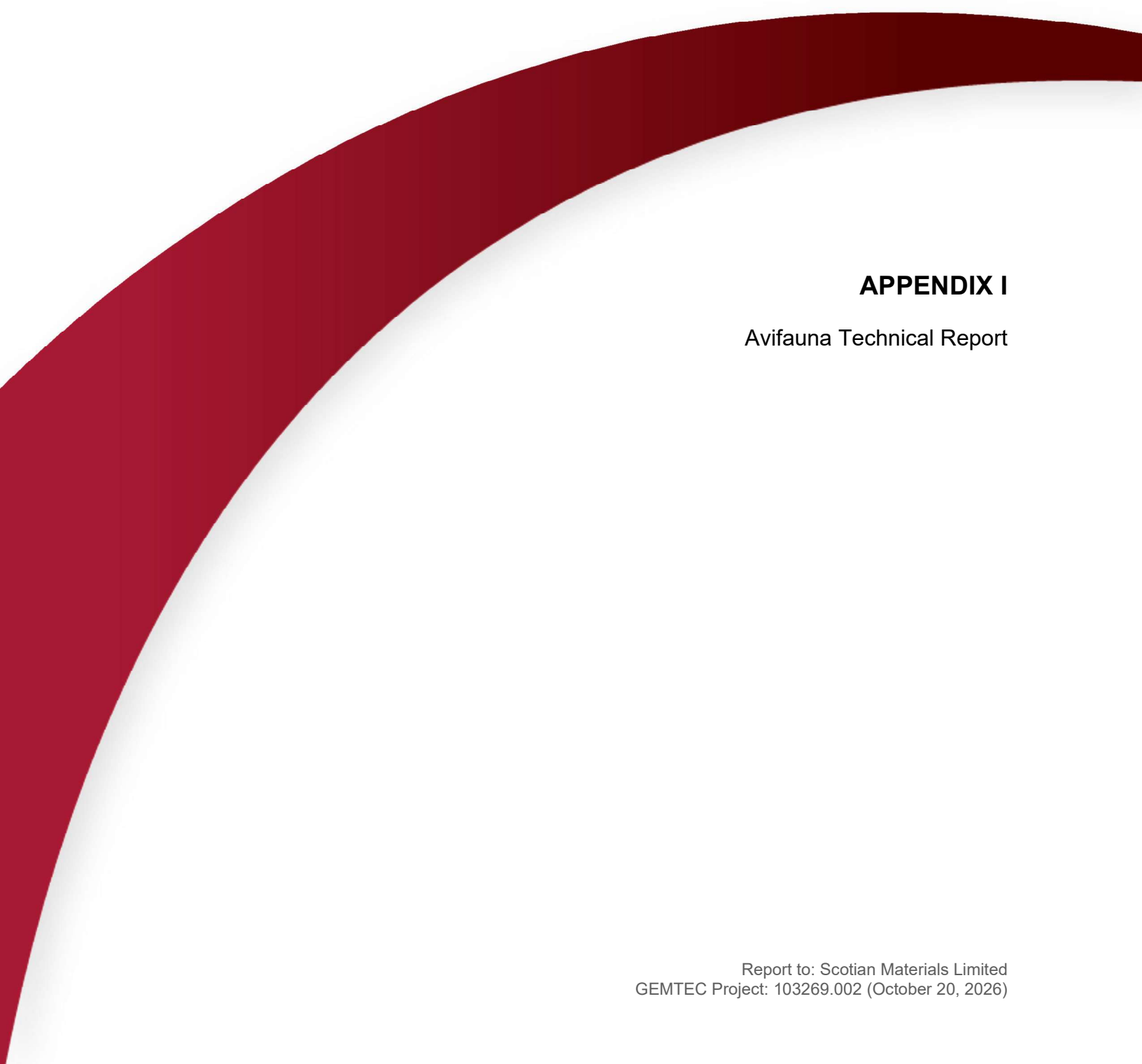




APPENDIX I

Avifauna Technical Report



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**Avifauna Technical Report
Avifauna
Environmental Assessment
Registration
Goffs Quarry – Phases 3 and 4
Expansion
Goffs, Nova Scotia**

GEMTEC Project: 103269.002

experience • knowledge • integrity



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Submitted to:

Scotian Materials Limited
171 Resource Road
Goffs, Nova Scotia
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Environmental Baseline Report: Avifauna

Environmental Assessment Registration
Goffs Quarry – Phases 3 and 4
Expansion
Goffs, Nova Scotia

June 22, 2026
GEMTEC Project: 103269.002

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LIST OF ABBREVIATIONS AND TERMINOLOGY

ACCDC	Atlantic Canada Conservation Data Centre
CEPA	Canadian Environmental Protection Act
COSEWIC	Committee on the Status of Endangered Wildlife in Canada
CWS	Canadian Wildlife Services
ECCC	Environment and Climate Change Canada
EA	Environmental Assessment
ELC	Ecological Land Classification
EMP	Environmental Management Plan
END	Endangered
GEMTEC	GEMTEC Consulting Engineers and Scientists Limited
IA	Impact Assessment
IBA	Important Bird Area

IPD	Initial Project Description
km	Kilometers
LAA	Local Assessment Area
m	Meters
MBBA	Maritimes Breeding Bird Atlas
MBCA	Migratory Bird Convention Act
n	Number of observations
NSECC	Nova Scotia Environment and Climate Change
NS ESA	Nova Scotia Endangered Species Act
PDA	Project Development Area
RAA	Regional Assessment Area
S-Rank	Subnational rank
SAR	Species at Risk
SARA	Species at Risk Act
SC	Special Concern
SOCC	Species of Conservation Concern
THR	Threatened
VC	Valued Component
VUL	Vulnerable

LIST OF APPENDICES

Attachment H-1	Maritime Breeding Bird Atlas Data
Attachment H-2	Bird Survey Field Data

1.0 INTRODUCTION

This baseline report is a supplemental resource to the Environmental Assessment (EA) Registration document for the Goffs Quarry Expansion Phases 3 and 4 Project (the Project), prepared by GEMTEC Consulting Engineers and Scientists Limited (GEMTEC) on behalf of the Scotian Materials Limited. This document describes the results of an avian study completed in 2025 to characterize the existing avian community within and near the Project area.

1.1 Regulatory Context

1.1.1 Provincial

The Project is subject to the provincial requirements under *the Nova Scotia Environmental Assessment Regulations*, under Section 49 of the *Environment Act*. Since the Project involves expanding a quarry footprint beyond 4 hectares, it triggers provincial environmental assessment requirements and must be registered for EA review as a Class I Undertaking. As such, an EA Registration document must be submitted to the Environmental Assessment Branch of the Nova Scotia Department of Environment and Climate Change (NSECC) for review and approval prior to the commencement of the Project.

As part of the provincial EA process, the proponent must describe the existing environment at the Project site and assess the potential effects on the physical, biological, and ecological features. This report describes one Valued Component (VC) of the existing environment: Avifauna.

1.1.2 Federal

The Project does not require a federal impact assessment under the Impact Assessment Act.

Migratory bird species in Canada are protected under the *Migratory Birds Convention Act, 1994* (MBCA) and the *Species at Risk Act* (SARA). The MBCA, which implements the Migratory Birds Convention between Canada and the United States, prohibits the possession, hunting, capturing, injuring, or killing of migratory birds and forbids the disturbance, destruction, or removal of their nests or eggs without appropriate authorization. It further governs hunting seasons and establishes regulations for the conservation of bird populations, including the protection of essential habitats.

The *Migratory Birds Regulations, 2022*, under the MBCA, modernizes enforcement and clarifies prohibitions or activities likely to harm birds or the reproductive success during critical periods like the breeding season.

SARA offers additional protections for migratory birds listed under Schedule 1 of the Act. For these listed species, it is an offence to kill, harm, harass, capture, or take individuals, and to destroy their residences or critical habitat. Species designated as Special Concern, while not

subject to the same prohibitions, are identified as requiring monitoring and the development of management plans to prevent further decline.

Together, the MBCA and SARA support the conservation, protection, and recovery of migratory bird populations in Canada, while promoting habitat stewardship and fulfilling international obligations.

1.2 Project Description

The Project consists of a 23.2 ha expansion of the existing 18.4 ha aggregate quarry in two additional phases: Phases 3 and 4. The quarry is located in Goffs, Nova Scotia. The quarry is owned and operated by Scotian Materials Ltd., who are the project proponents. Scotian Materials currently operates the existing quarry under an Industrial Approval (Approval No. 2016-095664-03), which was issued in June 2020.

A previous Environmental Assessment Approval was issued in October 2019 for an earlier expansion into Phases 1 and 2. Those phases are now operational.

The project scope includes the construction, operation, decommissioning, and reclamation of the expanded quarry. Phases 3 and 4 will extend the quarry eastward from its current footprint, with planned extraction depths reaching 88 masl in Phase 3 and 99 masl in Phase 4. Including the original quarry (4.04 ha), the Phase 1 and 2 expansions (14.35 ha), and the proposed Phase 3 and 4 expansions (23.2 ha), the total quarry area will amount to 41.6 ha within the 100-ha property (PID 00505941).

A detailed project description is provided within the EA Registration document.

1.3 Scope of Valued Component (VC)

The avifauna VC encompasses migratory and resident bird species, their habitats (e.g., forests, wetlands, open fields, and riparian zones), and avian species at risk (SAR).

Avian SAR include those listed under Schedule 1 of the federal SARA or under the NS ESA. Additional Species of Conservation Concern (SOCC) may not be listed under federal or provincial legislation but are prioritized by wildlife conservation organizations, such as the Committee on the Status of Endangered Wildlife in Canada (COSEWIC) and the Atlantic Canada Conservation Data Centre (ACCDC). The ACCDC assigns sub-national rarity ranks (S-Rank) for individual species, where S1 indicates species that are “Critically Imperiled”, S2 “Imperiled”, and S3 “Vulnerable” (Atlantic Canada Conservation Data Centre, 2025).

This report presents the methodology and results for the avifauna studies completed for the Goffs Quarry Phase 3 and 4 expansions. The potential impacts of the Project on avifauna, along with the associated mitigation measures, are assessed in Section 4.2.5 of the EA Registration document.

2.0 METHODOLOGY

2.1 Spatial Boundaries

For the purposes of this baseline description, existing conditions for avifauna are primarily focused on the immediate Project Development Area (PDA). However, a general overview of avifauna within the broader Local Assessment Area (LAA) and Regional Assessment Area (RAA) is also provided.

2.1.1 Project Development Area (PDA)

The PDA for the Project encompasses the proposed Phase 3 and 4 expansions and is approximately 23.2 ha in combined area. This does not include the original quarry area (~4 ha), or the Phase 1 and 2 expansions (14.4 ha).

2.1.2 Local Assessment Area (LAA)

A generalized ecological LAA was based on drainage basins surrounding the PDA. The drainage area from a point downstream of the PDA at the inlet to Soldier Lake was generated based on a LiDAR-derived digital elevation model (DEM) using the modelling software Personal Computer Storm Water Management Model (PCSWMM). Rather than defining an LAA arbitrarily based on a radius or buffer, this LAA represents natural topographical boundaries within which off-site effects might be anticipated, such as those associated with runoff and erosion. It is acknowledged that individual ecological VCs (e.g., birds, wildlife, vegetation) may experience indirect effects at different spatial scales; however, in the interest of a simplified effects assessment, drainage basins were considered a reasonable spatial limit for off-site effects on ecosystems. The extent of the Ecological LAA for this project is an area of approximately 604 ha surrounding and including the PDA (refer to Figure 3.3 of the main EA Registration document).

The significance of direct impacts to a specific avifauna habitat type within the PDA can be better understood in the context of the availability of that habitat across the LAA. In addition, the LAA provides a suitable scale for reviewing existing records of rare or sensitive bird species that may occur within or near the Project footprint.

2.1.3 Regional Assessment Area (RAA)

The RAA for ecological components including Avifauna was established based on EcoSections overlapping or in close proximity to the PDA. The RAA is a large area of approximately 13,590 ha (136 km²) in size. The EcoSections that make up the RAA are part of the Eastern Interior EcoDistrict (440) of the Eastern EcoRegion of Nova Scotia. The RAA is the scale at which species distribution and habitat supply are considered, and cumulative effects are assessed (e.g., cumulative loss of important habitat types). The Ecological Land Classification (ELC) and a more detailed description of ecological characteristics of the RAA are provided in the main EA Registration document. This baseline report focuses mainly on the PDA and LAA.

2.2 Desktop Review and Secondary Sources

A desktop review was completed to compile existing information on avifauna within the LAA. The following key components formed the basis of the desktop analysis.

2.2.1 Atlantic Canada Conservation Data Centre Report

A data report was acquired from the ACCDC identifying known occurrences of rare and protected species within the 5 km and 100 km radii of the Project site. This information will support the identification of SAR and SOCC that have been historically documented in the region and may potentially occur within the LAA.

2.2.2 Maritimes Breeding Bird Atlas (MBBA)

A search was conducted within the Maritimes Breeding Bird Atlas (MBBA) database to review bird species occurrences in the 10 km x 10 km squares that surround the PDA. This included a search of the 20MQ56 square in Region 20 – Chebucto – Musquodoboit. The data retrieved from the MBBA database is summarized in Section 3.1.2.

2.3 Field Studies

2.3.1 Breeding Bird Point Counts

Breeding bird surveys were conducted to characterize forest breeding bird assemblages within the habitats of the PDA.

To ensure comprehensive representation of avifauna species and habitats, preliminary site selection for point count stations considered landscape features, forest structure, and vegetation composition. Point count locations were randomly distributed throughout the PDA (Figure 1) and were spaced as a minimum of 200 m apart to maintain sampling independence. Typically forest breeding bird point counts would be spaced 300 m, but due to small project area, points were slightly closer than usual.

Point count surveys were conducted on the morning of June 6, 2025 (Round 1) and July 4, 2025 (Round 2), a date that falls within the core nesting period for breeding birds in the region. Surveys were conducted under favorable weather conditions, including a Beaufort Wind Scale rating <1, overcast skies, and light rain. Counts began shortly before sunrise and concluded before 10:00 AM, in accordance with standard breeding bird survey protocols (Environment and Climate Change Canada, 2023). Each survey point was observed for a 10-minute period, during which the species, number of individuals, behaviour, and estimated distance or location of each bird relative to the survey point were recorded. The timing of the survey was selected to coincide with peak vocal activity for the majority of regional species. Given the relatively consistent habitat types within the PDA, the limited likelihood of detecting early or late breeding birds specific to niche habitats, and the absence of known critical habitat for SAR, a single, well-timed survey was deemed sufficient to characterize baseline avifauna.

Breeding status was assessed using Breeding Evidence Codes from the Ontario Breeding Bird Atlas (Birds Canada, 2025). In addition to standard detections, signs of breeding activity such as nest-building, territorial displays, alarm calls, flushed individuals, mating, and aggressive defence of territory – were recorded where observed. Weather parameters, including wind speed and direction, sky conditions and air temperature were also documented at each point count location (Table 2.1).

Table 2.1 Breeding Bird Survey conditions.

Point	Start Time	End Time	Longitude	Latitude	Temperature (°C)	Beaufort (Wind)	Cloud Cover (%)
June 6 (Round 1)							
BBS-1	06:35	06:45	-63.55931	44.84657	12	0	50
BBS-2	06:52	07:02	-63.56124	44.84666	12	0	50
BBS-3	07:06	07:16	-63.56069	44.84885	12	0	75
BBS-4	07:30	07:40	-63.56402	44.84704	14	0	75
BBS-5	08:00	08:10	-63.56168	44.84337	14	0	75
BBS-6	08:28	08:38	-65.47356	45.70787	14	0	75
July 4 (Round 2)							
BBS-1	07:32	07:42	-63.55932	44.84657	18	1	100
BBS-2	07:47	07:57	-63.56128	44.84665	18	1	100
BBS-3	08:10	08:20	-63.56063	44.84875	18	1	100
BBS-4	08:30	08:40	-63.56414	44.84701	18	1	100
BBS-5	09:06	09:16	-63.56151	44.84324	18	1	100
BBS-6	09:39	09:49	-63.55748	44.84952	19	1	100

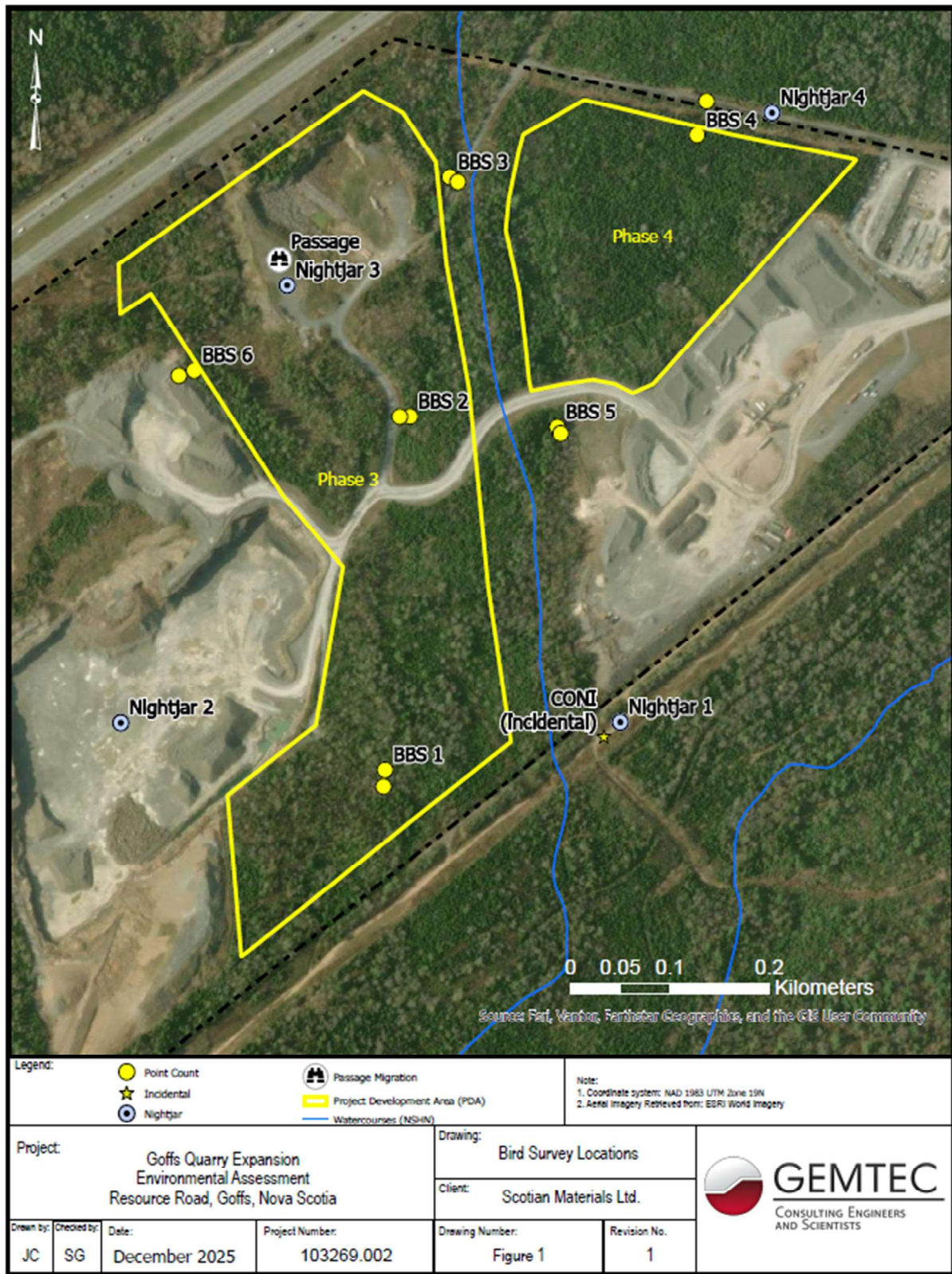


Figure 1. Bird Survey Locations.

