitutional Rights. Sipekne'katik strongly recommends further discussions with the Province of Nova Scotia to address these misalignments of consultation processes sooner rather than later.

The review of the Environmental Assessment (EA) provided by Chapman Bros Construction Limited under the SGI process identified limited environmental concerns. However, our team noted several data gaps and discrepancies that must be addressed to enable us to make an informed decision.

Request for Clarification on EA Data

The following points outline areas requiring further clarification and data within the submitted EA for the proposed Kemptown Quarry expansion:

- **Assessment of Potential Impacts**: The EA currently lacks sufficient detail regarding the potential environmental impacts of the proposed expansion. The document frequently relies on generalized language and non-quantitative descriptors. For example, the proponent states: "*Given the relatively small size of anticipated future annual operations of the quarry, compared to even forestry and other vehicle traffic along Kemptown Road, these emissions will be minimal*." However, no data is provided regarding existing traffic volumes or a detailed operational plan for the quarry.

- **Noise Impact Assessment**: Additional clarity is needed regarding noise emissions during the quarry operations. The EA provides only broad statements without specific decibel levels or analysis of how these emissions will interact with the ambient noise environment. The measures to be implemented to "*minimize noise*" should be clarified.

- **Impacts on Fish and Fish Habitat**: The EA notes that blasting will occur at an "*acceptable distance*" from fish habitats but fails to define this distance. Additionally, Table 4 (p.16) identifies a potential interaction between blasting activities and Fish and Fish Habitat, contradicting the earlier assertion. Quantitative criteria must be provided to clarify this claim and demonstrate actual compliance with environmental regulations.

- **Site Reclamation**: While the proponent states that the quarry will be reclaimed at the end of its projected 50-year life span, the absence of a detailed and actionable remediation plan raises concerns regarding the feasibility and credibility of this commitment. A specific reclamation strategy should be developed and disclosed before approval.

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- **Cumulative Effects**: The EA includes limited analysis of the potential cumulative effects of the quarry and other existing or proposed activities in the area. Although the proponent suggests these effects will be negligible, the rationale and supporting data are insufficient. A more robust cumulative effects assessment is required.

- **Water Resources Management**: The management plan for surface and groundwater offers only a cursory overview of potential impacts. Much of the hydrological data provided is not interpreted or used to support conclusions regarding risk to water resources. Drilled wells in the area share the same aquifer as the quarry site and could be significantly affected by operational activities and infiltration. Therefore, a detailed monitoring plan should be developed and shared for review.

- **Emergency Preparedness**: A comprehensive fuel or hazardous chemical spills contingency plan, including details on the blasting protocols and the storage of explosives, should be developed and shared for review before the EA approval.

- **Wildlife and Habitat Impacts**: The EA mentions frequent moose sightings around the project site. Given that the mainland moose population is classified as endangered, the proposed expansion poses significant risks through habitat fragmentation and increased noise disturbance. Comprehensive analysis and targeted mitigation strategies are required to address potential impacts on this species.

Concerns Regarding the Engagement Process

Chapman Bros. Construction Ltd. notified Sipekne'katik of the proposed project in November 2024. Our team replied in December 2024, outlining our community-based consultation protocol and requesting that the proponent provide further details about the project and formally engage with our process. In January 2025, a consultant representing the proponent contacted us to request more information about our consultation process and expressed general concerns about its structure. Our team requested a formal letter summarizing the consultant's questions and concerns to address them appropriately. We also reiterated that our consultation interests extend beyond archaeological impacts to include potential effects on Aboriginal and Treaty rights, particularly those related to traditional land use, environmental impacts, and overall stewardship responsibilities. Despite this clarification, the only response received was a letter addressing impacts solely on archaeological resources. Thereafter, communication ceased, and our follow-up email was not acknowledged.

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It is unfortunate to read in the EA that "*Chapman Bros. decided not to further engage with Sipekne'katik as the project location was outside the area occupied by their component reserves*." We wish to stress that our traditional and unceded territories are extensive and **are not confined to reserve boundaries**. These reserves, created by colonial authorities beginning in the 19th century, do not define the full extent of Mi'kmaq rights or territories. manage natural resources throughout our traditional lands, regardless of proximity to reserve lands. These treaties are not based on the principle of adjacency, but on a broader understanding of shared use and responsibility.

