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Colpton Quarry Expansion Project

Publication Date: March 14, 2024

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| Number | Source | Date |
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McInnis, Mark

From: Ferris, Kevin (HC/SC) <Kevin.Ferris@hc-sc.gc.ca> on behalf of IA-ATL / EI-ATL (HC/SC) <ia-atl-ei-atl@hc-sc.gc.ca>
Sent: January 17, 2024 4:45 PM
To: McInnis, Mark
Cc: Allain, Jérémie (HC/SC); Maclean, Lachlan (HC/SC)
Subject: RE: Colpton Quarry Expansion Project, Lunenburg County - EA Registration
Attachments: Human Health Considerations in EA.pdf

You don't often get email from ia-atl-ei-atl@hc-sc.gc.ca. [Learn why this is important](#)

**** 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

Hello Mark,

As per your email below regarding the Colpton Quarry Expansion Project, please identify any project-related human health impacts to which you require advice and guidance from Health Canada.

HC's role in Impact/Environmental Assessment is founded in statutory obligations under the Canadian Impact Assessment Act, and its knowledge and expertise can be called upon by reviewing bodies (e.g., Impact Assessment Agency of Canada, review panels, Indigenous groups and/or other jurisdictions). In the absence of such a request from one of the above noted groups, HC is unable to carry out a comprehensive review of the project. **However, HC is able to accommodate specific requests for human health advice and guidance related to provincial environmental assessments within a reasonable timeframe.**

Health Canada currently possesses expertise in the following areas related to human health: air quality, recreational and drinking water quality, traditional foods (country foods), noise, and methodological expertise in conducting human health risk assessment.

To help with your review of human health impacts, I have attached a document of common human health considerations in project reviews and links to Health Canada's guidance documents.

Kind regards,

Kevin Ferris

Regulatory Operations and Enforcement Branch
Health Canada / Government of Canada
kevin.ferris@hc-sc.gc.ca

Direction générale des opérations réglementaires et de l'application de la loi
Santé Canada / Gouvernement du Canada
kevin.ferris@hc-sc.gc.ca

Human Health Considerations in Environmental Assessment

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

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

| | Consideration | Reference Document |
|--|--|---|
| <p>Receptor Location(s)</p> <p>Please ensure the registration document clearly identifies the locations of all receptors that may be impacted by the proposed project, including any receptors located along the transportation route, if applicable.</p> | <ul style="list-style-type: none"> It is important to clearly describe the location and distance from the proposed site(s) to all potential human receptors (permanent, seasonal or temporary), taking into consideration the different types of land uses (e.g. residential, recreational, industrial, etc.), and identifying all vulnerable populations (e.g. in schools, hospitals, retirement or assisted living communities). Note that the types of residents and visitors in a particular area will depend on land use, and may include members of the general public and/or members of specific population subgroups (Indigenous peoples, campers, hunters, etc.) | <p>Section 7.1.3 of <i>Health Canada. 2019. Guidance for Evaluating Human Health Impacts in Environmental Assessment: Human Health Risk Assessment. Healthy Environments and Consumer Safety Branch, Health Canada, Ottawa, Ontario.</i></p> <p>https://publications.gc.ca/site/eng/9.870475/publication.html</p> |

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| | <ul style="list-style-type: none"> • If there is the potential that project-related activities could affect human receptors, impacts to human health should be considered. | |
| Atmospheric Environment | | |
| <p>Project impacts to the atmospheric environment include changes to air quality and noise, and can occur in both the construction, operation and decommissioning phases of the project. Project impacts to air quality are commonly caused by emissions from equipment or vehicles as well as by dust. Noise impacts are commonly caused by equipment as well as by activities such as blasting.</p> | <ul style="list-style-type: none"> • If there are receptors that could be affected by project-related activities, impacts to the atmospheric environment should be considered. Changes to the atmospheric environment that may impact human health include: <ul style="list-style-type: none"> ○ impacts to air quality (dust or fumes including PM_{2.5}, NO_x, SO_x, PAHs) ○ increased noise from construction or operations | <p><i>Health Canada. 2016. Guidance for Evaluating Human Health Impacts in Environmental Assessment: Noise. Healthy Environments and Consumer Safety Branch, Health Canada, Ottawa, Ontario.</i> http://publications.gc.ca/pub?id=9.832514&sl=0</p> <p><i>Health Canada. 2016. Guidance for Evaluating Human Health Impacts in Environmental Assessment: Air. Healthy Environments and Consumer Safety Branch, Health Canada, Ottawa, Ontario.</i> http://publications.gc.ca/pub?id=9.802343&sl=0</p> |
| | <ul style="list-style-type: none"> • If there are receptors who could be impacted by project-related noise, it may be necessary to inform receptors prior to loud activities, such as blasting. | |
| | <ul style="list-style-type: none"> • If there is the potential for impacts to human receptors from noise and/or air quality changes from the project, the proponent should consider establishing mitigation measures. If complaints are received additional mitigation measures may be required. | |
| Recreational and Drinking Water Quality | | |
| <p>The proponent should consider whether any nearby waterbodies are used for recreational (i.e. swimming, boating, or fishing) or drinking water purposes, as well as whether there are any drinking water wells in the area potentially impacted by the project. Nearby drinking and/or recreational water quality may be impacted by accidents or malfunctions, such as a fuel spill; by dust and</p> | <ul style="list-style-type: none"> • If there is the potential for impacts to drinking and/or recreational water quality from the project site, the proponent should consider establishing mitigation measures. If complaints are received additional mitigation measures may be required. | <p><i>Health Canada. 2017. Guidance for Evaluating Human Health Impacts in Environmental Assessment: Water Quality. Healthy Environments and Consumer Safety Branch, Health Canada, Ottawa, Ontario.</i> http://publications.gc.ca/pub?id=9.832511&sl=0</p> |
| | <ul style="list-style-type: none"> • The proponent should consider preparing a response plan in the event of an accident or malfunction with the potential to impact drinking and/or recreational water quality. Response plans should include a spill response kit, adequate spill response training, and a communication plan to notify all recreational and drinking water users in the impacted area as well as all relevant authorities. | |

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| <p>increased sediment runoff; and by other chemical discharges to the environment. Additionally, wells in the area potentially impacted by the project may be impacted by activities such as blasting.</p> | <ul style="list-style-type: none"> • In some cases, for projects that are likely to have an impact on drinking and/or recreational water quality, the proponent should consider conducting water monitoring prior to the start of the project (to establish a baseline). Monitoring would continue throughout the construction, operation and decommissioning phases of the project (as applicable) to monitor for any changes in water quality or quantity. | |
| <p>Country Foods</p> | | |
| <p>If there are plants or animals present in the area potentially impacted by the project that are consumed by humans, there may be potential for impacts to country foods. The proponent should consider all country foods that are hunted, harvested or fished from the area potentially impacted by the project. Impacts to country foods may occur from the release of contaminants into soil or water (including from an accident or spill) or from deposition of air borne contaminants.</p> | <ul style="list-style-type: none"> • If there is the potential for impacts to country foods from the proposed project, the proponent should consider establishing mitigation measures. If complaints are received additional mitigation measures may be required. • The proponent should consider preparing a response plan in the event of an accident or malfunction with the potential to impact country foods. Response plans should include a spill response kit, adequate spill response training, and a communication plan to notify all potential consumers of country foods in the impacted area as well as all relevant authorities. | <p><i>Health Canada. 2017. Guidance for Evaluating Human Health Impacts in Environmental Assessment: Country Foods. Healthy Environments and Consumer Safety Branch, Health Canada, Ottawa, Ontario.</i> http://publications.gc.ca/pub?id=9.855584&sl=0</p> |

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

Health Canada. 2017. Guidance for Evaluating Human Health Impacts in Environmental Assessment: Noise. Healthy Environments and Consumer Safety Branch, Health Canada, Ottawa, Ontario. <http://publications.gc.ca/pub?id=9.832514&sl=0>

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

Health Canada. 2016. Guidance for Evaluating Human Health Impacts in Environmental Assessment: Air. Healthy Environments and Consumer Safety Branch, Health Canada, Ottawa, Ontario. <http://publications.gc.ca/pub?id=9.802343&sl=0>

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

Health Canada. 2017. Guidance for Evaluating Human Health Impacts in Environmental Assessment: Water Quality. Healthy Environments and Consumer Safety Branch, Health Canada, Ottawa, Ontario. <http://publications.gc.ca/pub?id=9.832511&sl=0>

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

Health Canada. 2017. Guidance for Evaluating Human Health Impacts in Environmental Assessment: Country Foods. Healthy Environments and Consumer Safety Branch, Health Canada, Ottawa, Ontario. <http://publications.gc.ca/pub?id=9.855584&sl=0>

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

Health Canada. 2019. Guidance for Evaluating Human Health Impacts in Environmental Assessment: Human Health Risk Assessment. Healthy Environments and Consumer Safety Branch, Health Canada, Ottawa, Ontario. <https://publications.gc.ca/site/eng/9.870475/publication.html>

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

Date: Feb 8, 2023

To: Environmental Assessment Officer

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

Subject: **Walden Quarry Expansion Project, Lunenburg County, Nova Scotia**

Scope of review:

The focus of this Environmental Assessment Review is potential impacts on human health. In general, the scope of this review includes the assessment of the potential for the proposed undertaking/project to adversely affect human health in all phases of the project.

List of Documents Reviewed:

Colpton Quarry Expansion Project EA Registration Document Part 1 - 2

Key Considerations: (provide in non-technical language)

Provided best management practices are adopted for this project, and adherence to NSECC Approval(s) is achieved, no adverse public health impacts are expected to occur as a result of the project.

Date: Feb 13, 2024

To: Kelly Maher, Environmental Assessment Officer

From: Water Branch – Elizabeth Kennedy

Subject: Colpton Quarry Expansion Project, Lunenburg County, Nova Scotia

Scope of review:

This review focuses on the following mandate: Surface water quality and quantity, Groundwater quality and quantity, and Wetlands

List of Documents Reviewed:

Environmental Assessment Registration Document (EARD) Submission, including Appendices

Details of Technical Review:**Surface Water**

The submission outlines several species within or surrounding the project area, including species at risk, species of concern, and otherwise. The existing runoff collection sump drains through a culvert to a potential Wetland of Special Significance (WSS) northeast of the quarry.

Runoff from the quarry is predicted to increase because of quarry expansion, and in the Submission the proponent commits to developing a surface water management plan that will "...include consideration for a progressive increase in the amount of runoff from the quarry. The surface water management plan will be developed as part of the subsequent IA process and will include specific surface water controls and erosion and sediment control strategies." (pg 22). The submission doesn't include details on the design or approaches for surface water management to support an assessment of whether mitigations will be possible or successful. It is also noted that the values in Tables 2 and 3 within the Appendix F Water Balance Assessment outlining the % change for Catchment Area B represent the % change for the entire watershed area (~140 ha), and do not represent the % change for specifically the quarry area, which is much smaller. As a result, the % change in runoff from the quarry area itself will be much larger, and requires adequate assessment and mitigation so that potential impacts to the hydrological regime of the downstream WSS are considered and mitigated.

It is noted that "The Water Balance Assessment estimates that there will be a reduction in water flow within Catchment Area D (i.e. to Fox Lake), however given local topography any changes within this catchment area are not expected to occur until after the quarry has reached mid-development conditions (i.e. 21-hectares / anticipated to be 20+ years)."

(pg 22). It is further stated that the plan for this change includes "...re-assessment of the Fox Lake catchment area to identify potential effects and develop mitigation will be conducted when the quarry development is in closer proximity to the catchment area. This re-assessment will be completed prior to quarry expansion within the Fox Lake catchment area." (pg 22). This is an important commitment for the project.

One set of field parameter measurements were obtained as part of one field visit to characterize current water quality conditions and support the assessment of impacts to water quality associated with the proposed works. One sampling event focused on these parameters is not sufficient for characterizing current water quality discharged from site or for assessing potential impacts.

Groundwater

There has been a sufficient base level of work conducted for the site by the proponent in the EARD to assess background geological and groundwater conditions and level of risk appropriate to identified groundwater receptors. The primary relevant points from this work are as follows:

According to the EARD, the nearest residential water well supply is currently located approximately 2 km distance. A check of online mapping shows a measured distance of about 1.5 km to nearest homes east of the quarry site proposed extents, along Highway 325.

There appears to be no need to conduct baseline water survey of water wells as this is typically done for wells within 1.0 km of sites.