2.3.2 Nightjar Surveys

Both the common nighthawk (*Chordeiles minor*) and eastern whip-poor-will (*Antrostomus vociferus*) are listed as *Threatened* under the NS *Endangered Species Act*. Under the federal SARA, common nighthawk is now listed as *Special Concern*, while eastern whip-poor-will is still federally listed as *Threatened*.

Nightjar surveys were conducted in accordance with the *Canadian Nightjar Survey Protocol 2024* (Birds Canada, 2024), which establishes a standardized methodology for monitoring populations of common nighthawk and eastern whip-poor-will.

At each station, biologists recorded the species detected and number of individuals, and estimated distance to the vocalization source, call direction, and time of detection. Nightjar activity was classified using the following behaviour-based hierarchy, with the highest-ranking behaviour per one-minute interval recorded:

- **Wing-boom (W):** A territorial display specific to common nighthawk, characterized by a distinctive wing-produced sound.
- **Call (C):** Vocalization heard during the interval.
- **Visual (V):** Bird observed but not heard calling.
- **Not Detected (N):** No visual or auditory detecting during the interval.

Given the crepuscular and nocturnal activity patterns of these species, auditory and observation point surveys represent the most effective detection method. Surveys were conducted during the peak breeding period on July 3, 2025. The survey window began 30 minutes before sunset and was conducted under optimal environmental conditions – characterized by clear or mostly clear skies, no precipitation, and wind speeds no greater than 3 on the Beaufort scale – to minimize interference with auditory detection.

The survey followed a passive observation point design, consisting of four stations spaced at least 600 m apart to reduce the likelihood of duplicate detections. Observation point locations were strategically selected to represent habitats preferred by nightjars, such as open-canopy forests, wetland edges, and anthropogenically disturbed areas (e.g., clearing or gravel roads). Observers arrived at each station at least 10 minutes prior to the listening period to allow any disturbance to settle.

At each survey station (Table 2.2), observers conducted a 6-minute passive listening period, during which all nightjar vocalizations were recorded. Data collected included the species, number of individuals, estimated distance to the vocalization source, call direction, and time of detection.

Table 2.2 Nightjar survey information.

Point Number	Start Time	End Time	Longitude	Latitude	Temperature (°C)	Beaufort Wind	Cloud Cover (%)
NJ-1	20:42	20:48	-63.55851	44.84386	20	2	75
NJ-2	21:10	21:16	-63.56484	44.84383	20	1	55
NJ-3	21:23	21:29	-63.56278	44.84776	20	1	50
NJ-4	21:44	21:50	-63.55657	44.84943	18	1	35

2.3.3 Spring Passage Migration Surveys

Passage migration surveys were conducted to assess avian migration over and through the PDA during spring and fall migration periods. Passage migration surveys monitor birds actively flying through an area during diurnal migration, capturing data on flight activity, timing, approximate altitude, and movement patterns.

Spring passage migration surveys were conducted on the morning of June 5, 2025. Surveys were conducted under favorable weather conditions, including a Beaufort Wind Scale rating < 2, clear skies, and no precipitation. Counts began shortly before sunrise and concluded before 12:00 PM. Each survey point was observed for a 1-hour period, during which the species, number of individuals, behaviour, and estimated distance or location of each bird relative to the survey point were recorded.

Data collected included species identification, number of individuals, flight height, and cardinal direction of travel. Weather parameters such as wind speed and direction, sky conditions, and air temperature were also recorded at each point count location. (Table 2.3).

Table 2.3 Spring Passage Migration Survey conditions.

Point	Start Time	End Time	Longitude	Latitude	Temperature (°C)	Beaufort Wind	Cloud Cover (%)
1	06:15	12:15	-63.56288	44.84807	15	2	10

2.3.4 Fall Passage Migration Surveys

Fall passage migration surveys were conducted on October 14, 2025 and October 28, 2025. Surveys were conducted under favorable weather conditions. On October 14, conditions included a Beaufort Wind Scale rating < 2, clear skies, and no precipitation. On October 28, conditions included a Beaufort Wind Scale rating < 3, overcast skies, and 1 mm of precipitation. Each survey point was observed for a 1-hour period, during which the species, number of

individuals, behaviour, and estimated distance or location of each bird relative to the survey point were recorded.

Data collected included species identification, number of individuals, flight height, and cardinal direction of travel. Weather parameters such as wind speed and direction, sky conditions, and air temperature were also recorded at each point count location (Table 2.4).

Table 2.4 Fall Passage Migration Survey conditions.

Point	Start Time	End Time	Longitude	Latitude	Temp. (°C)	Beaufort Wind	Cloud Cover (%)	Day
1	10:00	16:00	-63.56288	44.84807	11	2	10	October 14
1	07:30	13:30	-63.56288	44.84807	10	3	10	October 28

2.3.5 Fall Stopover Migration Surveys

Fall stopover migration surveys were conducted on the October 15, 2025, and October 28, 2025. Surveys were conducted under favorable weather conditions. On October 14, conditions included a Beaufort Wind Scale rating < 1, clear skies, and no precipitation. On October 28, conditions included a Beaufort Wind Scale rating < 3, overcast skies, and no precipitation. Bird usage of habitats on site was recorded along transects. Each transect was walked slowly, during which the species, number of individuals, time of observation, and any notes regarding the behaviour of each bird were recorded.

Data collected included species identification, number of individuals, time of observation, and any notes regarding behaviour. Weather parameters such as wind speed and direction, sky conditions, and air temperature were also recorded at each point count location (Table 2.5).

Table 2.5 Fall Stopover Migration Survey conditions.

Point	Start Time	End	Temperature (°C)	Beaufort Wind	Cloud Cover (%)
October 14					
STOP	08:20	10:00	14	1	10
October 28					
STOP	13:50	15.35	11	3	10

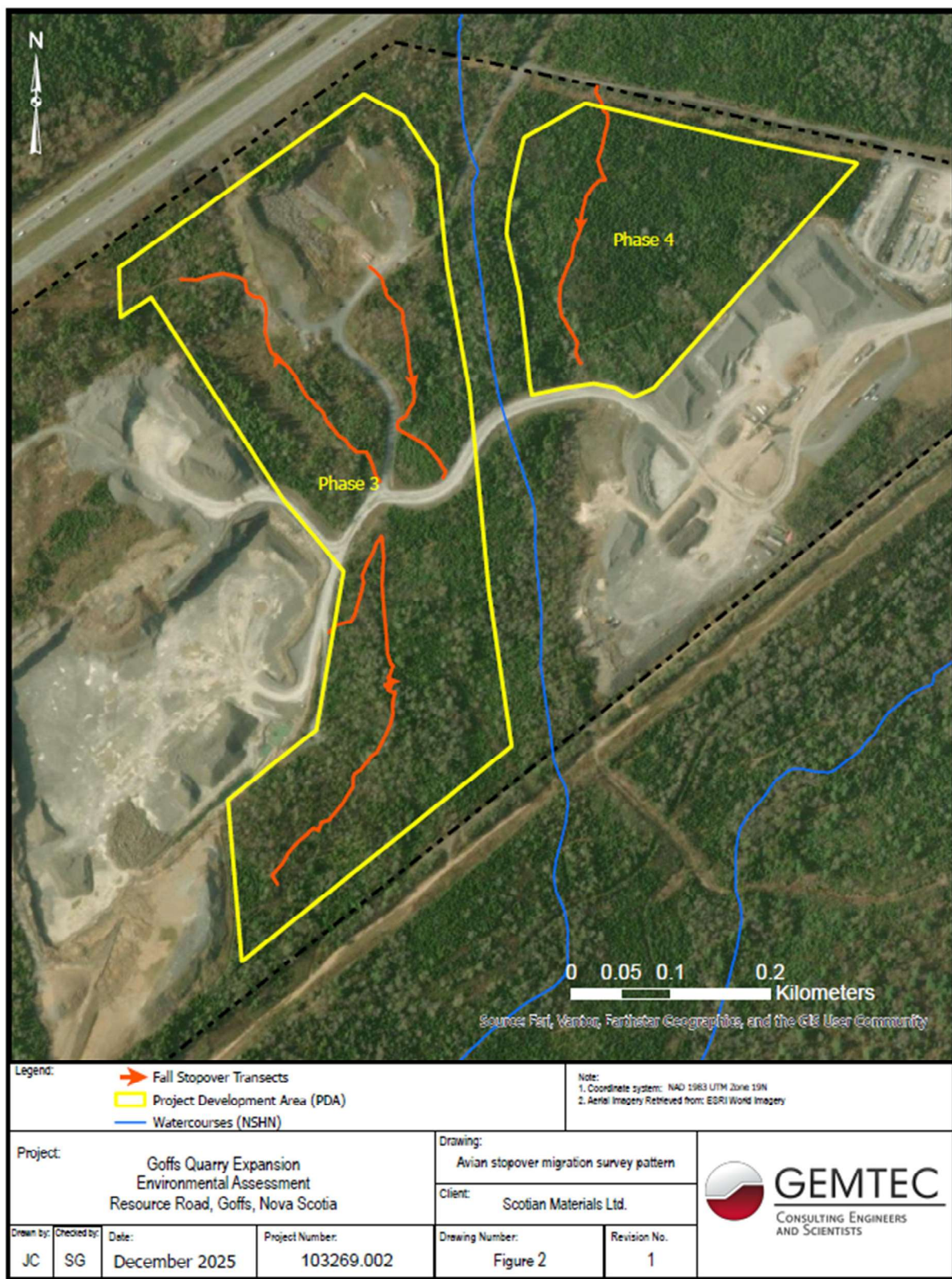


Figure 2. Avian Stopover Migration Survey Transects

3.0 RESULTS

The following section presents the results of the desktop review and field studies related to avifauna, summarizing the species observed and recorded within the PDA and LAA. The desktop review supports the identification of SAR and SOCC that may occur in the broader area, while the field studies provide insight into species presence and habitat use during the nesting season.

3.1 Local and Regional Context

3.1.1 ACCDC Data for Local Area

The ACCDC report summarizes records of SAR and SOCC historically documented within 5 km of the centre of the PDA. Within the 5 km radius around the site, the report identified 30 avian species with provincial S-Ranks of S3 or lower (including those only S3 during part of their lifecycle), and 8 federally or provincially listed Species at Risk (Table 3.1).

Table 3.1 ACCDC Results – Avian SAR within 5 km of the PDA.

Common Name	Scientific Name	Prov Legal Prot	SARA Status	COSEWIC Status	Provincial S-Rank
Rusty Blackbird	<i>Euphagus carolinus</i>	END	SC	SC	S2S3B
Barn Swallow	<i>Hirundo rustica</i>	END	THR	SC	S3B
Canada Warbler	<i>Cardellina canadensis</i>	END	THR	SC	S2S3B
Common Nighthawk	<i>Chordeiles minor</i>	THR	SC	SC	S3S4B
Olive-sided Flycatcher	<i>Contopus cooperi</i>	THR	SC	SC	S3B
Bobolink	<i>Dolichonyx oryzivorus</i>	VUL	THR	SC	S2S3B
Evening Grosbeak	<i>Coccothraustes vespertinus</i>	VUL	SC	SC	S3B,S3N
Eastern Wood-Pewee	<i>Contopus virens</i>	VUL	SC	SC	S3S4B
Common Tern	<i>Sterna hirundo</i>	-	-	Not At Risk	S3B
Warbling Vireo	<i>Vireo gilvus</i>	-	-	-	S1B,SUM
Vesper Sparrow	<i>Pooecetes gramineus</i>	-	-	-	S1S2B,SUM
Brown-headed Cowbird	<i>Molothrus ater</i>	-	-	-	S3B
Cliff Swallow	<i>Petrochelidon pyrrhonota</i>	-	-	-	S3S4B
Turkey Vulture	<i>Cathartes aura</i>	-	-	-	S4B
Canada Jay	<i>Perisoreus canadensis</i>	-	-	-	S3
Boreal Chickadee	<i>Poecile hudsonicus</i>	-	-	-	S3
Pine Siskin	<i>Spinus pinus</i>	-	-	-	S4

Killdeer	<i>Charadrius vociferus</i>	-	-	-	S3B
Black-billed Cuckoo	<i>Coccyzus erythrophthalmus</i>	-	-	-	S3B
Eastern Kingbird	<i>Tyrannus tyrannus</i>	-	-	-	S3?B
Rose-breasted Grosbeak	<i>Pheucticus ludovicianus</i>	-	-	-	S3S4B
Wilson's Snipe	<i>Gallinago delicata</i>	-	-	-	S3B,S4M
Wilson's Warbler	<i>Cardellina pusilla</i>	-	-	-	S3B,S4M
Pine Grosbeak	<i>Pinicola enucleator</i>	-	-	-	S2S3B,S5N
Red Crossbill	<i>Loxia curvirostra</i>	-	-	-	S4
Bay-breasted Warbler	<i>Setophaga castanea</i>	-	-	-	S4B
Spotted Sandpiper	<i>Actitis macularius</i>	-	-	-	S4B
Tennessee Warbler	<i>Leiothlypis peregrina</i>				S3B,S5M
Bufflehead	<i>Bucephala albeola</i>	-	-	-	S3S4N
Horned Lark	<i>Eremophila alpestris</i>	-	-	-	SHB,S5M,S4N

Table Note: The following codes represent the indicated conservation status: SC is Special Concern, THR is Threatened, VUL is Vulnerable and END is Endangered. Subnational (S-Rank) are as follows: S1 is Critically Imperiled in the province, S2 is Imperiled in the province, S3 is Vulnerable in the province, S#S# is to indicate a range of uncertainty about the status of the species in the province. A breeding status qualifier is included in the ranking where: B is the breeding population of the species in the province; M is the species are considered a migrant and only make transient occurrences in the province.

The ACCDC report also includes records of additional SAR and SOCC documented within a 100 km radius of the PDA. Records of SOCC are provided in the full ACCDC report, available in Appendix A of the main EA Registration document.

3.1.2 Maritimes Breeding Bird Atlas Records

In the Table 3.2 summarizes records of avian SAR or other Species of Conservation Concern retrieved from the Maritimes Breeding Bird Atlas (MBBA) database, for Square 20MQ56, in the Chebucto–Musquodoboit region (Attachment H-1).

A total of 9 species recorded in this square have a provincial conservation rank (S-rank) of S3 or lower, meaning they are considered vulnerable, imperiled, or critically imperiled in Nova Scotia.

Table 3.2 MBBA Results – Avian SOCC/SAR within the Chebucto-Musquodoboit region, Square 20MQ56.

Common Name	Scientific Name	NS ESA Status	SARA Status	COSEWIC Status	Provincial S-Rank	Code
Vesper Sparrow	<i>Pooecetes gramineus</i>	-	-	-	S1S2B,SUM	H
Cliff Swallow	<i>Petrochelidon pyrrhonota</i>	-	-	-	S3S4B	NY
Common Tern	<i>Sterna hirundo</i>	-	-	Not At Risk	S3B	FY
Black-billed Cuckoo	<i>Coccyzus erythrophthalmus</i>	-	-	-	S3B	S
Olive-sided Flycatcher	<i>Contopus cooperi</i>	THR	SC	SC	S3B	S
Barn Swallow	<i>Hirundo rustica</i>	END	THR	SC	S3B	NY
Rose-breasted Grosbeak	<i>Pheucticus ludovicianus</i>	-	-	-	S3S4B	H
Boreal Chickadee	<i>Poecile hudsonicus</i>	-	-	-	S3	S
Canada Jay	<i>Perisoreus canadensis</i>	-	-	-	S3	H

Table Note: Common names marked by an asterisk indicate those species found within the 20MQ56 square encompassing the LAA. The following codes represent the indicated conservation status: SC is Special Concern, THR is Threatened, and END is Endangered. Sub-nation (S-Rank) are as follows: S1 is Critically Imperiled in the province, S2 is Imperiled in the province, S3 is Vulnerable in the province, S#S# is to indicate a range of uncertainty about the status of the species in the province. A breeding status qualifier is included in the ranking where: B is the breeding population of the species in the province; M is the species are considered a migrant and only make transient occurrences in the province. Breeding Evidence Code: H is Species observed in its breeding season in suitable nesting habitat, S is Singing male(s) present, or breeding calls heard, in suitable nesting habitat in breeding season, P is Pair observed in suitable nesting habitat in nesting season, T is Permanent territory presumed through registration of territorial song, or the occurrence of an adult bird, at the same place, in breeding habitat, on at least two days a week or more apart, during its breeding season, D is Courtship or display, including interaction between a male and a female or two males, including courtship feeding or copulation, A is Agitated behaviour or anxiety calls of an adult, NB is Nest building or carrying nest materials, for all species except wrens and woodpeckers, FY is Recently fledged young (nidicolous species) or downy young (nidifugous species), including incapable of sustained flight, CF is Adult carrying food for young, NE is Nest containing eggs, NY is Nest with young seen or heard.

3.1.3 Important Bird Areas

The nearest Important Bird Areas (IBA) to the PDA are:

- **NS014: Musquodoboit**
 - o Located approximately 40 km southeast of the PDA
 - o Straddles two ecoregions: Atlantic Coastal and Eastern Interior Uplands

- o Notable for its extensive salt marshes and mudflats, providing important habitat for migratory shorebirds
- o Provides breeding and stopover habitat for species such as the Nelson's sparrow (*Ammospiza nelsoni*) and semipalmated sandpiper (*Calidris pusilla*)
- **NS026: Grassy Island Complex**
 - o Located approximately 40 km southwest of the PDA
 - o Located within the Northumberland–Bras d'Or Ecoregion
 - o Supports breeding colonies of common tern (*Sterna hirundo*) and provides important stopover habitat for migratory shorebirds
- **NS020: Southern Bight, Minas Basin**
 - o Located approximately 47 km northwest of the PDA
 - o Located within the Fundy Coast Ecoregion
 - o Provides critical staging habitat for tens of thousands of semipalmated sandpipers (*Calidris pusilla*) during southward migration

3.2 Field Survey Results

The following section presents the results of the avifauna field studies, including the breeding bird point counts, nightjar surveys, passage migration, and stopover surveys.

