Appendix A

Registry of Joint Stock Companies – Scotian Materials Limited

SCOTIAN MATERIALS LIMITED

Profile | Previous Names | Relationships | Events (13)

Name:	Relationship:	Effective From:
MARC JONCAS	Director	13-Jan-2022
PATRICK SULLIOT	Director	13-Jan-2022
MARC JONCAS	Officer(President, Secretary, Treasurer)	13-Jan-2022
GABRIEL DUCHESNE	Officer(Treasurer, Assistant Secretary)	13-Jan-2022
CHRIS MACINTYRE (Suite 1300, 1969 Upper Water Street, Purdy's Wharf Tower II, Halifax, NOVA SCOTIA, B3J 3R7, CANADA)	Recognized Agent	30-Jan-2020

Items

Documents (21) | Reports (2)

Entity Profile Report

Certificate of Status - Company

Appendix B

Public Consultation Information

NOTICE OF VIRTUAL PUBLIC MEETING

Scotian Materials Limited - Tote Road Quarry Expansion
COMMUNITY INPUT SESSION

Project Overview

Scotian Materials Limited is undergoing a Provincial Class 1 Environmental Assessment (EA) for the expansion of its existing Tote Road Quarry near Head of St. Margarets Bay, HRM, N.S.

You are Invited to a Virtual Public Meeting

Date: Thursday January 27, 2022
Time: 7:00 p.m. - 8:30 p.m.

Please register in advance at: bit.ly/ToteRoadEA

If you need assistance with the virtual public meeting or if you require an alternative format of the materials presented at the meeting, please contact:

Jeff Parks, GHD Limited
Phone: 902-334-1819
Email: ToteRoadEA@ghd.com

Virtual Meeting Format

Scotian will do a short presentation providing information about the local quarry expansion development project including baseline studies, operational plans, reclamation plans, monitoring and corporate experience. Following the presentation, Scotian staff and their consultants will be available to answer questions and comments.

Unable to attend? Questions can be sent to ToteRoadEA@ghd.com before or after the meeting.

THANK YOU IN ADVANCE FOR YOUR INPUT AND PARTICIPATION

Scotian Materials Limited
Tote Road Quarry Expansion
Environmental Assessment
Project Information Package

Scotian Materials Limited (Scotian) appreciates the role of the project stakeholders in the provincial environmental assessment process for the Tote Road Quarry Expansion Project, Head of St. Margarets Bay, Halifax County Nova Scotia.

The Project is located on approximately 2.5 kilometres (km) west of the community of Westwood Hills, Upper Tantallon and 2.4 km northwest of the community of Head of St. Margarets Bay (see Figure 1). The existing quarry is approximately 1 km north of Highway 103 between Exits 5 and 5A and is accessed by a new resource road from Exit 5A at Ingramport.

Some key aspects of the Project are outlined herein.

1. SCOTIAN MATERIALS LIMITED

Scotian is a Nova Scotia registered and operated company, headquartered in the Aerotech Industrial Park in Halifax Regional Municipality, NS. Scotian provides local markets with crushed stone and aggregate. Their goal is to help local contractors develop communities by building roads, schools, hospitals, and other community infrastructure. Scotian responsibly operates well-managed quarries from Halifax to Shelburne and make a conscious effort to go above and beyond minimum requirements focusing decisions on their social and environmental responsibility.

Scotian is committed to working in partnership with communities, and to operating in a safe, sustainable, responsible fashion. As Scotian continues to grow, they plan to be increasingly supportive of cultural and social events in each community.

2. PROJECT OVERVIEW

Scotian is currently permitting an expansion of its existing Tote Road Quarry to take full advantage of the aggregate resource on their wholly owned property. Operations began in 2013 and an Industrial Approval to operate a less than 4 ha quarry was issued by NSECC in 2014.

The Project is planning to continue an average production of approximately 200,000 tonnes per year with the possibility of periods of increased production depending on market conditions. The proposed operating schedule during peak demand operational periods is 12 hrs/day, five-six days/week for up to 35 weeks/year. Production rates, days/times of operation, traffic, blasting frequency etc., will remain consistent with the existing operations.

No permanent infrastructure, other than a settling pond to control site runoff, is required. Blasting is required to remove the resource as needed to meet market demand. Mobile crushing equipment will operate as required to stockpile material on site.

The quarry life span is anticipated to be 30+ years (typically seasonal) and will cover approximately 24 ha when fully realized.

3. PROCESSING

Site activities associated with construction, operation, and decommissioning of the quarry are as follows:

- Site preparation (removal and stockpiling of overburden, vegetation).
- On-site processing (drilling, blasting, extraction, crushing, stockpiling aggregate).
- Transportation/trucking.
- Reclamation and Closure.

Aggregate material is crushed to market size and stored on site until shipped to the market via trucks.

A permitted mobile asphalt plant may operate on the Project site for a period of time to meet market demand.

4. RECLAMATION CONCEPT

The Reclamation process returns the area to a condition that is consistent with the natural surroundings and community use through progressive (during operations on stable areas) and final reclamation (after the cessation of extraction activity) activities. Quarry faces are graded to a minimum 1:1 (45 degrees) slope then transition to a 3:1 slope or flatter to create fields or pond shorelines. Topsoil material that was saved during operation will be placed on slopes and vegetated with a mix of grasses, native plant species and trees.

Final reclamation will be done in consultation with the community and other stakeholders.

A general approach to reclamation planning in Nova Scotia is found in Guide for Surface Coal Mine Reclamation Plans:

www.novascotia.ca/nse/ea/docs/EA.Guide-SurfaceCoalMineReclamation.pdf

5. ENVIRONMENTAL ASSESSMENT

Environmental Assessment (EA) is a decision-making tool used to promote sustainable development, while protecting and conserving the environment, by evaluating the potential environmental and socio-economic effects of a project. It is a well-defined process in Nova Scotia that includes environmental and socio-economic baseline studies. Consultation is important and includes the Mi'kmaq, public, and all levels of government during the assessment.

Public and stakeholder input helps Scotian to address public concerns prior to registration of the Project and submission of the assessment report to government.

6. THE ENVIRONMENT

The Project area has been the subject of previous forest harvesting and resource extraction activity. Desktop and Field Studies in 2020 and 2021 included:

Air Quality, Noise, Light Assessment - Baseline data has been collected at several nearby receptors; closest receptors are more than 2 km. Outputs will be consistent with existing operations.

Geology and Soils - Rock is not acid generating; soils are suitable for reclamation.

Groundwater - No domestic wells are within ~2.3-km. Monitoring wells have been installed to monitor groundwater quality and quantity.

