Spence Aggregates Quarry Expansion Project - EA Registration Document

Final Report

May 5, 2025

Prepared for:
Spence Aggregates Limited
126 Stark Road
Newport Station, NS B0N 2A0

Prepared by:
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File Number:
121418141

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Acronyms/Abbreviations

AC CDC	Atlantic Canada Conservation Data Centre
ARIA	archaeological resource impact assessment
ARD	acid rock drainage
ARU	autonomous recording units
AQMS	Air Quality Management System
CAAQS	Canadian Ambient Air Quality Standards
CAC	Criteria Air Contaminants
CCME	Canadian Council of Ministers of the Environment
CRHP	Canadian Register of Historic Places
cm	centimeter
CO	carbon monoxide
CO_2e	carbon dioxide equivalent
COSEWIC	Committee on the Status of Endangered Wildlife in Canada
CWQG-FAL	CCME Water Quality Guidelines for the Protection of Freshwater Aquatic Life
CWS	Canadian Wildlife Service
dB	decibel
dBA	A-weighted dB scale
dBAI	Impulsive sound level using the A-weighted scale
EARD	Environmental Assessment Registration Document
ECCC	Environment and Climate Change Canada
GCDWQ	Guidelines for Canadian Drinking Water Quality
GHG	greenhouse gas
GHGRP	Greenhouse Gas Reporting Program
ha	hectare
HRP	Heritage Research Permit
H_2S	hydrogen sulphide
IA	Industrial Approval
IBA	Important Bird Areas
kg	kilogram
km	kilometre
KMKNO	Kwilmu’kw Maw-klusuagn Negotiation Office

KMKNO-ARD	Kwilmu'kw Maw-klusuagn Negotiation Office's Archaeological Research Division
kt	kiloton
LAA	Local Assessment Area
L_{eq}	sound pressure level
LiDAR	Light Detection and Ranging
L/min	liters per minute
m	meter
MARI	Maritime Archaeological Resource Inventory
masl	meters above sea level
MBCA	*Migratory Birds Convention Act*
$m^3/d/m$	cubic meters per day per minute
MEKS	Mi'kmaq Ecological Knowledge Study
mg/L	milligrams per liter
mm	millimeter
NO_2	nitrogen dioxide
NSCCTH	Nova Scotia Department of Communities, Culture, Tourism, and Heritage
NSECC	Nova Scotia Department of Environment and Climate Change
NS ESA	Nova Scotia *Endangered Species Act*
NSGC	NS Geomatics Centre
NSNRR	NS Department of Natural Resources and Renewables
NSTDB	NS Topographic Database
NSWLD	Nova Scotia Well Log Database
OLA	Office of L'nu Affairs
O_3	ozone
PDA	Project Development Area
$PM_{2.5}$	particulate matter less than 2.5 micrometres in diameter
PM_{10}	particulate matter less than 10 micrometers in diameter
ppb	parts per billion
PSEMP	Project Specific Environmental Management Plan
RBCA	Risk-Based Corrective Action
SAR	Species at Risk
SARA	*Species at Risk Act*
SO_2	sulphur dioxide
SOCC	Species of Conservation Concern
t	tonnes

TDS	total dissolved solids
TRS	total reduced sulphur
TSP	total suspended particulate
µg/L	micrograms per litre
µg/m^3	micrograms per cubic meter
VC	Valued Component
WESP-AC	Wetland Ecosystem Services Protocol – Atlantic Canada
%	percent
>	greater than
°C	degrees Celsius

1 Introduction

Spence Aggregates Ltd. (Spence Aggregates, the Proponent) has owned and operated an aggregate quarry in Newport Station, Nova Scotia (NS) since 2007. The current quarry operation is limited to 4 hectares (ha) and produces approximately 150,000 – 250,000 kilograms (kgs) of product per annum. The quarry is currently operating under an Industrial Approval (IA) (No. 2007-056319-02) issued in 2017. Spence Aggregates is a key supplier of materials for a diverse range of clients including, local private/residential uses, small regional contractors, and larger scale infrastructure projects. Spence Aggregates proposes to expand the quarry site gradually to provide longevity and stability for the company.

The Spence Aggregates Quarry Expansion Project (the Project) consists of expanding the approved quarry (~4 ha) to occupy an additional 59 ha, for a total permitted area of approximately 63 ha (Project Development Area; PDA). The Project will allow for continued long-term aggregate production. Spence Aggregates does not propose to increase the general rate of production. Operations are proposed to advance initially from the existing quarry site but may also shift to the north portion of the PDA in consideration of market demand and efficiency of production.

The Project involves the expansion of a quarry footprint beyond 4 ha and thus must be registered as a Class I Undertaking pursuant to the Environmental Assessment Regulations under the *Environment Act*. This Environmental Assessment Registration Document (EARD) has been prepared for submission to Nova Scotia Environment and Climate Change for registration under the Environmental Assessment Regulations. Pending release from the environmental assessment (EA) process, Spence Aggregates will seek an amendment to their existing IA to permit Project activities. References made to existing IA conditions within this EARD, should be interpreted as commitments to conditions of the approved IA at the time of operation. Spence Aggregates acknowledges that conditions may be updated in an amended IA and is committed to maintaining compliance with the IA current at the time of operations.

1.1 Project Information

Name of the Undertaking: The name of the proposed undertaking is the “Spence Aggregates Quarry Expansion Project”, which is referred to in this document as “the Project”.

Location of the Undertaking: Newport Station, NS

1.2 Identification of the Proponent

The Project Proponent is Spence Aggregates Ltd. (Spence Aggregates). Proponent contact details are provided below.

Proponent Contact Information		**Company President/Founder**	
Name:	Spence Aggregates Ltd.	Name:	Andrew Spence
Mailing Address:	126 Stark Road Newport Station, NS B0N 2A0	Mailing Address:	Same
Telephone Number:	(902) 798-0178	Telephone Number:	902-497-5375

Contact Person for Purposes of the Environmental Assessment

Name:	Craig Bauchman
Official Title:	Project Facilitator
Address:	126 Stark Road Newport Station, NS B0N 2A0
Telephone Number:	(902) 306-9990
E-Mail Address:	craig@spenceaggregates.ca

Andrew Spence, President — Date: May 5, 2025

Craig Bauchman, EA Contact — Date: May 5, 2025

1.3 Project Overview

The Project involves the expansion of an existing approved aggregate quarry in Hants County from 4 ha to approximately 63 ha. Despite the increased size, the quarry will continue to operate as it has been. . The Project is located on lands owned by Spence Aggregates. Spence Aggregates also owns much of the land surrounding the Project Development Area (PDA). Other lands in proximity to the Project are undeveloped or residential. Newport Station is a small community located approximately 1 kilometre (km) north of the Project.

The anticipated average production rate is expected to remain at approximately 150,000 – 250,000 kg per year. Production rates vary depending on market demand. The quarry currently operates approximately five and a half days per week, 52 weeks/year, weather permitting. When demand is high, the quarry has the capacity to operate seven days per week. The quarry is closed on statutory holidays. The quarry expansion is not anticipated to change the average production rate or operating hours.