3.2.1 Breeding Birds Surveys

Point count surveys were conducted on the morning of June 6, 2025 (Round 1) and July 4, 2025 (Round 2), during the core nesting period for breeding birds in the region. During the surveys, observers recorded all bird species detected, estimated the distance and azimuth of each observation relative to the survey point, and noted breeding behaviour observations based on standardized criteria.

Breeding status was assessed using evidence codes adapted from the Ontario Breeding Bird Atlas (Birds Canada, 2024), and the following behaviours were observed during the 2025 survey:

- **Possible (S):** Singing male observed in suitable habitat
- **Possible (V):** Visiting probable nest site

Additional breeding evidence codes, including those for probable and confirmed breeding, are described in the Maritimes Breeding Bird Atlas (2025) but were not observed during this field program.

The 2025 breeding bird survey results are presented in Table 3.3. In total, 144 individual birds were recorded, of 30 species. Most of these species are considered common in Nova Scotia, with S-Ranks of S4 or higher. No species of conservation concern were recorded.

The three most abundant species detected, in descending order, were:

- Black-throated green warbler (*Setophaga virens*): 21 individuals
- Ovenbird (*Seiurus aurocapilla*): 12 individuals
- American redstart (*Setophaga ruticilla*): 10 individuals

These are all species of warblers.

All field observation data can be found in Appendix I-2.

Table 3.3 Breeding Bird Survey Results.

Common Name	Scientific Name	S-Rank	Breeding Behavior	# Individuals	Round
American Crow	<i>Corvus brachyrhynchos</i>	S5	V	3	1
American Goldfinch	<i>Spinus tristis</i>	S5	S	3	2
			V	4	1
			S	4	1
American Redstart	<i>Setophaga ruticilla</i>	S5B	S	8	2
			S	2	1
American Robin	<i>Turdus migratorius</i>	S5B,S5N	S	6	2
			S	4	1
Bay-breasted Warbler	<i>Setophaga castanea</i>	S4B	S	1	2
Black-and-white Warbler	<i>Mniotilta varia</i>	S5B	S	2	2
			S	7	1
Blackburnian Warbler	<i>Setophaga fusca</i>	S5B	S	1	2
Black-throated Green Warbler	<i>Setophaga virens</i>	S4B	S	9	2
			S	12	1
Blue Jay	<i>Cyanocitta cristata</i>	S5	S	1	1
Cedar Waxwing	<i>Bombycilla cedrorum</i>	S5B	S	1	2
Chipping Sparrow	<i>Spizella passerina</i>	S4B	S	2	1
Common Yellowthroat	<i>Geothlypis trichas</i>	S5B	S	5	2
			S	4	1
Dark-eyed Junco	<i>Junco hyemalis</i>	S5	S	2	2
			S	4	1
Hairy Woodpecker	<i>Dryobates villosus</i>	S5	S	3	1
Hermit Thrush	<i>Catharus guttatus</i>	S5B	S	6	2
			S	2	1
Magnolia Warbler	<i>Setophaga magnolia</i>	S4S5B	S	2	2
			S	5	1
Northern Flicker	<i>Colaptes auratus</i>	S5B	S	1	2
Northern Parula	<i>Setophaga americana</i>	S5B	S	1	2
Ovenbird	<i>Seiurus aurocapilla</i>	S5B	S	4	2
			S	8	1
Purple Finch	<i>Haemorhous purpureus</i>	S5B,S4N	S	1	1
Red-breasted Nuthatch	<i>Sitta canadensis</i>	S5	S	1	2
Red-eyed Vireo	<i>Vireo olivaceus</i>	S5B	S	2	2
			S	5	1
Red-winged Blackbird	<i>Agelaius phoeniceus</i>	S4S5B,SUN	S	1	1

Ruby-crowned Kinglet	<i>Corthylio calendula</i>	S4B, S5M	S	2	2
Song Sparrow	<i>Melospiza melodia</i>	S5B	S S	5 1	2 1
Swamp Sparrow	<i>Melospiza georgiana</i>	S5B	S	1	2
Veery	<i>Catharus fuscescens</i>	S4S5B	S	1	2
White-throated Sparrow	<i>Zonotrichia albicollis</i>	S4S5B,S5M	S S	2 1	2 1
Winter Wren	<i>Troglodytes hiemalis</i>	S5B	S	2	2
Yellow-rumped Warbler	<i>Setophaga coronata</i>	S5B	S	2	1

3.2.2 Nightjar Surveys

Targeted nightjar surveys were conducted on the evening of July 3, 2025, during the peak breeding season for both Common nighthawk and Eastern whip-poor-will, following the Canadian Nightjar Survey Protocol (Birds Canada, 2024).

A summary of the 2025 nightjar survey results is presented in Table 3.4. In total, 4 individual birds were recorded, all were common nighthawk.

Table 3.4 Nightjar Surveys Results.

Common Name	Scientific Name	S-Rank	Behavior	# Individuals
Common Nighthawk	<i>Chordeiles minor</i>	S3S4B	C/W/V	2
			C/W/V	2

3.2.3 Spring Passage Migration Surveys

The results of the spring passage migration surveys include all bird species observed during June 5, 2025, survey period. Each bird was identified to the species level where possible and the flying height from the ground was estimated. Flying height estimates were capped at 150 meters, as heights beyond this range were likely too high to assess accurately. However, relatively few individuals were recorded at distances exceeding 100 meters.

A summary of the 2025 spring passage migration survey results is presented in Table 3.5. Additional variables like estimated height are provided in the field data in Appendix I-1. In total, 202 individual birds of 19 species were recorded. All these species are considered common in Nova Scotia, with S-Ranks of S4 or higher.

The three most abundant species detected, in descending order, were:

- American goldfinch (*Spinus tristis*): 96 individuals, average flying heights were 18 meters
- Cedar waxwing (*Bombycilla cedrorum*): 39 individuals, average flying heights were 30 meters
- American robin (*Turdus migratorius*): 18 individuals, average flying heights were 20 meters

Table 3.5 Spring Passage Migration Surveys Results.

Common Name	Scientific Name	S-Rank	# Individuals
American Crow	<i>Corvus brachyrhynchos</i>	S5	2
American Goldfinch	<i>Spinus tristis</i>	S5	96
American Goshawk	<i>Accipiter atricapillus</i>	S3S4	1
American Robin	<i>Turdus migratorius</i>	S5B,S5N	18
Black-throated Green Warbler	<i>Setophaga virens</i>	S4B	4
Blue Jay	<i>Cyanocitta cristata</i>	S5	6
Cedar Waxwing	<i>Bombycilla cedrorum</i>	S5B	39
Common Merganser	<i>Mergus merganser</i>	S5B,S4N	2
Common Raven	<i>Corvus corax</i>	S4	3
Dark-eyed Junco	<i>Junco hyemalis</i>	S5	4
Downy Woodpecker	<i>Dryobates pubescens</i>	S5	1
Great Black-backed Gull	<i>Larus marinus</i>	S4	4
Merlin	<i>Falco columbarius</i>	S4S5B	3
Northern Flicker	<i>Colaptes auratus</i>	S5B	1
Ovenbird	<i>Seiurus aurocapilla</i>	S5B	3
Purple Finch	<i>Haemorhous purpureus</i>	S5B,S4N	2
Red-eyed Vireo	<i>Vireo olivaceus</i>	S5B	2
Red-tailed Hawk	<i>Buteo jamaicensis</i>	S4	4
Red-winged Blackbird	<i>Agelaius phoeniceus</i>	S4S5B,SUN	2
Song Sparrow	<i>Melospiza melodia</i>	S5B	5

3.2.4 Fall Passage Migration Surveys

The results of the fall passage migration surveys include all bird species observed during October 14, 2025, and October 28, 2025, survey dates. A summary of the 2025 fall passage migration survey results is presented in Table 3.6. In total, 201 individual birds were recorded, representing 17 species. Most of these species are considered common in Nova Scotia, with S-Ranks of S4 or higher.

The three most abundant species detected, in descending order, were:

- Black-capped chickadee (*Poecile atricapillus*): 42 individuals, average flying heights were 30 meters
- Dark-eyed junco (*Junco hyemalis*): 39 individuals, average flying heights were 10 meters
- American goldfinch (*Spinus tristis*): 23 individuals, average flying heights were 30 meters

Table 3.6 Fall Passage Migration Surveys Results.

Common Name	Scientific Name	S-Rank	# Individuals
October 15			
Pine Siskin	<i>Spinus pinus</i>	S4	12
Turkey Vulture	<i>Cathartes aura</i>	S4B	1
Purple Finch	<i>Haemorhous purpureus</i>	S5B,S4N	4
White-throated Sparrow	<i>Zonotrichia albicollis</i>	S4S5B,S5M	8
Red-breasted Nuthatch	<i>Sitta canadensis</i>	S5	1
Dark-eyed Junco	<i>Junco hyemalis</i>	S5	9
Blue Jay	<i>Cyanocitta cristata</i>	S5	3
Black-capped Chickadee	<i>Poecile atricapillus</i>	S5	42
American Goldfinch	<i>Spinus tristis</i>	S5	20
Hairy Woodpecker	<i>Dryobates villosus</i>	S5	1
Ruffed Grouse	<i>Bonasa umbellus</i>	S5	1
American Crow	<i>Corvus brachyrhynchos</i>	S5	2
October 28			
Pine Siskin	<i>Spinus pinus</i>	S4	8
Canada Goose	<i>Branta canadensis</i>	S5B,S5N	16
Dark-eyed Junco	<i>Junco hyemalis</i>	S5	39
White-throated Sparrow	<i>Zonotrichia albicollis</i>	S4S5B,S5M	1
American Robin	<i>Turdus migratorius</i>	S5B,S5N	11
Song Sparrow	<i>Melospiza melodia</i>	S5B	2
Common Raven	<i>Corvus corax</i>	S4	8
American Crow	<i>Corvus brachyrhynchos</i>	S5	4
Golden-crowned Kinglet	<i>Regulus satrapa</i>	S5	3
American Goldfinch	<i>Spinus tristis</i>	S5	3
Blue Jay	<i>Cyanocitta cristata</i>	S5	2

3.2.5 Fall Stopover Migration Surveys

The results of the fall stopover migration surveys include all bird species observed during October 15th and 28th, 2025 surveys. Each bird was identified to the species level where possible and the flying height from the ground was estimated.

The 2025 fall stopover migration survey results are presented in Table 3.7. In total, 41 individual birds were recorded, representing 6 species. Most of these species are considered common in

Nova Scotia, with S-Ranks of S4 or higher. They are also generally considered year-round residents.

The three most abundant species detected, in descending order, were:

- Dark-eyed junco (*Junco hyemalis*): 15 individuals
- Golden-crowned kinglet (*Regulus satrapa*): 10 individuals
- Black-capped chickadee (*Poecile atricapillus*): 9 individuals

Table 3.7 Fall Stopover Migration Surveys Results.

Common Name	Scientific Name	S-Rank	# Individuals
October 15			
Dark-eyed Junco	<i>Junco hyemalis</i>	S5	6
White-throated Sparrow	<i>Zonotrichia albicollis</i>	S4S5B,S5M	1
American Robin	<i>Turdus migratorius</i>	S5B,S5N	1
Golden-crowned Kinglet	<i>Regulus satrapa</i>	S5	6
Black-capped Chickadee	<i>Poecile atricapillus</i>	S5	6
October 28			
Dark-eyed Junco	<i>Junco hyemalis</i>	S5	9
White-throated Sparrow	<i>Zonotrichia albicollis</i>	S4S5B,S5M	1
American Robin	<i>Turdus migratorius</i>	S5B,S5N	1
Black-capped Chickadee	<i>Poecile atricapillus</i>	S5	3
Golden-crowned Kinglet	<i>Regulus satrapa</i>	S5	4
American Crow	<i>Corvus brachyrhynchos</i>	S5	3

4.0 CLOSURE

This report was prepared by GEMTEC Consulting Engineers and Scientists on behalf of the Scotian Materials Limited. The report may not be relied upon by any other person or entity without the express written consent of GEMTEC Consulting Engineers and Scientist Limited and the Scotian Materials Limited.

Any use that a third party makes of this report, or any reliance or decisions made based on it, is the responsibility of such third parties. GEMTEC Consulting Engineers and Scientist Limited accepts no responsibility for damages, if any, suffered by any third party as a result of decisions made or actions based on this report.

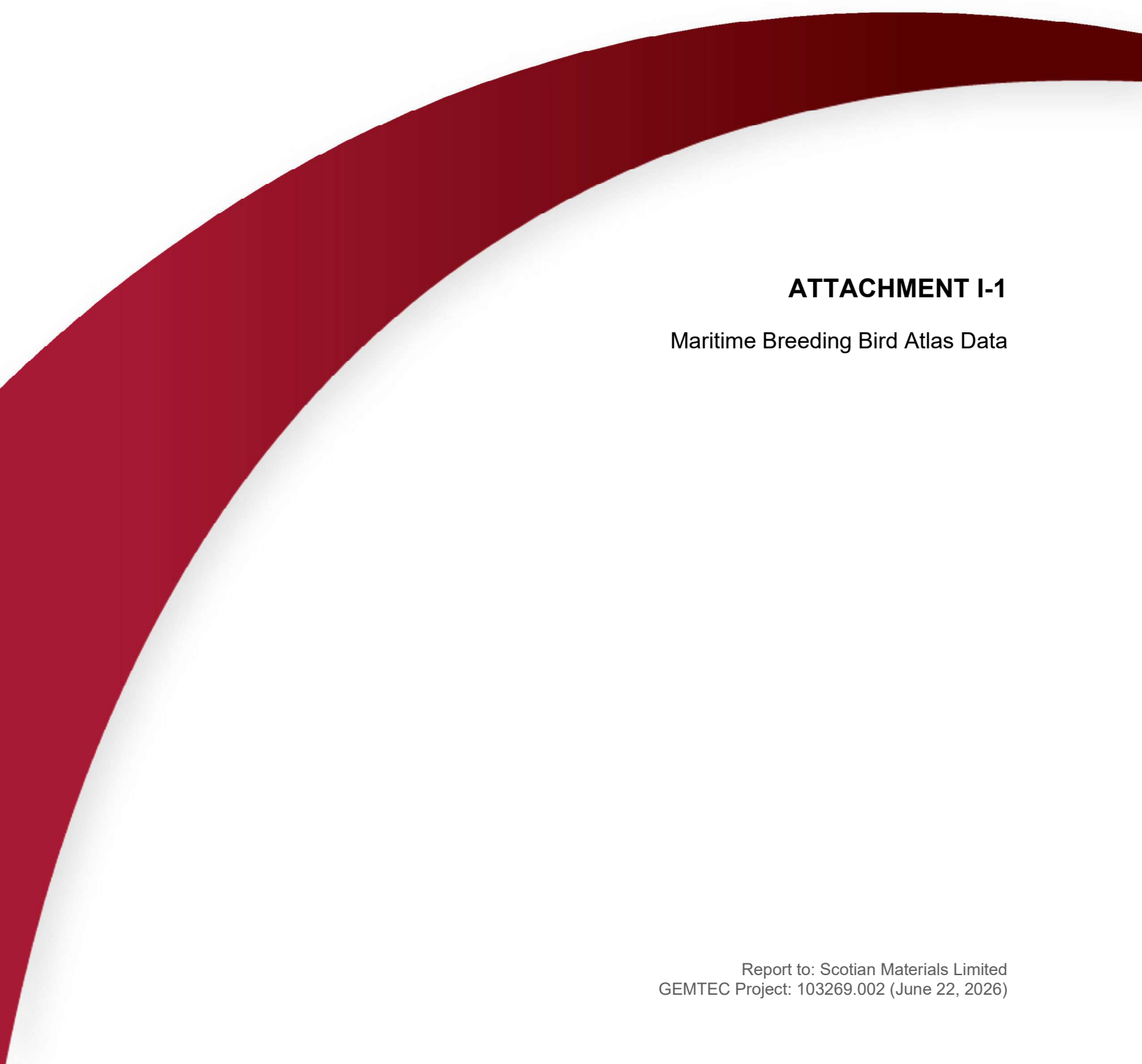
The information presented in this report represents the best judgment of our trained professionals and technical staff based on current standards, site and project information known at the time and project area conditions observed by staff at the time the work was performed.

Should additional information become available, GEMTEC Consulting Engineers and Scientists Limited requests that this information be brought to our attention so that we may review the conclusions presented herein.

If you have any questions concerning this report or require further details, please do not hesitate to contact us.

5.0 REFERENCES

- Atlantic Canada Conservation Data Centre. (2025). *Understanding Ranks*. Retrieved from Atlantic Canada Conservation Data Centre: <http://accdc.com/en/rank-definitions.html>
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- Birds Canada. (2025). *Breeding Evidence Codes*. Retrieved from Ontario Breeding Bird Atlas: <https://www.birdsontario.org/breeding-codes/>
- Environment and Climate Change Canada. (2023). *Breeding Bird Survey instructions*. Retrieved from Government of Canada: <https://www.canada.ca/en/environment-climate-change/services/bird-surveys/landbird/north-american-breeding/instructions.html>



ATTACHMENT I-1

Maritime Breeding Bird Atlas Data



Square Summary (20MQ56)

#species (1st atlas) #species (2nd atlas) #hours #pc done
poss prob conf total poss prob conf total 1st 2nd road offrd
19 29 51 99 29 20 26 75 112 30.9 14 2

Region summary (#20: Chebucto - Musquodoboit)

#sq with data #species #pc done target #pc
#squares 1st 2nd 1st 2nd
103 93 98 146 177 944 386

Target number of point counts in this square: 14 road side, 1 off road (1 in Mature coniferous). Please try to ensure that each off-road station is located such that the entire 100m radius circle is within the prescribed habitat.