Reliance on the concept of adjacency misrepresents these rights and reinforces colonial structures historically used to limit Indigenous peoples' access to their lands and resources. Sipekne'katik does not accept this framework and strongly urges the proponent to become properly informed about their consultation obligations. **Meaningful consultation requires respect, reciprocity, and a willingness to engage beyond the minimum standards defined by outdated concepts of territorial ownership.**

We expect our comments to be fully considered and included in the EA review process, and that the requested clarifications will be provided prior to any decision regarding EA approval. In the meantime, the SGI team awaits regular updates from NSECC on any progress, including prompt notifications of any potential changes affecting the project's scope or design.

As a final reminder to the province of Nova Scotia and Chapman Bros Construction Ltd., the SGI consultation team wants to clarify and restate that the Kemptown Quarry Expansion Project is located in Mi'kma'ki, the ancestral territory of the Mi'kmaq. The Band has Treaty and Aboriginal Rights regarding lands, waterways and natural resources that it has used, benefited from, and occupied since time immemorial - **no undertaken shall impede the exercise of such Rights.**

, *Marine Biologist, on behalf of the Sipekne'katik Governance Initiative*
@sipeknekatik.ca
(902) 814-3967

CC:

Outlook

Proposed Project Comments

Date Thu 2025-04-03 14:42
To ea@novascotia.ca <ea@novascotia.ca>

** EXTERNAL EMAIL / COURRIEL EXTERNE **
Exercise caution when opening attachments or clicking on links / Faites preuve de prudence si vous ouvrez une pi﷿ce jointe ou cliquez sur un lien

Project: kemptown-quarry-development Comments: As a resident of kemptown road, the amount of dust we are forced to deal with by the quarry and their trucks is inhumane. I understand the need for this material but the road NEEDS to be paved if you are to increase your operations. The locals who must live with you cant use their own road recreationally for the dust, they cant keep their windows open in the summer time, and theyre forced to continue to bleed money into their vehicles because the road is in terrible shape, made worse by the many gravel trucks. Name: Municipality: Upper Kemptown email_message: Privacy-Statement: agree x: 58 y: 29

Outlook

Proposed Project Comments

Date Sat 2025-04-05 09:09
To ea@novascotia.ca <ea@novascotia.ca>

** EXTERNAL EMAIL / COURRIEL EXTERNE **
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Project: kemptown-quarry-development Comments: I am very concerned about this project getting bigger as all of the noise, air pollution has already impacted my family. My property is almost beside the pit and it has stopped any walks along the road as well as a massive amount of garbage being thrown out of the trucks as the drivers are throwing out their cigarette packages, tim hortons cups as well as their lunch packaging. We cant even have our windows open because of the dust on the road and the d.o.t. provided cloride only last a couple of days with all the traffic. And the road needs graded a lot more because of the massive increase in traffic.

Municipality: Kemptown email_message:

Privacy-Statement: agree x: 61 y: 26

Outlook

Re: EA Registration - Kemptown Quarry Development Project, Colchester Co

Date Thu 2025-05-01 09:38
To Higgins, Jeremy W <Jeremy.Higgins@novascotia.ca>

Good morning Jeremy.

I would like to first say that I am very supportive of this quarry expansion project.
However, the proponent has done a very poor job in communicating and more importantly respecting the Community which for me is critical.
As I understand correctly when Chapman Brothers first moved into this location it was considered a gravel pit and as such limited Environmental conditions attached. The past 2 years this operation has operated as a rock quarry with drilling and blasting.

So I am asking that the proponent follow all requirements associated with opening a new quarry. It is not a true expansion as a quarry never existed. There must be requirements for dust control, hours of operation, noise, potential for crystalline silica, proper aquifer and well water assessment and most important some semblance of a social licence beyond a simple public meeting to advise that they are expanding their current operation.

With respect to that social licence, I attended the community that was held by the proponent and their environmental assessment consultant. In my view, it left a lot to be desired. In my view they were unprepared to answer questions. Having just been through the Osco expansion, it seemed that their consultant was surprised and unable to answer some fairly basic questions asked by residents. There seemed to be a view by the proponent that it was a box that had to be checked.

Again I am a strong supporter of responsible resource development. As we as a Government move forward in this direction we must ensure very timely approval process while ensuring that the environmental standards are upheld.

Thank you for the opportunity to express my views.