Surface Water – No watercourses located within the quarry limits. A first order stream located 50-m west of site does not provide passage to upgradient features. A small pond is located on SW corner of the site.

Fish – No fish observed. Habitat in stream limited by dry conditions, underground and dechannelized surface flow through wetland habitat.

Wetlands – No wetlands are within the quarry limits. Three wetlands located on the northern property boundary are avoided with appropriate setbacks. One of these is a wetland of special significance due to the presence of blue felt lichen observed outside property. A 100-m buffer no activity buffer is established that will not directly impact the wetland or lichen.

Vegetation and Vascular Plants – The land is a mosaic of disturbed and intact forest consisting of regenerative softwood stand and wetlands. 101 vascular plant species identified: one species of special conservation interest; no priority species were observed.

Lichens - 22 lichen species; two priority lichens were observed outside of the expansion area.

Breeding and Migratory Birds - 62 species; 14 priority species. All species observed are native species in this region. Bird activity is consistent with habitat.

Wildlife - Surveys identified 7 common mammals. No signs of moose or bats present.

Archaeological and Cultural Heritage Resources - Study found low potential for encountering archaeological resources. The site is cleared of any further archaeological investigation.

Mi'kmaq Ecological Knowledge Study - The study is ongoing. A site visit by a Mi'kmaw elder did not identify anything of significance.

Socioeconomic Assessment – The area has middle to high family incomes, good education, and essential amenities and services. The quarry will not be disruptive to the economy or residential life and will support local construction projects.

7. NEXT STEPS

The project will be registered for regulatory approval through Nova Scotia Department of Environment & Climate Change (NSECC) which includes a 30-day public review and comment period.

Please watch in your local and regional newspapers and the website noted below for a Notice that the Project has been registered and how to provide comments to NSECC.

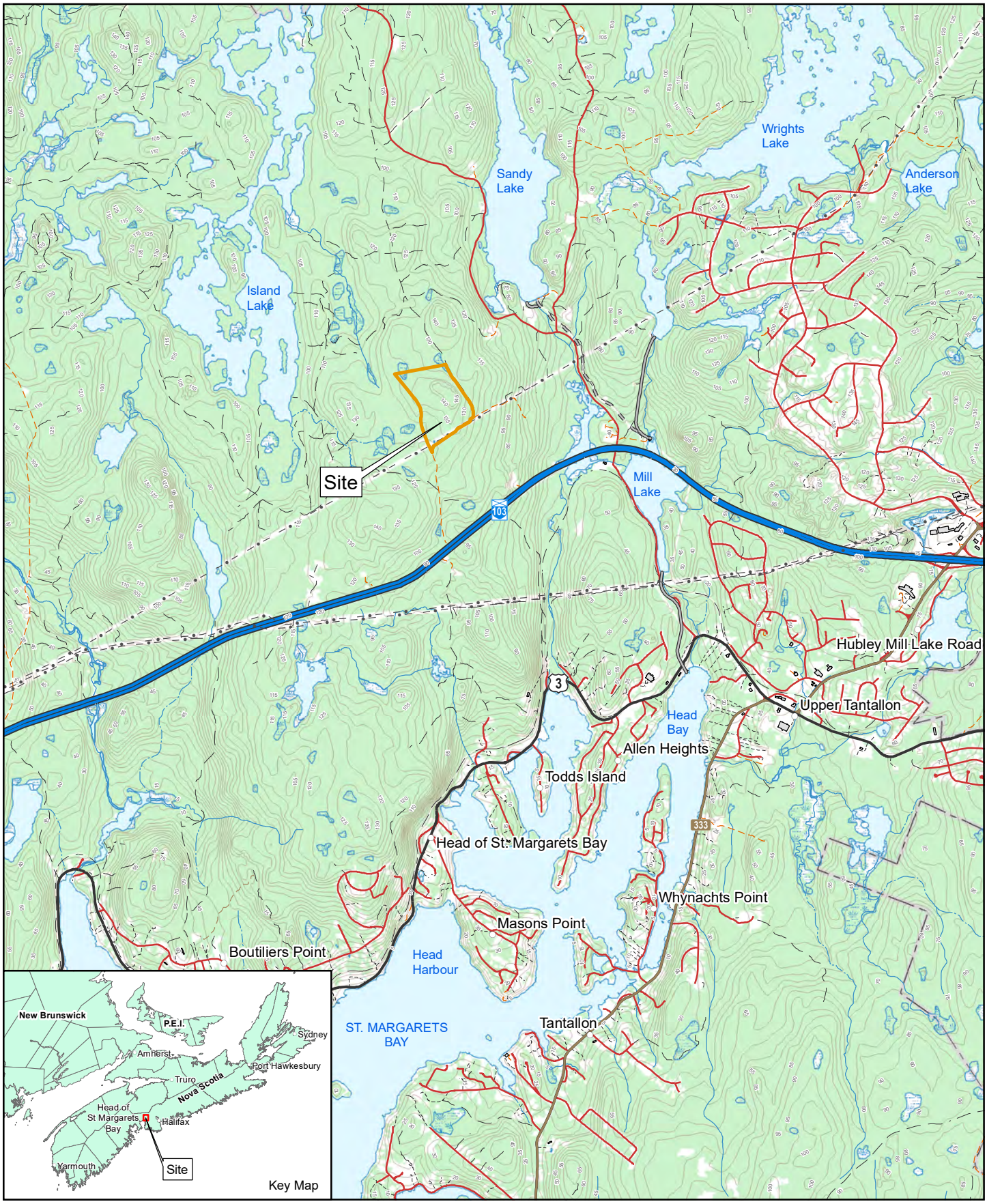
Additional information on the Environmental Assessment process in Nova Scotia can be found at:

novascotia.ca/nse/ea/pubs.asp
novascotia.ca/nse/ea/faqs.asp

Questions? Email: ToteRoadEA@ghd.com

Scotian MATERIALS
YOUR RESOURCE. YOUR COMMUNITY. YOUR FUTURE

Scotian Materials Limited
171 Resource Road, Goffs, NS, B2T 0L2
www.scotianmaterials.ca



Paper Size ANSI A

0 500 1,000 1,500

Metres

Map Projection: Transverse Mercator
Horizontal Datum: North American 1983 CSRS
Grid: NAD 1983 CSRS UTM Zone 20N

N

GHD

SCOTIAN MATERIALS LIMITED
HEAD OF ST. MARGARETS BAY, NOVA SCOTIA
TOTE ROAD QUARRY EXPANSION PROJECT

SITE LOCATION

Project No. 11216599
Revision No. -
Date 12/05/2021

FIGURE 1

N:\CA\Halifax\Projects\661\11216599\GIS\Maps\Deliverables\11216599-PD\11216599-PD-GIS-HX001.mxd
Print date: 18 Jan 2022 - 16:56

Data source: GEONOVA, GHD, Scotian Materials . Created by: jjparks

→ Jeff Parks, P.Geo., FGC
Senior Environmental Geoscientist

Tote Road Quarry Expansion
Public Information Session

Welcome

1

→ Mi'kmaw Land Acknowledgement

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Outline

Introductions and Welcome
Mi'kmaw Land Acknowledgement
The Proponent
The Project
Processing
Reclamation Concept
Environmental Assessment Process
The Environment
Next Steps
Questions and Answers

3

The Proponent: Scotian Materials Limited

A Nova Scotian registered and operated company.