SPECIES	Code		%		SPECIES	Code		%		SPECIES	Code		%				
	1st	2nd	1st	2nd		1st	2nd	1st	2nd		1st	2nd	1st	2nd			
Canada Goose	H	15	61		Great Blue Heron \$		H	26	40	Common Tern \$		ON	FY	17	30		
Wood Duck		17	46		Green Heron †					Arctic Tern †§				9	11		
Gadwall ‡		0	4		Turkey Vulture ‡α		H	0	4	Black Guillemot †§				1	12		
Eurasian Wigeon ‡		0	0		Osprey		NY	56	72	Rock Pigeon		ON	NE	49	67		
American Wigeon ‡		0	7		Bald Eagle α		H	24	69	Mourning Dove			T	24	81		
American Black Duck	FL	FY	68	84	Northern Harrier		C	41	53	Black-billed Cuckoo			S	4	17		
Mallard		17	38		Sharp-shinned Hawk		H	20	43	Great Horned Owl				24	47		
Mallard x Am. Black Duck ‡		0	4		Northern Goshawk		H	17	33	Barred Owl			H	37	67		
Blue-winged Teal		8	6		Red-should Hawk †			1	0	Long-eared Owl †				1	7		
Northern Pintail		3	3		Broad-winged Hawk		H	A	22	45	Short-eared Owl †				1	2	
Green-winged Teal		21	24		Red-tailed Hawk		H	H	37	63	North Saw-whet Owl			T	16	45	
Ring-necked Duck	H	40	50		Virginia Rail †			2	3	Common Nighthawk †			T	49	56		
Greater Scaup †		0	0		Sora			15	10	Chimney Swift †			H	35	14		
Common Eider \$		7	20		American Coot †			0	1	Ruby-thr Hummingbird			T	H	52	86	
Harlequin Duck †		0	0		Semipalmated Plover †			2	0	Belted Kingfisher			ON	H	49	82	
Common Goldeneye ‡		0	7		Piping Plover †			3	6	Yellow-bellied Sapsucker			T		36	41	
Hooded Merganser		6	28		Killdeer		DD	51	36	Downy Woodpecker			AY	FY	51	81	
Common Merganser		33	55		Spotted Sandpiper		C	H	54	66	Hairy Woodpecker			AY	CF	54	86
Red-breast Merganser		6	15		Greater Yellowlegs †			3	23	Black-back Woodpecker			H		22	47	
Ring-necked Pheasant		T	29	70	Willet			16	24	Northern Flicker			AY	FY	82	92	
Ruffed Grouse	T	S	49	78	Lesser Yellowlegs ‡			0	0	Pileated Woodpecker			S	41	72		
Spruce Grouse		25	27		Least Sandpiper †			4	2	American Kestrel					39	50	
Common Loon	FL	S	61	72	Wilson's Snipe		T	45	43	Merlin			H		18	52	
Pied-billed Grebe		10	13		American Woodcock		T	D	20	53	Olive-sided Flycatcher †			T	S	44	60
Leach's Storm-Petrel †§		1	5		Black-headed Gull ‡			0	0	Eastern Wood-Pewee			T		55	55	
Northern Gannet ‡		0	0		Ring-billed Gull †§			0	3	Yellow-bellied Flycatcher			H		58	73	
Double-crest Cormorant \$		13	31		Herring Gull \$		H	31	40	Alder Flycatcher			AY	FY	77	89	
Great Cormorant †§		2	5		Great Black-backed Gull \$		NY	31	31	Least Flycatcher			H	T	36	68	
American Bittern	H	19	26		Roseate Tern †§			3	2	Eastern Phoebe					4	15	

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Maritimes Breeding Bird Atlas - Summary Sheet for Square 20MQ566 (page 2 of 3)

SPECIES	Code		SPECIES		Code		SPECIES		Code	
	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd
Gr Crested Flycatcher			6	2	American Robin		AY	CF	87	91
Eastern Kingbird			22	25	Gray Catbird		AY		51	57
Blue-headed Vireo			69	89	Northern Mockingbird †				9	2
Warbling Vireo †			0	4	Brown Thrasher †				1	2
Philadelphia Vireo ‡			2	9	European Starling		AY	T	75	75
Red-eyed Vireo			81	88	Cedar Waxwing		AY	T	68	88
Gray Jay			62	68	Ovenbird		AY	T	66	74
Blue Jay			77	85	North Waterthrush				40	34
American Crow			83	91	Black-white Warbler		AY	CF	81	87
Common Raven			74	91	Tennessee Warbler		AY		78	48
Horned Lark †			3	1	Nashville Warbler		AY	S	65	83
Tree Swallow			80	87	Mourning Warbler				32	32
Bank Swallow §			49	22	Common Yellowthroat		AY	CF	86	91
Cliff Swallow §			34	18	American Redstart		AY	P	87	88
Barn Swallow			83	75	Cape May Warbler				19	29
Black-capp Chickadee			79	91	Northern Parula		AY	S	72	85
Boreal Chickadee			72	78	Magnolia Warbler		AY	CF	77	91
Red-breast Nuthatch			73	89	Bay-breasted Warbler		T	H	52	54
White-breast Nuthatch			17	24	Blackburnian Warbler		H		56	68
Brown Creeper			27	65	Yellow Warbler		AY	S	69	81
House Wren †			0	0	Chestn-sided Warbler		AY	T	51	72
Winter Wren			60	82	Blackpoll Warbler				10	27
Golden-crown Kinglet			70	90	Black-thr Blue Warbler		T		32	39
Ruby-crown Kinglet			81	88	Palm Warbler		AY	S	62	87
Eastern Bluebird †			3	5	Yellow-rumped Warbler		AY	D	82	92
Veery			44	30	Black-thr Green Warbler		AY	T	82	89
Swainson's Thrush			74	85	Canada Warbler †		AY		66	52
Hermit Thrush			80	91	Wilson's Warbler		T		15	20
Wood Thrush †			1	4	Chipping Sparrow		AY		51	54

This list includes all species found during the Maritimes Breeding Bird Atlas (1st atlas: 1986-1990, 2nd atlas: 2006-2010) in the region #20 (Chebucto - Musquodoboit). Underlined species are those that you should try to add to this square (20MQ566). They have not yet been reported during the 2nd atlas, but were found during the 1st atlas in this square or have been reported in more than 50% of the squares in this region during the 2nd atlas so far. "Code" is the code for the highest breeding evidence for that species in square 20MQ566 during the 2nd and 1st atlas respectively. The % columns give the percentage of squares in that region where that species was reported during the 2nd and 1st atlas (this gives an idea of the expected chance of finding that species in region #20). Rare/Colonial Species Report Forms should be completed for species marked: § (Colonial), † (regionally rare), ‡ (rare in the Maritimes) or α (rare in the Maritimes, documentation only required for confirmed records). Current as of 20/11/2025. An up-to-date version of this sheet is available from <http://www.mba-aom.ca/jsp/summaryform.jsp?squareID=20MQ566&lang=en>

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ATTACHMENT I-2

Bird Survey Field Data

Date	ID	Temp	Beaufort	Weather	Start (am)	End (am)	Species Code	Common Name	Scientific Name	S rank	Distance (m)	Bearing	Breeding Code	Number	Notes
4-Jul-25	1	18	1	Cloudy, Rain	7:32	7:42	HETH	Hermit Thrush	<i>Catharus guttatus</i>	S5B	60	360	S	1	
4-Jul-25	1	18	1	Cloudy, Rain	7:32	7:42	OVEN	Ovenbird	<i>Seiurus aurocapilla</i>	S5B	40	5	S	1	
4-Jul-25	1	18	1	Cloudy, Rain	7:32	7:42	MAWA	Magnolia Warbler	<i>Setophaga magnolia</i>	S5B	25	360	S	1	
4-Jul-25	1	18	1	Cloudy, Rain	7:32	7:42	COYT	Common Yellowthroat	<i>Geothlypis trichas</i>	S5B	45	30	S	1	
4-Jul-25	1	18	1	Cloudy, Rain	7:32	7:42	COYT	Common Yellowthroat	<i>Geothlypis trichas</i>	S5B	75	45	S	1	
4-Jul-25	1	18	1	Cloudy, Rain	7:32	7:42	AMRS	American Redstart	<i>Setophaga ruticilla</i>	S5B	50	90	S	1	
4-Jul-25	1	18	1	Cloudy, Rain	7:32	7:42	RCKI	Ruby-crowned Kinglet	<i>Corhylio calendula</i>	S4S5B	75	90	S	1	
4-Jul-25	1	18	1	Cloudy, Rain	7:32	7:42	DELU	Dark-eyed Junco	<i>Junco hyemalis</i>	S5	50	280	S	1	
4-Jul-25	1	18	1	Cloudy, Rain	7:32	7:42	RCKI	Ruby-crowned Kinglet	<i>Corhylio calendula</i>	S4S5B	50	300	S	1	
4-Jul-25	1	18	1	Cloudy, Rain	7:32	7:42	RBNJ	Red-breasted Nuthatch	<i>Sitta canadensis</i>	S5	65	325	S	1	
4-Jul-25	1	18	1	Cloudy, Rain	7:32	7:42	AMRS	American Redstart	<i>Setophaga ruticilla</i>	S5B	40	350	S	1	
4-Jul-25	2	18	1	Cloudy, Rain	7:47	7:57	AMRS	American Redstart	<i>Setophaga ruticilla</i>	S5B	25	60	S	1	
4-Jul-25	2	18	1	Cloudy, Rain	7:47	7:57	AMRS	American Redstart	<i>Setophaga ruticilla</i>	S5B	75	90	S	1	
4-Jul-25	2	18	1	Cloudy, Rain	7:47	7:57	BTGW	Black-throated Green Warbler	<i>Setophaga vires</i>	S5B	5	140	S	2	Pair
4-Jul-25	2	18	1	Cloudy, Rain	7:47	7:57	CEWA	Cedar Waxwing	<i>Bombicilla cedrorum</i>	S5B	25	120	S	1	
4-Jul-25	2	18	1	Cloudy, Rain	7:47	7:57	BTGW	Black-throated Green Warbler	<i>Setophaga vires</i>	S5B	25	145	S	1	
4-Jul-25	2	18	1	Cloudy, Rain	7:47	7:57	WTSP	White-throated Sparrow	<i>Zonotrichia albicollis</i>	S5B	100	155	S	1	
4-Jul-25	2	18	1	Cloudy, Rain	7:47	7:57	REVI	Red-eyed Vireo	<i>Vireo olivaceus</i>	S5B	50	235	S	1	
4-Jul-25	2	18	1	Cloudy, Rain	7:47	7:57	AMRS	American Redstart	<i>Setophaga ruticilla</i>	S5B	35	270	S	1	
4-Jul-25	2	18	1	Cloudy, Rain	7:47	7:57	AMRO	American Robin	<i>Turdus migratorius</i>	S5B	75	300	S	1	
4-Jul-25	2	18	1	Cloudy, Rain	7:47	7:57	AMRS	American Redstart	<i>Setophaga ruticilla</i>	S5B	5	315	S	1	
4-Jul-25	2	18	1	Cloudy, Rain	7:47	7:57	SOSP	Song Sparrow	<i>Melospiza melodia</i>	S5B	35	325	S	1	
4-Jul-25	2	18	1	Cloudy, Rain	7:47	7:57	BTGW	Black-throated Green Warbler	<i>Setophaga vires</i>	S5B	65	330	S	1	
4-Jul-25	2	18	1	Cloudy, Rain	7:47	7:57	WWR	Winter Wren	<i>Tragolayres hiemalis</i>	S5B	75	340	S	1	
4-Jul-25	3	18	1	Cloudy, Rain	8:10	8:20	COYT	Common Yellowthroat	<i>Geothlypis trichas</i>	S5B	20	10	S	1	
4-Jul-25	3	18	1	Cloudy, Rain	8:10	8:20	BAWW	Black-and-white Warbler	<i>Mniotilta varia</i>	S5B	30	20	S	1	
4-Jul-25	3	18	1	Cloudy, Rain	8:10	8:20	BBWA	Blackburnian Warbler	<i>Setophaga fusca</i>	S5B	60	20	S	1	
4-Jul-25	3	18	1	Cloudy, Rain	8:10	8:20	HETH	Hermit Thrush	<i>Catharus guttatus</i>	S5B	75	40	S	1	
4-Jul-25	3	18	1	Cloudy, Rain	8:10	8:20	AMRO	American Robin	<i>Turdus migratorius</i>	S5B	50	60	S	1	
4-Jul-25	3	18	1	Cloudy, Rain	8:10	8:20	SOSP	Song Sparrow	<i>Melospiza melodia</i>	S5B	25	120	S	1	
4-Jul-25	3	18	1	Cloudy, Rain	8:10	8:20	WTSP	White-throated Sparrow	<i>Zonotrichia albicollis</i>	S5B	75	120	S	1	
4-Jul-25	3	18	1	Cloudy, Rain	8:10	8:20	WWR	Winter Wren	<i>Tragolayres hiemalis</i>	S5B	50	160	S	1	
4-Jul-25	3	18	1	Cloudy, Rain	8:10	8:20	BTGW	Black-throated Green Warbler	<i>Setophaga vires</i>	S5B	25	225	S	1	
4-Jul-25	3	18	1	Cloudy, Rain	8:10	8:20	SOSP	Song Sparrow	<i>Melospiza melodia</i>	S5B	70	290	S	1	
4-Jul-25	3	18	1	Cloudy, Rain	8:10	8:20	HETH	Hermit Thrush	<i>Catharus guttatus</i>	S5B	100	330	S	1	
4-Jul-25	3	18	1	Cloudy, Rain	8:10	8:20	SWSP	Swamp Sparrow	<i>Melospiza georgiana</i>	S5B	50	355	S	1	
4-Jul-25	4	18	1	Cloudy, Rain	8:30	8:40	AMRO	American Robin	<i>Turdus migratorius</i>	S5B	5	45	S	1	
4-Jul-25	4	18	1	Cloudy, Rain	8:30	8:40	SOSP	Song Sparrow	<i>Melospiza melodia</i>	S5B	45	50	S	1	
4-Jul-25	4	18	1	Cloudy, Rain	8:30	8:40	AMRS	American Redstart	<i>Setophaga ruticilla</i>	S5B	40	60	S	1	
4-Jul-25	4	18	1	Cloudy, Rain	8:30	8:40	COYT	Common Yellowthroat	<i>Geothlypis trichas</i>	S5B	75	75	S	1	
4-Jul-25	4	18	1	Cloudy, Rain	8:30	8:40	SOSP	Song Sparrow	<i>Melospiza melodia</i>	S5B	45	90	S	1	
4-Jul-25	4	18	1	Cloudy, Rain	8:30	8:40	AMRO	American Robin	<i>Turdus migratorius</i>	S5B	80	90	S	1	
4-Jul-25	4	18	1	Cloudy, Rain	8:30	8:40	AMGO	American Goldfinch	<i>Spinus tristis</i>	S5	50	140	S	1	
4-Jul-25	4	18	1	Cloudy, Rain	8:30	8:40	OVEN	Ovenbird	<i>Seiurus aurocapilla</i>	S5B	65	330	S	1	
4-Jul-25	4	18	1	Cloudy, Rain	8:30	8:40	BTGW	Black-throated Green Warbler	<i>Setophaga vires</i>	S5B	35	360	S	1	
4-Jul-25	5	18	1	Cloudy, Rain	9:06	9:16	NOPA	Northern Parula	<i>Setophaga americana</i>	S5B	35	55	S	1	
4-Jul-25	5	18	1	Cloudy, Rain	9:06	9:16	NOFL	Northern Flicker	<i>Colaptes auratus</i>	S5B	75	50	S	1	
4-Jul-25	5	18	1	Cloudy, Rain	9:06	9:16	AMRS	American Redstart	<i>Setophaga ruticilla</i>	S5B	45	115	S	1	
4-Jul-25	5	18	1	Cloudy, Rain	9:06	9:16	COYT	Common Yellowthroat	<i>Geothlypis trichas</i>	S5B	30	135	S	1	
4-Jul-25	5	18	1	Cloudy, Rain	9:06	9:16	REVI	Red-eyed Vireo	<i>Vireo olivaceus</i>	S5B	50	135	S	1	
4-Jul-25	5	18	1	Cloudy, Rain	9:06	9:16	HETH	Hermit Thrush	<i>Catharus guttatus</i>	S5B	80	130	S	1	
4-Jul-25	5	18	1	Cloudy, Rain	9:06	9:16	HETH	Hermit Thrush	<i>Catharus guttatus</i>	S5B	90	160	S	1	
4-Jul-25	5	18	1	Cloudy, Rain	9:06	9:16	MAWA	Magnolia Warbler	<i>Setophaga magnolia</i>	S5B	50	225	S	1	
4-Jul-25	5	18	1	Cloudy, Rain	9:06	9:16	BTGW	Black-throated Green Warbler	<i>Setophaga vires</i>	S5B	45	250	S	1	
4-Jul-25	5	18	1	Cloudy, Rain	9:06	9:16	OVEN	Ovenbird	<i>Seiurus aurocapilla</i>	S5B	45	270	S	1	
4-Jul-25	5	18	1	Cloudy, Rain	9:06	9:16	AMGO	American Goldfinch	<i>Spinus tristis</i>	S5	50	360	S	1	
4-Jul-25	6	19	1	Cloudy, Rain	9:39	9:49	VEER	Veery	<i>Catharus fuscus</i>	S4B	70	25	S	1	
4-Jul-25	6	19	1	Cloudy, Rain	9:39	9:49	AMGO	American Goldfinch	<i>Spinus tristis</i>	S5	90	40	S	1	
4-Jul-25	6	19	1	Cloudy, Rain	9:39	9:49	BTGW	Black-throated Green Warbler	<i>Setophaga vires</i>	S5B	50	70	S	1	
4-Jul-25	6	19	1	Cloudy, Rain	9:39	9:49	BAWW	Black-and-white Warbler	<i>Mniotilta varia</i>	S5B	10	120	S	1	
4-Jul-25	6	19	1	Cloudy, Rain	9:39	9:49	DELU	Dark-eyed Junco	<i>Junco hyemalis</i>	S5	40	120	S	1	
4-Jul-25	6	19	1	Cloudy, Rain	9:39	9:49	BTGW	Black-throated Green Warbler	<i>Setophaga vires</i>	S5B	30	145	S	1	
4-Jul-25	6	19	1	Cloudy, Rain	9:39	9:49	AMRO	American Robin	<i>Turdus migratorius</i>	S5B	75	150	S	1	

4-Jul-25	6	19	1	Cloudy, Rain	9:39	9:49	BABW	Bay-breasted Warbler	Setophaga castanea	S4B, S4S5M	35	200	S	1
4-Jul-25	6	19	1	Cloudy, Rain	9:39	9:49	HETH	Hermit Thrush	Catharus guttatus	S5B	75	235	S	1
4-Jul-25	6	19	1	Cloudy, Rain	9:39	9:49	BTGW	Black-throated Green Warbler	Setophaga virens	S5B	50	300	S	1
4-Jul-25	6	19	1	Cloudy, Rain	9:39	9:49	OVEN	Ovenbird	Seiurus aurocapilla	S5B	95	320	S	1