If the project is approved, a monitoring well program should be determined in conjunction with the Department. The establishment and maintenance of groundwater monitoring program is identified in the EARD (p. 28) and is of primary importance for determining the water table elevation and background groundwater quality:

"Groundwater monitoring will be conducted as per the terms and conditions of the IA. It is expected that a condition of EA approval will be to develop a groundwater monitoring program for the site under the IA process, and a network of groundwater monitoring wells will be constructed to establish baseline groundwater quality as well as existing groundwater table elevations. The monitoring well network is expected to include three industry standard monitoring wells. The monitoring well network will allow for on-going monitoring to ensure that potential groundwater impacts are identified."

The EARD (p. 21) states the intention to conduct all operations above the water table:

"The quarry excavation will not enter the groundwater table, so on-going pumping will not be required. If aggregate extraction below the groundwater water table is required in the future, a Hydrological Study will be completed and an application to amend the IA will be submitted to NSECC."

The installation of monitoring wells (in the groundwater monitoring program) and determination of true water table location will help ensure this objective. Typically, the

Department requires at least 1.0 m separation between the water table and operating quarry floor.

No other groundwater receptors of note, or concerns related to groundwater have been identified, based on the EARD and the site location at this time. If surrounding conditions change over time (for example construction of new residences in nearby locations), additional monitoring could become necessary.

Wetlands

The proponent has provided a general overview of the wetlands within the study area and identified seven wetlands; six being identified as a WSS. The proponent has stated that no direct impacts to WSS are anticipated, however, the complete alteration of Wetland 7 (W7) is anticipated.

It is unclear what time of year the surveys occurred and if WESP-AC was performed. Therefore, it is challenging to determine if the wetland assessment is complete. Aside from the WSS triggers outlined in the Nova Scotia Wetland Conservation Policy, WESP-AC is also a tool that can identify a functional WSS. If WESP-AC was not performed then we do not know the full extent of WSS within the Study Area.

The EARD states that no impacts to WSS are anticipated however, based on the shapefiles provided, ~580 m² of Wetland 4 appears to overlap with the proposed quarry expansion area. There is uncertainty whether direct impacts are anticipated to occur within Wetland 4.

The proponent does not anticipate operating below the groundwater water table and indirect impacts to wetlands via groundwater drawdown are not anticipated. If operation below the water table is required in the future, a hydrological study will be completed and an amendment to the IA will be submitted to NSECC. If the hydrological studies show potential impacts to adjacent wetlands, then further monitoring may be required.

Key Considerations: (provide in non-technical language)

Surface Water

As part of achieving the mitigations outlined in the submission, erosion and sediment control plans should be developed for each phase of the project to mitigate identified risks to surface water quality and aquatic species and habitats be developed by a qualified professional prior to further site development taking place. Plans should be supported by a design basis that clearly articulates what water quality objectives will be achieved as a result of these mitigations (e.g., reduction of Total Suspended Solids to a defined level prior to discharge). A more detailed surface water management plan should be required prior to the expansion of the quarry and detail how the potential increases to flows to the WSS to the north of the site will be mitigated (e.g., site water management retention/settling ponds with engineered outlet structures). Any proposed mitigation measures should be supported by sufficient assessment and justification to enable effective Departmental review. It is noted that that as part of mitigating changes to

surface water quantity, the proposed works are likely to require additional site water management features that are not currently described in the submission.

In recognition of the potential surface water contaminants associated with quarrying operations and the existence of a WSS downstream of the site discharge location (e.g., the quarry sump), a more complete characterization of the water quality collected and discharged from site should be completed, including but not limited to general chemistry and metals at an appropriate amount of sampling frequencies. These results should be used to evaluate whether additional mitigation measures are required as part of the surface water management plan, and that any proposed mitigations be supported by sufficient assessment and justification to enable effective Departmental review. It is noted that as part of mitigating changes to surface water quality, the proposed works may require additional site water management features and monitoring that are not currently described in the submission.

As part of further evaluating the predicted impacts to the Fox Lake watershed associated with the proposed works, the Submission outlines that impacts to this watershed be re-assessed prior to quarry expansion impacts on the Fox Lake watershed area. It is important that this commitment be fulfilled prior to activities occurring in this area.

Groundwater

The EARD has provided a base level of information sufficient to determine the potential environmental sustainability of the proposed operations, in relation to groundwater. Based on the information provided, the statement by the proponent that *“Overall, the impact of the project on groundwater is expected to be similar to the existing operation, with little or no change from previous operations at the quarry. With appropriate mitigation applied, potential impacts on groundwater are expected to be negligible.”* (EARD p. 21) is found to be reasonable.

Work as proposed involves blasting, quarrying activity and extraction conducted above the water table. Operating above the water table is a key component to minimizing groundwater impacts and the Department typically requires in similar situations that work be conducted a minimum of 1 metre above the annual high-water table level, as measured in a permanent monitoring well network (to be established). Based on quarrying activity to occur above the water table, no groundwater drawdown of the water table is expected.

The nearest residential receptor water wells along Highway 325 are about 1.5 km from the proposed quarry extents and unlikely to be affected by the current proposed plans.

Any changes to groundwater levels could affect nearby wetlands, and the proponent proposes developing a Wetland Monitoring Program for subsequent operational work.

Other standard Groundwater EA Terms and Conditions for Quarry Applications should also be applied for this site.

Wetlands

The proponent should clarify if direct impacts to Wetland 4 are anticipated, and if so, provide details on the type of work that will be completed within the wetland and approximate infill area. WESP-AC results should be completed and provided to NSECC for review to determine if additional WSS were identified via WESP-AC (i.e. Wetland 7).

A more detailed surface water management plan should be required prior to the expansion of the quarry to detail how the potential increases to flows to the WSS to the north of the site will be mitigated (e.g., site water management retention/settling ponds with engineered outlet structures).

Agriculture

Date: February 20, 2024

To: Kelly Maher, Environmental Assessment Officer

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

Subject: Colpton Quarry Expansion Project
Colpton, Lunenburg 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 proposed location of the expansion is on class 7 land, which is unsuitable for agriculture.
- The closest registered farm is 2.2 km from the proposed expansion area.
- The closest land in agricultural use is 1.7 km from the proposed expansion area.

Date: February 20, 2023

To: Kelly Maher, Environmental Assessment Officer

From: Executive Director, SAS

Subject: **Colpton Quarry Expansion Project, Lunenburg County, Nova Scotia**

Scope of review:

This review focuses on the following mandate: protected areas

List of Documents Reviewed:

- Registration document for this project

Details of Technical Review:

Section 6.2.11 in Part 1 and Section 5.3.11 in Part 2 are labelled “Parks and Protected Areas”. These sections do not identify or address impacts on Pu'tlaqne'katik, a wilderness area immediately adjacent to the project site. The registration document provides insufficient information or rationale to support the following claims:

- “the degree of any interactions with the managed parks and protected areas in the immediate vicinity is not expected to change”
- “expansion of the quarry will not affect the integrity of any nearby protected areas”.
- “the impact of the project on parks and protected areas is expected to be minimal, with little or no change from previous operations at the quarry”

The rationale provided appears to be that the proposed quarry expansion “will not change the intensity or frequency of activity at the site”. Expansion of the quarry footprint is not addressed.

Key Considerations: (provide in non-technical language)

- Project occurs immediately adjacent to and upstream of Pu'tlaqne'katik, a designated wilderness area
- The registration document lacks meaningful information on project impacts to the adjacent wilderness area.

- Pu'tlaqne'katik is a "biodiversity hot spot", meaning it contains an exceptionally high concentration and diversity of rare species compared to other places in the region, which was the rationale for establishment of the existing Wilderness Area.
- The EA area overlaps with delineated core habitat identified under Nova Scotia's *Endangered Species Act* and critical habitat identified under the federal *Species at Risk Act* for two listed species: Blandings turtle and Eastern ribbon snake. These delineated habitats extend from the EA area well into the adjacent wilderness area and formed a part of the rationale for the creation of the Wilderness Area.
- Given the immediate proximity of the EA area to core and critical habitat for Blandings turtle and Eastern ribbon snake within the wilderness area it can be expected that degradation of these habitats and related impacts associated with the quarry expansion will negatively affect these species within the adjacent wilderness area.
- The Wilderness Area also contains provincial core habitat for monarch butterfly and black ash, and numerous records for rare coastal plain flora, including Long's bullrush and Goldencrest. These two species are listed under the provincial *Endangered Species Act* and grow along lakeshore margins. Wetlands within the Wilderness Area are Wetlands of Special Significance. Potential impacts to water quality and indirect impacts to aquatic or species occupying shoreline and/or seasonally flooded are not identified.



Date: February 21, 2024

To: Kelly Maher, Environmental Assessment Officer

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

Subject: Colpton Quarry Expansion, Lunenburg County, Nova Scotia

Scope of review:

Fisheries and Oceans Canada (DFO) is responsible for administering 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 Colpton Quarry Expansion Project Environmental Assessment Registration Document to potentially result in:

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

Recommendations:

We did not identify any potential impacts to fish or fish habitat during our review of the Colpton Quarry Expansion Environmental Assessment Registration Document, and therefore do not have any comments or recommendations on the document.

Date: February 21, 2024
To: Kelly Maher, Environmental Assessment Officer
From: Beth Lewis, Director of Special Places Protection
Subject: **Colpton Quarry Expansion Project, Lunenburg County, Nova Scotia**

Scope of review:

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

List of Documents Reviewed:

Colpton Quarry Environmental Assessment Registration document
Colpton Quarry GIS Data
Archeological Resource Impact Assessment Final Report for Heritage Research Permit A2022NS073 – Colpton Quarry Expansion Archaeological Resource Impact Assessment, Screening & Reconnaissance.
Final Report Letter for HRP A2022NS073

Details of Technical Review (Archaeology):

Upon examination of the Environmental Assessment (EA) registration document, Appendix E, the findings from the archaeology consultant, and the review conducted by the Department of Communities, Culture, Tourism & Heritage (CCTH), it has been concluded that there are currently no archaeological concerns with the proposed expansion of the Colpton Quarry. The assessment conducted by CCTH staff has identified that the likelihood of encountering archaeological resources within the project's defined study area is low, thereby eliminating the need for additional archaeological investigations in this area.

By following the provided recommendations, the project will be able to proceed without negatively affecting any archaeological resources.

Key Considerations:

The report was acceptable as submitted to CCTH by the archaeology consultant.

Details of Technical Review (Geology):

The proposal documents indicate that the project area's bedrock geology consists of Goldenville Formation quartzites. Given this, the probability of discovering significant fossils within the Goldenville bedrock is minimal, leading to the expectation that there will be no paleontological concerns.

DATE: February 21, 2024
TO: Kelly Moher, Environmental Assessment Officer
FROM: Christina Lovitt, Provincial Director of Planning
SUBJECT: COLPTON QUARRY EXPANSION, LUNENBURG COUNTY, NS

Scope of Review:

This review focuses on the following mandates: Statements of Provincial Interest, Municipal Development Permits and community and municipal engagement.

Document(s) Reviewed:

Registration Document Part 1

Details of Technical Review:

- At the present time, the Municipality of the District of Lunenburg does not have land use planning or zoning for the area encompassed by the Colpton Quarry Expansion; consequently, there are no zoning requirements or land use bylaw provisions in effect for the site, and there are no Municipal Development Permit requirements.
- The proponent has indicated that they have engaged with the public, as outlined in Table 1 included in the EA Registration document.
- Community engagement to date has focused on notifying local elected officials and community representatives. Dexter has indicated that engagement efforts have included email correspondence and in-person meetings.
- Table 1 also shows that the proponent has engaged with the Municipality's Deputy Mayor and local municipal councilors about the quarry expansion.

Statements of Provincial Interest:

- **Drinking Water:** No anticipated impact. The existing and proposed expansion of the quarry are subject to an existing Industrial Approval (IA), which includes conditions related to surface water quality and groundwater management. Additionally, there are no drinking water supply areas located in proximity to the quarry site. The Registration document also indicates that: *surface water and wells associated with the nearest residences are too far from the quarry and in a different groundwater regime to be affected by quarry activities, including blasting. If aggregate washing is required, wash water will be managed within the site itself and wash water is retained on-site and can be re-used in the aggregate washing process.*
- **Agricultural Land:** No anticipated impact. The quarry site does not include areas of agricultural high capability soils or agriculturally related activities. The area is predominantly forested with acidic soils.
- **Flood Risk:** No anticipated impact. None of the river systems mapped as part of the Canada – NS Flood Mapping Program are located in Lunenburg County and, presently, there are no known flood plains located in the quarry site.