Headquartered at Aerotech Industrial Park, in Goffs, Halifax Co., Nova Scotia.

Produces a variety of construction aggregates for local projects.

Scotian's products supply road building and construction markets locally.

Scotian supports several community sponsored organizations.

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The Project : Tote Road Quarry Expansion

Located on Tote Road, Head of St. Margarets Bay, Halifax County, Nova Scotia

The quarry life span is anticipated to be 30+ years (typically seasonal)

Production rates, days/times of operation, traffic, blasting frequency etc., will remain consistent with the existing operations

- Continue an average annual production of up to 200,000 tonnes with the possibility of periods of increased production depending on market conditions.
- Operating schedule during peak demand is 12 hrs/day, five-six days/week for up to 35 weeks/year.
- No permanent infrastructure, other than a settling pond to control site runoff.
- Blasting is required to remove the resource as needed.

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The Project : Tote Road Quarry Expansion

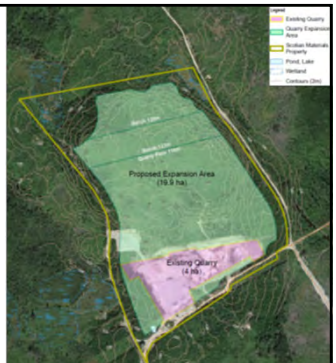
Existing 4 ha permitted (NSE 2014) quarry planning to expand to approximately 24 ha

Setbacks
- Property boundaries (30 m)
- Roads (30 m)
- Wetlands and watercourses (30 m)
- Wetlands of significance (priority species present) (100 m)
- 2 km+ to potable wells

Quarry Floor Elevation
- 116 m above sea level (asl)

Two 5 m benches to mitigate potential groundwater impacts to northern wetlands
- 121 and 126 masl (wetland elevation at approx. 128 masl)

The Study Area for the EA is located on a ~33 ha privately-owned property that includes the existing quarry and footprint of the proposed quarry expansion.



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Processing

Site activities associated with construction, operation, and decommissioning of the quarry are as follows:

- Site preparation (removal and stockpiling of overburden, vegetation).
- On-site processing (drilling, blasting, extraction, crushing, stockpiling aggregate).
- Transportation / Trucking.
- Reclamation (Progressive) and Closure.

Aggregate material is crushed to market size and stored on site until shipped to the market via trucks.

Consistent with the current operations, a permitted mobile asphalt plant may operate on the Project site for a prescribed period to meet market demand.

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Reclamation Concept

Reclamation is the final phase of the Project to return the area to a condition that is consistent with the natural surroundings and community use.

Two types of reclamation will be completed

- progressive (during operations on stable areas)
- final reclamation (after the cessation of extraction activity).

Quarry faces are graded to a minimum 1:1 (45 degrees) slope then transition to a 3:1 slope or flatter to create fields or pond shorelines.

Topsoil material that was saved during operation will be placed on slopes and vegetated with a mix of grasses, native plant species and trees.

Final reclamation will be done in consultation with the community and other stakeholders

8

Environmental Assessment Process

Environmental Assessment is a decision-making tool used to promote sustainable development, while protecting and conserving the environment, by evaluating the potential environmental and socio-economic effects of a project.

A well-defined process in Nova Scotia that includes environmental and socio-economic baseline studies.

Consultation is important and includes the Mi'kmaq, public, and all levels of government during the assessment.

Public and stakeholder input helps Scotian to address any concerns prior to submission of the Project for regulatory approval.

Suggestions or concerns are reviewed, responded to, and incorporated into the final project design.

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The Environment

Air Quality, Noise and Light Assessment

- Baseline data has been collected at several nearby receptors.
- Outputs will be consistent with existing operations.

Geology and Soils

- Rock is not acid generating; soils are suitable for reclamation.

Groundwater

- No domestic wells are within ~2.3 km.
- Monitoring wells have been installed to monitor groundwater quality and quantity.

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The Environment

Surface Water

- No watercourses located within the proposed quarry limits. One watercourse is located 50 m west of the Study Area.
- One waterbody (small pond) is located in the southwest corner of the Study Area.

Fish

- No fish were observed during the field studies within the watercourse or the small pond.
- Fish habitat is limited by dry conditions, underground, and dechannelized surface flow through wetland habitat.

Wetlands

- No wetlands located in the proposed quarry limits.
- Wetlands to the north of the property are avoided and appropriate setbacks in place.
- A wetland of special significance was identified due to the presence of blue felt lichen observed off property. A 100-m buffer no activity buffer is established that will not directly impact the wetland or lichen.

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The Environment

Vegetation and Vascular Plants

- Mosaic of disturbed and intact forest habitat. Habitat of regenerative softwood stands, wetlands, and disturbed areas.
- 101 vascular plant species. One SOCI observed outside proposed quarry limits. No priority species were observed.

Lichens

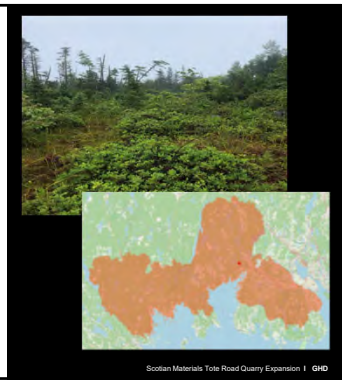
- 22 lichen species. Two priority lichens were observed outside of the proposed quarry limits.

Breeding and Migratory Birds

- 62 species observed; 14 priority species within the Study Area.
- All species observed are native species in this region. Bird activity is consistent with the available habitat.

Wildlife

- Survey identified 7 common mammals. Others may use the habitat.
- Moose Concentration Area but no shelter patches identified in the Study Area - No signs of moose.
- No bats observed. No known hibernacula within 5 km.