Date	ID	Temp	Beaufort	Weather	Species Code	Start (am)	End (am)	Common Name	Scientific Name	S rank	Distance (m)	Bearing	Breeding Code	Number	Notes
6-Jun-25	1	14	0	Cloudy, Rain	BAWW	8:00	8:10	Black-and-white Warbler	<i>Mniotilta varia</i>	S5B	50	30	S	1	
6-Jun-25	1	14	0	Cloudy, Rain	DEIU	8:00	8:10	Dark-eyed Junco	<i>Junco hyemalis</i>	S5	25	50	S	2	
6-Jun-25	1	14	0	Cloudy, Rain	BAWW	8:00	8:10	Black-and-white Warbler	<i>Mniotilta varia</i>	S5B	50	120	S	1	
6-Jun-25	1	14	0	Cloudy, Rain	HAWO	8:00	8:10	Hairy Woodpecker	<i>Dryobates villosus</i>	S5	75	120	S	1	
6-Jun-25	1	14	0	Cloudy, Rain	MAWA	8:00	8:10	Magnolia Warbler	<i>Setophaga magnolia</i>	S5B	50	150	S	1	
6-Jun-25	1	14	0	Cloudy, Rain	OVEN	8:00	8:10	Ovenbird	<i>Seiurus auricapilla</i>	S5B	70	180	S	1	
6-Jun-25	1	14	0	Cloudy, Rain	REVI	8:00	8:10	Red-eyed Vireo	<i>Vireo olivaceus</i>	S5B	50	225	S	1	
6-Jun-25	1	14	0	Cloudy, Rain	MAWA	8:00	8:10	Magnolia Warbler	<i>Setophaga magnolia</i>	S5B	35	250	S	1	
6-Jun-25	1	14	0	Cloudy, Rain	AMRO	8:00	8:10	American Robin	<i>Turdus migratorius</i>	S5B	35	300	S	1	
6-Jun-25	1	14	0	Cloudy, Rain	DEIU	8:00	8:10	Dark-eyed Junco	<i>Junco hyemalis</i>	S5	20	315	S	1	
6-Jun-25	1	14	0	Cloudy, Rain	CHIP	8:00	8:10	Chipping Sparrow	<i>Spizella passerina</i>	S5B	30	320	S	1	
6-Jun-25	1	14	0	Cloudy, Rain	REVI	8:00	8:10	Red-eyed Vireo	<i>Vireo olivaceus</i>	S5B	75	315	S	1	
6-Jun-25	2	12	0	Cloudy, Rain	BTGW	6:52	7:02	Black-throated Green Warbler	<i>Setophaga virens</i>	S5B	75	10	S	1	
6-Jun-25	2	12	0	Cloudy, Rain	BAWW	6:52	7:02	Black-and-white Warbler	<i>Mniotilta varia</i>	S5B	20	60	S	1	
6-Jun-25	2	12	0	Cloudy, Rain	COYT	6:52	7:02	Common Yellowthroat	<i>Geothlypis trichas</i>	S5B	50	150	S	1	
6-Jun-25	2	12	0	Cloudy, Rain	BTGW	6:52	7:02	Black-throated Green Warbler	<i>Setophaga virens</i>	S5B	90	175	S	1	
6-Jun-25	2	12	0	Cloudy, Rain	MAWA	6:52	7:02	Magnolia Warbler	<i>Setophaga magnolia</i>	S5B	55	190	S	1	
6-Jun-25	2	12	0	Cloudy, Rain	WTSP	6:52	7:02	White-throated Sparrow	<i>Zonotrichia albicollis</i>	S5B	25	210	S	1	
6-Jun-25	2	12	0	Cloudy, Rain	PUFI	6:52	7:02	Purple Finch	<i>Haemorhous purpureus</i>	S4S5B,SUN,SSM	35	270	S	1	
6-Jun-25	2	12	0	Cloudy, Rain	BTGW	6:52	7:02	Black-throated Green Warbler	<i>Setophaga virens</i>	S5B	90	270	S	1	
6-Jun-25	2	12	0	Cloudy, Rain	OVEN	6:52	7:02	Ovenbird	<i>Seiurus auricapilla</i>	S5B	55	325	S	1	
6-Jun-25	3	12	0	Cloudy, Rain	BTGW	7:06	7:16	Black-throated Green Warbler	<i>Setophaga virens</i>	S5B	75	30	S	1	
6-Jun-25	3	12	0	Cloudy, Rain	BAWW	7:06	7:16	Black-and-white Warbler	<i>Mniotilta varia</i>	S5B	50	30	S	1	
6-Jun-25	3	12	0	Cloudy, Rain	OVEN	7:06	7:16	Ovenbird	<i>Seiurus auricapilla</i>	S5B	50	45	S	1	
6-Jun-25	3	12	0	Cloudy, Rain	AMGO	7:06	7:16	American Goldfinch	<i>Spinus tristis</i>	S5	25	90	V	4	
6-Jun-25	3	12	0	Cloudy, Rain	COYT	7:06	7:16	Common Yellowthroat	<i>Geothlypis trichas</i>	S5B	75	75	S	1	
6-Jun-25	3	12	0	Cloudy, Rain	RWBB	7:06	7:16	Red-winged Blackbird	<i>Agelaius phoeniceus</i>	S4B	15	145	S	1	
6-Jun-25	3	12	0	Cloudy, Rain	BTGW	7:06	7:16	Black-throated Green Warbler	<i>Setophaga virens</i>	S5B	100	145	S	1	
6-Jun-25	3	12	0	Cloudy, Rain	REVI	7:06	7:16	Red-eyed Vireo	<i>Vireo olivaceus</i>	S5B	75	150	S	1	
6-Jun-25	3	12	0	Cloudy, Rain	AMRS	7:06	7:16	American Redstart	<i>Setophaga ruticilla</i>	S5B	30	180	S	1	
6-Jun-25	3	12	0	Cloudy, Rain	YRWA	7:06	7:16	Yellow-rumped Warbler	<i>Setophaga coronata</i>	S5B	45	240	S	1	
6-Jun-25	3	12	0	Cloudy, Rain	OVEN	7:06	7:16	Ovenbird	<i>Seiurus auricapilla</i>	S5B	30	260	S	1	
6-Jun-25	3	12	0	Cloudy, Rain	REVI	7:06	7:16	Red-eyed Vireo	<i>Vireo olivaceus</i>	S5B	35	305	S	1	
6-Jun-25	3	12	0	Cloudy, Rain	COYT	7:06	7:16	Common Yellowthroat	<i>Geothlypis trichas</i>	S5B	75	325	S	1	
6-Jun-25	3	12	0	Cloudy, Rain	OVEN	7:06	7:16	Ovenbird	<i>Seiurus auricapilla</i>	S5B	100	350	S	1	
6-Jun-25	4	14	0	Cloudy, Rain	HAWO	8:28	8:38	Hairy Woodpecker	<i>Dryobates villosus</i>	S5	75	25	S	1	
6-Jun-25	4	14	0	Cloudy, Rain	AMGO	8:28	8:38	American Goldfinch	<i>Spinus tristis</i>	S5	30	40	S	2	
6-Jun-25	4	14	0	Cloudy, Rain	AMRO	8:28	8:38	American Robin	<i>Turdus migratorius</i>	S5B	50	100	S	1	
6-Jun-25	4	14	0	Cloudy, Rain	OVEN	8:28	8:38	Ovenbird	<i>Seiurus auricapilla</i>	S5B	15	140	S	1	
6-Jun-25	4	14	0	Cloudy, Rain	BTGW	8:28	8:38	Black-throated Green Warbler	<i>Setophaga virens</i>	S5B	75	200	S	1	
6-Jun-25	4	14	0	Cloudy, Rain	BTGW	8:28	8:38	Black-throated Green Warbler	<i>Setophaga virens</i>	S5B	75	300	S	1	
6-Jun-25	4	14	0	Cloudy, Rain	BTGW	8:28	8:38	Black-throated Green Warbler	<i>Setophaga virens</i>	S5B	50	330	S	1	
6-Jun-25	5	12	0	Cloudy, Rain	HETH	6:35	6:45	Hermit Thrush	<i>Catharus guttatus</i>	S5B	75	30	S	1	
6-Jun-25	5	12	0	Cloudy, Rain	AMRO	6:35	6:45	American Robin	<i>Turdus migratorius</i>	S5B	50	80	S	1	
6-Jun-25	5	12	0	Cloudy, Rain	CHIP	6:35	6:45	Chipping Sparrow	<i>Spizella passerina</i>	S5B	80	90	S	1	
6-Jun-25	5	12	0	Cloudy, Rain	HETH	6:35	6:45	Hermit Thrush	<i>Catharus guttatus</i>	S5B	25	110	S	1	
6-Jun-25	5	12	0	Cloudy, Rain	BAWW	6:35	6:45	Black-and-white Warbler	<i>Mniotilta varia</i>	S5B	40	190	S	1	
6-Jun-25	5	12	0	Cloudy, Rain	MAWA	6:35	6:45	Magnolia Warbler	<i>Setophaga magnolia</i>	S5B	50	225	S	1	
6-Jun-25	5	12	0	Cloudy, Rain	AMRO	6:35	6:45	American Robin	<i>Turdus migratorius</i>	S5B	75	250	S	1	
6-Jun-25	5	12	0	Cloudy, Rain	BTGW	6:35	6:45	Black-throated Green Warbler	<i>Setophaga virens</i>	S5B	65	270	S	1	
6-Jun-25	5	12	0	Cloudy, Rain	DEIU	6:35	6:45	Dark-eyed Junco	<i>Junco hyemalis</i>	S5	30	290	S	1	

Attachment I-2
Breeding Bird Data
June 6, 2025

Proj #: 103269.002

6-Jun-25	5	12	0	Cloudy, Rain	BTGW	6:35	6:45	Black-throated Green Warbler	Setophaga virens	S5B	100	305	S	1
6-Jun-25	5	12	0	Cloudy, Rain	AMCR	6:35	6:45	American Crow	Corvus brachyrhynchos	S5	65	340	V	2
6-Jun-25	6	14	0	Cloudy, Rain	COYT	7:30	7:40	Common Yellowthroat	Geothlypis trichas	S5B	100	20	S	1
6-Jun-25	6	14	0	Cloudy, Rain	AMGO	7:30	7:40	American Goldfinch	Spinus tristis	S5	50	25	S	1
6-Jun-25	6	14	0	Cloudy, Rain	SOSP	7:30	7:40	Song Sparrow	Melospiza melodia	S5B	65	35	S	1
6-Jun-25	6	14	0	Cloudy, Rain	BTGW	7:30	7:40	Black-throated Green Warbler	Setophaga virens	S5B	100	45	S	1
6-Jun-25	6	14	0	Cloudy, Rain	YRWA	7:30	7:40	Yellow-rumped Warbler	Setophaga coronata	S5B	60	55	S	1
6-Jun-25	6	14	0	Cloudy, Rain	HAWO	7:30	7:40	Hairy Woodpecker	Dryobates villosus	S5	15	45	S	1
6-Jun-25	6	14	0	Cloudy, Rain	BTGW	7:30	7:40	Black-throated Green Warbler	Setophaga virens	S5B	30	60	S	1
6-Jun-25	6	14	0	Cloudy, Rain	OVEN	7:30	7:40	Ovenbird	Seiurus aurocapilla	S5B	75	60	S	1
6-Jun-25	6	14	0	Cloudy, Rain	REVI	7:30	7:40	Red-eyed Vireo	Vireo olivaceus	S5B	100	55	S	1
6-Jun-25	6	14	0	Cloudy, Rain	BLJA	7:30	7:40	Blue Jay	Cyanocitta cristata	S5	75	85	S	1
6-Jun-25	6	14	0	Cloudy, Rain	AMCR	7:30	7:40	American Crow	Corvus brachyrhynchos	S5	80	110	V	1
6-Jun-25	6	14	0	Cloudy, Rain	AMGO	7:30	7:40	American Goldfinch	Spinus tristis	S5	40	140	S	1
6-Jun-25	6	14	0	Cloudy, Rain	BAWW	7:30	7:40	Black-and-white Warbler	Mniotilta varia	S5B	50	200	S	1
6-Jun-25	6	14	0	Cloudy, Rain	OVEN	7:30	7:40	Ovenbird	Seiurus aurocapilla	S5B	100	315	S	1
6-Jun-25	6	14	0	Cloudy, Rain	AMRS	7:30	7:40	American Redstart	Setophaga ruticilla	S5B	70	340	S	1
6-Jun-25	6	14	0	Cloudy, Rain	BAWW	7:30	7:40	Black-and-white Warbler	Mniotilta varia	S5B	55	360	S	1
6-Jun-25	6	14	0	Cloudy, Rain	MAWA	7:30	7:40	Magnolia Warbler	Setophaga magnolia	S5B	30	360	S	1



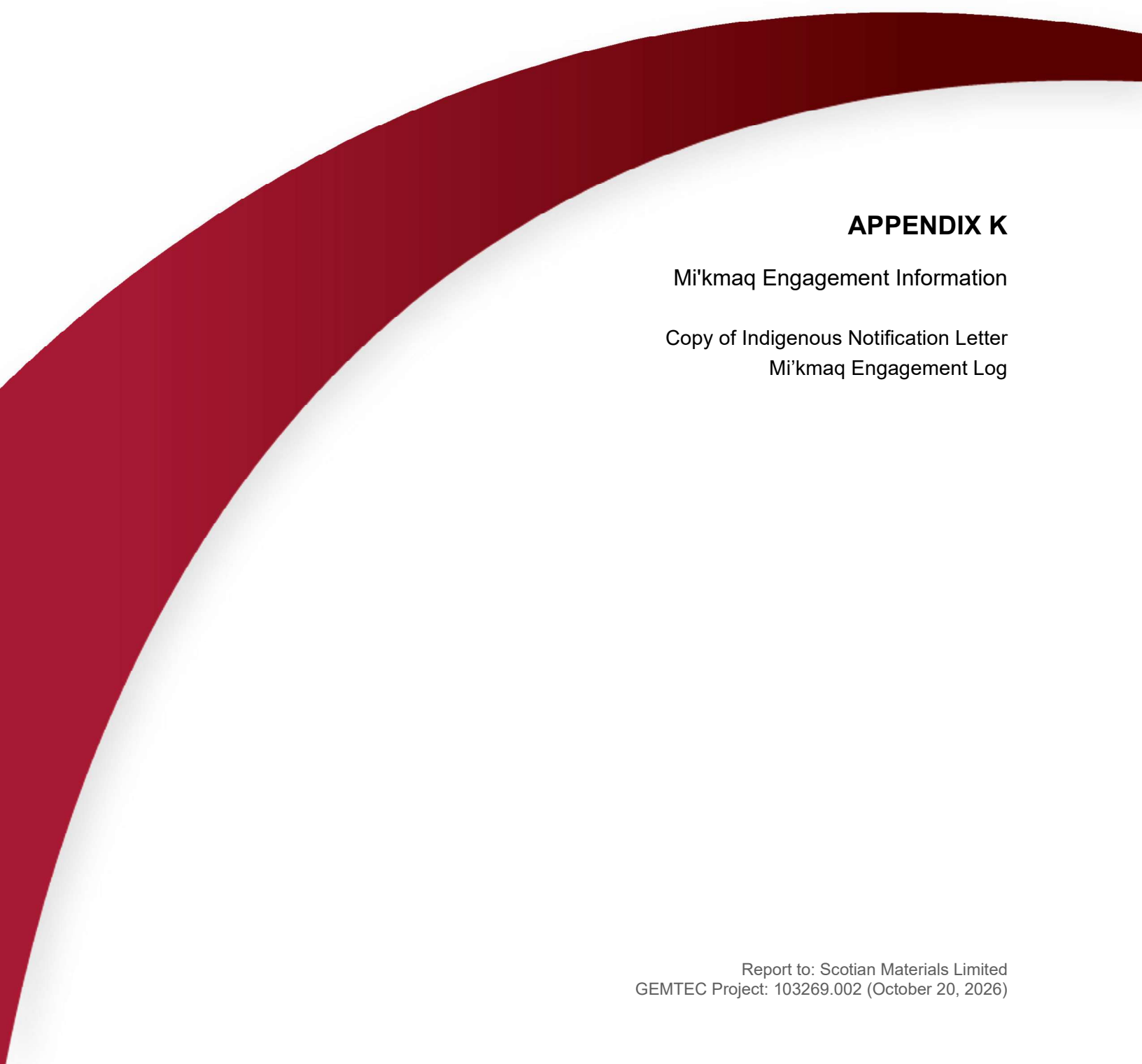
APPENDIX J

Key Project Personnel

The following are key project personnel from GEMTEC who completed field studies and contributed to the preparation of the EA Registration document for Phase 3 and 4 of the Goffs Quarry.

Key Project Personnel for Goffs Quarry Phase 3 & 4 Environmental Assessment

Name	Role
Stewart Gibson, PMP	Project Manager
Paul Vanderlaan, P.Eng.	Senior Environmental Regulatory Specialist
Justin Chase, M.Sc.	Senior Environmental Scientist; Vegetation Lead
Troy Poirier, P.Eng.	Water Resources Lead
Vernon Banks, M.Sc., P.Geo., FGC	Hydrogeological Lead
Leslie Williams, P.Eng.	Health and Safety Coordinator
Kurtis Westbury, M.Sc.	Intermediate Biologist; Fish & Fish Habitat Lead
Laura Moore, B.Sc.	Intermediate Biologist; Wetlands Lead
Connor McAlary, B.Wc.	Biologist; Avian Field Crew Lead
Bella Lord B.Sc., Dip.	Biologist
Dariia Androshchuk M.Sc.	Environmental Assessment Technician
Jordan Murphy, CET, EPt.	Environmental Technologist
Ramiro Munoz Ramirez, P.Geo.	Hydrogeologist



APPENDIX K

Mi'kmaq Engagement Information

Copy of Indigenous Notification Letter
Mi'kmaq Engagement Log

August 2026

File: 103269.002

[Recipient Information]

Re: Goffs Quarry Expansion, Phases 3 and 4 – Project Introduction
171 Resource Road, Goffs, Nova Scotia

To Whom It May Concern:

This letter was prepared by Scotian Materials Limited (Scotian Materials) and GEMTEC Consulting Engineers and Scientists Limited (GEMTEC) to introduce proposed quarry expansion project in Goffs, Nova Scotia. The project is subject to provincial Environmental Assessment (EA), and the proponent is seeking input from local First Nations and indigenous organizations during environmental field studies and conceptual project planning. This letter provides a brief overview of the project and the completed field studies to support the EA Registration.