1.4 Purpose and Need for the Project

The purpose of the Project is to allow Spence Aggregates to expand their existing quarry footprint in Newport Station, NS to extend the life of the quarry. As is the case for other quarries in NS, Spence Aggregates is an important component of the natural resource sector of the local, regional, and provincial economies. Spence Aggregates provides direct and indirect employment for its workers, suppliers, and customers, as well as potential economic spin-off benefits for private citizens, local contractors, and the regional and provincial infrastructure sectors. The majority of Spence Aggregates customers are local contractors and construction operations, which provide services and employment in the community. Spence Aggregates' ability to access land with aggregate resources over an extended period is critical for continued quarry operation to be successful and continue to provide local and regional benefits through employment, the procurement of goods, and tax payments.

2 Project Description

2.1 Project Location and Geographic Setting

The Project is located at 126 Stark Road, near the community of Newport Station within the West Hants Regional Municipality (Figure 2.1.1). The current quarry is accessed by a private road off Stark Road, which connects to Highway 1. The Project is located on land owned by Spence Aggregates (Parcel Identification Numbers: 45015484, 45015765, 45015773, 45015823, 45016011, 45282068).

The PDA is located on land zoned as General Resource which allows for uses including extractive facilities (MWH 2008). Lands surrounding the PDA are also predominantly zoned General Resource, with some Rural Residential zoning to the north. Much of the land surrounding the PDA is also owned by Spence Aggregates and is undeveloped.

The PDA is adjacent to a rehabilitated historical quarry which was developed for the supply of aggregates to the Highway 101 Twinning Project in 2009, under the Nova Scotia Department of Public Works quarry exemption. The PDA also overlaps with a manufactured topsoil operation, and a decommissioned quarry (Figure 2.1.1).

The boundaries of the Project have been determined in consideration of separation distances prescribed by the *Pit and Quarry Guidelines* (NSEL 1999) and the existing IA including the following setbacks:

- 30 m of the boundary of a public or common highway
- 30 m of the bank of any watercourse or the ordinary high-water mark
- 30 m of the boundary of the property on which the quarry is located

The Project sits in an elevated area and contains large amounts of rock suitable for aggregate extraction. The PDA is predominantly mixedwood forest and contains both hardwood and softwood stands (RFS 2022).

There are no waterbodies or watercourses in the PDA (see section 5.3). Sams Brook, a small first order watercourse, runs approximately 300 m outside the western boundary of the PDA.

Notes

1. Coordinate System: NAD 1983 CSRS UTM Zone 20N
2. Data Sources: GeoNOVA, NRCAN, OSM, Stantec
3. Background: Google (n.d.) [Satellite Map Newport Station, NS]. Retrieved 4/9/2025
   Province of New Brunswick, Province of Nova Scotia, Esri Canada, Esri, TomTom, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, NRCan, Parks Canada, Earthstar Geographics, Esri, TomTom, Garmin, FAO, NOAA, USGS, NRCan, Parks Canada, Google

Legend

- Project Development Area (PDA)
- Decommissioned Quarry
- Manufactured Topsoil Operation
- Highway
- Arterial
- Collector
- Local Arterial
- Local Road
- Ramp
- Resource Road / Trail
- Railroad
- Pipeline
- Transmission Line
- Dam
- Waterbody
- Watercourse

0 500 1,000 1,500 2,000 Metres

(At original document size of 8.5x11)
1:55,000

N

Stantec

Project Location
Spence Quarry
Windsor, NS

Prepared by AC on 2025-03-05

Client/Project
Spence Aggregates Limited
Spence Quarry
Expansion

121418141

Figure No.
2.1.1

DRAFT

Title
Project Location

2.2 Project Components and Activities

2.2.1 Existing Aggregate Quarry Operation

The existing quarry operates under I A No. 2007-056319-02. The quarry produces between 150,000 and 225,000 tonnes of aggregate per year, depending on market demand. The proposed quarry expansion is not anticipated to result in a change to current quarry operations (e.g. operating hours, production rates), as the intent of the Project is to extend the life of the quarry.

Depending on customer demand, the quarry may operate seven days per week and 52 weeks per year, weather permitting, and is closed on statutory holidays.

The existing quarry operation includes an open pit with a bench and active working rock face at the southwest side of the site. The bench height ranges between 8 m to 15.5 m, with working face slopes at approximately 70-degrees or steeper. Quarry operations are currently advancing primarily in a south-to-southwesterly direction (Hoeg Construction Management Ltd. 2023).

A laydown area is located immediately adjacent to the active rock face where raw material is crushed and screened. Blasting and crushing equipment is provided and operated by third party companies. Other equipment on site includes:

- three front-end loaders (Volvo L110G, L110H, and L150H models)
- two excavators (Volvo EC300EL and EC380E)
- two portable light towers with built-in generators

Material stockpiles are located in several locations along the northeast side of the pit. Stockpiles within the quarry pit are primarily aggregate, and additional stockpiles of topsoil and manufactured soils removed prior to rock extraction are located to the west on the site of a rehabilitated former Nova Scotia Department of Public Works quarry. The quarry produces various aggregate and soil products including:

- armour rock
- clear stone
- gravel
- sand
- fill
- soil, including topsoil

A sales office and weigh scales are located at the entrance to the quarry on the north side of the existing pit. Trucks entering and leaving the quarry are generally customer vehicles consisting of tandem and twin steer dump trucks, or tractor trailers operated by the Nova Scotia Department of Public Works. Material is trucked via the main access to the site, an existing private access road which connects to Stark Road and then Highway 1. Additional access is provided by a private road accessible off Pleasant Street, approximately 650 m west of Stark Road. This road is used infrequently but may become active again during the life of the Project.

2.2.2 Project Activities

The development of the quarry will occur based on market demand for aggregate and is anticipated to take up to 30 years to reach the final quarry extent. Operation activities of the Project are currently anticipated to be the same as those for the existing quarry, described in further detail in the following sections.

The quarry will generally be developed progressively in smaller areas at a time, with aggregate extraction carried out using industry standard techniques. Project activities include clearing and grubbing of vegetation and overburden; blasting; the use of a crusher and/or screener for crushing and screening aggregate; stockpiling of product; supplying products to local contractors, and trucking of product to meet market demands.

2.2.2.1 Clearing and Grubbing

Sections of the expansion area will be cleared progressively based on anticipated short-term market demand. Clearing will involve the use of timber harvesting equipment such as skidders, harvesters, and feller bunchers, as well as hand tools such as chainsaws when needed. The area surrounding the expansion area is an actively managed forest, with ongoing timber harvesting and thinning activities. Merchantable timber collected within the expansion area will be sold.

Once trees and other woody vegetation has been cleared, the area will be grubbed using heavy equipment such as bulldozers and excavators. Overburden will also be removed progressively to expose bedrock.

Topsoil, grubbing, and overburden will be separated and stockpiled at other sections of the quarry for future use, including use in progressive reclamation. Long-term stockpiles of topsoil and grubbing materials will be stabilized to reduce potential for erosion and sedimentation.

Quarry related clearing and grubbing activities are conducted outside the breeding bird season (May-August) when feasible. When clearing must occur within the breeding bird season, pre-clearing breeding bird surveys will be conducted by qualified biologists, and appropriate mitigation (e.g., avoidance setbakcs) will be implemented.

2.2.2.2 Blasting

Once a section of the expansion area has been cleared and grubbed, drilling and blasting will occur. Blasting is conducted by a qualified third-party blasting company and in accordance with the *Occupational Health and Safety Act* Blasting Safety Regulations and separation distances prescribed in the *Pit and Quarry Guideline*s (NSEL 1999).

The blasting contractor will develop a blast design appropriate for the area and will drill a series of boreholes into the exposed bedrock. Explosive charges will be placed in the boreholes and detonated to initiate the blast and generate large unprocessed rock material.