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The Environment

Mi'kmaq Ecological Knowledge Study

- The study is ongoing.
- A site visit by a Mi'kmaw elder did not identify anything of significance.

Archaeological and Cultural Heritage Resources

- Study found low potential for encountering archaeological resources.
- The site is cleared of any further archaeological investigation.

Socioeconomic Assessment

- Area has middle to high family incomes, good education, and essential amenities and services.
- The quarry will not be disruptive to the economy or residential life of the community.
- The quarry will supply local construction projects.

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Next Steps

- Public and stakeholder inputs to be incorporated prior to Project registration.
- Submission of the EARD to NSECC in February 2022
- Public notice of consultation period to be published to inform the public on comment period
- The public and stakeholders also have an opportunity (30 days) to provide comment to the government on the final documents once the EA has been registered

For more information: novascotia.ca/nse/ea/faqs.asp or novascotia.ca/nse/ea/pubs.asp

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Questions and Answers

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Still have Questions?

If you didn't ask your question or have specific comments/concerns please email or call within the next week so that they can be considered in the environmental assessment.

- ToteRoadEA@ghd.com
- Contact Jeff Parks, 902-334-1819

When the EARD is submitted there is 30-day consultation period through Nova Scotia Environment & Climate Change (Feb-Mar 2022) where you can review the document and provide comment.

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Appendix C

Baseline Particulate and Noise Monitoring Report

Baseline Particulate and Noise Monitoring

Tote Road Quarry Expansion Project
Head of St. Margarets Bay
Halifax County, Nova Scotia

Scotian Materials Limited

25 February 2022

GHD
110, 120 Western Parkway
Bedford, Nova Scotia B4B 0V2, Canada
T +1 902 468 1248 | **F** +1 902 468 2207 | **E** info-northamerica@ghd.com | **ghd.com**

Document status

Status Code	Revision	Author	Reviewer		Approved for issue		
			Name	Signature	Name	Signature	Date
S3	00	Jessica Romo	Callie Andrews		Callie Andrews		Feb 4, 2022
S4	01	Jessica Romo	Callie Andrews		Callie Andrews		Feb 25, 2022

Contents

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Table index (following text)

Figure index

Appendices

1. Introduction

GHD Limited was retained by Scotian Materials Limited (Scotian) to conduct a baseline monitoring program for Total Suspended Particulates (TSP) and noise. The monitoring program was completed on the Tote Road Quarry property and within the neighbouring residential areas located northeast and southeast of the quarry. Particulate monitoring was conducted at two locations from August 16 through August 19, 2021, for a total of three days at each location. Noise monitoring was completed at three locations between August 16 and August 19, 2021 at the same or nearby locations.

1.1 Site Description

The Tote Road Quarry (the Site) is located on Tote Road, Head of St. Margarets Bay, Halifax County, Nova Scotia, approximately 2.3 kilometres (km) west of the community of Westwood Hills, Upper Tantallon, NS, and 2.5 km northwest of the community Head of St. Margarets Bay, NS. (See Site Location, Figure 1). The Site is accessed via a series of resource roads. The Site consists of a quarry used to extract rock aggregate. Operations at the quarry to date have included grubbing and removal of surficial overburden, blasting, crushing, and stockpiling of aggregate.

An Industrial Approval (IA) (2014-090423-01) to operate, construct, and reclaim a quarry less than 4 hectares (ha) was granted by Nova Scotia Environment (NSE) in 2014 and revised in 2020. No quarry activities (i.e., blasting, crushing, loading, etc.) occurred during the monitoring period.

2. Sampling Methodology

2.1 Particulate Monitoring

Baseline particulate monitoring was conducted at two locations from August 16 through August 19, 2021. The monitoring locations were selected based on accessibility, wind direction, and the proximity to Site boundaries for the purpose of capturing baseline particulate concentrations in the vicinity of the Site. Table 2-1 provides a description of the air monitoring locations. Monitoring locations are depicted on Figure 2.

Table 2-1 Particulate Monitoring Locations

Sample Location ID	Description
A1	Tote Road, Head of St. Margaret's Bay – Quarry. Monitoring conducted in southeast corner of existing quarry, near existing settling pond.
A2	15 Hollyberry Lane, St. Margaret's Village – private residence located approximately 3.7 km southeast of quarry. Monitoring conducted in backyard.

The monitoring program for TSP was carried out in accordance with United States Environmental Protection Agency (USEPA) CFR 40 Part 50 - Regulations for Ambient Particulate Sampling. Sampling equipment utilized by GHD consisted of three high volume (Hi-Vol) air samplers equipped with 8-inch x 10-inch glass fiber filters for sample collection. The Hi-Vol sampler used at the quarry was electrically powered by a propane generator located approximately 45 m away. The Hi-Vol samplers used at the private residence were electrically powered by connection to the residences power supply. The Hi-Vol samplers were calibrated according to the above referenced method as well as manufacturers' specifications.

Approximately 40 cubic feet per minute of ambient air was drawn through the Hi-Vol samplers over 24-hour sampling periods, trapping particulate on a pre-weighed glass fiber filter. After each 24-hour sampling event, filters were removed from the sampler, placed in an envelope and stored in a clean, dry area. A total of three samples were collected at A1 (Tote Road Quarry) and A2 (15 Hollyberry Lane). Sampler flow calibration sheets and calculated flow rates are provided in Appendix A. Upon completion of the program samples were submitted to an

accredited laboratory, AGAT Laboratories in Dartmouth, NS, for analysis in accordance with the EPA Method 5 as per the analytical report method. The laboratory results and certificate of analysis are provided in Appendix C.

2.2 Noise Monitoring

Baseline noise monitoring was conducted at three locations, in proximity to the air sampling locations, between August 16 and 19, 2021. Table 2-2 provides a description of the noise monitoring locations. Sampling locations are depicted on Figure 2.

Table 2-2 Nosie Monitoring Locations

Sample Location ID	Description
N1	15 Hollyberry Lane, St. Margaret's Village – private residence located approximately 3.7 km southeast of quarry. Monitoring conducted in back yard.
N2	Vacant lot adjacent to 95 Chera Drive, Head of St. Margaret's Bay – private vacant lot northwest of adjacent residence (95 Chera Drive, same property owners) lot located approximately 2.8 km southeast of quarry. Monitoring conducted in grassed area of vacant lot.
N3	152 Falcourt Run, Upper Tantallon – private residence located approximately 3.2 km northeast of the quarry. Monitoring conducted in front yard.