- **Infrastructure:** No anticipated impact. The area of the quarry site is not serviced by municipal water or sewer.
- **Housing:** No anticipated impact. There are no permanent residences within 800 meters of the quarry; the nearest residence is in the community of West Clifford some two kilometres distant.

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

There is no outstanding information and/or conditions. All components considered under DMAH's areas of mandate have been adequately addressed.

Date: February 21, 2023

To: Mark McInnis, Environmental Assessment Officer

From: Climate Change Division – Nancy Rondeaux

Subject: **Colpton Quarry Expansion Project, Lunenburg County, Nova Scotia**

Scope of review:

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

List of Documents Reviewed:

Environmental Assessment Registration Document

Details of Technical Review:

Adaptation:

- Chapter 7 of the EA registration document recognizes that the Colpton Quarry will be impacted by weather, including extreme weather which may occur more frequently because of climate change.
- The Biophysical Assessment Report of the EA registration document (Appendix D) includes a description of the local climate (section 4.1.1) based on climate normals from the Bridgewater Climate Station from 1981-2010 and wind regimes based on the Canadian Wind Atlas. The use of a 30-year time frame for historical normal meets recommended practice, however, historical extreme precipitation is not included in the climate characterization.
- The VEC sections of the EA registration document do not consider climate change impacts and projections for the site. For example, the document does not provide climate projections for average and extreme temperature or other climate variables relative to climate normals and indicate how projected climate changes may impact sensitive environmental components.
- The potential adverse effects of climate change on the undertaking and mitigative measures are not identified or presented within a risk management framework.

Mitigation

- The proponent does not quantify the greenhouse gas emissions expected from the quarry project. The proponent expects that emissions will be generated by the operation of vehicles and equipment. The quantity of greenhouse gas emissions generated could be considered negligible.
- The proponent estimates that emission levels from the expanded quarry are expected to be similar to those already produced at the site, since there is no anticipated change in the scope of the quarry. This may be the case if the sources of greenhouse gas emissions remain similar, however an expansion will be expected to lead to some increase in greenhouse gases even if the emissions remain negligible.

Key Considerations: (provide in non-technical language)

Adaptation:

- We suggest the proponent consider using updated climate change projections for the site and indicate how these changes may affect the development, including how the detailed project design will account for the projected changes (e.g., how IDF curves based on climate projections will be used during the design of the project structures and erosion and sediment control measures). The latest climate projection data and IDF curve guidance are available at climatedata.ca.
- We suggest the proponent consider adopting a risk management framework (described in the 'Guide to Considering Climate Change in Project Development in Nova Scotia') to determine which impacts present the highest risks to the various phases of the project and to assist in the determination of priorities for implementing adaptation measures, where required.

Mitigation

- No further recommendation as the submission is enough for the scope and nature of the project.

Date: 21 February 2024

To: Kelly Maher, Environmental Assessment Officer

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

Subject: Dexter Construction Company Limited – Colpton Quarry Expansion Project,
Lunenburg County

Bob Pett A/Manager

Scope of review:

This review focuses on the following mandate: Traffic Engineering and Road Safety

List of Documents Reviewed:

Dexter Construction Company Limited – Colpton Quarry Expansion Project

Details of Technical Review:

The proponent (Dexter Construction Company Limited) is planning to expand their existing quarry with the new planned production replacing the existing production from the current quarry. There are no operational changes to the quarry.

The Department of Public Works has the following comments pertaining to the Transportation sections:

1. There are a few Transportation sections within the document which, at times, present conflicting information.

In Section 4.3.15 Transportation of the Biophysical Description and Assessment for Colpton Quarry Expansion (Part 2), there are a couple of references to the existing quarry access road having good sightlines, with no expectations of hazards, however; later on, in Section 5.3.7 of the Biophysical Description and Assessment for Colpton Quarry Expansion (Part 2), the same reference to good sightlines is mentioned but includes the following statement: "...may lead to hazardous encounters due to the long stretch of highway on either side which do not have significant on-turning traffic..." This section also refers to possible addition of signage. Very similar messaging to Section 5.3.7 is also included in 6.0 Valued Environmental Components and Effects Management, 6.2 Socio-economic Components, Section 6.2.7 Transportation.

Historical collision data for this section of road confirms that over the last 10 years, there have not been any issues with truck-related collisions associated with trucks exiting the quarry. It appears that current mitigation measures and safe driving

practices and signage have been effective, however; it may be beneficial to consolidate the various Transportation sections to provide more cohesive messaging.

Key Considerations: (provide in non-technical language)

1. The proponent should consider consolidating the Transportation sections to provide more cohesive messaging.
2. Should the proponent determine that mitigation measures such as warning signage be required, the proponent must reach out to the Local Area Manager, so that any signage can be approved by the Local Traffic Authority.
3. Public works is a substantial aggregate consumer in the region of Lunenburg County through both Capital Construction and Maintenance activities. Private industry expanding their capabilities, while adhering to applicable regulatory review, in the region would enhance DPW's access to said aggregate. This should lead to more competitive pricing and reduce any supply constraints which may have been present in the past.

Date: February 22 2024

To: Kelly Maher, Environmental Assessment Officer

From: Air Quality Unit

Subject: **Colpton Quarry Expansion Project, Lunenburg County, Nova Scotia**

Scope of review:

This review focuses on the following mandate: Air Quality

List of Documents Reviewed:

Colpton Quarry Expansion Project EA Registration Document – Part 1
Colpton Quarry Expansion Project EA Registration Document – Part 2
Colpton Quarry Expansion Project EA Registration Document – Part 3

Details of Technical Review:

Dexter Construction Company Limited of Bedford, Nova Scotia proposes to expand the existing Colpton quarry to produce aggregate primarily used in the local highway and construction industry. The proposed undertaking involves the expansion of the existing NSECC approved quarry from a less than four-hectare quarry to a 42-hectare quarry. Other than an increase in the total footprint of the site, activities at the site are expected to remain identical, or very similar to historical use of the site.

Impacts on air quality from this project are most likely to occur during clearing/grubbing, blasting/drilling activities, stockpiling of aggregate, operation of heavy equipment (e.g. crushers, earthmovers), and onsite routine operations. Operation of the quarry has the potential to generate dust and combustion emissions.

The proponent states that dust management will be undertaken, including the use of water sprays, and covering working and laydown areas with blasted rock, dust suppression systems on crushing equipment, reducing vehicle speeds, and using tarpaulins on truck boxes. Vehicles and heavy equipment are expected to follow efficient operating procedures such as not idling unnecessarily. Given the relatively small size of the quarry and the scope of the planned operations, quarry expansion activities are not expected to decrease air quality compared to current baseline conditions. No proposed ambient air quality monitoring is included in the EA registration document, however the proponent states that ambient air quality monitoring will be conducted at the request of NSECC, in accordance with the terms and conditions of the Industrial Approval.

Overall, the impacts to air quality are expected to be similar to the existing operation. Decommissioning of the site should be addressed at the appropriate time to minimize dust impacts from site operations.

Key Considerations: (provide in non-technical language)

The nearest residential receptor is approximately 1.4 km (map A-2) from the proposed expansion area and given that activities at the site are expected to remain identical to current operations, quarry expansion activities are not expected to decrease air quality compared to current baseline conditions.

If the project is approved, the proponent should ensure that the generation of dust is kept to a minimum by using the proposed mitigation methods and any other methods that are considered appropriate once expansion starts. It is recommended that a Dust Management Plan is in place prior to the commencement of the expansion. Such a plan should include a clear chain of responsibility for actions, including timely complaint resolution.

Key Considerations: (provide in non-technical language)

The overall impacts to noise are not expected to change with this expansion. The nearest residential receptor is approximately 1.4 km from the proposed expansion and therefore noise from the proposed expansion is unlikely to exceed the GENMA daytime permissible sound levels due to the use of industry best practices and sound attenuation over distance.

If the project is approved, the site management should continue to use noise management methods to limit noise impacts, along with best operating practices e.g., limiting the necessity for reversing, and an effective complaints resolution procedure. It is recommended that a Noise Management Plan is in place prior to the commencement of operation in the expansion area. Such a plan should include a clear chain of responsibility for actions, including timely complaint resolution.

Date: February 23, 2024

To: Kelly Maher, Environmental Assessment Officer

From: Nova Scotia Office of L'nu Affairs – Consultation Division; **Reviewed by Beata Dera, Director of Consultation**

Subject: Colpton Quarry Expansion Project, **Lunenburg County, Nova Scotia**

Scope of review:

The following review considers whether the information provided will assist the Province in assessing the potential of the proposed Project to adversely impact established and/or asserted Mi'kmaw Aboriginal and/or Treaty rights.

List of Documents Reviewed:

Environmental Assessment Registration Document

Details of Technical Review:

4.0 PUBLIC CONSULTATION AND FIRST NATIONS ENGAGEMENT

This section states that the Proponent sent engagement letters to Wasoqopa'q (Acadia) First Nation, KMKNO, Native Council of Nova Scotia, and the Office of L'nu Affairs. Please note that Sipekne'katik First Nation, Millbrook First Nation, and Membertou are not represented by KMKNO therefore the proponent is encouraged to consider sending engagement letters with project information to these three communities.

The EARD states that the Proponent attended an information meeting with KMKNO and KMKNO noted that a Mi'kmaq Ecological Knowledge Study (MEKS) will likely be requested during the EA review process.

6.2.1 MI'KMAQ FIRST NATION

A Mi'kmaq Ecological Knowledge Study (MEKS) was not undertaken for the proposed Project.

This section states that the quarry is not located near established Mi'kmaw communities and activities are not expected to be directly affected by the Colpton Quarry. Please note that the quarry site is located approximately 13 km from Wildcat, a satellite community of Wasoqopa'q (Acadia) First Nation.

6.2.2 Recreational Activities

This section states that lands in the general vicinity have been managed by the Province of Nova Scotia, the federal government, and conservation organizations and groups to

protect natural environment values and associated wildlife and species of conservation concern and to provide the public with opportunities to experience them. The proponent may provide this added specificity: “The quarry site is adjacent to Pu'tlaqne'katik, which combines two former candidate nature reserve sites from the 2013 Parks & Protected Areas Plan (plus some boundary revisions), and was designated as a wilderness area (with Mi'kmaw name) instead of as two separate nature reserves”.

6.2.4 COMMERCIAL AND MI'KMAQ FISHING

This section states that fishing in watercourses near the quarry is not expected to be affected by activities at the quarry. The amount of runoff from the quarry is small and of high quality and will have a negligible impact on the watercourses and fish habitat downstream. This section stated that surface waters at the site have high quality, including low turbidity and neutral pH, which would lead to good water quality downstream for fish. Overall, a negligible impact of the quarry on Mi'kmaq fishing is expected.

6.3.4 FRESHWATER AQUATIC ENVIRONMENT AND WETLANDS

This section states that there are no permanent streams within the proposed quarry expansion area. This section states that seven wetlands were identified within the study area and the proposed expansion area has been modified to avoid direct impacts to wetlands other than a 0.01 ha seasonal pond. This section notes that the nearby wetlands are home to species at risk and known critical habitat for endangered species, and therefore the wetlands to the north of the site will be designated as Wetlands of Special Significance (WSS). OLA is aware that wetlands support a wide variety of plants, including those that the Mi'kmaq consider to be for sacred, ceremonial, and medicinal purposes.

6.3.8. SPECIES AT RISK

This section stated that the Colpton quarry is near a complex of wetlands and terrestrial environment supporting a large number of species at risk including lichens. OLA is aware that the Mi'kmaq are concerned about adverse impacts to wetlands and lichens.

Key Considerations:

Crown consultation with the Mi'kmaq of Nova Scotia is ongoing for this project. The Mi'kmaq of Nova Scotia may provide additional information that informs the regulator in assessing the proposed project's potential impacts to established and/or asserted Mi'kmaw Aboriginal and Treaty rights and appropriate accommodation and mitigation measures. At this time, OLA is able to provide the following considerations:

OLA encourages the Proponent to continue to engage with the Mi'kmaq of Nova Scotia and provide regular updates throughout the duration of the Project.

A Mi'kmaq Communication Plan would be helpful to achieve the sharing of information and providing a mechanism for input from the Mi'kmaq regarding wetland mitigation, compensation, and monitoring plans.