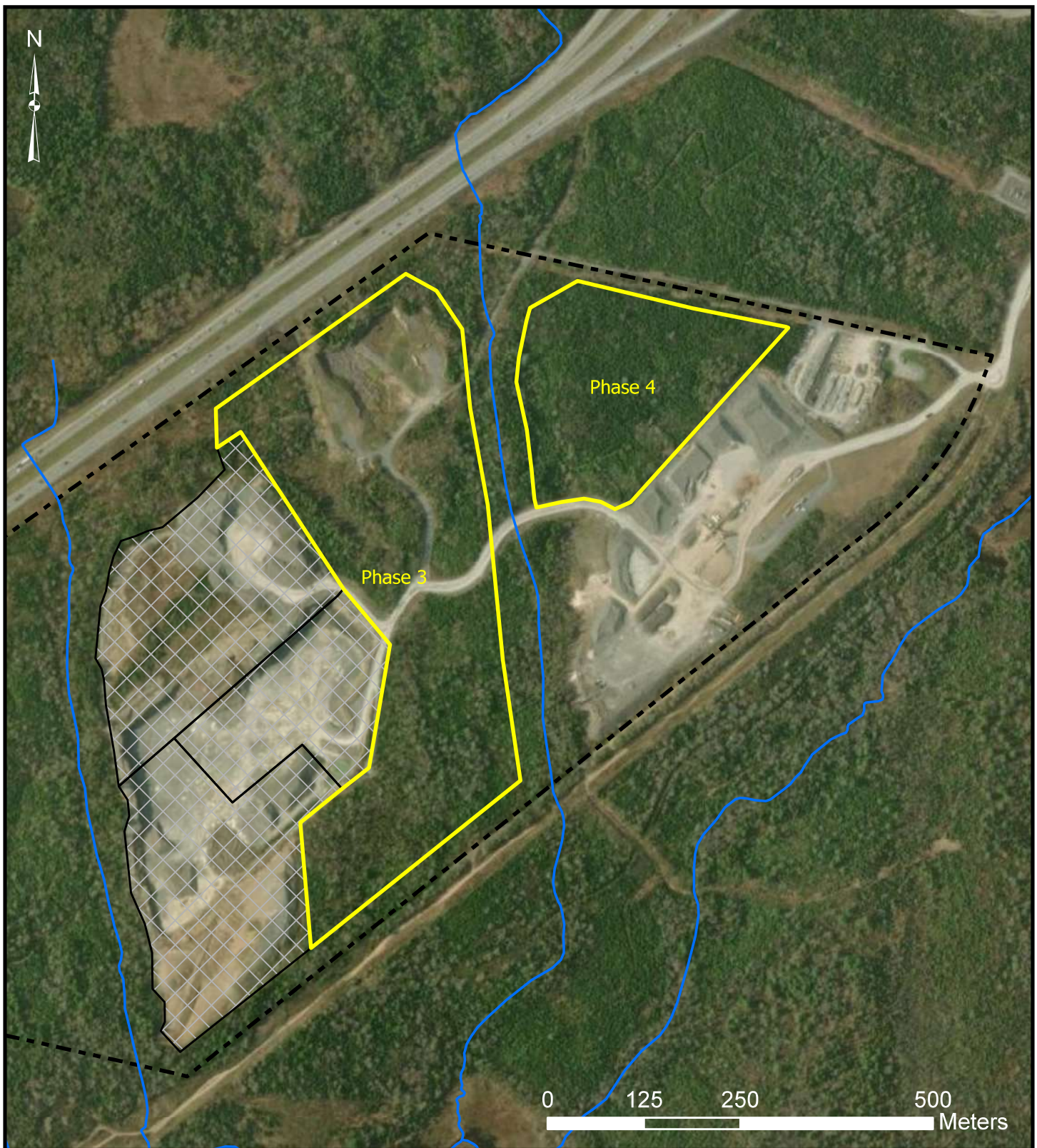
PROJECT OVERVIEW

Scotian Materials Ltd. is a privately owned Canadian company based in Nova Scotia specializing in the production and supply of construction aggregates and related materials. Scotian Materials currently operates an 18.4 ha construction aggregate quarry in Goffs, Nova Scotia. The existing quarry consists of an open pit and aggregate processing facility, including the original quarry and the Phase 1 and 2 expansions, operated under the Industrial Approval No. 2016-095664-03. The proposed expansion is intended to support the long-term supply of aggregate materials for regional infrastructure and construction projects, including roads, asphalt production, airport infrastructure, and residential and commercial development. The property has a history of quarry operations dating back to the 1960s. The existing quarry has been operating since 2017 and continues to provide essential construction materials, support local employment, and contribute to the provincial construction and transportation sectors while complying with provincial environmental standards.

The proposed expansion involves a total area of 23.2 hectares and consists of two additional phases – Phase 3 and Phase 4 (Figure 1). The Project scope includes the construction, operation, decommissioning, and restoration of the expanded quarry.

Including the original quarry (4.04 ha), the Phase 1 and 2 expansions (14.35 ha), and the proposed Phase 3 and 4 expansions (23.2 ha), the total quarry footprint will increase to approximately 41.6 ha within the 100 ha property (PID 00505941). The average production rate of the quarry will remain at approximately 300,000 tonnes per year, with the possibility of limited

periods of increased production should significant aggregate contracts require. Based on current estimates, there are over 14 million tonnes of rock reserves within the Project footprint. Depending on market demand, operation of the proposed Goffs Quarry Expansion will take place over a period of 25 to 30 years.



Legend:		Note:	
	Existing Phases		Project Development Area (PDA)
	Property Boundary (PID 00505941)		Watercourses (NSHN)

Project: <div>Goffs Quarry Phase 3 & 4 Expansion Goffs, Nova Scotia</div>				Drawing: Project Development Area (PDA)		 <div>GEMTEC CONSULTING ENGINEERS AND SCIENTISTS</div>
				Client: Scotian Materials Ltd.		
Drawn by:	Checked by:	Date:	Project Number:	Drawing Number:	Revision No.	
JC	SG	November 2025	103269.002	Figure 3.1	2	

REGULATORY CONTEXT

In 2018, Scotian Materials Limited registered the Goffs Quarry Expansion Project, covering all proposed phases, for environmental assessment under Part IV of the Environment Act. However, the Minister approved only Phases 1 and 2. It was determined that any future development of Phases 3 and 4 would require a new environmental assessment that considers the findings and monitoring information arising from the operation of Phases 1 and 2.

The proposed expansion of the existing quarry beyond its current approved limits requires registration as a Class I Undertaking under Nova Scotia's Environmental Assessment Regulations.

GEMTEC has prepared an EA Registration document on behalf of Scotian Materials, based on the *proponent's guide to Environmental Assessment* (Nova Scotia Department of Environment and Climate Change, 2025), and the sector-specific guideline "Environmental Assessment Supplemental Checklist: Pits and Quarries" (Nova Scotia Department of Environment and Climate Change, 2025). As well as the *Guide to Preparing an EA Registration Document for Pit and Quarry Developments in Nova Scotia* (Government of Nova Scotia, 2009). Furthermore, the proposed expansion project adheres to the *Pit and Quarry Guidelines* (Nova Scotia Environment and Labour, 1999).

BASELINE ENVIRONMENTAL STUDIES

A combination of field surveys and desktop studies were proposed to characterize the existing environment and to delineate environmental features within the Project Development Area (PDA). The following field studies were completed in 2024 and 2025:

- wetland delineation and functional assessments,
- terrestrial habitat characterization,
- lichen survey,
- fish and fish habitat surveys,
- breeding bird surveys (i.e., point counts),
- passage migration and stopover migration surveys,
- nightjar surveys,
- a surface water hydrology assessment with seasonal flow measurements, and
- groundwater monitoring in support of a hydrogeological assessment.

Several additional studies were completed previously, in support of the original 2019 EA registration, including comprehensive vascular plant surveys and an archaeological impact assessment.

More detail on any of these field programs can be provided upon request.

Several other environmental components were assessed based on desktop review only, including local air quality, carbon sources and sinks, and assessment of socio-economic impacts (e.g., local economy, land use, transportation, etc.).

INDIGENOUS ENGAGEMENT

Scotian Materials completed considerable public and indigenous engagement prior to the development of the previous Phase 1 and 2 expansions. Those earlier engagement efforts also included Phases 3 and 4. However, as the Minister of Environment has required a new EA Registration for Phases 3 and 4, it is appropriate to provide a project update to the Mi'kmaq peoples and organizations, and notification of the planned expansion into Phase 3 and 4 and the updated EA.

GEMTEC has been retained to prepare the EA registration documentation and facilitate the EA review.

Scotian Materials is committed to meaningful engagement with indigenous communities and organizations throughout the project planning and development. As an initial step in your involvement with this Project, Scotian Materials and GEMTEC would greatly appreciate receiving your perspectives, concerns, and feedback on the proposed Goffs Quarry Phase 3 and 4 Expansion Project.

Additionally, we would welcome the opportunity to meet—either in person or virtually—to provide further information about the Project and to discuss any questions, concerns, or recommendations you may have.

Scotian Materials would also appreciate your guidance on appropriate engagement approaches, as well as recommendations for Mi'kmaq First Nations involvement in the planning and implementation of the Goffs Quarry Phase 3 and 4 Expansion Project.

Should you have any questions about the information provided in this letter, please contact:

Nolan Chase, P.Tech.

Quarry Operations Manager
Scotians Material Ltd.

nolan.chase@euroviamaritimes.ca

Stewart Gibson, H.B.A., PMP

Ecological and Permitting Services Lead
GEMTEC Consulting Engineers and Scientists Limited

Stewart.Gibson@gemtec.ca

Summary of Concerns Raised and Proponent Responses During Indigenous Engagement for Goffs Quarry Phases 3 & 4

Community or Organization	Format	Issues or Requests	Proponent Response
Sipekne'katik First Nation; Millbrook First Nation; Native Council of Nova Scotia; the Assembly of Nova Scotia Mi'kmaw Chiefs, and the Kwilmu'kw Maw-klusuaqn Negotiation Office (KMKNO)	Letters attached to emails, all sent by GEMTEC on behalf of Scotian Materials on August 25, 2026.	Various – See Below	Various – See Below
Millbrook First Nation	Email received on August 25, 2026, from the Administrative Assistant to the MFN Chief and Council	No response was received other than confirmation that the email containing the notification letter had been received.	N/A

Cont.

Hive Engineering (Representing Sipekne'katik First Nation)	Phone call with Justin Chase of GEMTEC on August 26, 2026	The consultant from Hive asked various questions about the project, mainly related to fish habitat, Fisheries Act authorizations, and engagement with Sipekne'katik.	GEMTEC provided high-level information on existing fish and fish habitat and anticipated impacts. GEMTEC also clarified that a Fisheries Act authorization had not previously been required and that none was anticipated for the Phase 3 and 4 expansion. Additional information was provided to Hive and Sipekne'katik by email in the following days.
Hive Engineering (Representing Sipekne'katik First Nation)	Emails between Justin Chase and Hive on August 27, 2026	Hive requested existing permitting records, information on any completed MEKS, and responses to various other project questions.	GEMTEC and Scotian Materials provided information, including copies of several existing permitting records (previous EA conditions, the Industrial Approval, and the Wetland Alteration Approval); information on the anticipated impacts of the expansion on fish and fish habitat; a copy of the 2019 MEKS; and high- level information on the predicted groundwater impacts of the Phase 3 and 4 expansion.
Hive Engineering (Representing Sipekne'katik First Nation)	Emails between Justin Chase and Hive on August 28 and September 10, 2026	Hive requested a copy of the previous record of Mi'kmaq engagement from the original EA.	GEMTEC provided a copy of the 2018 Mi'kmaq engagement log on September 10, 2026.

Hive Engineering (Representing the Director of Consultation from Sipekne'katik First Nation)	Email to Justin Chase on September 17, 2026	The consultant from Hive, on behalf of the Director of Consultation, sent an email with information about the Sipekne'katik Governance Initiative (SGI).	On behalf of Scotian Materials, GEMTEC responded to Hive on September 21, 2026, acknowledging Sipekne'katik's request to engage through the SGI process and receipt of information about that process.
Maritime Aboriginal Aquatic Resources Secretariat	MS Teams Meeting, September 17, 2026	Various questions about the impacts of phases 1 & 2, general anticipated impacts of expansion, and questions about fish and fish habitat	GEMTEC and Scotian Materials representatives provided a PowerPoint presentation introducing the project, EA studies, and anticipated impacts. They also discussed observed impacts of previous phases (e.g., groundwater changes). Fish and fish habitat, along with other ecological components, were central to many of the concerns discussed during the meeting.
Maritime Aboriginal Aquatic Resources Secretariat	MS Teams Meeting, September 17, 2026	Question about wetland removal and Wetlands of Special Significance (WSS) classification	GEMTEC confirmed that neither wetland is a WSS. Wetland permitting and compensation will be addressed following EA approval.
Maritime Aboriginal Aquatic Resources Secretariat	MS Teams Meeting, September 17, 2026	Question about the presence of bank swallows and turtles	No bank swallows were observed during field surveys. No turtles were observed during field studies. ACCDC records identified snapping turtles within approximately 10 km of the site.

Maritime Aboriginal Aquatic Resources Secretariat	MS Teams Meeting, September 17, 2026	Question about bat habitat and surveys	No targeted bat surveys were conducted. Potential habitat and species at risk are addressed in the EA.
Maritime Aboriginal Aquatic Resources Secretariat	MS Teams Meeting, September 17, 2026	Questions about equipment and operations and turtle presence	Scotian Materials representative described equipment on site and operational details.
Maritime Aboriginal Aquatic Resources Secretariat	MS Teams Meeting, September 17, 2026	Questions about water balance and downstream flows	A water balance assessment was completed. The results will be included in the EA Registration Document. No significant changes in downstream flows are anticipated.
Maritime Aboriginal Aquatic Resources Secretariat	MS Teams Meeting, September 17, 2026	Question about water wells within areas affected by blasting	It was confirmed that there are no water wells within 800 m of the blasting areas, except for one project-owned well on site.
Maritime Aboriginal Aquatic Resources Secretariat	MS Teams Meeting, September 17, 2026	Questions about geology and potential contaminants	A GEMTEC hydrogeologist explained that bedrock units located farther north have the potential for acid generation, but the rock on site is not acid-generating. No results significantly different from background conditions were identified.



APPENDIX L

Public Involvement Information

Copy of Public Notification from Chronicle Herald
Open House Presentation Boards

NOTICE

Open House for Environmental Assessment

Scotian Materials Limited is planning to register a Class I Undertaking under the Nova Scotia *Environmental Assessment Regulations* for the proposed expansion of its existing quarry in Goffs, NS. The exist quarry at 171 Resource Rd has been operating since June 2017. The proposed expansion would increase the total quarry footprint from approximately 18.4 hectares to 41.6 hectares.

Scotian Materials Limited would like to invite interested members of the public to attend a Public Open House. This session is hosted by the company to share information regarding our proposed project, answer questions, and gather your feedback. We encourage all interested individuals, community groups, and stakeholder organizations to attend and participate.

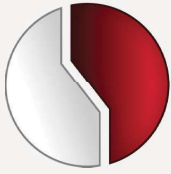
Open House Format: drop in format with poster board information stations and relevant subject experts.

Location: The Open House will be held at the Holiday Inn Express & Suites, 180 Pratt and Whitney Drive, near Halifax Stanfield International Airport.

Date and Time: October 1st, 2026 from 5:00 PM to 9:00 PM

Contact Us: Interested individuals can also reach out to the company with any questions or concerns about the proposed expansion by email at nolan.chase@euroviamaritimes.ca and Stewart.Gibson@gemtec.ca or by mail to:

Scotian Materials Limited
171 Resource Road
Goffs, Nova Scotia
B2T 0L2



GEMTEC

CONSULTING ENGINEERS
AND SCIENTISTS



YOUR RESOURCE. YOUR COMMUNITY. YOUR FUTURE

Scotian Materials Limited

Goffs Quarry – Expansion Phases 3 and 4

Environmental Assessment

Proponent:

Scotian Materials Limited

Location:

171 Resource Road, Goffs N.S.

Quarry History:

- Operating since June 2017 (9 years)
- Original quarry: 4.04 ha
- Phase 1 & 2 expansions: 14.35 ha
- Supported highway development, upgrading projects, and other road/local construction.

Product Types:

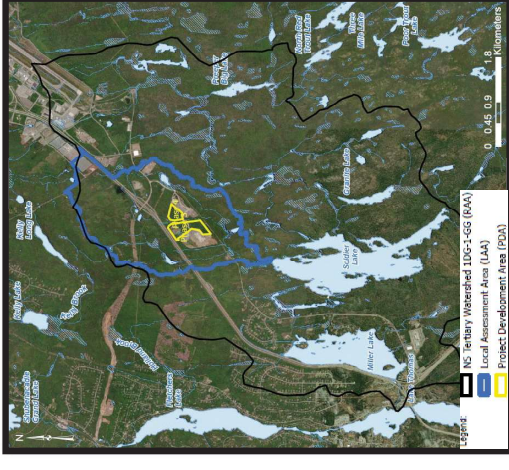
Construction aggregates including crushed stone, manufactured sands, and gravel supporting local market

Project Description



Expansion Details:

- Proposed Phase 3 & 4 expansions: 23.2 ha
- The total quarry footprint will increase from 18.4 ha to 41.6 ha
- The quarry will maintain an average production rate of approximately 300,000 tonnes per year.



Environmental Assessment Process

EA “Trigger”:

The Project involves the expansion of an existing quarry beyond its current approved boundaries and requires registration as a

Class I Undertaking under Nova Scotia's Environmental Assessment (EA) Regulations



How are impacts assessed?

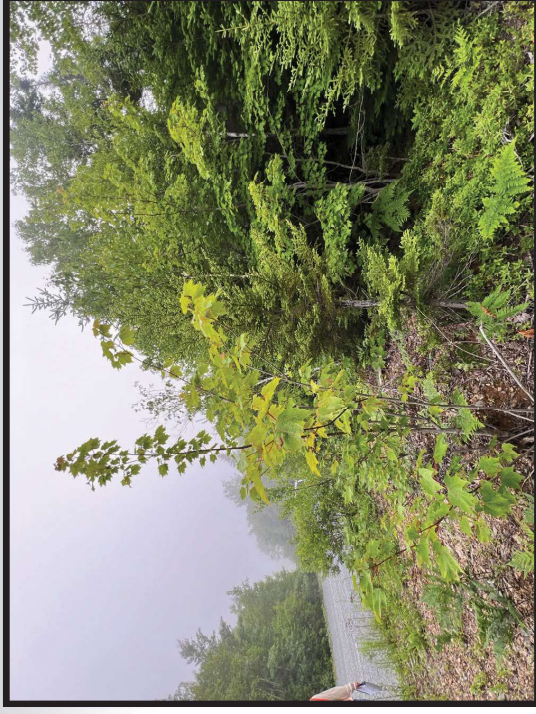
- Characterize existing environment
- Identify potential impact pathways
- Develop mitigation measures
- Reduce impacts to acceptable levels

Project Timeline:

- Project Initiated (First regulator check-in: 07/16/2025)
- Baseline Studies
- Preparation of EA
- Mi'kmaq and public engagement (pre-registration)
- Anticipated EA Registration (September 2026)
- Mi'kmaq and public engagement (40-day comment period)
- Minister's decision
- Clearing & Construction (Beginning 2027)
- Operation & Maintenance (2027-2057)
- Decommissioning & Restoration (Between 2057 and 2082)

Valued Components

Valued Components (VC) of the existing environment include physical and ecological features (biophysical), and socioeconomic conditions that could be affected by the Project. The disciplines evaluated as part of the baseline program are summarized in the table below.

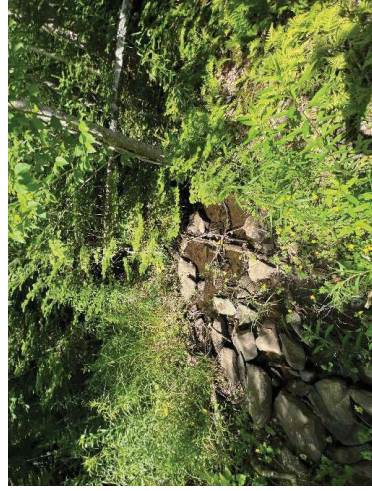


Physical Environment	Ecological Environment	Socio-Economic Conditions
<ul style="list-style-type: none"> Local Atmospheric Environment Climate Change Acoustic Environment Geology Groundwater Surface Water Resources 	<ul style="list-style-type: none"> Ecological Land Classification (ELC) Vegetation and Rare Plants Wetlands Fish and Fish Habitat Avifauna Terrestrial Wildlife (non-avian) Species at Risk Managed and Significant Areas 	<ul style="list-style-type: none"> Archaeology and Heritage Resources Community and Local Economy Public Health and Safety Transportation and Infrastructure Land and Resource Use Recreation and Tourism

Field Studies

As part of the EA, GEMTEC completed a comprehensive suite of field studies to characterize existing environmental conditions within the Project Area.