Noise is measured as sound pressure levels (SPL) in decibels (dB). This scale is "A" weighted to approximate the way the human ear hears. Noise measurements are therefore represented as dBA units. Sound level measurements were collected using a Larson Davis sound level meter, equipped with data-logging capabilities. The device was calibrated at 94 decibels (dBA) before and after each measurement period using a Larson Davis Calibrator.

The noise meter was programmed to record continuous 1-minute sound level measurements taken with the detector in slow response using the A-weighting (dBA scale) and reported as average equivalent continuous level (Leq) dBA readings at each of the three monitoring locations. The sound level meters were equipped with an outdoor casing and foam covering to protect the microphone from adverse weather conditions and reduce sound disturbances caused by physical contact and wind disturbances.

3. Results and Discussion

3.1 Weather Conditions

The weather conditions during the particulate monitoring period predominantly consisted of clear skies with some cloudy periods. Meteorological conditions were recorded using Environment Canada's Bedford Range weather station (ID 8200574). Weather data from the monitoring period is presented in Appendix B. Prominent wind direction for 2016 – 2020 from the Bedford Range is southeast and north as depicted by the wind rose diagram labelled as Figure 3. Prominent wind direction during the monitoring period is between south and west (south winds, southwest winds, or west winds). The west to north wind direction (west winds, northwest winds or winds blowing from the north) was the second most common wind direction recorded during the monitoring period.

A brief summary of weather conditions during the air monitoring period is provided in Table 3-1.

Table 3-1 Summary of Weather Conditions During Monitoring

Date	Average Temperature (°C)	Wind Speed Range (km/hr)	Predominant Wind Direction
August 16, 2021	18.68	0-15	Between South and West
August 17, 2021	18.37	0-13	
August 18, 2021	18.60	0-32	
August 19, 2021	21.08	16-31	

3.2 Total Suspended Particulate Monitoring

TSP includes dust, dirt, soot, smoke, and liquid droplets directly emitted into the air by sources such as factories, power plants, cars, construction activity, fires, and natural windblown dust. Particles formed in the atmosphere by condensation or the transformation of emitted gases such as SO2 and Volatile Organic Compounds (VOCs) are also considered particulate matter.

Quarry activities such as blasting, on-site vehicle operations, crushing, and wind-borne particulate from waste rock piles can contribute to increased particulate levels. Based on Nova Scotia Air Quality Regulations, a significant adverse environmental effect with respect to TSP is one that would reduce air quality, such that the level of TSP matter exceeds 120 microgram per cubic meter (µg/m^3) over a 24-hour averaging period or 70 µg/m^3 over an annual averaging period (Nova Scotia Environment Act Air Quality Regulations, Effective January 1, 2015, NS Reg 179/2014).

Table 3-2 Air Monitoring Summary

Date	A1 – Tote Road Quarry, Head of St. Margaret's Bay, NS	A2 - 15 Hollyberry Lane, St. Margaret's Village, NS
August 16 – 17, 2021	15.4 µg/m^3	7.0 µg/m^3
August 17 – 18, 2021	20.2 µg/m^3	9.3 µg/m^3
August 18 – 19, 2021	13.3 µg/m^3	9.6 µg/m^3

All calculated values were reported below the maximum permissible ground level concentration of 120 µg/m^3 outlined in Schedule A of the Nova Scotia Air Quality Regulations. TSP values measured at the two monitoring locations over the three-day period ranged from 7.0 µg/m^3 to 20.2 µg/m^3. TSP measurements compared to applicable criteria are presented in Table 4, at the end of this report.

3.3 Noise Monitoring

Noise is defined as any unwanted sound which may be hazardous to health, interfere with speech and verbal communications, or is otherwise disturbing, irritating, or annoying. In general, an increase in noise levels from 1 to 3 dBA will not be noticeable, 3 to 5 dBA will be noticeable by most people, 5 to 7 dBA will be easily heard, and an increase of 7 to 10 dBA will be considered by most to be twice as loud. Because the decibel scale is logarithmic, doubling of the number of noise sources will increase noise levels by 3 dBA. A tenfold increase in the number of noise sources will add 10 dBA to the noise level.

Quarry operations such as blasting, on site vehicle operations, and rock crushing can contribute to increased noise levels. As specified in the Noise Measurement and Assessment Guidelines (Nova Scotia Environment Pit and Quarry Guidelines, May 4, 1999, Revised August 20, 2003), Leq values should be within limits shown in Table 3-3. The criteria is compared to the minimum and maximum values recorded.

Table 3-3 Noise Monitoring Summary

Time Frame	Criteria (dBa)	dBa		
		N1	N2	N3
		Recorded Min - Max		
0700 - 1900	≤ 65	43.2-53.2	33.9-43.5	29.3-39.1
1900 - 2300	≤ 60	41.9-44.3	36.5-41.2	32.4-34.2
2300 - 0700	≤ 55	40.4-47.3	27.8-34.9	30.1-43.8

Average sound level values ranged from 31.10 dBa to 50.63 dBa at all locations. Average sound level values for each time interval were reported below the maximum permissible sound levels of the Noise Measurement and Assessment Guidelines. The lowest sound levels were reported northeast of the quarry, at location N3 (152 Falcourt Run). The highest noise levels recorded during daytime (07:00 – 19:00), evening (19:00 – 23:00) and overnight hours (23:00 – 07:00) hours were measured at location N1 (15 Hollyberry Lane). During the

monitoring event, construction on nearby properties were taking place in close proximity to N1 monitoring location which may have contributed to noise levels recorded.

A complete summary of the results and the sound level measurements compared to applicable criteria are presented in Table 5, at the end of this report.

4. Limitations

This report has been prepared by and the work referred to in this report has been undertaken by GHD for Scotian Materials Limited. Any use, reliance on, or decision made by any person other than Scotian Materials Limited based on this report is the sole responsibility of such other person. Scotian Materials Limited and GHD make no representation or warranty to any other person with regard to this report and the work referred to in this report and they accept no duty of care to any other person or any liability or responsibility whatsoever for any losses, expenses, damages, fines, penalties or other harm that may be suffered or incurred by any other person as a result of the use of, reliance on, any decision made or any action taken based on this report or the work referred to in this report.

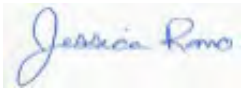
It is important to emphasize that an air and noise assessment is, in fact, a random sampling of a site and the comments included in this report are based on the results obtained at the monitoring locations only. The conditions confirmed at the sampling locations may vary at other locations. Conditions can also be significantly modified by construction activities on Site (i.e. excavation, dewatering and drainage, blasting, etc.).