Typically, for a project of this scope and scale, a Mi'kmaq Ecological Knowledge Study (MEKS) would be completed to determine what, if any, traditional and current use activities and Aboriginal Rights are practiced by the Mi'kmaq within the Project area.

Date: February 23, 2024

To: Kelly Maher, Environmental Assessment Officer

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

Subject: Colpton Quarry Expansion Project, Lunenburg County

Scope of review:

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

List of Documents Reviewed:

Colpton Quarry EARD Parts 1-7

Details of Technical Review:

The proponent has indicated their intention to address surface water runoff through the implementation of a water management plan. Consequently, as long as this plan is effectively enacted, there are no expected issues concerning fish or adverse effects on Nova Scotia's sportfishery.

The site of the quarry is sufficient distance from any harbours and therefore no risk to harvesting operations is anticipated.

The potential adverse impacts on the aquaculture and rockweed harvesting sectors due to sediments, downstream water flow, and surface water runoff are expected to be minimal, provided that monitoring and mitigation measures, as detailed in the proponent's proposal, are effectively implemented.

There is no mention of power supply needs or possible disruptions in the submission. If power disruptions are going to occur, the proponent must update their plans and provide appropriate mitigations for review.

The 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](#). In addition, the proponent should be directed to the [Site Mapping Tool - Government of Nova Scotia, Canada](#) for information on aquaculture operations within the area.

Key Considerations: (provide in non-technical language)

- There are a total of 0 rockweed leases and 0 aquaculture sites within 25km of the proposed project.
- The Department does not anticipate risks to commercial fishing or marine activities within the Department's mandate.
- The Department does not anticipate any risks to Nova Scotia's sportfishery.

Date: February 23, 2024

To: Mark McInnis, Environmental Assessment Officer

From: Department of Natural Resources and Renewables

Subject: **Colpton Quarry Expansion Project, Lunenburg County, Nova Scotia**

Scope of review:

This review focuses on the following mandate: biodiversity, species at risk status and recovery, wildlife species, and habitat management and conservation.

List of Documents Reviewed:

Colpton Quarry Expansion Project – Environmental Assessment Registration Document and Appendices.

Details of Technical Review:

The Colpton Quarry Expansion Project Environmental Assessment Registration Document, prepared by Dexter Construction Company Ltd. is a well-prepared document; and specifically, the Biophysical Assessment, conducted by EnviroSphere Consultants Limited.

Please note, however, that the critical habitat layer for Blanding's turtle is either incorrect or incorrectly projected, resulting in an inaccurate depiction (underestimate) of the extent of Blanding's turtle critical habitat within the expansion area.

The current quarry and expansion area includes Critical Habitat identified by the federal Species at Risk Act and core habitat identified by the provincial Endangered Species Act for Blanding's Turtle and Eastern Ribbsnake; is surrounded by substantial sensitive wetland habitats, and has records of observations of a number of species at risk. Destruction of critical habitat should be avoided.

Additional surveys within some of the habitats known to be suitable for several species at risk, as well as species specific surveys, are required to ensure appropriate mitigations can be developed. Survey and monitoring are largely consistent with current best practices; however, effective mitigation is lacking in some cases. Additionally, several conclusions of minimal or negligible impacts are made without sufficient support, specifically in areas adjacent to wetland habitat and within Blanding's Turtle critical habitat.

Quarries and borrow pits are known to provide suitable nesting habitat for turtles. The active quarry and much of the expansion area are within Blanding's Turtle critical habitat,

and observations of Snapping and Eastern Painted Turtles have occurred within 500m of the study area. There is high potential to encounter terrestrially active or nesting turtles within the active quarry site.

Several bird species at risk are present or expected to occur within the study area, including Common Nighthawk and Bank Swallow. Mitigation measures to ensure Bank Swallows do not nest in the aggregate stockpiles can be easily implemented. Quarries generally provide both nesting and foraging habitat for Common Nighthawk; it is recommended to conduct nightjar surveys prior to springtime operations to identify nests and subsequently avoid disturbance to them.

Several other species at risk birds have been observed, or are expected to occur, within the study site; appropriate mitigations should be implemented.

6.3.2; 6.3.3; 6.3.4 – Groundwater; Hydrology/Water Quality; Freshwater Aquatic Environments and Wetlands

- As this is an expansion to a quarry that has been operating since 2010, there was a missed opportunity to analyze and present data on the ongoing groundwater, hydrology/water quality, freshwater aquatic environment, and wetland monitoring programs. Analyzing these data would provide insight into changes over time and could identify areas where enhanced mitigation could be implemented to improve interactions between the quarry and surrounding habitats.
- Required monitoring plans (e.g. surface water monitoring, ground water monitoring, wetland management plan, and noise and dust monitoring), and a Reclamation Plan will ensure protection of the surrounding sensitive environment by minimizing and mitigating impacts.
- Due to the sensitivity of adjacent wetlands of special significance, and the Species at Risk that inhabit them, strong mitigation is required to ensure indirect alterations to groundwater, hydrology, water quality, freshwater aquatic environments, and wetlands does not occur.
- Erosion and sedimentation must be controlled to ensure there are no impacts to the surrounding wetlands; controls must be monitored and maintained.

6.3.8 – Species at Risk

- Eastern Ribbonsnake
 - The quarry southern expansion area is in close proximity to Eastern Ribbonsnake Critical Habitat (under SARA) and core habitat (under the NSESA) north of Fox Lake. There is high potential for snake hibernacula habitat in the southwestern extent of the quarry expansion area; additional snake and habitat surveys should be conducted in this area.
- Bats
 - Dedicated bat surveys using Autonomous Recording Units (ARU) would assist in determining presence of bats. If presence of bats is detected, additional surveys should be conducted to determine the presence and location of maternity or overwintering roosts. Acoustic monitoring should be conducted between May and November to cover key spring migration, breeding, summer, and fall migration periods.
- Blanding's Turtle

- The northern and much of the southern expansion areas are within Blanding's Turtle critical habitat. Quarries are listed as an unknown threat in the federal recovery strategy. Potential impacts include changing the hydrology and polluting of nearby water bodies including wetlands, fragmentation of habitat, use of quarry sites as nesting habitat, and direct harm of adults and hatchlings by equipment.
- The description of biophysical attributes of terrestrial critical habitat in the recovery strategy suggests the quarry may meet those needs, including sparse to no vegetation throughout incubation; full to partial sunlight; sand, gravel, rock or sandy loam and well-drained soils. Upland forest with presence of refuges (e.g., litter) and presence of openings for basking are also biophysical attributes of terrestrial critical habitat for Blanding's turtles.

8.0 – Potential Cumulative Impacts

- An analysis of potential cumulative impacts was not conducted. Rather, it is assumed that there will be no cumulative impacts due to the remoteness of the quarry.
 - Potential positive or negative cumulative impacts on a specific environment, local area or region should be assessed collectively, including but not limited to, recreational use of the surrounding area, human caused climate change, other industrial activity in the region (e.g. mining exploration, forestry).
 - Cumulative impact assessments can take a variety of forms but there are guidelines available as a starting place, such as the Cumulative Effects Assessment Practitioners Guide (Canadian Environmental Assessment Agency, 1999 ([Cumulative effects assessment practitioners guide / Prepared by: The Cumulative Effects Assessment Working Group and AXYS Environmental Consulting Ltd. : En106-44/1999E-PDF - Government of Canada Publications - Canada.ca](#))).

Key Considerations: (provide in non-technical language)

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

- Obtain all necessary permits to undertake the project as required under legislation related to wildlife, species at risk and habitat alterations.
- Activities should be conducted in such a way that critical habitat for Blanding's Turtle and Eastern Ribbonsnake is not destroyed.
- Provide digital waypoints and/or shapefiles for all species detected during flora and fauna surveys, including Species at Risk and Species of Conservation Concern to NRR (those species listed and/or assessed as at risk under the Species at Risk Act, Endangered Species Act, COSEWIC, as well as all S1, S2 and S3 species). Data should adhere to the format prescribed in the NRR Template for Species Submissions for EAs and is to be provided within two (2) months of collection.

- Prior to the development of a Wildlife Management Plan (WMP), the following field surveys should be conducted so a full SAR/SOCC risk assessment can be completed. Where relevant, Special Management Practice methodology should be followed. These include:
 - Conduct additional Eastern Ribbonsnake and habitat surveys.
 - Conduct dedicated bat surveys to determine presence of bats. If present, complete bat roost surveys prior to disturbance of snags and/or wetlands.
 - Conduct surveys to determine if biophysical attributes of Blanding's turtle critical habitat are present in the proposed activity area.
- Develop a Wildlife Management Plan (WMP) in consultation with NRR and ECCC which shall include:
 - 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.
 - Noise, dust, lighting, blasting, and herbicide use mitigations.
 - 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.
 - An annual turtle nesting monitoring plan to protect and mitigate against potential impacts to nesting or hatchling turtles in the project area.
 - An annual spring nightjar monitoring plan to protect and mitigate against potential disturbance to roost and nest sites prior to spring quarry activity.
 - Measures to protect and mitigate against adverse effects to migratory birds during construction and operation. The incidental take of breeding birds, as well as their nests and/or eggs, is not permitted under the Migratory Birds Convention Act and the NS Wildlife Act. Mitigations include avoidance of certain activities (such as vegetation clearing) during the regional nesting period for most birds, buffer zones around discovered nests, limiting activities during the breeding season around active nests, and other best management practices.
 - 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 and associated habitats discovered through survey work or have the potential to be found on site. This may include leaving a vegetated buffer around surrounding protected areas and expanding the quarry to the south of current activity, as opposed to expanding north towards the WSS and critical habitat.
 - Details on monitoring and inspections to assess compliance with the WMP.
 - 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.
 - Ensure correct critical habitat layers are used in the development of the Wildlife Management Plan.
-
- Revegetate cleared areas using native vegetation or seed sources following consultation with NRR.
 - Develop and implement a plan to prevent the spread of invasive species both on and off site in consultation with NRR. The plan should include monitoring, reporting, and adaptive management components.
 - Provide a decommissioning and site reclamation plan and reclaim site in consultation with NRR at the end of project.
 - 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.

Date: February 23, 2024

To: Kelly Maher, Environmental Assessment Officer

From: David Clarke, ICE - Office Manager

Subject: **Colpton Quarry Expansion Project, Lunenburg County, Nova Scotia**

Scope of review:

This review focuses on the following mandate: the undertaking and quarry design, biophysical components, and assessment concentrating on bedrock, hydrology, hydrogeology, and water quality.

List of Documents Reviewed:

Registration Document for a Class 1 Undertaking Under Section 9 (1) of the Nova Scotia Environmental Assessment Regulation, Colpton Quarry Expansion, Dexter Construction Company Limited, January 2024; Appendix D: Biophysical Assessment (Environsphere 2023)

Details of Technical Review:

Description of the undertaking did not provide information related to future quarry floor elevation. It is stated that “future aggregate excavation will not likely take place below the deep bedrock water table” and “the quarry exaction will not enter the groundwater table”, and “there will be no pumping of groundwater and no dewatering of the associated bedrock aquifer”.

Baseline information did not include the site water table and the deep bedrock water table. It is not clear how the proponent deals with the water above the deep bedrock water table, and how the proponent defines the groundwater table(s) for shallow/deep bedrock.

Baseline information indicates that bedrock at the quarry site belongs to the Goldenville Group; the Goldenville Formation is composed of quartzites, meta-greywackes, and lesser amounts of slate.

Biophysical components indicate that there is a quarry sump within the active quarry footprint; the overflow from the sump exits via a culvert into catchments north of the quarry. However, no water chemistry of the quarry sump water/overflow was tested and provided in the registration document; it is unknown if the quarry sump overflow quality would affect the aquatic ecosystem; it is also not clear if the sump water exists in dry periods (groundwater feeding or not).

Key Considerations: (provide in non-technical language)

Bedrock at the site is composed of Goldenville Formation which consists of intercalated metamorphosed sandstone (greywacke), siltstone and shale (slate to schist). Available information indicates that water wells intercepting Goldenville rocks are more likely to have arsenic concentrations exceeding acceptable guidelines (Kennedy and Drage, 2009 and 2016).

The extracting and crushing process of the bedrock of greywacke and slate for aggregate will create more surface area of the crushed stone aggregate to interact with water and air. That is, the extracting and crushing process will affect hydrogeochemical conditions of the stone and could result in elevated concentration of arsenic in water including surface water and groundwater. Hence, quarry sump water/overflow quality needs to be tested prior to quarry expansion and monitored with the quarry progression to ensure the sump water/overflow does not affect the ecosystem and water resources.