These studies established the environmental baseline used to assess potential project effects and identify measures to avoid, minimize, or mitigate environmental impacts.



Discipline	Dates	Studies
Hydrogeology	Summer-Fall 2025	Groundwater monitoring, well installation, assessment of local hydrogeological conditions, and water balance model updates
Surface Water	Spring-Fall 2025	Monitoring of surface water at locations upstream and downstream of the Project site
Rare Plants / ELC	Spring & Summer 2025	Collection of Species at Risk data, plant surveys, and documentation of incidental field observations
Lichens	Spring 2025	Rare lichen surveys (focus on epiphytic taxa)
Wetlands	September 2025	Delineation and Functional Assessments (WESP) of directly impacted wetlands
Avifauna	June-October 2025	Spring Migration, Breeding Bird, Nightjar. Updated bird surveys to assess avian presence and habitat use
Fish & Fish Habitat	Summer 2025	Fish and fish habitat assessments, including updated field surveys

Noise and Air Quality

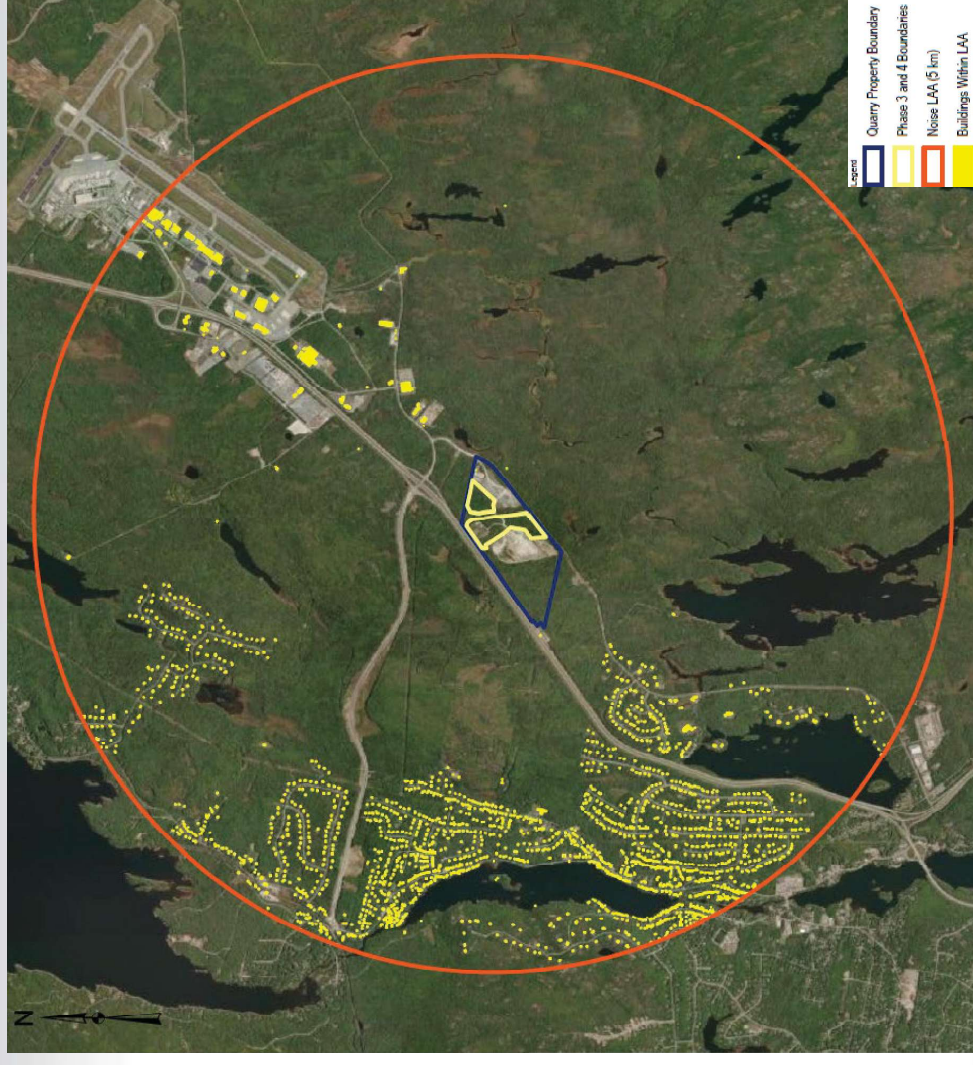
Predictive noise modelling for the previous EA assessed operations and drilling across all project phases predicted **33–36 dBA** at nearby residences (~1,500 m from Phase 3), complying with applicable noise limits.

Proposed mitigation measures include:

- Restricting construction and operation to daytime hours, where practical.
- Follow blasting setback and provincial guidelines.
- Regular maintain equipment and minimize idling.
- Enforcing site speed limits.
- Following appropriate truck loading, unloading, and hauling practices.
- Applying dust suppression measures as needed.

Within the 5 km acoustic LAA, **2,173** buildings were identified, including **1,782 dwellings** and **391 outbuildings**. Most are west of the LAA, with nearly all residences >2 km from the PDA. The closest residences (3–4 homes on Perrin Drive) are ~1–2 km southwest of the PDA.

Predicted noise and air quality are expected to be similar to current levels.



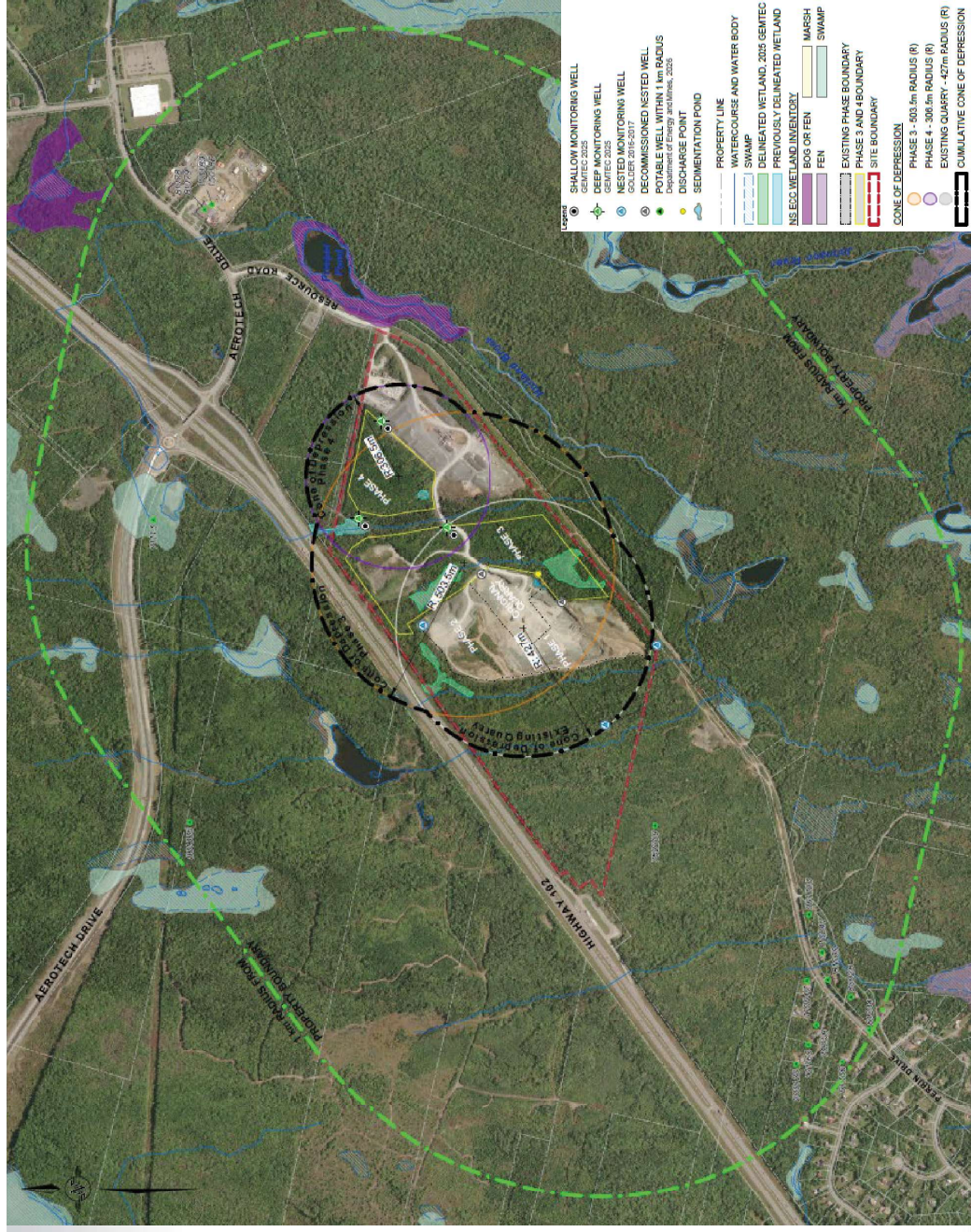
Hydrogeology (Groundwater)

Current groundwater levels across Goff Quarry ranged from 0.1 – 6.36 mbgs (115.94 – 108.79 masl), including the Phase 3 and 4 expansion areas.

RADIUS OF INFLUENCE:

Existing Quarry Pit	Phase 3 Expansion	Phase 4 Expansion
<ul style="list-style-type: none"> Groundwater zone of influence radius 427 m Fully extracted to 88 masl; estimated pit inflow 1,515 m³/day 	<ul style="list-style-type: none"> Groundwater zone of influence radius 503.5 m Fully extracted to 88 masl; estimated pit inflow 1,688 m³/day 	<ul style="list-style-type: none"> Groundwater zone of influence radius 306.5 m Fully extracted to 99 masl; estimated pit inflow 732 m³/day

The radius of influence reflects conservative assumptions, with current operations demonstrating less impact than anticipated.



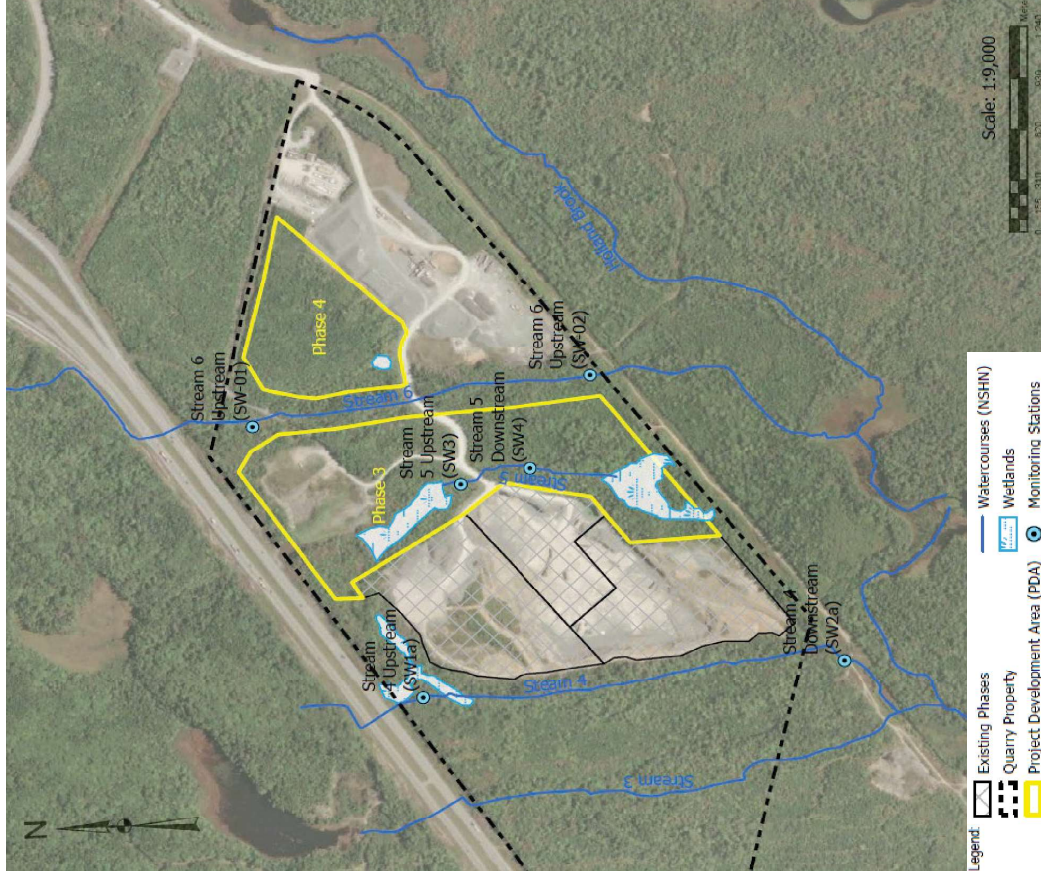
Surface Water

The Project is in the southern Miller Lake tertiary watershed, which drains into Soldier Lake within the Shubenacadie River watershed.

The following catchments were evaluated:

- ☐ Stream 4
 - ✓ Current: 27 ha; drains to the southwest property boundary.
 - ✓ Post-expansion: 54.4 ha; will include runoff from the Stream 5 catchment which will be collected in the Phase 3 expansion and discharged/diverted to Stream 4.
- ☐ Stream 5
 - ✓ Current: 24.1 ha; drains to the southwest boundary and includes a portion of the existing quarry.
 - ✓ Post-expansion: runoff will be collected in Phase 3 of the expanded Quarry and discharged/diverted to Stream 4.
- ☐ Stream 6
 - ✓ Current: 49.2 ha; drains to the southeast property boundary.
 - ✓ Post-expansion: 44.8 ha; catchment boundaries shift slightly due to Phases 3 and 4 of the Quarry expansion.

The quarry expansion will alter site drainage patterns, but controlled water management and discharge are expected to result in no measurable downstream effects.



Ecological Land Classification: Terrestrial Habitats and Wetlands

Five habitat types were identified within the PDA.

	Regenerating Forest	Mixedwood Forest	Anthropogenic Areas	Wetland	Tolerant Hardwood
PDA Habitat Composition (% of PDA)	54.3%	18.1%	16.8%	7.3%	3.4%
Direct Project Impacts (ha)	12.56 ha	4.31 ha	-	1.8 ha	0.81 ha

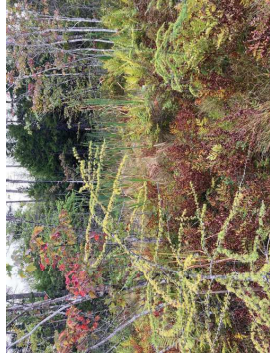
Wetland Characteristics and Functions

Wetland ID	Size (ha)	Existing	Proposed Development	Class	Impacts	Mitigation
4	1.05	Partially Altered	Phase 3	Swamp	Removal	Compensation plans
5	0.77	Yes	Phase 3	Marsh/Swamp	Removal	

Wetland 4

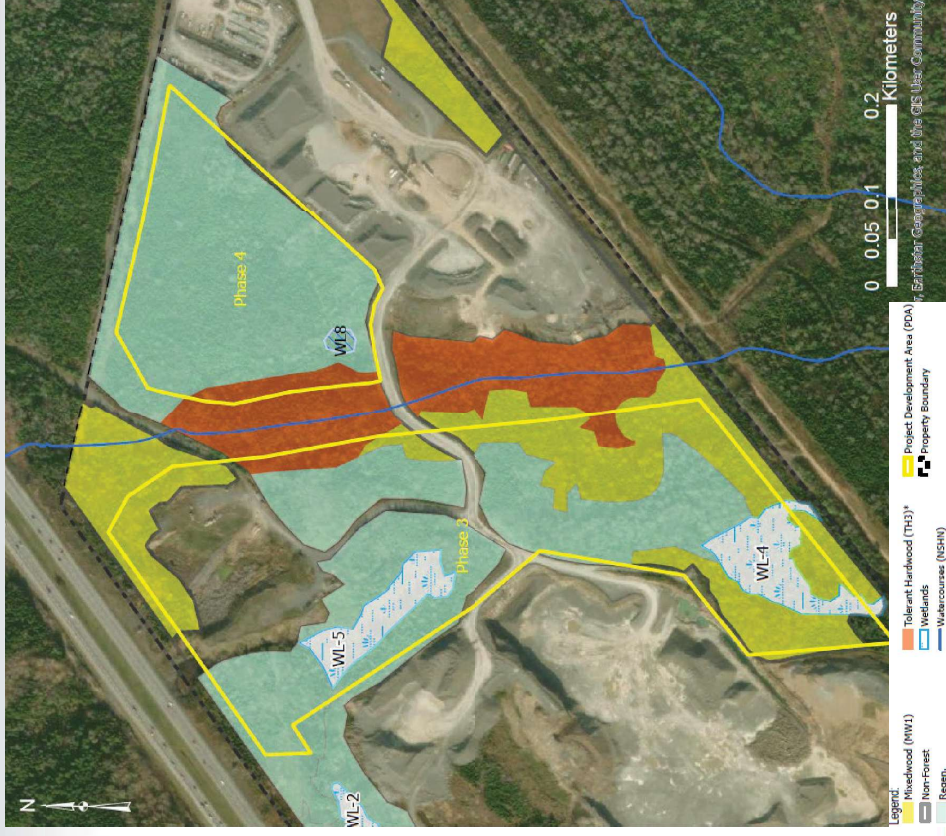


Wetland 5



Mitigation:

- Limit clearing and soil disturbance to essential areas.
- Erosion and sediment control.
- Avoid unnecessary clearing.
 - Use native species for revegetation and stabilization.
 - Environmental monitoring.
- Implement wetland compensation.