If Site conditions or applicable standards change or if any additional information becomes available at a future date, modifications to the findings, conclusions and recommendations in this report may be necessary. The recommendations made in this report are in accordance with our present understanding of the project, the current site use, ground surface elevations and conditions, and are based on the work scope approved by the Client.

5. Closure

We trust this meets the requirements for baseline particulate and noise monitoring and sampling for the Scotian Materials Ltd. Tote Road Quarry, located on Tote Road, St. Margaret's Bay, Halifax County, Nova Scotia.

All of Which is Respectfully Submitted



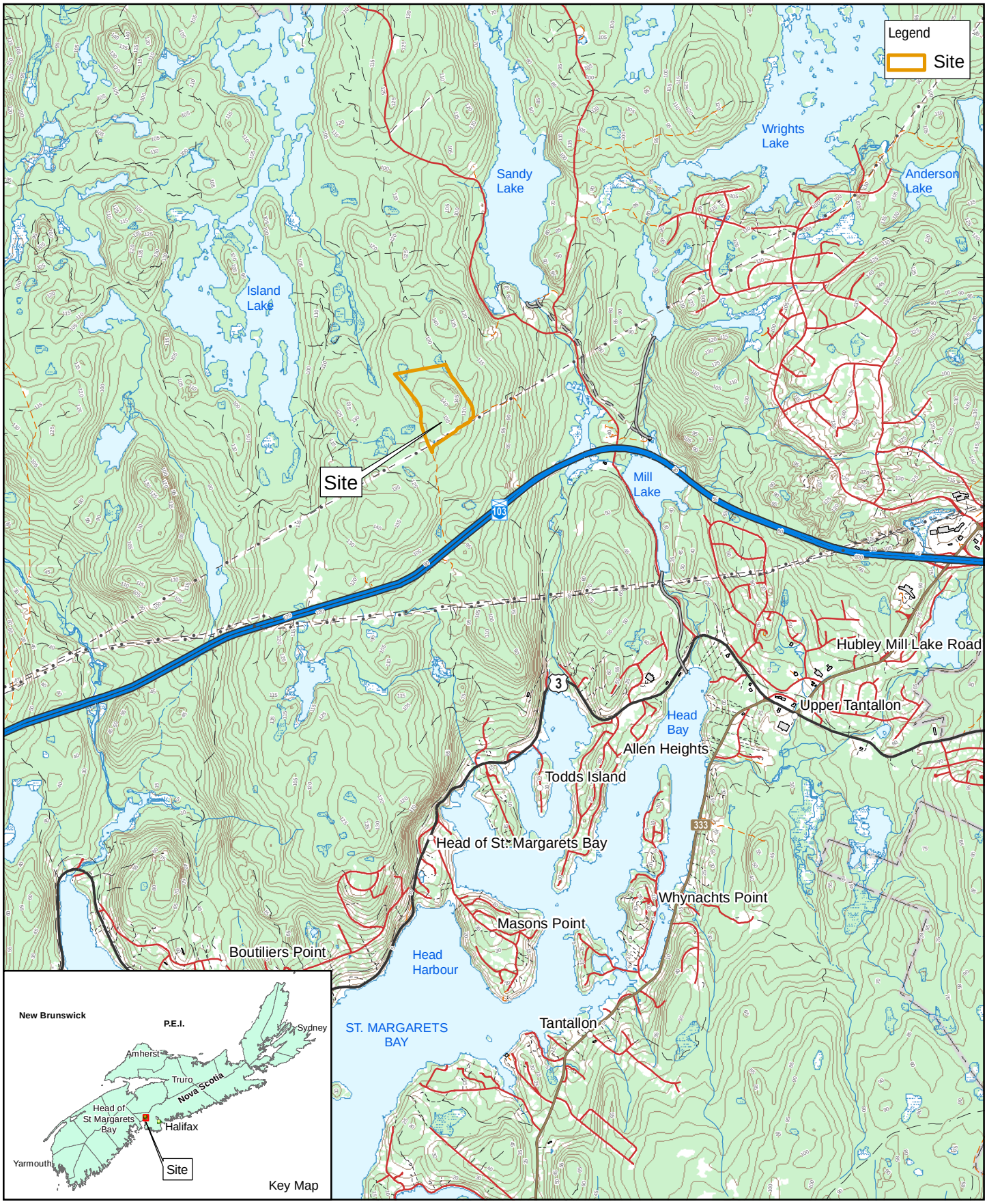
Callie Andrews, M.Sc.
Project Manager

+1 902 334-1805
callie.andrews@ghd.com

Jessica Romo, MREM
Project Coordinator

+1 902 334-1832
jessica.romo@ghd.com

Appendices



Paper Size ANSI A

0 500 1,000 1,500

Metres

Map Projection: Transverse Mercator
Horizontal Datum: North American 1983 CSRS
Grid: NAD 1983 CSRS UTM Zone 20N