Blasting frequency will depend on market demand and typically occurs up to three times per season. The Project will not require an increase in the magnitude or frequency of blasting, and blasting will be monitored by the third-party blasting company as per the requirements of the Blasting Safety Regulation, and the quarry's IA. In accordance with the quarry's IA, no blasting shall occur between 1800 hours and 0800 hours, on Sundays, or on a statutory holiday.

2.2.2.3 Crushing and Stockpiling

Following the completion of blasting activities, a mobile crusher will be brought to the laydown area adjacent to active rock face. The mobile crusher will be operated by a third party. Front-end loaders and excavators will be used to move the large unprocessed rock to the crusher where it will be processed into smaller material. This material will then be screened and sorted based on size.

Once crushed and screened, aggregate will be stockpiled on site using front end loaders and excavators. The aggregate stockpiles will be stable and uncovered. Stockpiles are located in various locations throughout the site and are separated based on the type and size of aggregate. The size and location of these stockpiles will vary depending on the time of year and market demand for material.

2.2.2.4 Transportation

The existing quarry offers both bulk product pickup and delivery services. Material is loaded into trucks from the appropriate stockpile and is hauled offsite using existing access roads. Prior to leaving the quarry, haul trucks are weighed at an on-site weigh scale. Private vehicles are used for bulk product pickup and typically include tandem and twin-steer dump trucks, and tractor trailers.

An existing private access road which connects to Stark Road is used for transporting material off-site, however an additional access road which connects to Pleasant Street is also used infrequently. The existing access road to Stark Road is suitable for large truck traffic and does not require substantial upgrades. However, a 100 m segment of this access road, where it connects to Stark Road will be paved as part of the Project, to reduce dust and limit tracking of material onto public roads.

The Project is not anticipated to result in an increase of annual traffic to and from the site, which is typically highest between May and October. The route to the quarry from nearby areas is not subject to spring weight restrictions.

2.2.3 Emission and Waste Management

The Project will meet or exceed the compliance standards outlined in Spence Aggregates' existing IA , and applicable regulations or standards with respect to liquid and gaseous emissions and discharges, sedimentation, and waste management. Where no standards exist, appropriate industry practices will be adopted, where feasible. Volumes of wastes and concentrations of contaminants entering the environment will be reduced through best management practices, following applicable legislation, and mitigation.

2.2.3.1 Air Contaminant and Greenhouse Gas Emission Management

Air contaminant emissions from the Project are generally classified as Criteria Air Contaminants (CAC) and include carbon monoxide (CO), nitrogen oxides (NO_X), sulphur dioxide (SO_2), and particulate matter (PM, including its common size fractions PM_{10} and $PM_{2.5}$). Greenhouse gas (GHG) emissions will also be generated as part of the Project. The primary sources of GHGs are carbon dioxide (CO_2), methane (CH_4), nitrous oxide (N_2O), and carbon dioxide equivalent (CO_{2e}).

Emissions will be generally related to the generation of dust related to blasting, crushing and screening and CAC and GHG emissions from diesel-fueled equipment including trucks, bulldozers, excavators, crushers, and other heavy equipment. Air emissions will be maintained within the Air Quality Regulations (*Environment Act*) and *Canadian Environmental Protection Act* Ambient Air Quality Objectives. In accordance with section 6 of Spence Aggregates' existing IA, particulate emissions will not exceed the following limits at the property boundaries:

- Annual Geometric Mean 70 µg/m^3
- Daily Average (24 hrs) 120 µg/m^3

Control measures, such as use of dust suppression techniques, will be used as required to reduce fugitive dust. Routine inspection and maintenance of heavy equipment will reduce exhaust fumes. The use of oil as a dust suppressant will not be permitted. The burning of waste brush/slash material will not be permitted.

Dust generated by material movement along the access road will be mitigated by speed control (i.e., operators adjust their speed based on road conditions), proper truck loading, and the application of calcium chloride or magnesium chloride as required (minimum twice per year). Water is also applied to the road as needed. A portion of the existing private access road will also be paved to further reduce dust emissions.

As the Project will not involve a change to current quarry operation or an increase in production rate, the Project is not anticipated to result in an increased rate of air contaminants or GHG emissions.

2.2.3.2 Noise Management

Noise and vibration emissions from the Project will occur primarily during blasting and crushing. Project-related noise will be intermittent, as blasting and crushing is conducted on an as-needed basis during daytime hours. Blasting will be conducted by a qualified third-party blasting company and will follow setbacks outlined in the Pit and Quarry Guidelines (NSEL 1999). Other noise sources, such as the operation of heavy equipment, will be mitigated using mufflers and timing of activities.

As the Project will not involve a change to current quarry operations or an increase in blast frequency or production, the Project is not anticipated to result in an increase in noise emissions. As per the existing IA, sound levels (A-weighted decibels-dBA) from quarry operations should not exceed the following threshold sound levels (Leq) at the property boundaries:

- 65 dBA 0700-1900 hours (Days)
- 60 dBA 1900-2300 hours (Evenings)
- 55 dBA 2300-0700 hours (Nights)

2.2.3.3 Water Management

The proposed quarry expansion will not involve deepening the open pit, however, potential interactions with ground- and surface water may occur. Detailed descriptions of interactions with ground- and surface water can be found in sections 5.2 and 5.3 respectively.

During Project development, a groundwater monitoring program will be implemented for main Project components to confirm potential changes in groundwater associated with Project activities. The groundwater monitoring program will be developed based on regulatory requirements for both quantity and quality and will document groundwater resources and recovery in groundwater levels across the PDA. Details related to groundwater monitoring including frequency and duration) will be specified in the Industrial Approval Application.

Surface water runoff generally drains north to south within the open pit and is collected in a surface water management pond at the north end of the pit. Water is allowed to settle to remove fines and is passively discharged off-site into the surrounding area through a drainage/ditch channel. An additional drainage ditch is located at the west side of the current pit which prevents off-site stormwater from draining into the pit and directs it to the surrounding forested area.

In accordance with the existing IA, surface water discharged from the site will not exceed the following criteria:

1. Total Suspended Solids, Clear Flows (Normal Background Conditions):
    a. Maximum increase of 25 mg/l from background levels for any short-term exposure (24 hour or less)
    b. Maximum average increase of 5 mg/l from background levels for longer term exposure (inputs lasting between 24 hours and 30 days)
2. Total Suspended Solids, High Flow (Spring Freshets and Storm Events):
    a. Maximum increase of 25 mg/l from background levels at any time when background levels are between 25 mg/l and 250 mg/l
    b. Maximum increase of 10% over background levels when background is >250 mg/l
3. pH (Outfall):
    a. Maximum 5 to 9 in grab sample
    b. Maximum 6 to 9 as a Monthly Arithmetic Mean

Onsite washroom facilities and drinking water do not factor into water management. Washroom facilities are pumped out and waste is removed from site by a third-party contractor. Drinking water is provided in bottles.

2.2.3.4 Solid and Hazardous Waste Management

Non-hazardous solid waste, including domestic waste, generated as part of Project operations will generally consist of domestic and office wastes. Solid wastes will continue to be separated into compost, waste, and recyclables, and collected in appropriate receptacles and removed for disposal off-site at approved disposal facilities.

Hazardous materials present on-site are those associated with the normal operation of heavy equipment. These materials include gasoline, diesel fuel, lubricants, and antifreeze liquid. Regular maintenance of equipment will be completed by qualified personnel and most equipment maintenance services will be carried out on-site, with oils and tools stored in sufficient quantities to accommodate these activities.