Tom

Tom Taggart, MLA
Colchester North
(O) - 902-641-2335

On Thu, Apr 3, 2025 at 9:05 AM Higgins, Jeremy W <Jeremy.Higgins@novascotia.ca> wrote:

> Good Morning,
>
> On April 3, 2025, **Champman Bros Construction Limited** registered the **Kemptown Quarry Development, Colchester County** for Environmental Assessment (EA), in accordance with Part IV of the Environment Act.
>
> The purpose of the proposed undertaking is to develop the existing <2 ha Kemptown aggregate Quarry located at 1417 Kemptown Road, in the community of Upper Kemptown, Colchester County. The quarry, which was opened in 2023 under a temporary operating permit is located on PID 20343422. The quarry is planned to be expanded up to 30.6 ha within the next 50 years. Levels of activity including blasting, crushing, asphalt production, and heavy equipment operation, will be similar to current operations and with continued estimated production of an average of 25,000-50,000 tonnes of aggregate annually based on market demands. Aggregate from the Kemptown Quarry is used locally for provincial road construction projects.
>
> As of today, April 3, 2025, all project information will be available on Nova Scotia Environment and Climate Change website at http://www.novascotia.ca/nse/ea/.
>
> Please note that all comments must be provided by **May 3, 2025**, to be considered in this environmental assessment. **Comments are requested to be provided via email if possible.** All submissions received will be posted on the Department's website for public viewing.
>
> On or before May 23, 2025, the Minister of Environment and Climate Change will decide if the project can be granted conditional Environmental Assessment Approval.
>
> Best Regards,
>
> Jeremy Higgins
>
> NOVA SCOTIA
> Environment and Climate Change
> *1903 Barrington St.*
> *Suite 2085*
>
> **Jeremy W. Higgins**
> Environmental Assessment Officer
> Policy, Planning and Environmental Assessment
> *902-233-4477*

Halifax, NS, B3J 2P8

Jeremy.Higgins@novascotia.ca

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

May 2nd, 2025

Chapman Bros Construction Limited

32 Maplewood Drive
New Glasgow, NS, B2H 5Y2

RE: Kemptown Quarry Development Project

On behalf of the Native Council of Nova Scotia (NCNS), the Maritime Aboriginal Aquatic Resources Secretariate (MAARS) would like to thank Chapman Bros Construction Limited for taking the time to discuss the Kemptown Quarry Development Project with us virtually on April 28th, 2025. We would like to summarize and expand upon the discussion to ensure our comments are captured for the Environmental Assessment Review. Upon careful review of the EARD, we are of the opinion that the current Environmental Assessment Registration Document (EARD), as presented, is deficient.

MAARS has significant concerns around the lack of targeted surveys relating to several areas outlined in the Biophysical Assessment Report. Having a qualified biologist attend the site for a walk through on a single day is not sufficient to consider the presence of the many species that could be using this area for a variety of life stages. Targeted surveys for all potentially impacted biophysical features must be completed to gather a complete understanding of site use, including but not limited to, targeted Mainland Moose studies, targeted lichen surveys (undertaken by a qualified lichenologist), winter pellet surveys, herpetofauna surveys, winter bird surveys, and terrestrial and migratory bat surveys. We note that while migratory bats are not currently listed under the Species at Risk Act (SARA), they have been assessed by the Committee on the Status of Endangered Wildlife in Canada (COSEWIC) as endangered and are likely to be listed within the lifetime of the project. As well, given the proximity of this project to the Gully Lake Wilderness Area, we have concerns over the potential effects of this project on the Wilderness Area without thorough field surveys.

In accordance with Nova Scotia Department of Environment's *Guide to Addressing Wildlife Species and Habitat in an EA Registration Document*[1] surveys must be conducted during peak periods, for optimal detection of priority species. Surveys to target wildlife on the site were completed on a single day in May 2023 during the biophysical assessment, during which no targeted surveys were completed for Mainland Moose, migratory and terrestrial bats, and herpetofauna. Additionally, the bird surveys completed did not include any winter surveys or a review of the Christmas Bird Count, and were only completed for one day in two field seasons. The use of the ACCDC database is not a sufficient one-to-one substitute for a ground survey. As presented, the Biophysical Assessment does not meet the requirements, nor the best practices. As such, the Biophysical Assessment is deficient and does not provide an accurate and fulsome assessment of the project development area, or account for seasonal changes in the environment.

Despite the elevated potential for Mainland Moose to occur in this area, and the overlap of the project footprint on Mainland Moose Core Habitat, no targeted terrestrial surveys were completed, and no Habitat Suitability Modelling has been completed for this project. The ACCDC reports are not a substitute for a ground survey and given that much of these data are outdated, we feel it is important the proponent completes on-the-ground surveys to determine habitat suitability for Mainland Moose. This is especially important given that the Mainland Moose Recovery Plan lists mining and quarrying as a high impact activity, with serious impacts due to habitat fragmentation, hazards due to dramatic changes in terrain, and population fragmentation/isolation[2]. Development across Mainland Moose core habitat continues to shrink the area acceptable to an already at-risk species that is also culturally significant to the Mi'kmaq people. With this, we call upon the Province of Nova Scotia to commit seriously to the Recovery Plan for Mainland moose and implement the second objective: *To enhance connectivity to improve genetic health and demographic parameters and to support symmetrical exchange of migrants between each pair of localized groups within the Eastern mainland (Cumberland/Colchester, Pictou/Antigonish/Guysborough) and the Tobeatic*. It is not acceptable to continually decimate or fragment the habitat available to Mainland Moose.