Groundwater level conditions for the site/local or shallow bedrock and deep bedrock need to be determined prior to the quarry expansion. “No pumping of groundwater and no dewatering of the associated bedrock aquifer” needs to be verified.

From: [Wade, Suzanne \(ECCC\)](#)
To: [Maher, Kelly](#)
Cc: [Hingston, Michael \(il, lui | he, him\) \(ECCC\)](#); [Gautreau, Rachel \(elle, la | she, her\) \(ECCC\)](#); [Mailhiot, Joshua \(ECCC\)](#); [Wade, Suzanne \(ECCC\)](#)
Subject: FW: Colpton Quarry Expansion Project, Lunenburg County, NS - EA Registration (EAS# 24-NS-003)
Date: February 26, 2024 1:00:00 PM
Attachments: [EA Reviewer Guidance August 2023 - Final.docx](#)
[EA Reviewer Template August 2023 - Final.docx](#)
[Generic EA Mitigations_Pits and Quarries.pdf](#)

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Hi Kelly,

Environment and Climate Change Canada (ECCC) has reviewed the information forwarded to us regarding the proposed expansion of the Colpton Quarry in the Colpton area of Lunenburg County, Nova Scotia, and we offer the following comments:

WILDLIFE COMMENTS

It is not possible to adequately evaluate the potential effects of the project on species at risk (SAR) and/or their critical habitat (CH) based on the information provided. Additional information regarding wildlife, as indicated in our comments below, should be provided.

Furthermore, in its "Consideration of Alternatives" Section, the Proponent has provided the following generic response: "Considering quality, environmental, and logistical constraints, it is preferred to proceed with an expansion of the existing quarry rather than the development of a new quarry nearby." However, we recommend that this section be revisited with a serious study of alternatives, given that:

- the Project Study Area is almost entirely surrounded by existing or proposed protected conservation lands,
- a number of SAR were detected in or near the Project Study Area, and
- CH for SAR is present in portions of the Project Study Area and adjacent to the Study Area.

Species at Risk and Critical Habitat

For projects undergoing environmental assessment, the Canadian Wildlife Service (CWS) of 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.

The Proponent states in Section 6.3.8 that “Quarry expansion will occur to the south, advancing the quarry away from wetlands and habitat for species at risk identified to the north of the site.” However, the proposed project footprint is not mapped in relation to SAR CH and observations, and species-specific mitigation measures and monitoring plans are not proposed. Mapping clearly showing the proposed project footprint in relation to SAR observations and their habitats (including CH) and buffers should be provided. Furthermore, additional information should be provided as described below.

- Landbird SAR

- Olive-sided Flycatcher

The Olive-sided Flycatcher is a migratory bird species of Special Concern listed on Schedule 1 of SARA. In Section 4.2.6 of Appendix D, it is stated that 11 Olive-sided Flycatcher were detected, and describes their locations in relation to the Point Count sites. However, only 2 Olive-sided Flycatcher detections are shown on Figure 29 of Appendix D. All Olive-sided Flycatchers detected during biophysical surveys should be mapped in relation to the Project footprint.

Mitigation measures to avoid both direct and indirect impacts on Olive-sided Flycatchers should be described, and a monitoring plan to verify EA predictions and adequacy of mitigation measures should be proposed.

CWS generally recommends buffers for this landbird SAR as follows during the breeding season:

- Low disturbance activities – 50 m
- Medium disturbance activities – 150 m
- High disturbance activities – 300 m

Loss of wetland habitat function for this species would result in instances (if any) where vegetation conditions of forested wetlands would be removed or altered by the project and would not be re-established for the life of the project. As a measure to compensate for the lost habitat function for passerine SAR in instances where such habitat cannot be avoided, we recommend the use of conservation allowances as the preferred form of the compensation step in the mitigation hierarchy of avoidance, minimization, and compensation.

- Common Nighthawk

Common Nighthawk is a migratory bird species of Special Concern listed on Schedule 1 of SARA. In Section 4.2.8 of Appendix D, it is stated that “Two pairs of Common Nighthawk

were heard at the quarry from 0430 to 0530 on May 29, 2022 at the commencement of the point-count survey.” However, it is later stated in Section 6.2.8 of Appendix D that “Common Nighthawk, a ground nesting bird species is relatively common, north, and east of the existing quarry...” And Figure 29 of Appendix D shows Common Nighthawk detected in 2 areas west of the existing quarry footprint. It should be clarified exactly where Common Nighthawk were detected in relation to the proposed footprint. Furthermore, it is not clear why a nightjar survey was not conducted given the presence of the existing quarry and the large clear-cut area.

Mitigation measures to avoid both direct and indirect impacts on Common Nighthawks should be described, and a monitoring plan to verify EA predictions and adequacy of mitigation measures should be proposed.

This ground nesting species may be attracted to previously cleared areas for nesting in the spring. For sites where activities are not ongoing when spring dispersal of this species occurs, active nest surveys of the cleared areas prior to the start of project activities may be carried out successfully by skilled and experienced observers using appropriate methodology. Should any nests or unfledged chicks be discovered, protection by an appropriate-sized buffer is expected. CWS generally recommends buffers for this landbird SAR as follows during the breeding season:

- Low disturbance activities – 50 m
- Medium disturbance activities – 100 m
- High disturbance activities – 200 m

- Blanding’s Turtle

The Blanding’s Turtle (Nova Scotia population) is listed on Schedule 1 of SARA as Endangered. While no individuals of this species were detected during biophysical surveys, CH for this species overlaps a portion of the Project Study Area. It should be noted that while the Proponent has mapped CH on Figure 29 of Appendix D, the CH polygon for the area in our database differs and extends further into the Study Area. Since Blanding’s Turtle is a location sensitive species, provincial SAR biologists should be consulted as CWS cannot provide CH polygons for this species without their granted permission.

The Blanding’s Turtle is a terrestrial SAR not protected under the MBCA; therefore, we recommend that provincial SAR biologists be consulted for species-specific technical information regarding this species and its CH.

Mitigation measures to avoid both direct and indirect impacts on CH and Blanding’s Turtle individuals should be described, and a monitoring plan to verify EA predictions and adequacy of mitigation measures should be proposed.

- Eastern Ribbonsnake

The Eastern Ribbonsnake (Atlantic population) is listed on Schedule 1 of SARA as Threatened. While no individuals of this species were detected during biophysical surveys, CH for this species occurs in and immediately adjacent to the Study Area. Since Eastern Ribbonsnake is a location sensitive species, provincial SAR biologists should be consulted as CWS cannot provide CH polygons for this species without their granted permission.

The Eastern Ribbonsnake is a terrestrial SAR not protected under the MBCA; therefore, we recommend that provincial SAR biologists be consulted for species-specific technical information regarding this species and its CH.

Mitigation measures to avoid both direct and indirect impacts on CH and Eastern Ribbonsnake individuals should be described, and a monitoring plan to verify EA predictions and adequacy of mitigation measures should be proposed.

- Snapping Turtle

The Snapping Turtle is listed as Special Concern on Schedule 1 of SARA. According to Section 4.2.8 of Appendix D, “A Snapping Turtle was observed swimming through the culvert under the quarry access road on unnamed tributary 1 during a site reconnaissance survey on July 7, 2022...” The Snapping Turtle is a terrestrial SAR not protected under the MBCA; therefore, we recommend that provincial SAR biologists be consulted for species-specific technical information regarding this species and its CH.

Mitigation measures to avoid both direct and indirect impacts on Snapping Turtle individuals should be described, and a monitoring plan to verify EA predictions and adequacy of mitigation measures should be proposed.

- Bat SAR

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, the Eastern Red Bat, and the Silver-haired Bat have been assessed as Endangered by the Committee on the Status of Endangered Wildlife in Canada (COSEWIC). CWS recommends considering these Species of Conservation Concern as though they are at risk, in the event that they become listed during the lifetime of the Project. Bat SAR are terrestrial SAR not protected under the MBCA; therefore, we recommend that provincial SAR biologists be consulted for species-specific technical information regarding these species.

CWS 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.

The Proponent only deployed a single acoustic bat detector for a short time on the evening of May 17, 2022. This is not adequate considering the presence of six abandoned mine openings/mine shafts within the Project Study Area, and that forested areas will be cleared. The Proponent should adequately survey the use of Project Study Area by bats, should determine whether mine-openings/shafts are open and if so, whether they are being used by bats, and should determine whether bat SAR maternity roosts are present. If so, mitigation measures, including proposed buffers and timing adjustments, to avoid both direct and indirect impacts on bat SAR should be described, and a monitoring plan to verify EA predictions and adequacy of mitigation measures should be proposed.

- Wrinkled Shingle Lichen

The Wrinkled Shingle Lichen is listed on Schedule 1 of SARA as Threatened. According to Figure 29 of Appendix D, Wrinkled Shingle Lichen was observed at 3 locations during biophysical surveys: 2 observations within the northeast portion of the Project Study Area, and 1 observation just outside the Project Study Area. While the Recovery Strategy for this species is being drafted, it is anticipated that CH for this species would include a 100 m area around each observation, as well as a 200-m wide corridor connecting observations that are located within 500 m of each other. Since these observations are within 500m of each other, CH would also encompass a 200m-wide corridor between these observations.

The Wrinkled Shingle Lichen is a terrestrial SAR not protected under the MBCA; therefore, we recommend that provincial SAR biologists be consulted for species-specific technical information regarding this species. Our comments on lichen SAR are based on available CWS expertise, but we recognize that the technical expertise and authority for this species lies with the province.

Mitigation measures to avoid both direct and indirect impacts on Wrinkled Shingle lichen and its habitat should be described, and a monitoring plan to verify EA predictions and adequacy of mitigation measures should be proposed. The Proponent should clarify whether it will implement the Province of Nova Scotia's Special Management Practice for SAR lichens.

Protected Areas

The Project Study Area is almost entirely surrounded by protected areas. However, the Proponent only identifies standard mitigation measures for dust, noise, and lights to minimize adverse effects of the Project on the habitats and species which inhabit the protected areas. We recommend that buffer zones also be added as an extra layer of mitigation against potential adverse effects (i.e. of noise, dust, sedimentation, lights) on the habitats and species which inhabit the surrounding protected areas.

Bird Survey Data Presentation

The Proponent presented its bird survey data by lumping a number of point count sites together. It is therefore not possible for us to determine at which of these lumped sites certain species had been detected. For instance, according to Table 4 of Appendix D, Olive-sided Flycatcher was detected at 2 sites in Clear-cut White Pine, Red Maple, Red Oak, Beech (Sites 8, 9, and 10). However, from this Table, we cannot tell at which of Sites 8, 9, or 10, the Olive-sided Flycatchers were detected. A table detailing the birds detected at each point count site, with a description of habitat at each site should be provided. For SAR and Species of Conservation Concern, additional information should also be provided (e.g. direction and distance from the point count site).

Pileated Woodpecker

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 to be abandoned, and to no longer have high conservation value for migratory birds.

According to Table 4 of Appendix D, Pileated Woodpecker was detected at 2 survey sites during May 29, 2022 bird surveys. Should there be a need to clear vegetation in nesting habitat for this species, the Proponent should conduct a survey for Pileated Woodpecker nesting cavities. Since the Pileated Woodpecker is one of the species listed on Schedule 1 of MBR, 2022, the nesting cavities of this species are protected year-round, including when they are not occupied by a migratory bird or viable eggs.

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

A Pileated Woodpecker Cavity Identification Guide is available for reference at: [Pileated Woodpecker Cavity Identification Guide](#) .

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

[Migratory Birds Regulations, 2022 \(justice.gc.ca\)](#)

[New Migratory Birds Regulations, 2022 - Canada.ca](#)

[Continued evolution of the Migratory Birds Regulations, 2022 - Canada.ca](#)

[Notice: Abandoned Nest Registry - Canada.ca](#)

[Fact sheet: Nest Protection under the Migratory Birds Regulations, 2022 - Canada.ca](#)

[Frequently Asked Questions: Migratory Birds Regulations, 2022 - Canada.ca](#)

[Service standards and performance: permits for Migratory Birds Regulations](#)

Additional Comments

In the event that the Project is ultimately approved:

- 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.
- Since even small spills of oil can have serious effects on migratory birds, every effort should be taken to ensure that no oil spills occur. The Proponent should ensure that all precautions are taken by staff to prevent fuel leaks from equipment, and contingency plans in case of oil spills should be prepared.
- CWS recommends that a variety of species of plants native to the general project area be used in revegetation 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.