Hazardous wastes such as used hydraulic fluids, motor oil, grease and lubricants for heavy equipment, will be temporarily stored on-site in a separate area and will be contained and temporarily stored in a designated area until they are removed from the site by a licensed contractor and recycled or disposed of at an approved facility. There is no planned on-site storage of large volumes of hazardous materials. Spence Aggregates has practices in place for handling of hazardous materials and maintains a Certificate of Recognition issued by the Nova Scotia Construction Safety Association for on-site health and safety management, which includes measures for spill response.

Refueling of equipment will be conducted on-site on an as-needed basis. Refueling activities will be compliant with the existing IA, and will allow for the containment of spills, and the prevention of spills or releases entering watercourses or waterbodies. Equipment operators will remain with equipment during refueling in accordance with the Petroleum Management Regulations of the *Environment Act*.

Employees and temporary site workers will review the best practices and relevant legislation for avoiding and containing spills as part of their site orientation. If an accidental spill of hazardous material occurs, the spill will be immediately reported and spill containment measures will be implemented as immediately as possible, considering site safety. Supervisors will notify proper agencies, put controls in place to prevent further release, and initiate clean up. Containment, clean-up, site restoration, disposal and reporting will be compliant with the existing IA. A list of hazardous materials maintained on site and a list of equipment available for emergency response to a spill will also be maintained and made available to staff. All spills will be reported to the 24-hour environmental emergencies reporting system (1-800-565-1633) in accordance with the Emergency Spill Regulations.

2.2.4 Accidents and Malfunctions

Accidents and malfunctions could occur during Project activities and could include the accidental release (spill) of petroleum hydrocarbons or other hazardous materials, the failure of mitigation devices (e.g., erosion and sediment controls) to effectively manage site runoff or drainage within the PDA, and fire.

A hazardous material spill or the failure of mitigation devices to effectively manage site runoff or drainage could adversely affect water quality, terrestrial habitats, and plant and wildlife species including Species At Risk (SAR) and Species of Conservation Concern (SOCC) in or near the PDA. The failure of erosion and sediment controls could result in increased concentrations of total suspended solids and/or other contaminants in water resources, riparian areas, and/or wetlands. Terrestrial habitat and species, potentially including SAR, SOCC, and sensitive vegetation communities, could also be adversely affected by a hazardous material spill or the failure of erosion and sediment controls (i.e., in areas where associated contamination is present and/or sediments are deposited).

A Project-related fire could result in the alteration or loss of terrestrial habitat; injury or mortality of terrestrial species, potentially including SAR, SOCC, and sensitive vegetation communities; and atmospheric emissions of contaminants that adversely affect air quality. A fire could also adversely affect land and resource use if it results in a restriction or change in access to areas surrounding the PDA used for recreation, or other purposes.

The risk of an accident or malfunction will be reduced through implementation of standard mitigation measures and best management practices currently used by Spence Aggregates, including those pertaining to hazardous materials/wastes and dangerous goods; erosion and sediment control, management of runoff, and water quality; and blasting. Stipulations in the existing IA regarding the fuelling of machinery and equipment will continue to be adhered to. Spill contingency and emergency response procedures will meet or exceed applicable guidelines and will be detailed in the IA amendment process.

In the unlikely event of an accident or malfunction, it is anticipated that implementation of appropriate contingency and emergency response measures will reduce the magnitude, geographic extent, and duration of potential residual adverse effects on the environment. Contingency and emergency response equipment and materials will be maintained in good working order on-site, including spill containment and clean-up equipment, fire prevention and suppression equipment, and contingency erosion and sediment control materials. The existing infrastructure currently in place to manage surface water runoff (e.g., ditching and settling ponds) may further reduce the risk of spill or fire-related contaminants leaving the PDA.

2.2.5 Reclamation

Reclamation activities for the existing quarry are outlined in the Rehabilitation Plan: Stark Road Quarry (HCM 2023). An updated Rehabilitation Plan which includes the expanded area of the Project will be developed and submitted to NSECC for review. The Rehabilitation Plan will include updated information on proposed final topography, maximum slopes, re-vegetation plans and an outline for progressive reclamation for the Project.

Spence Aggregates will follow this plan to support the surrounding woodlands of the Panuke Managed Forest, with options to use quarry infrastructure, such as access roads and scale houses, to support forestry operations in the area. Rehabilitation will result in the creation of a flat approach to constructed hill slopes at the former location of the quarry.

Steps outlined in this plan include blasting and contouring existing quarry faces and benches to create stable 45-degree (1H:1V) slopes. Salvaged overburden from quarry operations will be used to cover these slopes to facilitate revegetation and reforestation. Slopes greater than 5H:1V will be seeded, mulched, and, if required, fertilized to promote revegetation, whereas slopes less steep will be left to revegetate naturally.

Spence Aggregates will complete progressive rehabilitation activities to offset phased clearing and grubbing activity. The timing and specifics of progressive rehabilitation efforts will depend on production volumes and will vary according to the intensity of production-related clearing and grubbing activity.

2.3 Project Schedule

The Project is intended to extend the life of the quarry for up to 30 years, with the rate of quarry expansion dependent on market demand for aggregate products. Following the completion of quarry activities, the quarry will be reclaimed in accordance with the Mineral Resources Regulation under the *Mineral Resources Act.*

No changes to the annual operating schedule of the quarry are proposed as part of the Project.

The Project could start within one year of Project approval and will extend over at least 30 years.

The proposed operation and maintenance schedule for the Project is year-round, the same as for the existing quarry. The following timing windows for quarry activities will be observed:

- Clearing and grubbing will typically be conducted to not occur between May and August
- Blasting will be conducted two to three times per year
- Crushing and stockpiling will occur for approximately three weeks following each blasting event
- Transportation will occur year-round, typically highest between May and October

Progressive reclamation activities will occur throughout the life of the Project. The updated reclamation plan, outlining planned progressive reclamation, will be developed as part of the IA amendment process and based on conditions of EA approval.

3 Environmental Assessment Scope and Methods

3.1 Overall Approach

The assessment methods and approach used for this EARD have been developed to meet the requirements of a Class I EA Registration under the Nova Scotia *Environment Act* and Environmental Assessment Regulations.

The scope of assessment considers the proposed Project components and activities, knowledge of the existing conditions and sensitivities of the surrounding environment, other EA documents that have been prepared for projects of a similar nature and/or occurring in the same region, applicable regulations, policies and guidelines, the influence of engagement conducted thus far, and professional experience. The approach is precautionary; that is, to generally overestimate rather than underestimate potential adverse effects.

In recognition of spatial and temporal boundaries set for the assessment, baseline conditions are described for each Valued Component (VC; section 5), drawing on baseline studies/programs conducted in support of this Project. Potential interactions between the Project and VCs are identified and residual effects described (i.e., after application of mitigation). Where there may be data gaps or some uncertainty around an effects prediction or effectiveness of mitigation, follow-up and monitoring is proposed.

This chapter describes the EA methods and approach used in this EARD.

3.2 Scope of the Assessment

3.2.1 Context for this Assessment

The Project involves the expansion of a quarry footprint beyond 4 ha and thus must be registered as a Class I Undertaking pursuant to the Environmental Assessment Regulations under the *Environment Act*. The Project is not anticipated to trigger federal impact assessment requirements under the *Impact Assessment Act*. This EARD has been prepared in accordance with the provincial *Guide to Preparing and EA Registration Document for Pit and Quarry Documents in Nova Scotia* (NSE 2009) (.