Additionally, Section 6.3 - Assessment of Biophysical Impacts states that the quarry is unlikely to impact any freshwater habitat and that there will be negligible impacts on Species at Risk. MAARS requests that Chapman Bros and Envirosphere provide further details on how this conclusion was reached given the limited field surveys completed.

In Appendix A, Section 6 of the Biophysical Assessment, Cumulative Effects, the proponent does not appropriately consider the nearby wind farms. The Kmtnuk Wind Project and the Clydesdale Wind Farm are both located less than 8 km from the project footprint. Additionally, while the proponent noted the proximity to the adjacent Dexter Construction Quarry, there is no consideration for the cumulative effects especially given the potential for both quarries to be active during the same time frame, exacerbating impacts of quarry activities and blasting.

[1] Nova Scotia Department of Environment, "Guide to Addressing Wildlife Species and Habitat in an EA Registration Document."
[2] Nova Scotia Department of Natural Resources and Renewables, "Recovery Plan for the Moose (Alces Alces Americana) in Mainland Nova Scotia."

Despite the completion of a Hydrogeological Assessment (Appendix B), the proponent has not completed any baseline condition assessment of groundwater and has not yet installed any monitoring wells. In accordance with the *Guide to Preparing an EA Registration Document for Pit and Quarry Developments in Nova Scotia*[3] Section 6.1.3, the proponent needs to complete pre-development well water surveys to obtain baseline conditions across seasonal fluctuations before this project can be approved. Additionally, MAARS does not support the minimal proposed water quality monitoring – as presented, it simply gives a snapshot in time with no ability for comparative assessment, given that there is no baseline value from which to draw. MAARS would request that Chapman Bros completes regular, random sampling, with a minimum of 12 samples per year, equivalent to at least one sample per month, and complete water sampling following any blasting events or significant rainstorms.

The EARD refers to the wetlands present within the project footprint, and their wetland type; however, it is unclear if there were any field surveys completed to confirm this as none are mentioned in the document. It is stated that the boundaries and characteristics of the wetlands were determined during field surveys in 2023; however, the Information Sources listed in the Biophysical Assessment do not refer to surveys completed for this purpose. Furthermore, there is no description of the field methods used, nor is the timing identified. The conclusion that none of the wetlands are 'significant in terms of conservation' (Section 6.3.5, page 25) has not been appropriately considered given that the wetland areas have not been surveyed during field studies. Wetland habitats are known to provide important ecosystem functions, as well as habitat for numerous aquatic, terrestrial, and plant species. As such, any impacts to the functions of these habitats can have significant effects on the ecosystem. Given that this project is proposed to eliminate five wetlands, MAARS recommends that appropriate wetland habitat surveys are completed. We further request that wetland compensation plans are made available to us for review upon completion.

While the Archeological Resources Impact Assessment (ARIA) has concluded that this area is of low potential for archeological resource occurrence, no shovel testing has been completed in this area. Additionally, no Mi'kmaq Ecological Knowledge Study (MEKS) has been completed for this site, limiting the information available on potentially significant archeological sites and traditional use. Given that quarrying requires blasting, shovel testing must be done prior to any ground disturbance in the area.

The *Guide to Preparing an EA Registration Document for Pit and Quarry Developments in Nova Scotia* outlines the construction activities that should be addressed in the EARD, not all of which have been addressed in the Kemptown Quarry EARD. This includes sewage treatment and waste management systems, dangerous goods storage areas, structures, and hazardous waste management. Of particular interest, the proponent has not described if any dangerous goods (such as explosives) will be stored on site and how they will be stored, how sewage or waste will be managed at the site while it is active, and whether there will be fuel storage located at this site. These areas must be addressed by the proponent prior to any approvals of this project, in keeping with the guidelines outlined by the Nova Scotia Department of Environment.

[3] Nova Scotia Department of Environment, "Guide to Preparing an EA Registration Document for Pit and Quarry Developments in Nova Scotia."