CWS 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.
- Certain species of migratory birds (e.g. Bank Swallows) may nest in large piles of soil left unattended/unvegetated during the most critical period of breeding season (April 15th through August 15th). To discourage this, the proponent should consider measures to cover or to deter birds from these large piles of unattended soil during the breeding season. If migratory birds take up occupancy of these piles, any industrial activities (including hydroseeding) will cause disturbance to these migratory birds and inadvertently cause the destruction of nests and eggs. Alternate measures will then need to be taken to reduce potential erosion, and to ensure that nests are protected until chicks have fledged and left the area. For a species such as Bank Swallow, the period when the 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 of time after chicks have learned to fly, because Bank Swallows return to their colony to roost.

See also for example the following guidance concerning beneficial management practices that should be considered for implementation when designing mitigation measures for Bank Swallows, provided at [Bank Swallow \(*Riparia riparia*\): in sandpits and quarries - Canada.ca](#)

- 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.

CWS 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. mesh netting, 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, CWS should be consulted in a timely manner in advance of any proposed decommissioning activities for species-specific considerations.
 - Beaver dam removal could impact migratory birds using the associated ponds. If waterfowl and/or waterbirds are using ponds created by beaver dams for nesting or raising chicks, the proponent should not alter beaver dams until waterfowl and/or waterbirds have raised their young.
- The Proponent should ensure that provisions for wildlife response are identified in emergency prevention & response plans. The following information should be included:
 - Mitigation measures to deter migratory birds from coming into contact with polluting substance (e.g. oil);
 - Mitigation measures to be undertaken if migratory birds and/or sensitive habitat becomes contaminated;
 - The type and extent of monitoring that would be conducted in relation to various spill events.

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

Applicable Legislation

- ***Migratory Birds Convention Act***

The *Migratory Birds Convention Act* (MBCA) protects most bird species in Canada however, some families of birds are excluded. A list of species under MBCA protection can be found at <https://www.canada.ca/en/environment-climate-change/services/migratory-birds-legal-protection/list.html> .

The federal [Migratory Birds Convention Act, 1994 \(justice.gc.ca\)](https://www.justice.gc.ca) 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: [Avoiding harm to migratory birds - Canada.ca](#).

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.”

It is the responsibility of the proponent to ensure that activities comply with the MBCA and 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 birds 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 that:

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.

For species which are not yet 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.

For species-specific technical information for terrestrial SAR not protected under the *Migratory Birds Convention Act* (MBCA), ECCC recommends that the Province of Nova Scotia be consulted.

WATER QUALITY

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

It is the responsibility of the proponent to ensure that activities are managed so as to prevent the release of substances deleterious to fish. In general, compliance is determined at the last point of control of the substance before it enters waters frequented by fish, or, in any place under any conditions where a substance may enter such waters. Additional information on what constitutes a deposit under the *Fisheries Act* can be found here: <https://www.canada.ca/en/environment-climate-change/services/managing-pollution/effluent-regulations-fisheries-act/frequently-asked-questions.html>

ACCIDENTS AND MALFUNCTIONS

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

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

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

If you have any questions, please direct any further correspondence to ECCC's environmental assessment window for coordination at: FCR_Tracker@ec.gc.ca.

Suzanne Wade

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February 20th, 2024

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VIA EMAIL (mark.mcinnis@novascotia.ca)

Re: Consultation with the Mi'kmaq of Nova Scotia on the Colpton Quarry Expansion Project, Lunenburg County

I write to acknowledge receipt of your letter dated November 8, 2023, with respect to continued consultation under *the Terms of Reference for a Mi'kmaq-Nova Scotia-Canada Consultation Process* (ToR) as ratified on August 31, 2010, on the above noted project. We wish to proceed with consultation.

Although the Archaeological Resource Impact Assessment (ARIA) suggests that the study area “does not likely contain significant archaeological resources” due diligence and further an Archaeology Research Division (ARD) report requested and was submitted. Although the closest proximity community was informed it is still of the utmost importance for subsurface testing to be conducted to ensure no archaeological significance is found or disrupted near or in the waterway.

Archaeology

The Kwilmu'kw Maw-klusuaqn Negotiation Office (KMKNO) ARD has reviewed an ARIA, HRP A2022NS073, for the Colpton Quarry Expansion Project located in Lunenburg County. The ARIA was conducted by CRM Group, included a background study and a pedestrian survey, and “was designed to identify, document, interpret, and make management recommendations for potential cultural resources within the potential impact area (CRM Group Ltd. 2022: 1). No areas of high potential were identified in the ARIA and there was no subsurface testing. Although a modern hunting blind and wetland was identified during the reconnaissance, the Study Area was classified as exhibiting low potential. This classification “is based on the area being heavily sloped with thin soils and numerous large glacial erratics. The study area is relatively distant from significant sources of water and historic roadways and contained no evidence of previous occupation” (CRM Group Ltd. 2022: 32, 43). It was concluded that the study area be “be cleared of any requirement for further archaeological investigation” (CRM Group Ltd. 2022: 43).

We do not support clearances without subsurface testing. Mi'kmaw archaeological sites have developed since time immemorial and may not be identified from the surface character of the

current landscape, one cannot conclusively eliminate potential for Mi'kmaw archaeological heritage without subsurface testing. We consistently recommend in areas that will undergo impact, that subsurface testing be undertaken to confirm the presence, or lack of presence, of archaeological heritage. This is especially important in landscapes which will undergo significant permanent mechanical alteration associated with quarry activities and landscapes that exhibit waterways or wetlands. Waterways, regardless of size, have continued to be important features in Mi'kmaw cultural landscapes. Whether for navigation, by boat or foot, drinking water, or harvesting areas, these features all are significant in Mi'kmaw cultural landscapes. The Mi'kmaq hunters track animals near brooks and streams, so the waterways have always been culturally significant as much as the rivers, lakes, bays, and oceans.

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

It is our expectation that a Mi'kmaq Ecological Knowledge Study (MEKS) be completed in accordance with the Mi'kmaq Ecological Knowledge Protocol. Should this project be approved, it is strongly advised the completion of a MEKS by the proponent be incorporated into the terms and conditions of the approval.

We consider any new construction project that may intersect with a watercourse to have elevated potential for encountering Mi'kmaw belongings.

EA Review

Our team at Kwilmu'kw Maw-klusuaqn has reviewed the EA registration titled DEXTER CONSTRUCTION COMPANY LIMITED COLPTON QUARRY EXPANSION, 7275 HIGHWAY 325, COLPTON, LUNENBURG COUNTY NOVA SCOTIA: Registration Document for a Class 1 Undertaking Under Section 9 (1) of the Nova Scotia Environment Assessment Regulation Quarry Review and has found that values and concerns have not fully been addressed.

6.3.1 Air Quality, Noise and Light

Air Quality

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

Noise

Have there been studies conducted to assess how noise will affect local wildlife? If so, please provide for our review.

Will additional noise monitoring locations be established with the expansion? If so, where are the proposed locations?

6.3.2 Groundwater

What hydrological studies have been conducted to evaluate relationships between surrounding waterbodies/courses and wetlands and the proposed quarry project?

6.3.3 Hydrology/Water Quality

Will Ammonium Nitrate Emulsion be used in the blasting? If so, how will contact water be treated?

Was only one sample collected for Acid Rock Drainage (ARD)? Have other lithologies been encountered in past operations, and if so, were they tested for ARD? Concentrations of sulphides can vary; therefore it is recommended that sampling continue on all encountered lithologies as the project progresses.

6.3.4 Freshwater Aquatic Environments and Wetlands

It is expected that a Surface Water Monitoring Plan and Wetland Monitoring and Compensation Plan are developed with input from the Mi'kmaq through review and comment.

6.3.6 Fish and Fish Habitat

It is expected that the Surface Water Management Plan is developed with input from the Mi'kmaq through review and comment.

6.3.8 Species at Risk

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

6.3.9 Natural Areas and Wilderness

Conservation areas are intended as a last resort to preserve the natural pristine of the area from disturbance. Destructive activities should not be permitted to disturb or alter a conservation area.

7.0 Impacts of the Environment on the Project

Whereby it states "... a surface water management plan and Erosion and Sediment Control Plan will be developed for the site, which will include consideration for extreme rainfall events. Integrity of any runoff management structures at the site will be inspected on a regular basis, in particular following major weather events. Corrective action will be undertaken, if needed, in a timely manner." We require specifics regarding time and corrective measures taken to protect sensitive sites as core habitat to sensitive ecosystems can be destroyed in minutes if the event is

significant enough. Further action plans should be completed in future preparation of a significant weather event.

Wetlands support thousands of aquatic, terrestrial, and flora species. In addition to playing an important role for Mi'kmaw who inhabited and steward the forest since time immemorial, they are essential for maintaining a healthy biodiversity within and over arching ecosystem. To continue to destroy or alter this unique habitat for any urban activity is unacceptable and is a disrespect to Mi'kma'ki, all its inhabitants, and the Mi'kmaq.

Forestry

In several instances in this document, forestry activities such as clearcutting has been noted. Forest harvests, regardless of type of prescription, are still considered to be a renewable resource. Meaning that land will naturally regenerate and become a valuable and productive member of that ecosystem in a relatively short period of time, months, with minor successional species acting as a food source, capturing carbon, and providing sedimentation control, while young and mature forest significantly increase these attributes within 10 years of a harvest. Therefore “clearcutting”, which has not been permitted since June of 2022, is not justification to significantly alter a site in the long term or permanently.

Traditional use

The study area falls within known wisqoq (black ash) habitat. Noting the procreation means of this species and the opportunistic characteristics for seedling germination, it is advisable for the proponent to conduct a vegetative survey to eliminate the concern over possible wisqoq presence. Additionally, through data collection and desktop analysis, numerous “moderate-risk” traditional use sites have been identified immediately within a 1 kilometer radius of the study area indicating that this particular area is rich in cultural interest and continued practice. As such, it is our expectation to be kept informed on all monitoring and mitigative efforts and reports with sufficient opportunity to review. Compensation will be expected if damage to ecology is severe or irreversible.

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

Yours in Recognition of Mi'kmaw Rights and Title,

Director of Consultation
Kwilmu'kw Maw-Klusuaqn Negotiation Office

CC: Kwilmu'kw Maw'klusuaqn Negotiation Office
Kendra Gorveatt, Nova Scotia Office of L'nu Affairs
Sally Steele, Nova Scotia Environment and Climate Change
Kermit deGooyer, Nova Scotia Environment and Climate Change
Neil Morehouse, Nova Scotia Environment and Climate Change
Danny Shannon, Nova Scotia Environment and Climate Change, ICE Division
Barry Gillis, Nova Scotia Environment and Climate Change, ICE Division
David Clarke, Nova Scotia Environment and Climate Change, ICE Division

McInnis, Mark

From: @gmail.com
Sent: January 25, 2024 11:08 PM
To: Environment Assessment Web Account
Subject: Proposed Project Comments

**** EXTERNAL EMAIL / COURRIEL EXTERNE ****

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Project: colpton-quarry-expansion Comments: I am a local landowner on Shingle Lake