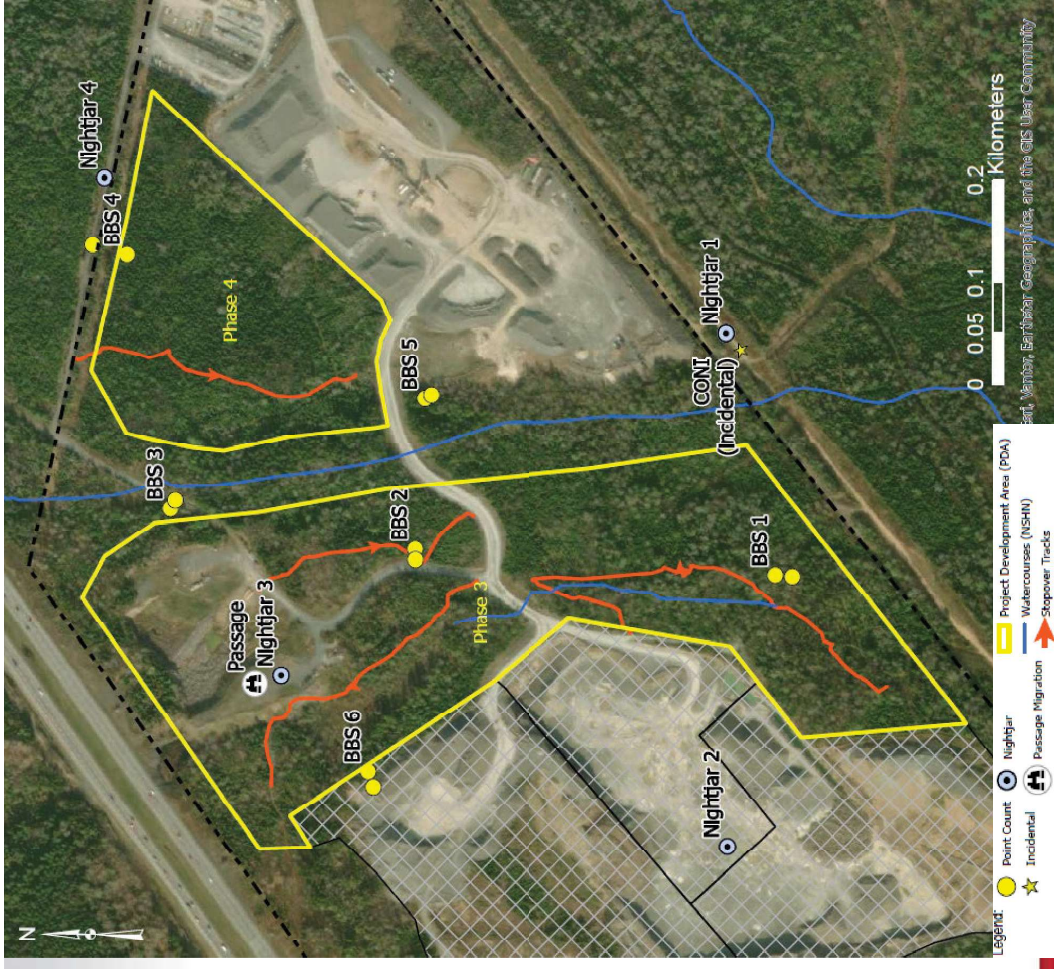
Avifauna and other Wildlife

Forty bird species were documented, including Common Nighthawk, a species of conservation concern, and a diversity of forest, wetland, and riparian birds.

No Species at Risk identified during the field programs.

Mitigation:

- Schedule major and disruptive clearing outside April 1–August 31 where practical.
- Complete nesting surveys before clearing during breeding season.
- Minimize clearing and progressively reclaim with native species.
- Control noise, vibration, and blasting.
- Establish buffers around occupied nests and properly manage waste.



Fish and Fish Habitat

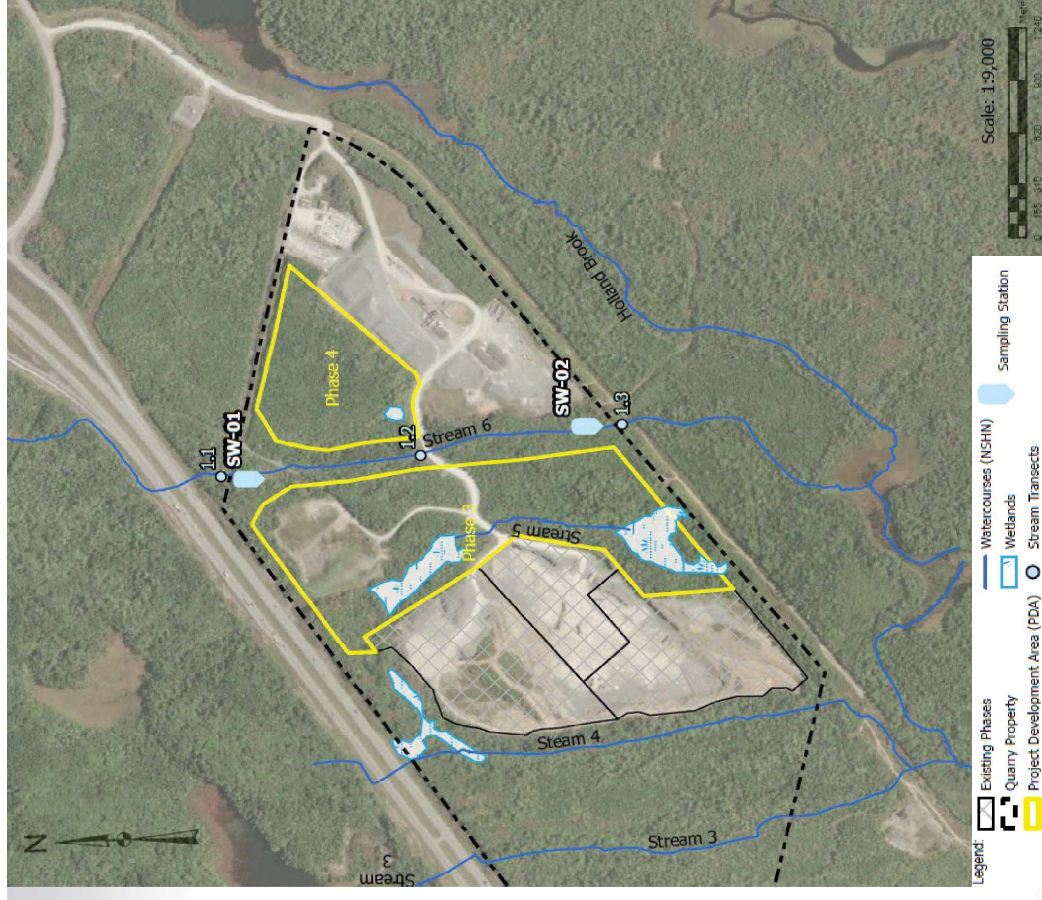
- ❑ Fish habitat assessments were completed along **Stream 6**, the primary watercourse separating **Phase 3 and Phase 4**.
- ❑ **Stream 5** is an ephemeral drainage feature and is **not considered fish habitat**. There is no connection to open water or watercourses.

Brook trout was the only species captured, consistent with expectations for small headwater streams in NS.



Mitigation:

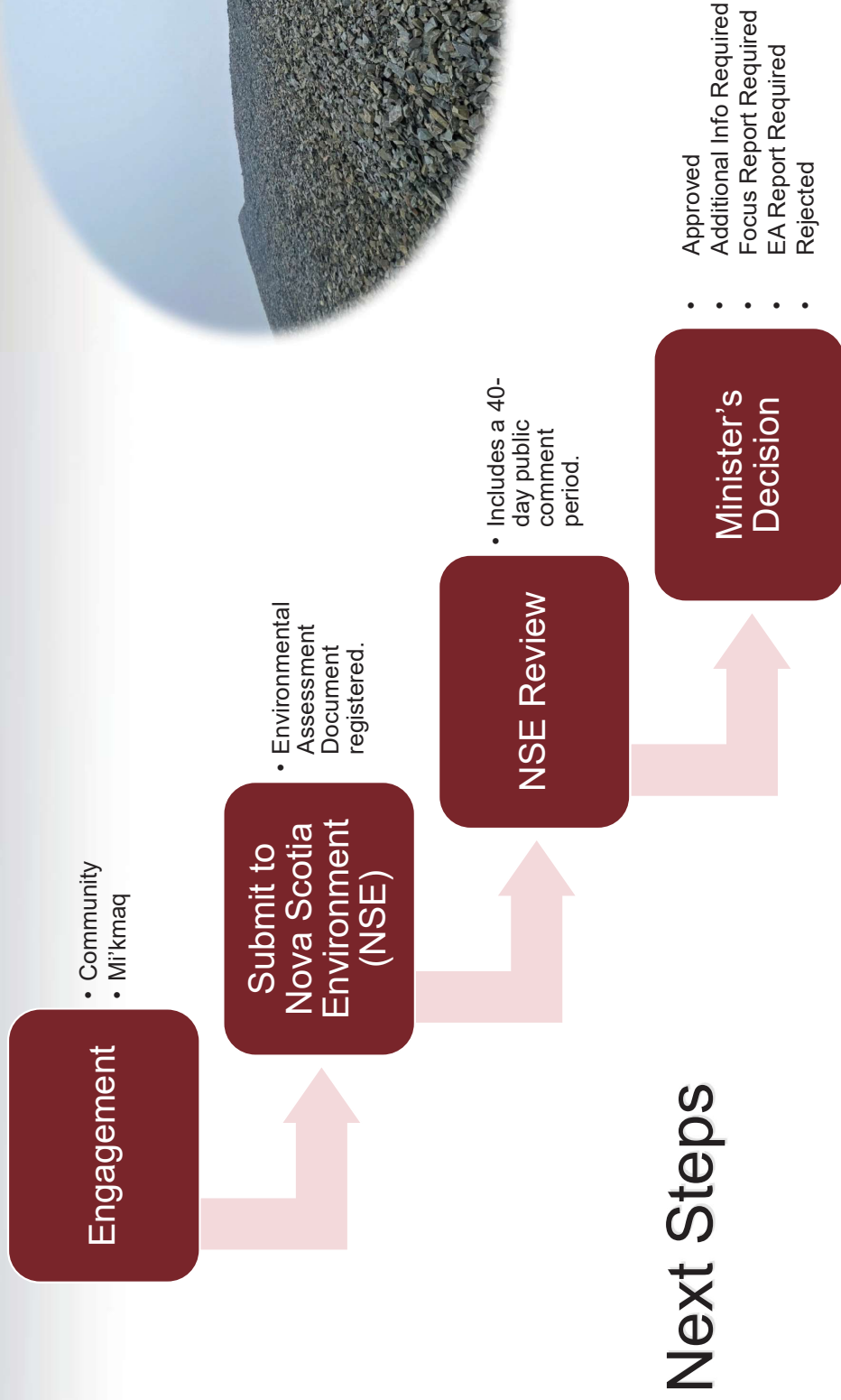
- Install and maintain erosion and sediment controls.
- Control dust with water or suppressants.
- Limit clearing and maintain riparian buffers.
- Maintain 30 m setbacks from watercourses/wetlands unless authorized.



Overall Environmental Effects and Mitigation

Managed through mitigation	Limited change	Little to no change
<u>Geology</u> (Slope stability monitoring and progressive restoration)	<u>Avifauna</u> (Timing of clearing and construction)	<u>Species at Risk</u> (Avoidance and timing measures)
<u>Ecological Land Classification</u> (Minimize clearing and progressive restoration)	<u>Groundwater</u> (Continued groundwater monitoring)	<u>Wildlife (non-avian)</u> (Wildlife observations and habitat restoration)
<u>Vegetation Communities</u> (Minimize clearing and progressive restoration)	<u>Surface Water</u> (Erosion controls and water-level monitoring)	<u>Fish and Fish Habitat</u> (Erosion and sediment controls)
<u>Wetlands</u> (Wetland compensation and post-construction monitoring)	<u>Climate Change</u> (Forest and wetland compensation; progressive restoration)	<u>Managed and Significant Areas</u> (No interaction with identified protected or significant areas)
	<u>Air Quality</u> (Dust control and monitoring)	<u>Socio-Economic Conditions</u> (Dust and noise controls)
	<u>Noise</u> (Daytime operations and noise/blast monitoring)	

Most effects are expected to be limited or minimal, with mitigation measures in place where needed.



Summary of Concerns Raised and Proponent Responses During Public Engagement for Goffs Quarry Phases 3 & 4

Date and Location	Issues or Requests	Proponent Response
September 10, 2026 CLC meeting in Goffs NS	Questions around quarry lifespan and need for the expansion.	Lifespan depends on production demand and usable rock quality; ~300,000 t/year is the historical average. Expansion increases the available resource/footprint, not the planned annual production rate
September 10, 2026 CLC meeting in Goffs NS	Comment that Some Miller Lake-area residents reported recent issues with wells/household water supplies running low and questioned potential quarry influence.	GEMTEC response that groundwater modelling predicts the quarry-related cone of depression will remain localized, with nearby communities/wells outside the area of substantial expected drawdown. Monitoring will continue. Also, zone of influence in updated model is now smaller than predicted in the previous EA.
September 10, 2026 CLC meeting in Goffs NS	Comment about residents potentially experiencing noticeable shaking during blasts.	Scotian representatives explained the strict blast monitoring requirements, and process for notification through community channels (primarily through the CLC).
September 10, 2026 CLC meeting in Goffs NS	Question about the Potential for the larger quarry footprint to increase noise and air-quality effects.	Expansion is not expected to increase production above historical levels. Previous modelling predicted ~33–36 dB at nearby residences, below the cited regulatory limit; mitigation is included in the EA.
September 10, 2026 CLC meeting in Goffs NS	Comment on collecting baseline data in 2025 may not have been representative because it was an especially dry year/summer.	GEMTEC and Scotian pointed out that current field results are supported by 2018 baseline data, up to 10 years of environmental/monitoring reports, and ongoing

wetland, groundwater, and surface-water monitoring.

September 10, 2026 CLC meeting in Goffs NS	Discussion of the fact that Wetlands 4 and 5 within Phase 3 would be removed.	Avoidance was considered not feasible within the proposed footprint; both wetlands have been delineated and functionally assessed, and compensation would be addressed through provincial permitting.
September 10, 2026 CLC meeting in Goffs NS	CLC members expressed a strong preference that compensation occur locally, ideally within the same watershed, rather than at a distant compensation site.	Scotia Materials will explore local opportunities with Ducks Unlimited or other restoration partners. Creating/restoring wetlands near the quarry, potentially within reclaimed quarry areas, was identified as an option requiring further consideration.
September 10, 2026 CLC meeting in Goffs NS	Question of whether removal of the isolated drainage/stream feature (i.e. Stream 5) would trigger fish-habitat compensation.	GEMTEC responded that they consider the feature an isolated, ephemeral drainage without fish access and therefore not fish habitat; provincial authorization may still be required. Stream 6, where brook trout were identified, would remain. NSECC and DNR/DFO can review the EA to consider the consultant's conclusions regarding Stream 5.
September 10, 2026 CLC meeting in Goffs NS	Concern that expansion will alter site drainage and could affect downstream conditions.	GEMTEC explained that drainage changes would be managed through controlled on-site water management and mitigation; measurable downstream effects are not expected. Continued monitoring may be required as an EA condition.
September 10, 2026	Clarification of applicable setback	Approximately 30 m under provincial environmental

CLC meeting in Goffs NS	requirements for watercourses.	regulation was identified for the remaining watercourses; the discussed 20 m setback relates to the Forest Act, but a full 30 m will be retained at the quarry.
September 10, 2026 CLC meeting in Goffs NS	Questions about potential acid-generating rock given known issues in an adjacent area.	Scotian Materials representative explained that rock in the expansion area has been tested and was not identified as acid-generating; testing is also a permit requirement.
September 10, 2026 CLC meeting in Goffs NS	Question on how and when disturbed quarry areas will be restored.	Scotian Materials representative explained that progressive reclamation is planned as quarrying advances. A reclamation plan is submitted every three years, with independent costing and financial security held by the province to cover restoration obligations.
September 10, 2026 CLC meeting in Goffs NS	CLC member raised the loss of a committee representative specifically from the Goffs area.	Scotian indicated that a replacement will be sought, potentially through the open house/public engagement or direct outreach (*note, the invitation to join the CLC was later raised with some open house participants).
September 10, 2026 CLC meeting in Goffs NS	General discussion of public notification and open house plans.	Scotian and GEMTEC outline plans for notification (newspaper) and suggested that the CLC should also let local people know about the open house. Venues we also discussed, but it was decided the Holiday Inn at the airport was a good, central location for various surrounding communities.
October 1, 2026;	Attendees associated with SWEPS discussed	The GEMTEC representative also described the water

Open House in Goffs NS	the water quality monitoring program their organization undertakes every year, which includes a station just downstream of the quarry. They indicated that results were generally good, and there have been no issues detected by them since the previous Phase 1 and 2 expansion.	quality sampling competed by the proponent for the EA and ongoing monitoring, in addition to fish and fish habitat assessments.
October 1, 2026; Open House in Goffs NS	Several attendees raised the concern of wetland compensation projects often not occurring within the same watersheds where wetlands are impacted.	Scotian Materials representatives expressed an interest in exploring more local wetland restoration opportunities to meet compensation requirements for Phases 3 and 4.
October 1, 2026; Open House in Goffs NS	One or more attendees asked about elevated levels of nitrate that had been detected in monitoring well(s) on site previously. One person suggested this could have been caused by blasting by others associated with the Aerotech Drive construction project, which is upstream of the quarry.	<p>Scotian Materials representatives acknowledged this and indicated that although the cause is unknown, the nitrate levels in groundwater monitoring wells have since declined.</p> <p>Nitrates were detectable in monitoring wells in 2025, sampled in association with field studies for this EA, but concentrations were all below the <i>Canadian Drinking Water Quality Guidelines</i> Maximum Acceptable Concentrations (i.e., below 10 mg/L).</p>
October 1, 2026; Open House in Goffs NS	A representative from Halifax Water raised the issue of the project being within the area for municipal surface water supplies including the Collins Park and BoMont water supply areas (HRM), and the Shubenacadie-Grand Lake	In response to these comments, more information about the surface water supply areas was added to the EA Registration document (primarily within Section 4.2.8).

water supply area (East Hants).

The same individual reference in the row above also suggested that due to the importance of the area for regional (surface) water supply, any wetland compensation should be within the local area. Likewise, they suggested wetlands be included in future reclamation plans for the quarry itself.

October 1, 2026;
Open House in Goffs
NS

A local resident asked about noise, dust, groundwater monitoring, and underlying geology and acid drainage potential.

Scotian Materials and GEMTEC representative explained details on anticipated noise and dust, planned mitigation, and discussed monitoring requirements associated with blasting.

Anticipated groundwater impacts were discussed along with ongoing groundwater monitoring.

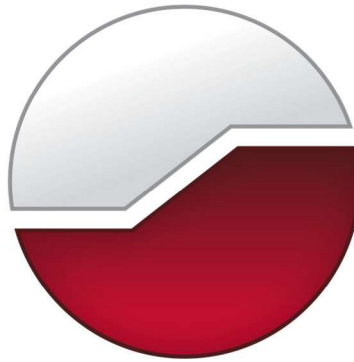
It was clarified that there exists rock with acid generating potential in areas north of the project site, but that

October 1, 2026;
Open House in Goffs
NS

Various discussions had with attendees without specific concerns or questions.

N.A.

experience • knowledge • integrity



civil	civil
geotechnical	géotechnique
environmental	environnement
structural	structures
field services	surveillance de chantier
materials testing	service de laboratoire des matériaux

expérience • connaissance • intégrité