A preliminary briefing note on the Project was submitted to NSECC on June 19, 2024, for review. That document provided an overview of the key components and activities associated with the Project, the proposed EA approach and scope of the assessment, and proposed engagement activities for the purposes of soliciting feedback from NSECC and facilitating an efficient and effective EA process for the Project. Spence Aggregates and Stantec subsequently met with NSECC on June 25, 2024, to present and discuss the contents of the briefing note and to further focus the scope of the assessment and associated desktop and field studies.

The scope also takes into consideration that the quarry is presently operational and subject to an existing IA. The existing IA includes conditions and mitigation measures related to operational sound levels, separation distances, particulate emissions, surface water quality, groundwater management, reclamation, regulatory reporting as well as site-specific conditions. Prior to Project commencement, the existing IA will be amended based on the results of recently completed baseline studies and assessments completed for this EARD, and potential conditions arising from the EA Approval. The amended IA will outline operational requirements of the expanded quarry operation. The Project will not change the scope of operations at the quarry site. Other than the gradual inclusion of the proposed expansion, ongoing activities at the pit will be the same as in the past.

3.2.2 Data Sources for Environmental Assessment

3.2.2.1 Overview of Constraints Analysis

Information from publicly available desktop sources was reviewed to identify the potential for the presence of environmentally sensitive features, SAR, SOCC, and other potential critical issues in the Project Area. This information was supplemented by with historical SAR and SOCC observations from the Atlantic Canada Conservation Data Centre (AC CDC).

3.2.2.2 Field Studies and Data Collection

Field studies were conducted in 2024 by Stantec to investigate the existing conditions and to determine appropriate mitigation measures to manage environmental effects of the Project. Existing environmental conditions are described for each VC and are established based on data collected during desktop review, baseline environmental studies, and public and Indigenous engagement activities conducted in support of the EARD.

Field studies were completed in spring, summer, and fall of 2024 by qualified technical personnel and consisted of the following:

- Noise monitoring during non-blasting periods
- Surface water sampling at watercourses and water bodies in and near the PDA
- Fish and fish habitat categorization of watercourses and water bodies near the PDA
- Breeding bird surveys including early and June breeding species
- Dedicated bat and bat habitat surveys
- Vegetation and wetland surveys
- Archaeological walkover surveys
- Incidental wildlife observations for birds, mammals (including bats), and herptiles completed during the execution of targeted bird, fish, vegetation and wetland field surveys

Several desktop studies were also completed for the following components:

- Atmospheric environment (i.e., air quality)
- Groundwater resources
- Archaeological and heritage resources
- Land and resource use

Additional information in support of the field and desktop studies was gathered through a review of other available sources including:

- Aerial and satellite imagery
- NS Significant Species and Habitats Database
- Site mapping
- AC CDC
- Statistics Canada
- NS Department of Natural Resources and Renewables (NSNRR)
- NS Geomatics Centre (NSGC)
- NS Topographic Database (NSTDB)
- NS Groundwater Atlas

3.2.2.3 Species at Risk and Species of Conservation Concern

For this EARD, SAR are defined as those species that meet any of the following criteria:

- Species that are listed under Schedule 1 of the federal *Species at Risk Act* (SARA) as Endangered, Threatened, Vulnerable, or of Special Concern
- Species that are listed under the NS *Endangered Species Act* (NS ESA) as Endangered, Threatened, Vulnerable, or of Special Concern

For the purposes of this EARD, species that do not meet the above criteria, but have been assessed as Endangered, Threatened, Vulnerable or of Special Concern by the Committee on the Status of Endangered Wildlife in Canada (COSEWIC) or as Vulnerable (S3), Imperiled (S2), or Critically Imperiled (S1) by the AC CDC are designated as SOCC.

3.2.3 Selection of Valued Components

In 2023, Stantec conducted a desktop environmental constraints analysis and regulatory requirement review of the proposed expansion. Based on this constraints analysis, the scope of the Project, regulatory engagement, and the professional judgement of the EA study team, this document includes an assessment of the following seven VCs:

- Atmospheric Environment
- Groundwater Resources
- Aquatic Environment
- Vegetation and Wetlands
- Wildlife and Wildlife Habitat
- Heritage Resources
- Land Use

Table 3.2.1 lists the biophysical and socioeconomic components to be addressed, along with the rationale for inclusion, and the assigned VC for discussion.

Table 3.2.1 Scoping of Valued Components

Valued Component	Rational for Inclusion
Atmospheric Environment	• Air Quality is regulated by NSECC under the *Environment Act*. The Project will emit air emissions including dust and criteria air contaminants. Dust and air emissions can affect human and ecological health. • The Project will create noise that may extend beyond the PDA. Noise can cause annoyance and/or negative health effects to people. Noise (for public nuisance) is governed by provincial noise criteria and municipal by-laws.
Groundwater Resources	• Project activities are predicted to interact with groundwater resources in areas where the water table is close to the surface. Groundwater is federal and provincially regulated.
Aquatic Environment	• The Project largely avoids surface water resources and has no discharges into mapped watercourses. However, Project activities will affect quantity and quality of stormwater runoff and overland drainage in the PDA Impacted surface water includes runoff and overland drainage, and some wetlands in the PDA. Changes to hydrology are also provincially regulated. • Freshwater fish and fish habitat are protected by the federal *Fisheries Act*. There are no watercourses or water bodies in the PDA, and the Project is not anticipated to impact any watercourses or water bodies.
Vegetation and Wetlands	• Project activities will affect vegetation and potentially affect species biodiversity, unique species assemblages, and uncommon habitats. This may include changes in vegetation species diversity or community diversity due to direct habitat loss or indirect changes to habitat (e.g., changes in soil, hydrological effects, dust, light exposure changes, competition from invasive plants). • Wetlands are valued resources, protected by the *Environment Act*. Project activities will directly affect wetland habitat in the PDA.

Table 3.2.1 Scoping of Valued Components

Valued Component	Rational for Inclusion
Wildlife and Wildlife Habitat	• Project activities will directly and/or indirectly affect wildlife and their habitat. Protection of wildlife species is administered through the federal *Species at Risk Act*, the *Endangered Species Act*, and Nova Scotia *Wildlife Act*. Protection of migratory birds is mandated by the *Migratory Birds Convention Act, 1994*. Project activities will change the quality and availability of habitats used by terrestrial wildlife and avifauna in the vicinity of the Project Area. Changes in habitat and potentially food availability may result in changes in wildlife abundance, diversity and distribution within the affected area.
Heritage Resources	• Ground disturbance associated with ground disturbance activities (e.g., grubbing, blasting, exacavation) could disturb or destroy previously unidentified archaeological resources present within the disturbance footprint.
Land Use	• The Project must abide by applicable land use plans and bylaws. The Project should also consider current land use as it pertains to the public and to traditional uses.