I have been living in the area for 15 years and have spent lots of time working and recreating in and around the lands near this quarry and had the permission of the previous owner to pass through the land. The Puâ?Ttlaqneâ?Tkatik wilderness area is adjacent to this quarry. There are links to this area with several local Mikmaq families. The EA clearly dismisses those linkages and/or acts as if they dont exist and wont be impacted without having consulting any of those families just because there is no reserve adjacent to the quarry. Family connections to these lands begin thousands of years beyond the existence of colonial reserves imposed on the Mikmaq. Thats insulting to say the least and needs to be rectified through direct and meaningful consultation with local Mikmaq. This quarry has operated successfully and sustainably as a 4Ha quarry for several decades. Given its adjacency to the wilderness area and the potential impacts of expanding it to 42Ha I recommend that this large expansion not be approved. If there is a need to expand this quarry it should be done in smaller sections in order to for there to be any ability for long term effects on the local ecosystems and species at risk to be detected. The increase in Truck Traffic since Dexter took over the quarry in 2021 has been noticeable locally to the quarry trucks every 10 minutes going north and south and as far away as Caledonia trucks every 15 minutes. I have personally timed this out while out walking over several weeks and across the construction season and it was consistently this high for road widening projects and trucks going toward Bridgewater. The EA document downplays what the increase in traffic will be and does not address that it has already increased greatly even before any expansion has taken place. The companies hauling this aggregate have mostly been not local operators in my observation. Their trucks often indicate that they are from the valley or further afield than the local area. I have seen only one local single person operator that I recognize benefitting from the increase in hauling. Trucking is a major employer in North Queens. Despite what the EA registration documents suggest this increase in frequency will for sure increase the risk to turtles through direct mortality when they cross either Hwy 325, 208 or the crown owned access road to the quarry. Several turtle species including the Endangered Blandings Turtle live in Barren Meadow Brook and could nest along the access road corridor or the shoulder of the highway. The increased truck traffic will be a risk to those turtle and nesting females are especially important to these populations. The impacts to at risk lichens in the area are unknown. There are many locations of Wrinkled Shingle Lichen nearby to the quarry and the impacts of increased particulates and dust on their survival is unknown. They appear to have survived fine with the small-scale quarry but an expansion to 42 HA would introduce an increase in mortality risk. The current owner of the property clearcut almost all habitat that could have contained species at risk birds or lichens on the property before the EA screening botany and ornithology work was done. This is a pretty underhanded and deceitful thing to do before an EA. It would be impossible, literally impossible, for all of the life contained in the ecosystems to be removed from the surface of 42Ha of land and not have it affect local hydrology. Even from the basis standpoint of physics of how the water would run off the land it would have a major impact on how that happens. Further, removing all of the ecosystem services of water filtrations and retention in vegetation soils etc. it is galling how dismissive the EA registration documents are of this fact. Turning a blind eye helps nothing. If one is going to create a 42Ha quarry at least own up to the fact that it will, without question have impacts on surface runoff, retention, nutrient flow etc. in the ecosystems and watersheds adjacent to the area. Thats part of the reality of running an operation like this. Society has to decide, OK these are the impacts of having a quarry and removing the entire ecosystem from the surface of the earth to get some aggregate...are we OK with that as a trade off? Dismissing or diminishing it doesnt help the process. The glacial ridges, extensive bedrock barrens and intact mature forests in the Barren Meadow area to the south of this area

are a provincially rare ecosystem and contain the species at risk Bluecurls. The area round Barren Meadow supports populations of the Atlantic Coastal Plain Flora Longâ€™s Bullrush and Goldencrest. The portion of Shingle Lake that gets water from Fox Lake and where I have a property is noteworthy particularly for being a low nutrient clear water lake whereas the section fed by Barren Meadow Brook is a dark water lake. We enjoy having access to a deep spring fed clear water lake for swimming and canoeing and is part of the reason we bought this lot. The quality of our time at our lake property would be very impacted if the water quality were to drastically change due to the development of a 42Ha quarry. The low nutrients is also what supports the rare Atlantic Coastal Plain Flora species Goldencrest along the lakeshore. This part of Shingle Lake that is fed from Fox Lake adjacent to the quarry is the single most important site for the Goldencrest population in Canada in the sheer numbers that exist there. Any increase in nutrients due to changes in hydrology and runoff could potentially cause a decline in population or the quality of their habitat. So, in summary there needs to be direct mitigations made for turtles to reduce the risk of mortality through work done by the company or in collaboration with local turtle researchers. The quarry should be expanded as smaller expansions spread out over time in order to be able to observe any long-term impacts of quarry expansion on water quality, local wildlife etc. and be able to adaptively manage what is going on. Grubbing and quarrying the entire site all at once does not leave room for adaptive management of any kind. Efforts should be made to observe survivorship impacts on local endangered lichens especially those near the access road that will get the most dust and diesel particulates. There is absolutely zero need to ramp this up to a 42Ha quarry given the many other quarries operated by Dexter that ARE NOT next to so many rare ecosystems and rare species. Name: _____ Email: _____@gmail.com Address: _____ Municipality: Caledonia email_message: Privacy-Statement: agree x: 54 y: 15

From: @gmail.com
To: [Environment Assessment Web Account](#)
Subject: Proposed Project Comments
Date: February 19, 2024 5:54:21 PM

**** EXTERNAL EMAIL / COURRIEL EXTERNE ****

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Project: colpton-quarry-expansion Comments: As a Wildlife Biologist with a property close to this quarry on Shingle Lake and a resident of Caledonia I strongly object to the expansion of this quarry. Since 2021 when Dexter took over this quarry, there has been a markedly and observable increase in the amount of truck traffic going both towards Bridgewater and through Caledonia. The route towards Bridgewater crosses through the critical habitat of the endangered Blanding's turtle and threatened Eastern Ribbonsnake and increased truck traffic leads to increased road mortality for these species, as well as species at risk turtles Snapping Turtle, Painted Turtle and other birds, mammals, reptiles and amphibians. As a resident of Caledonia raising a family, I don't appreciate the current large increase in heavy truck traffic passing us with the quarry at its current size. Expanding this quarry from less than 4 Ha to 42 Ha is a 10x increase. With the already significant noticeable increase in truck traffic this is concerning. The environmental assessment is not accurate regarding increases in traffic and does not take into account the very significant increase in traffic since 2021. This will not bode well for road mortality of common and rare species on highways in Nova Scotia that lack any sort of road mitigations or safe wildlife crossings structures like eco-passages. Blanding's turtle populations are Endangered and the loss of one nesting female which are attracted to roadside edges for nesting can have a significant negative impact on the population. This quarry is located in a hot spot for species at risk and in close proximity to Blanding's turtle critical/core habitat, Eastern Ribbonsnake critical/core habitat, Wrinkled Shingle Lichen critical/core habitat, nesting habitat for Common Nighthawk, Snapping Turtle, Painted Turtle, the Olive-sided Flycatcher, and the globally rare Atlantic Coastal Plain Flora species Golden Crest and Long's Bulrush. Golden Crest is found on only 7 lakes in all of Canada, including Shingle Lake, making this a high priority area for conservation and one of the reasons for the designation of the Pu'tlaqne'tkatik Wilderness Area. This is the most critical lake for Golden Crest in Canada, making up well over 50 of the population at this one lake. Shingle Lake is fed from Fox Lake, which is close in proximity to the quarry, and so its current size already raises concerns for water quality for the rare species found along the shores of Shingle Lake that require low nutrient lakes for survival. The 'Multi-Species Action Plan for Atlantic Coastal Plain Flora' lists Golden Crest and Long's Bulrush as high priority species for conservation. As ACPF depend on low nutrient habitats, this legally binding action plan states that habitat for ACPF can be destroyed by the addition of additional nutrients that may be unsuitable for ACPF growth or from sediments or other nutrients that are introduced in the waterway, and that higher nutrient levels may allow other vegetation native and non-native to flourish and competitively exclude ACPF. A quarry expansion is not in line with the biological needs of these globally rare species. Golden Crest populations have been mapped, and the habitat photographed along the entire shoreline of Shingle Lake so this population has been extensively mapped and studied. As mentioned, Shingle Lake contains a significant percentage of the Canadian population for Golden Crest well over 50 of the ENTIRE Canadian population for this species. It's protection is imperative. A 40 HA quarry could significantly threaten this species. Nova Scotia Environment and Climate Change states that 'The Pu'tlaqne'tkatik wilderness area is an 'ecological hotspot', or place

of elevated importance for biodiversity, with a high concentration of rare and at-risk species. The woodlands consist primarily of imperfectly or poorly drained conifer forest. Soils are generally thin, with relatively low productivity. Aquatic habitats include slow moving river and streams stillwaters, bogs, fens, shallow lakes and lakeshores. These features provide refuge for at-risk species, including Blandings turtle, ribbon snake, and several rare flora species, including golden crest and uncommon arctic-alpine plants. Protection of these landscape features helps improve representation of the LaHave Drumlins Natural Landscape in Nova Scotia's protected areas system. This is NOT the place to have a 42 HA quarry beside it. The air quality impacts to rare lichens with such an expansion is unknown, and lichens are very sensitive to air pollution. The impacts to the local hydrology from a large quarry are also very concerning for the residents of the area, as well as the rare wildlife that depend on these habitats for survival. The Environmental Assessment is lacking in both depth and detail on the environmental impacts to the region. As a landowner at Shingle Lake, the clear water and water quality for swimming and canoeing was one important consideration that drew us to this location. I am asking that this quarry expansion not be approved. I am concerned about water quality with such a change to the landscape in such short proximity. Increases in nutrients and sediments will also certainly impact rare species and sensitive fish like the Brook Trout. Increase in sediment and nutrients also increase the risk of toxic algal blooms which are of significant health concerns to both humans, pets and wildlife. Botanists that have visited this area have commented that the extensive glacial ridges and bedrock barrens are unique and rare features that should be protected. They have found very rare species in these habitats such as the species at risk Blue Curly and it is likely other species will be documented with further investigation. There are other quarries owned by Dexter that are not in close proximity to rare habitats and a significantly high number of rare species. I implore you to not approve this expansion. The current size of 4Ha already has significant impacts to the surrounding area including extensive clearing before determining if any SAR were present and the current increase in traffic is already worrying for road mortality for many species, including the endangered Blandings turtle, threatened Eastern Ribbonsnake, and Special Concern Snapping Turtle and Painted Turtle. Given the biological significance of this area, even the heightened operation of the current 4HA size is questionable.

BSCH, MREM Wildlife Biologist and property owner at Shingle Lk Name:

Email: @gmail.com Address: Caledonia, NS B0T1B0 Municipality:

Caledonia_email_message: Privacy-Statement: agree x: 67 y: 27

From: @gmail.com
To: [Environment Assessment Web Account](#)
Subject: Proposed Project Comments
Date: February 20, 2024 7:30:57 AM

**** EXTERNAL EMAIL / COURRIEL EXTERNE ****

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Project: colpton-quarry-expansion Comments: I oppose the expansion of the quarry to the proposed limits. It risks compromising water quality on both Fox Lake and through watercourses on to Shingle Lake. The proposed borders of the extended quarry are to close to protected areas and watercourses. Name: Email: @gmail.com Address: Municipality: Crousetown email_message: Privacy-Statement: agree x:

69 y: 24

From: info@merseytobeatic.ca
To: [Environment Assessment Web Account](#)
Subject: Proposed Project Comments
Date: February 23, 2024 3:11:06 PM

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Project: colpton-quarry-expansion Comments: The Mersey Tobeatic Research Institute MTRI is writing to express concerns about the proposed Colpton Quarry Expansion Project and recommend it not be approved without further species at risk mitigations in place. The area encompassing Colpton, Barren Meadow-Keddy Brook, Shingle Lake and Fox Lake are spots with high concentrations of a variety of species at risk including reptiles, birds, Atlantic Coastal Plain Flora and lichens. MTRI has been monitoring some of these species, including a population of Endangered Blanding's turtles, and we are concerned that the EA document has not fully considered the potential impacts of the quarry expansion on these species. As noted in part 2, portions of the quarry site fall within critical/core habitat for both Blanding's turtle and Eastern Ribbonsnake and we are concerned that the EA has vastly underestimated potential impacts operating will have on these species. Most notably, the reptile component of the document focuses only on wetland habitat and does not address impacts on turtle nesting movements and habitat use. Of particular concern was the conclusion in Table 13 under the heading "Operation", subsection "Moving/Transporting Rock and Product" that activities would not have an impact on species at risk. Highway 325 and Highway 208 run directly through Blanding's turtle habitat and there are several documented instances of individuals crossing these roads. This project will presumably result in a substantial increase in truck activity on these roads. Transport trucks would likely be unable to avoid adult turtles, let alone small juvenile turtles on the road. The sustained loss of even one additional adult Blanding's turtle annually can have extremely detrimental effects on the small Nova Scotia population of this long-lived and slow maturing species. Table 14 subsection Species at Risk, heading "Operation" has listed "Open and revegetated areas and grubbing" piles may be occupied by nesting species such as nighthawks. Under the suggested mitigation they have listed looking for bird life prior to activities. However, no mention is made of potential use by Blanding's turtles or Eastern Ribbonsnakes. It is well documented that Blanding's turtles can travel considerable distances from their home wetlands to nest. Turtles seek out exposed substrates for nesting and this can include quarries, gravel roads and roadsides. Given the proximity of the quarry to a significant population of Blanding's turtles, it is possible that they may already be using the existing quarry as a nesting site. From the EA documents, it does not appear that any survey specifically looking for turtle nesting sites was conducted, an important oversight in considering potential impact to the species. Even if Blanding's turtles are not already using the site, expanded open areas may draw them there in future, increasing their risk of vehicular impact and the risks of nest destruction during quarry activities. The EA document indicates that additional surveys for Blanding's turtle may be prudent and MTRI echoes this and strongly recommends further studies and mitigations to reduce harms to this provincially and federally Endangered population of Blanding's turtles prior to any expansion of the quarry site. The single survey reported as part of this EA is insufficient to determine the wide-ranging areas these species utilize throughout their active season. The adjacent population of Blanding's turtles represents one of only four significant genetically distinguishable populations known in the province and the studies in the concentration nearest to the quarry have found it to contain