N

SCOTIAN MATERIALS LIMITED
HEAD OF ST. MARGARETS BAY, NOVA SCOTIA
TOTE ROAD QUARRY EXPANSION PROJECT

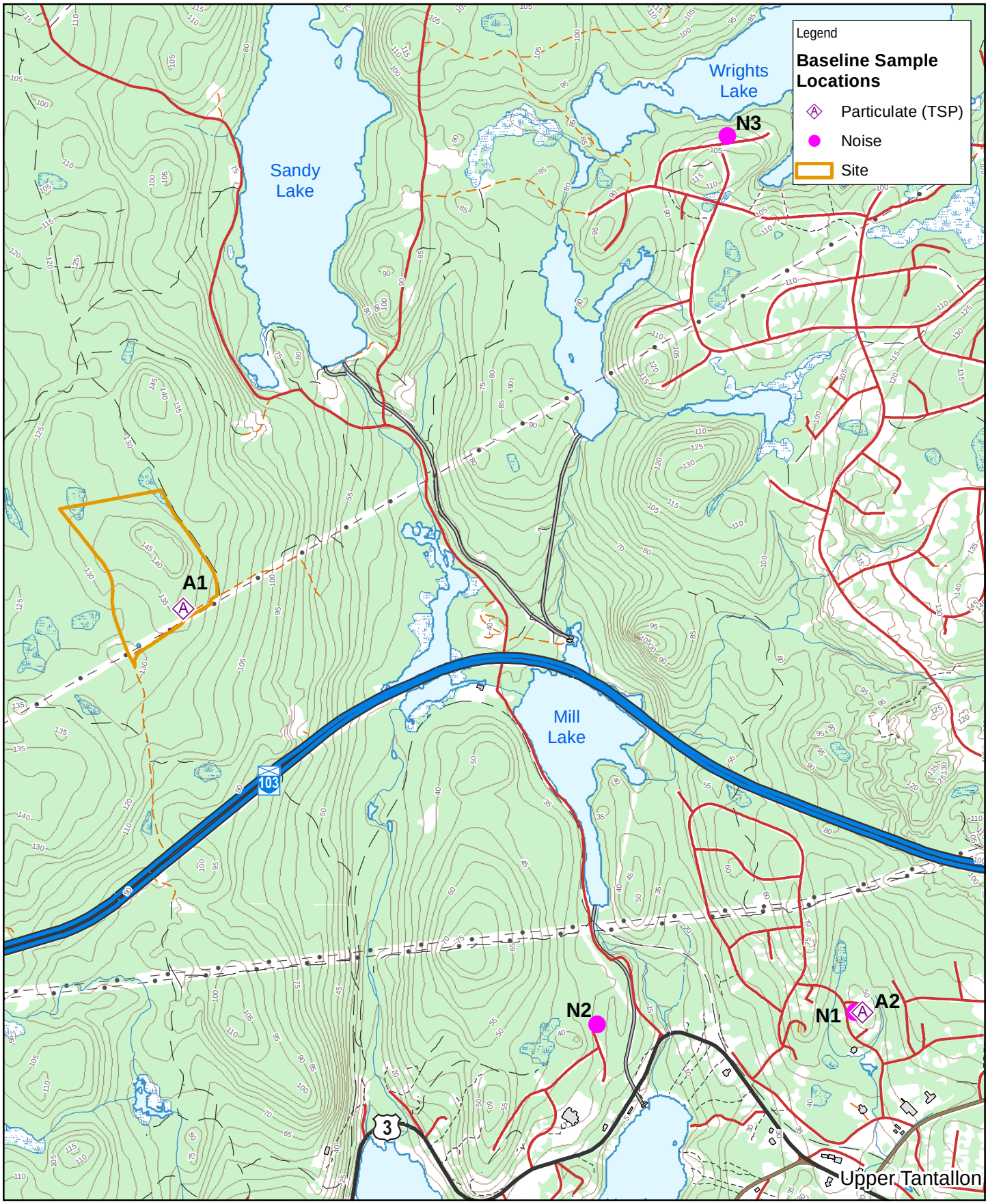
BASELINE AIR & NOISE MONITORING SITE LOCATION

Project No. 11216599
Revision No. -
Date 26/10/2021

FIGURE 1

N:\CA\Halifax\Projects\661\11216599\GIS\Maps\Deliverables\11216599-RPT-03\11216599-RPT03-GIS-HX001-FIG1_Site location.mxd
Print date: 04 Feb 2022 - 14:54

Data source: GEONOVA, GHD, Scotian Materials . Created by: jjparks



Paper Size ANSI A

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Metres

Map Projection: Transverse Mercator
Horizontal Datum: North American 1983 CSRS
Grid: NAD 1983 CSRS UTM Zone 20N

N

GHD

SCOTIAN MATERIALS LIMITED
HEAD OF ST. MARGARETS BAY, NOVA SCOTIA
TOTE ROAD QUARRY EXPANSION PROJECT

BASELINE AIR & NOISE MONITORING SAMPLING PLAN

Project No. 11216599
Revision No. -
Date 26/10/2021

FIGURE 2

N:\CA\Halifax\Projects\661\11216599\GIS\Maps\Deliverables\11216599-RPT-03\11216599-RPT03-GIS-HX002-FIG2_Sampling Plan.mxd
Print date: 04 Feb 2022 - 15:03

Data source: GEONOVA, GHD, Scotian Materials . Created by: jjparks

WIND ROSE PLOT:

Wind Rose Plot for Lower Sackville and Bedford, Nova Scotia
Bedford Range Automated Station WMO 71325

DISPLAY:

Wind Speed
Direction (blowing from)