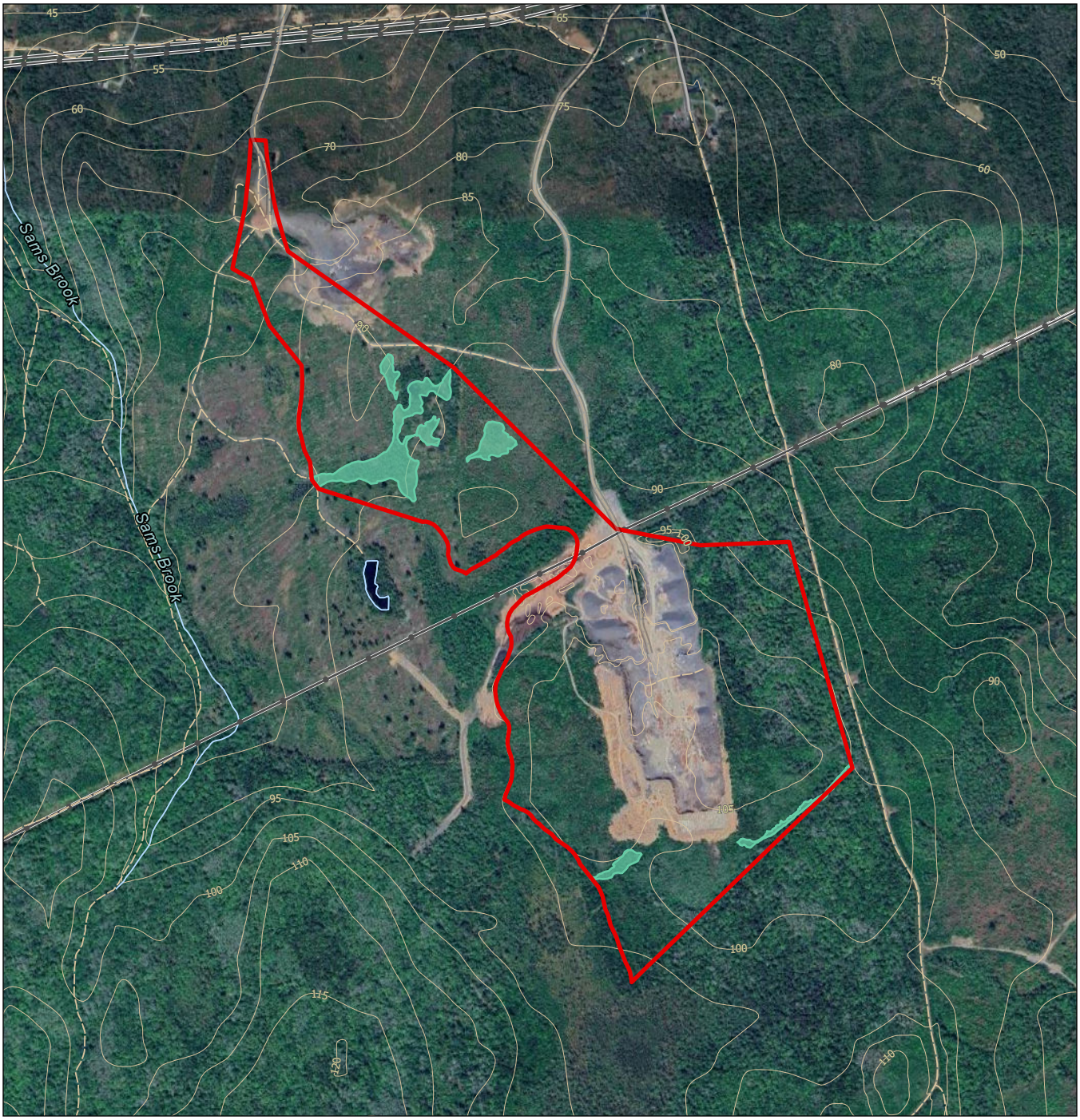
3.2.4 Assessment Boundaries

The scope of the assessment is defined by spatial boundaries (i.e., geographic extent of potential effects) and temporal boundaries (i.e., timing of potential effects). The spatial boundaries reflect the geographic range over which potential environmental or socio-economic effects may occur, whereas temporal boundaries identify when an environmental or socio-economic effect may occur throughout the different phases of the Project.

The PDA encompasses the existing quarry footprint and the anticipated area of physical disturbance associated with Project activities and is shown in Figure 3.2.1.

The assessment of some VCs may extend beyond the PDA. This area, the Local Assessment Area (LAA), is the area within which Project-related environmental effects can be predicted or measured for assessment. The LAA varies by VC depending on the area of influence associated with effect pathways of and potential interactions with the environment.

The temporal boundaries for assessment address the potential effects through the life of the Project. For the purposes of this assessment the temporal boundaries extent covers the expected life of the expanded quarry which is up to 30 years.



Notes

1. Coordinate System: NAD 1983 CSRS UTM Zone 20N
2. Data Sources: GeoNOVA, NRCAN, OSM, Stantec
3. Background: Google (n.d.) [Satellite Map Newport Station, NS]. Retrieved 4/9/2025
   Esri, TomTom, Garmin, FAO, NOAA, USGS, NRCan, Parks Canada, Source: Esri, Maxar, Earthstar Geographics, and the GIS User Community, Google, Esri Community Maps Contributors, Province of New Brunswick, Province of Nova Scotia, Esri Canada, Esri, TomTom, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, NRCan, Parks Canada

Legend

- Project Development Area (PDA)
- Local Road
- Resource Road / Trail
- Transmission Line
- Contour (5m)
- Watercourse
- Waterbody
- Wetland (Field Delineated)

0 200 400 Metres

(At original document size of 8.5x11)
1:12,000

N

Stantec

Project Location
Spence Quarry
Windsor, NS

Prepared by MB on 2025-01-09

Client/Project
Spence Aggregates Limited
Spence Quarry
Expansion

121418141_009

Figure No.
3.2.1

Title
Project Development Area

\\ca0213-pfss01\work_group\1214\active\1XXX - Other PCs\1214_NB\121418033\gis\mapping\aprx\121418141_Spence_Quarry_Expansion\121418141_Spence_Quarry_Expansion.aprx Revised: 2025-04-09 By: schubbs

3.3 Potential Project Interactions

Table 3.3.1 indicates where there is potential for interaction between Project activities and the VCs identified for the assessment.

Table 3.3.1 Potential Projects Interactions with Valued Components

Project Activity	Valued Components						
	Atmospheric Environment	Groundwater Resources	Aquatic Environment	Vegetation and Wetlands	Wildlife and Wildlife Habitat	Land Use	Heritage Resources
Clearing and Grubbing	✓	✓	–	✓	✓	✓	✓
Blasting	✓	✓	–	✓	✓	✓	✓
Crushing and Stockpiling	✓	✓	✓	✓	✓	✓	–
/Transportation	✓	–	–	–	✓	✓	–
Progressive and final reclamation of the PDA	✓	✓	✓	✓	✓	✓	–

Notes:
✓ = Potential Interaction
– = No Interaction

Section 5 presents a description of the existing environment and anticipated environmental effects for each VC selected for the Project. An evaluation of anticipated effects is presented, along with mitigation measures or monitoring plans, where applicable.

3.4 Mitigation and Management Measures

Once potential effects are identified for a VC, mitigation measures to reduce potential adverse environmental effects and improve positive effects are identified and described. Technically and economically feasible mitigation measures are proposed to eliminate (e.g., avoid), reduce, or control adverse environmental effects, to address public concerns, and/or to increase beneficial effects. Mitigation measures are provided in the respective VC assessments.

3.5 Residual Environmental Effects

In consideration of applied mitigation, residual effects are described for each VC. The significance of predicted residual effects is then determined in consideration of VC-specific thresholds, which, if a residual effect surpassed, would represent a significant adverse effect.