MAARS would request that the proponent complete a fulsome Wildlife Monitoring Program. This program should include, but is not limited to, management of pile slopes to prevent nesting from Bank Swallows and Snapping Turtles, provisions for blasting outside of key breeding or migratory periods for birds and bats, and protocols for managing these potential interactions. As well, given that this area is within Core Habitat for Mainland Moose, the Wildlife Monitoring Program must include provisions for continuous Mainland Moose monitoring throughout the lifetime of the quarry.

We would like to bring your attention to Section 6.2.5 Archeological/Cultural/Historical, which states that "the area was not settled by Europeans until late in the 17th century". This statement demonstrates a complete lack of disregard for the Mi'kmaq People as the original stewards of the land since time immemorial. Settlement by Europeans is one facet of relatively recent history and it is disturbing that this is the timing to which you refer. To be clear, we are not interested in the potential for 17th century archaeological artifacts – we are concerned with the continued loss of historical Mi'kmaq artifacts which have been historically disregarded and stolen from their rightful heirs. This is Mi'kma'ki and the Mi'kmaq People have used all these lands long before European "settlement".

For contextual purposes

We would like to take this opportunity to reiterate that it is important for all proponents of projects to understand that the Off-Reserve Aboriginal Community represented by the NCNS is included within the definition of the word "Indian" of Section 91(24) of the *Constitution Act*, 1982. The Supreme Court of Canada in a landmark decision in *Daniels v. Canada (Indian Affairs and Northern Development)*, 2016 SCC 12. declared that "the exclusive Legislative Authority of the Parliament of Canada extends to all Indians, and Lands reserved for the Indians" and that the word "Indians" in s.91(24) includes the Métis and non-Status Indians[4]. Since 2004, in multiple decisions passed by the Supreme Court of Canada: *Haida Nation*[5], *Taku River Tlingit First Nation*[6], *and Mikisew Cree First Nation*[7], has established that,

> Where accommodation is required in decision making that may adversely affect as yet unproven Aboriginal Rights and title claims, the Crown must balance Aboriginal concerns reasonably with the potential impact of the decision on the asserted right or title and with other societal interests.

Further, both the Government of Nova Scotia and the Government of Canada are aware that the "Made in Nova Scotia Process" and the *Mi'kmaq-Nova Scotia-Canada Consultation Terms of Reference* does not circumvent the Provincial Government's responsibility to hold consultations with other organizations in Nova Scotia that represent Indigenous Peoples of Nova Scotia. While the proponent may have to engage with the thirteen Mi'kmaq First Nations through the Assembly of Nova Scotia Mi'kmaq Chiefs, represented by the Kwilmu'kw Maw-klusuaqn Negotiation

[4] Daniels v. Canada (Indian Affairs and Northern Development), 2016 SCC 12, [2016] 1 S.C.R. 99
[5] Haida Nation v. British Columbia (Minister of Forests), (2004), 2 S.C.R. 511
[6] Taku River Tlingit First Nation v. British Columbia (Project Assessment Director), (2004), 3 S.C.R. 550
[7] Mikisew Cree First Nations v. Canada (Minister of Canadian Heritage), (2005), 3 S.C.R. 388

Office (KMKNO), the KMKNO does not represent the Off-Reserve Aboriginal Community who have elected to be represented by the NCNS since 1974.

We assert that the Off-Reserve Aboriginal Communities, as 91(24) Indians, are undeniably heirs to Treaty Rights and beneficiaries of Aboriginal Rights as substantiated by Canada's own Supreme Court jurisprudence. As such, there is absolutely an obligation to consult with the Off-Reserve Community through their elected representative body of the NCNS. The Crown's duty is to consult with all Indians, not only the Indian Act Bands.

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 directly with Chapman Bros Construction Limited and Envirosphere to discuss the Kemptown Quarry Development Project. We have taken an important step in this connection that we look forward to furthering 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: @gmail.com
Sent: Thursday, April 03, 2025 14:42
To: Environment Assessment Web Account
Subject: Proposed Project Comments

** EXTERNAL EMAIL / COURRIEL EXTERNE **
Exercise caution when opening attachments or clicking on links / Faites preuve de prudence si vous ouvrez une pièce jointe ou cliquez sur un lien
Project: kemptown-quarry-development Comments: As a resident of kemptown road, the amount of dust we are forced to deal with by the quarry and their trucks is inhumane. I understand the need for this material but the road NEEDS to be paved if you are to increase your operations. The locals who must live with you cant use their own road recreationally for the dust, they cant keep their windows open in the summer time, and theyre forced to continue to bleed money into their vehicles because the road is in terrible shape, made worse by the many gravel trucks. Name: Email: n@gmail.com Address: Municipality: Upper Kemptown email_message: Privacy-Statement: agree x: 58 y: 29