both a significant population of adults and one of the highest proportions of juveniles known in the province Lefebvre et al. 2012. Eastern Ribbonsnakes have been documented using the Colpton area since the 1970s, including the first documented large concentration in the province Gilhen 1984. This Threatened species may also use the quarry for parts of their annual life cycle including potential overwintering sites or use of small ponds as feeding areas and may be at increased risk of vehicular mortality in and around the quarry site. The Colpton area is a unique geographic landscape, and the nearby Shingle Lake is home to some of the rare Atlantic Coastal Plain Flora ACPF, which require a low nutrient environment. Particularly, Shingle Lake is home to the vast majority ~75 of the Canadian population of Goldencrest. Most of this population is on the western clear water low nutrient side of the lake within the wilderness area. Any changes to water quality coming into Shingle Lake from Fox Lake or Barren Meadow could negatively impact the habitat of these plants. Shingle Lake and Barren Meadow are also home to populations of Longâ€™s Bullrush, Greenland Stitchwort and the only Canadian population of Forked Bluecurls. Focused surveys of the Barren Meadow area for Forked Bluecurls have never been conducted and there could be undiscovered sites in close proximity to the quarry site. Removing all vegetation from a 42-hectare site will most likely impact the hydrology and nutrient flow from the site to the surrounding area, including the important low nutrient areas of Shingle Lake. This potential downstream impact has not been directly addressed in the EA assessment and there are no considerations or mitigations for at risk ACPF listed in Table 14 under Species at Risk. There are known locations of Wrinkled Shingle Lichen near the site close 20m to Highway 325 as well as nearby locations of White-rimmed Shingle Lichen and Scaly Fringe Lichen. However, no systematic surveys of the surrounding area have been done. The impact of a significant increase in truck traffic emissions, dust etc. on the ability of the lichens to survive at this site is unknown and would require long-term survivorship monitoring. Dust and air pollution are known to impact the survivorship of cyanolichens such as these. In conclusion, MTRI recommends that the expansion be put on hold until further investigations can be done and significant species at risk mitigations are put in place. We recommend that the proponent work with the Wildlife Division of the Department of Natural Resources to ensure appropriate compliance with Endangered Species legislation and that the proponents consult species experts to ensure adequate surveys, mitigations, and monitoring of impacts. References Lefebvre, JosÃ©, Stephen W. Mockford, and Tom B. Herman. 2012. Ecology of a recently discovered population segment of Blandingâ€™s Turtles, *Emydoidea blandingii*, in Barren Meadow and Keddy Brooks, Nova Scotia. *Canadian Field-Naturalist* 126(2): 89â€“94. Gilhen, J. 1984. Amphibians and reptiles of Nova Scotia. The Nova Scotia Museum, Nova Scotia. Name: Mersey Tobeatic Research Institute Email: info@merseytobeatic.ca Address: 9 Mt Merritt Rd, Caledonia, NS B0T 1B0 Municipality: Kempt email_message: Privacy-Statement: agree x: 56 y: 23



Colpton Quarry Expansion Project Environmental Assessment Registration Document (EARD) - Comments from Ecology Action Centre

February 2024

The Ecology Action Centre is an environmental charity based in Mi'kma'ki/Nova Scotia. We have a leadership role in working on critical environmental issues from biodiversity protection to climate change to environmental justice. Grounded in over five decades of deep environmental change work and fuelled by love and grief, EAC takes a 50-year perspective on what is needed to build towards a time of thriving and flourishing. We work to equip human and ecological communities for resilience and build a world where ecosystems and communities are restored not just sustained.

Ecology Action Centre staff have only been able to comment on some aspects of this EARD. This is in part due to the limitations of our expertise – we only hold knowledge in certain subject areas and have commented on those. However, this is also because the 30 day comment period is too short to comment completely on any EARD, including this one. Public comment periods for EARD should be 60 days, minimum. Additional time would have allowed us to hone our comments further and make additional, relevant comments.

Overall comments

Overall, this EARD is not complete. In every section the proponent states conclusions without supporting rationale or any other evidence to support their conclusions. This is especially disappointing because the existing quarry and years of operation provide ample opportunity to gather data about how the site's operations have been affecting wildlife, water quality, residents, and more. This information could have contributed to a more complete EARD. We believe the proponent should gather and analyze relevant data about their site and apply their findings to produce a useful EARD.

The quarry property seems to be located within the critical habitat for Blanding's Turtle and for Eastern Ribbonsnake. It is imperative that the company operating on site work closely with DNRR (which is on the recovery team for both Species at Risk) to closely monitor and respond to Blanding's Turtle and Eastern Ribbonsnake's needs on the property.

Specific comments

2.2 Location

The EARD states that the property is “located on Municipal-owned land,” but later (section 3.0) states that the quarry properties are owned by Dexter since 2021. The proponent needs to clarify who owns the properties.

3.1 Purpose/Need of the Undertaking

The proponent should provide more information on why the expansion of the quarry is needed at this time. There is no information provided that indicates an increase in local or provincial need for aggregate, and no data is provided on whether the proposed expansion area would provide suitable aggregate.

3.2 Consideration of Alternatives

The consideration of alternatives section of the EARD is severely lacking. The proponent does not provide any evidence that a quarry at a different location would be a less desirable alternative than the proposed approach. This especially needs to be substantiated because of the risk of impacting Species at Risk (SAR) at the quarry site, which are not present at many other potential quarry sites in Nova Scotia.

The EARD also does not discuss alternatives related to reduced road use (i.e., due to increased use of public transportation, active transit, and driving less) and therefore less need for quarrying aggregate for roads. The alternatives sections also does not discuss alternatives to one of the most polluting parts of the proposed project – the extensive trucking using diesel trucks.

An obvious alternative to the project is to protect the property for nature conservation purposes. Almost all of the surrounding properties are formally designated as protected area through various means. The property where the expansion is proposed also hosts the same SAR for which the surrounding properties were legally protected. It stands to reason that the area where the expansion is proposed is perhaps better off as a protected area, contributing to the provincial goals to increase protected area coverage and to conserve habitat for SAR.

4.0 PUBLIC CONSULTATION AND FIRST NATIONS ENGAGEMENT

It is concerning that there has not been more engagement by the proponent with Acadia First Nation. This Mi'kmaw community has worked on SAR including Blanding's Turtle and Eastern Ribbonsnake, so have specific knowledge and experiences, in the area, to bring to project planning and monitoring. We recommend that the proponent work harder to develop this relationship.



It is also concerning that the proponent did not reach out to Wildcat First Nation. They are also nearby, and also have experience with SAR found at the project site.

Another area that falls short regarding engagement is the lack of attempts to engage with the Mersey Tobeatic Research Institute (MTRI), and the Nova Scotia Nature Trust. MTRI has done work on SAR in the project area, likely even accessing the current quarry property, for over 10 years. The Nature Trust owns and stewards properties with SAR right next to the quarry site. There is much to be gained by the proponent by working harder to connect with these organizations.

4.2 Future Steps.

Future steps for the proponent should include: continued outreach to nearby First Nations (Acadia and Wildcat), outreach to MTRI and the Nature Trust, and the development of a Community Liaison Committee.

5.0 DESCRIPTION OF THE UNDERTAKING

5.1 Existing Quarry Operations

This section is too short on detail. Other information about the existing quarry operations should be provided, including: existing lighting regime (including when operating at night), sound measurements from blasting, blasting technique including chemicals used, current tonnes of aggregate produced per year, frequency of trucking, etc.

6.2 Socio-economic Components

6.2.1 Mi'kmaq First Nation

Ecology Action Centre supports the application of the United Nations Declaration on the Rights of Indigenous Peoples, including the declaration's call for Free, Prior, and Informed consent from Indigenous Peoples regarding proposed projects in their Territory. This is not discussed in the EARD but should be.

6.2.2 Recreational Activities

The proponent asserts that "Noise from routine operations at the quarry would not be heard in the nearby communities of West Clifford, Colpton or Pleasant River," but provides no evidence to support that. The proponent should provide information based on their current operations, such as sound measurements during operations at nearby residences and cottages, and records of any complaints about sound received by government or Dexter.

The EARD states: “Although quarry operations may be heard and residents may experience truck traffic and other effects of quarry operations, the frequency and scope of activities within the quarry is not expected to increase from past use, and any impact on normal activities of residents because of the proposed quarry expansion are expected to be negligible.”

The proponent provides no evidence that even current operations are not impacting residents, cottagers, and recreational users of the area. More rationale is needed to support the conclusion that continued (expanded) operation of the quarry will have negligible impacts.

6.2.3 Tourism and Viewscape

The proponent concludes that there will be negligible impacts on tourism, but provides no rationale. Evidence and rationale are needed to reach a conclusion.

6.2.8 Residential Use

The proponent states: “Skyshine from the quarry, on rare occasions when the quarry may be operated at night, might be seen by residents of West Clifford, Colpton and Pleasant River.” Again, the proponent provides no data about their current lighting regime, light pollution in the area, how their lighting regime is contributing to light pollution in the area, or any information about complaints from residents about light pollution. Also, I don’t think “skyshine” is a word.

6.2.11 Parks and Protected Areas

Background

The proponent should name the nearby Wilderness Areas, Nature Reserves, and Nova Scotia Nature Trust Conservation Lands. These are all nearby Protected Areas that could be impacted by the project.

The proponent states: “Expansion of the quarry will not affect the integrity of any nearby protected areas.” Again, no data or rationale is provided, though it is possible to provide evidence here. As a minimum the proponent should state the purpose of these Protected Areas, since understanding their purpose would be key to determining potential impacts to their “integrity.”

6.3 Biophysical Components

6.3.1 Air Quality, Noise, and Light

Again, no data or rationale is provided here to substantiate the assumed lack of impacts. Light pollution needs to be dealt with more seriously in this EARD, especially considering its



potential impacts on bird SAR that are know or predicted to use the site, or may pass by during migration.

The statement: “With respect to light emanating from the site during infrequent night-time operations, measures will be taken to ensure use of directional lighting, which minimizes emanation of light upward and laterally over the horizon” makes it seem like the proponent really does not know what they are talking about with regards to understanding the potential impacts of light pollution on birds and specific mitigation measures that can be taken. There is a wealth of information on these topics.

6.3.4 Freshwater Aquatic Environments and Wetlands

Again, the proponent asserts there will be no impacts but provides no evidence or rationale as to why. Runoff is a concern at quarries, including at this one, where there are SAR in watercourses around the site.

6.3.7 Flora and Fauna Habitat

Again, conclusions that the light pollution from night operations will have negligible impact on fauna is baseless.

Mitigation options are proposed to reduce impacts from logging and site clearing – the proponents states that these “should be scheduled” outside of the breeding season. An additional mitigation technique should be used: night operations should not be carried out during the breeding season either, to reduce the negative impacts of light pollution on birds (breeding at the site and passing over during migration).

It is a major omission in this EARD that both Blanding's Turtle and Eastern Ribbonsnake are not discussed more thoroughly. It is likely that the property, and perhaps the expansion area, are within critical habitat for both of these species. If this project is approved as described in this EARD, one of the Terms & Conditions (or one aspects of the Environmental Management Plan) should be to monitor for these species, particularly where the stream crosses the road. Monitoring should also include searching for turtles travelling inland to the property. If there is road mortality at this site, or if risks to turtles emerge (e.g., turtles become attracted to part of the site for nesting habitat), intervention and mitigation actions should be required. In addition to monitoring data being provided to DNRR, Blanding's Turtle and Eastern Ribbonsnake observations should be provided to MTRI.

8.0 POTENTIAL CUMULATIVE IMPACTS

This is perhaps the shortest paragraph about cumulative impacts in an EARD ever. More work on this section is needed.