3.6 Follow-up and Monitoring

Follow-up and monitoring programs are identified for each VC, where applicable. VC-specific follow-up and monitoring programs include those proposed to verify the accuracy of key EA predictions and the effectiveness of prescribed mitigation measures, as well as compliance monitoring that will be undertaken as necessary to verify compliance with applicable regulatory requirements, including the terms and conditions of any environmental permits, approvals, or authorizations that may be issued in support of the Project.

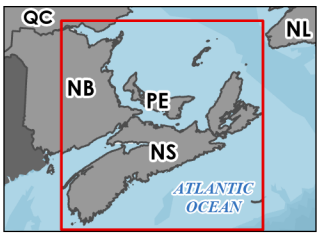
4 Indigenous and Public Engagement

4.1 Indigenous Engagement

4.1.1 Mi'kmaq in Nova Scotia

The ancestors of the Mi'kmaq peoples have existed on the lands known now as Nova Scotia for more than 10,000 years (CBU 2023). They currently live throughout the province, and many reside in one of the 13 recognized Mi'kmaq communities (AANDC 2014; Figure 4.1.1). Mi'kmaq in Nova Scotia have recognized Aboriginal and Treaty rights which encompasses their communal right to use land for traditional purposes (i.e., hunting, fishing, ceremonial activities).

The PDA is privately owned land within the Mi'kmaq district of Sipekne'katik. Glooscap First Nation is the closest community and is located approximately 16 km northwest of the PDA. The Annapolis Valley First Nation, affiliated with the Confederacy of Mainland Mi'kmaq Tribal Council, occupies the St. Croix Reserve (No. 34) located approximately 4 km to the south of the PDA, across Panuke Lake (Figure 4.1.1).



Notes
1. Coordinate System: NAD 1983 CSRS UTM Zone 20N
2. Data Sources: GeoNOVA, NRCAN, OSM, Stantec
3. Background: Esri, NASA, NGA, USGS, Esri, TomTom, Garmin, FAO, NOAA, USGS, NRCan, Parks Canada, Province of New Brunswick, Province of Nova Scotia, Esri Canada, Esri, TomTom, Garmin, SafeGraph, METI/NASA, USGS, NRCan, Parks Canada, Esri, USGS

Legend

- First Nation Community
- First Nation Reserve
- Project Development Area (PDA)
- Waterbody
- Forested Area
- Non-Forested Area
- City/Town
- Provincial Boundary
- Highway
- Road
- Resource Road / Trail
- Railway

0 50 100 km

(At original document size of 8.5x11)
1:3,000,000

N

Stantec

Project Location
Spence Quarry
Windsor, NS

Prepared by AC on 2025-04-08
Revised by NW on 2025-05-06

Client/Project 121418141
Spence Aggregates Limited
Spence Quarry Expansion

Figure No.
4.1.1

Title
Mi'kmaq Communities of Nova Scotia

4.1.2 Mi'kmaq Engagement

The Crown has a duty to consult with the Mi'kmaq of Nova Scotia on proposed Projects that can impact Aboriginal and Treaty rights. In many cases, the Crown delegates the engagement portion of this duty to proponents. Spence Aggregates engaged with the Office of L'nu Affairs on June 25, 2024, to seek input into the scope of an Indigenous engagement program. Spence Aggregates was advised that a Mi'kmaq Ecological Knowledge Study, a study that seeks to gather traditional knowledge to help inform projects and developments, especially on crown lands, was not required for this Project, but was encouraged to engage the First Nations directly.

Spence Aggregates undertook proactive Indigenous engagement to solicit feedback on the Project from Indigenous communities. In consideration of OLA discussions, Spence Aggregates sent letters and Project information sheets to all 13 First Nations, the KMKNO, and the OLA. A generic letter and a copy of the Project information sheet can be found in Appendix A.1 and A.2. To date, Spence has received correspondence from only one Indigenous community, the Sipekne'katik First Nation. Sipekne'katik First Nation requested that Spence Aggregates engage with them through the Sipekne'katik Governance Initiative (SGI) but provided no additional feedback on the Project. After careful consideration, and following discussions with the OLA on March 18, 2025, Spence Aggregates opted not to engage with Sipekne'katik First Nation through the SGI, but did send a follow up letter inviting Sipekne'katik First Nation to comment through Spence's established channels and offering a meeting to discuss the Project. Follow up letters were also sent to the closest Indigenous communities, the Glooscap and Annapolis Valley First Nations, and to the KMKNO and the OLA. Table 4.1.1 below outlines the Indigenous engagement efforts undertaken by Spence Aggregates.

Table 4.1.1 Summary of Indigenous Engagement

Indigenous Community or Stakeholder	Activity Description	Response/Follow Up
Acadia First Nation	Letter and Project information sent dated February 12, 2025, and addressed to Chief Deborah Robinson	• No response received to date
Annapolis Valley First Nation	Letter and Project information sent dated February 12, 2025, and addressed to Chief Gerald Toney	• No response received to date
	Follow up letter sent due to Project proximity dated March 31, 2025	• No response received to date
Bear River First Nation	Letter and Project information sent dated February 12, 2025, and addressed to Chief Carol Dee Potter	• No response received to date
Eskasoni First Nation	Letter and Project information sent dated February 12, 2025, and addressed to Chief Leroy D.C. Denny	• No response received to date

Table 4.1.1 Summary of Indigenous Engagement

Indigenous Community or Stakeholder	Activity Description	Response/Follow Up
Glooscap First Nation	Letter and Project information sent dated February 12, 2025, and addressed to Chief Sidney Peters	• No response received to date
	Follow up letter sent due to Project proximity dated March 31, 2025	• No response received to date
Membertou First Nation	Letter and Project information sent dated February 12, 2025, and addressed to Chief Terrance Paul	• No response received to date
Millbrook First Nation	Letter and Project information sent dated February 12, 2025, and addressed to Chief Robert Gloade	• No response received to date
Paqtnkek First Nation	Letter and Project information sent dated February 12, 2025, and addressed to Chief Cory Julian	• No response received to date
Pictou Landing First Nation	Letter and Project information sent dated February 24, 2025[1], and addressed to Chief Tamara Young	• No response received to date
Potlotek First Nation	Letter and Project information sent dated February 12, 2025, and addressed to Chief Wilbert Marshall	• No response received to date
Sipekne'katik First Nation	Letter and Project information sent dated February 24, 2025[1], and addressed to Chief Michelle Glasnow	• March 6, 2025: Email received on requesting engagement through SGI • March 6-31, 2025: Spence Aggregates consideration of SGI process • March 18, 2025: Spence Aggregates discussions with OLA Consultation Staff
	Follow up letter and Project information sent dated March 31, 2025, to Chief Michelle Glasnow declining engagement through SGI, but inviting comment through established channels (phone, email, mail) and offering a meeting to discuss the Project further	• No further response to date
Wagmatcook First Nation	Letter and Project information sent dated February 12, 2025, and addressed to Chief Norman Bernard	• No response received to date
We'koqma'q First Nation	Letter and Project information sent dated February 24, 2025[1], and addressed to Chief John Leonard Bernard	• No response received to date • No follow up sent
KMKNO	Letter and Project information sent dated February 12, 2025, and addressed to Twila Gaudet (cc Shawn Taylor)	• No response received to date
	Follow up letter sent dated March 31, 2025	• No response received to date

Table 4.1.1 Summary of Indigenous Engagement

Indigenous Community or Stakeholder	Activity Description	Response/Follow Up
OLA	Letter and Project information sent dated February 12, 2025, and addressed to Beata Dera (cc Kendra Gorveatt, Melissa Slauenwhite)	• No response received to date
	Follow up letter sent dated March 31, 2025	• No response received to date

Notes:
[1] Letters initially sent dated February 12, 2025, but were identified to be addressed to past Chiefs. Corrected and resent February 24, 2025.

4.2 Public Engagement

Spence Aggregates is locally owned and operated with a strong presence in the Newport Station community. The quarry provides direct and indirect benefits to the local economy, and many of its staff live in the surrounding communities. Spence Aggregates is also a proud supporter of the local community and has provided financial support to community organizations and events including the Hants County Exhibition, the Heritage Beef Show, Falmouth Tug of War, Local 4H Market Steer Project, West Hant Minor Hockey, Valley Maple Leaf's Hockey, Green Foot Woman's Hockey, Ninja Turtle Tractor Pulling Team, and Coyote Park Baseball.

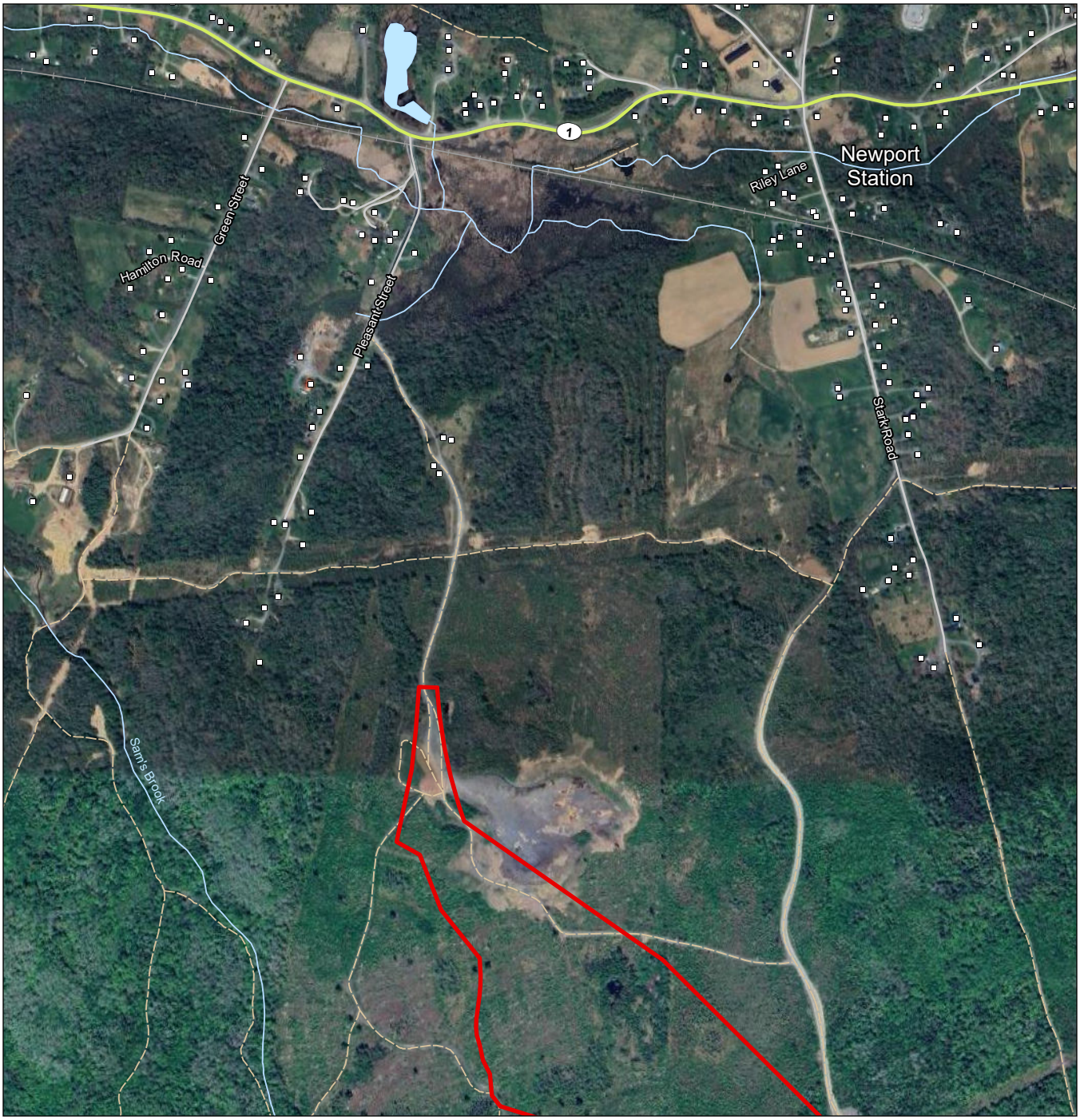
As a member of the local community, Spence Aggregates recognizes the value of seeking input from community stakeholders. Between February 24, 2025, and March 3, 2025, Spence Aggregates distributed over 70 letters with Project information sheets to members of the community (Appendix A.3). To date, no negative feedback from the public has been received by Spence Aggregates. Numerous residents expressed positive attitudes towards the Project when Spence Aggregates was distributing letters. One homeowner requested additional information regarding blasting. Spence Aggregates discussed blasting with the homeowner, including blast monitoring protocols. Spence Aggregates also provided contact information and invited the homeowner to contact them if they had additional questions or wanted additional information. A summary of canvasing efforts is presented in Table 4.2.1 below, and the area canvased is shown on Figure 4.2.1.

Table 4.2.1 Summary of Public Engagement Efforts

Homeowner Response	Number of Properties	Description of Feedback/Response
Positive	20	Includes community members with whom Spence Aggregates had a positive conversation. Positive feedback included homeowners who supported the quarry for its impacts on the local economy, homeowners who are customers of the quarry, and homeowners who expressed general support or a positive view of the quarry.
Neutral	11	Includes community members who answered the door and for whom receipt is confirmed. Community members in this category offered limited comments (e.g., “ok, thanks”), but raised no concerns.
Negative	0	No community members raised concerns at the time of receipt. No comments have been received at the time of submission.
Further Questions	2	Includes community members which had specific questions about the quarry. Topics included blasting, and monitoring equipment. Spence Aggregates answered questions and reiterated the invitation to contact the quarry with further questions.
Not Home/No Answer[1]	35	Includes community members who were not home or who did not answer the door. Information packages were left in accessible locations.
Property Vacant	1	Information package left in door, but property appeared vacant

Notes:

[1]Includes one property where information was left with neighbour due to access/safety considerations. Neighbour agreed to deliver information



Notes
1. Coordinate System: NAD 1983 CSRS UTM Zone 20N
2. Data Sources: GeoNOVA, NRCAN, OSM, Stantec
3. Background: Esri, TomTom, Garmin, FAO, NOAA, USGS, NRCan, Parks Canada, Google

Legend

- Project Development Area (PDA)
- Building / Residence
- Arterial
- Local Road
- Resource Road / Trail
- Railway
- Waterbody
- Watercourse

0 100 200 300 400 m

(At original document size of 8.5x11)
1:10,000

N

Stantec

Project Location
Spence Quarry
Windsor, NS

Prepared by AC on 2025-04-04

Client/Project
Spence Aggregates Limited
Spence Quarry
Expansion

121418141

Figure No.
4.2.1

Title
Area of Public Engagement