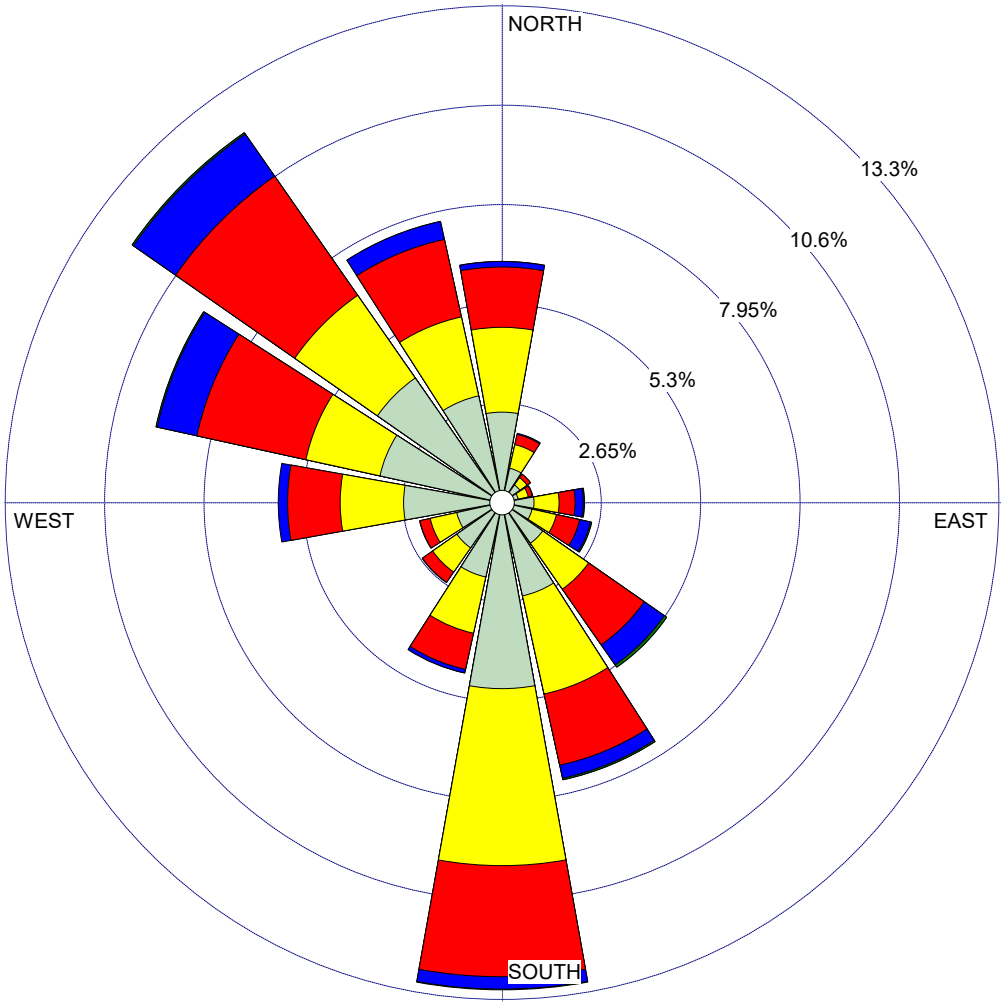

FIGURE 3

COMMENTS: Source: Environment Canada	DATA PERIOD: **Start Date: 1/1/2016 - 00:00** **End Date: 12/31/2020 - 23:00**	TITLE: **BASELINE PARTICULATE AND NOISE MONITORING TOTE ROAD QUARRY EXPANSION PROJECT HEAD OF ST. MARGARETS BAY, NOVA SCOTIA**	
		MODELER: **GHD**	
	CALM WINDS: **13.46%**	TOTAL COUNT: **43225 hrs.**	
	AVG. WIND SPEED: **2.46 m/s**	DATE: **8/4/2021**	PROJECT NO.: **11216599**

WRPLOT View - Lakes Environmental Software

TABLE 4: CALCULATED PARTICULATE RESULTS

Scotian Materials Limited - 2021 Total Suspended Particulate and Noise Monitoring Program

Results for Total Suspended Particulate (TSP)

Sample ID	Sampler Used	Sample Date	Sample Time (min)	Flow (m^3/min)	Flow (CFM)	Total Volume (m^3)	Total Suspended Particulate (TSP) (Total µg)	Total Suspended Particulate (TSP) (µg/m^3)[2]	Nova Scotia Air Quality Regulation[1] - 24 hour sample
A1 Tote Road Quarry	TSP-2	Aug 16 - 17, 2021	1413	1.194	42.2	1687.49	26000	15.4	120 µg/m^3
		Aug 17 - 18, 2021	1445	1.200	42.4	1733.88	35000	20.2	
		Aug 18 - 19, 2021	1380	1.200	42.4	1655.89	22000	13.3	
A2 15 Hollyberry Lane	TSP-7	Aug 16 - 17, 2021	1416	1.214	42.9	1719.12	12000	7.0	
		Aug 17 - 18, 2021	1429	1.208	42.7	1726.82	16000	9.3	
		Aug 18 - 19, 2021	1383	1.208	42.7	1671.23	16000	9.6	

Note:

[1] Nova Scotia Air Quality Regulations, Effective January 1, 2015

[2] Total Suspended Particulates is calculated by dividing Total Suspended Parituclate (Total µg) by Total Volume (m^3)

Shaded — Exceeds applicable guidelines

TABLE 5: AVERAGE L_{eq} VALUES
Scotian Materials Limited - 2021 Total Suspended Particulate and Noise Monitoring Program
Results for Noise Monitoring

Location	Date	Time	Average L_{eq} Value	NSE Criteria[1]
N1: 15 Holly Berry Lane, St. Margaret's Village	16-Aug-21	9:00-9:59	--	0700-1900 ≤65 dBA
		10:00-10:59	44.20	
		11:00-11:59	44.90	
		12:00-12:59	45.20	
		13:00-13:59	45.10	
		14:00-14:59	44.30	
		15:00-15:59	44.50	
		16:00-16:59	45.00	
		17:00-17:59	43.50	
		18:00-18:59	43.20	
average			**44.43**	
		19:00-19:59	43.00	1900-2300 ≤60 dBA
		20:00-20:59	44.30	
		21:00-21:59	43.50	
		22:00-22:59	41.90	
average			**43.18**	
	17-Aug-21	23:00-23:59	41.00	2300-0700 ≤55 dBA
		0:00-0:59	40.70	
		01:00-01:59	40.40	
		02:00-02:59	41.10	
		03:00-03:59	41.20	
		04:00-04:59	41.60	
		05:00-05:59	44.00	
		06:00-06:59	47.30	
average			**42.16**	
		07:00-07:59	49.20	0700-1900 ≤65 dBA
		08:00-08:59	53.20	
		09:00-09:59	49.50	
		10:00-10:59	--	
average			**50.63**	
N2: Vacant lot adjacent to 95 Chera Drive, Head of St. Margaret's Bay	17-Aug-21	11:00-11:59	36.00	0700-1900 ≤65 dBA
		12:00-12:59	36.30	
		13:00-13:59	38.00	
		14:00-14:59	41.80	
		15:00-15:59	43.20	
		16:00-16:59	43.50	
		17:00-17:59	42.90	
		18:00-18:59	42.20	
average			**40.49**	
		19:00-19:59	41.20	1900-2300 ≤60 dBA
		20:00-20:59	39.80	
		21:00-21:59	38.50	
		22:00-22:59	36.50	
average			**39.00**	
	18-Aug-21	23:00-23:59	34.90	2300-0700 ≤55 dBA
		0:00-0:59	31.40	
		01:00-01:59	29.40	
		02:00-02:59	28.20	
		03:00-03:59	27.80	
		04:00-04:59	28.70	
		05:00-05:59	34.50	
		06:00-06:59	33.90	
average			**31.10**	
		07:00-07:59	33.90	0700-1900 ≤65 dBA
		08:00-08:59	36.70	
		09:00-09:59	35.40	
		10:00-10:59	--	
average			**35.33**	

TABLE 5: AVERAGE L_{eq} VALUES
Scotian Materials Limited - 2021 Total Suspended Particulate and Noise Monitoring Program
Results for Noise Monitoring

Location	Date	Time	Average L_{eq} Value	NSE Criteria[1]
N3: 152 Falcourt Run, Upper Tantallon		11:00-11:59	--	0700-1900 ≤65 dBA
		12:00-12:59	34.60	
		13:00-13:59	34.00	
		14:00-14:59	35.80	
		15:00-15:59	33.40	
		16:00-16:59	34.00	
		17:00-17:59	34.10	
		18:00-18:59	33.70	
average			**34.23**	
		19:00-19:59	34.20	1900-2300 ≤60 dBA
		20:00-20:59	32.40	
		21:00-21:59	33.10	
		22:00-22:59	32.50	
average			**33.05**	
	19-Aug-21	23:00-23:59	30.80	2300-0700 ≤55 dBA
		0:00-0:59	30.10	
		01:00-01:59	41.20	
		02:00-02:59	43.80	
		03:00-03:59	43.30	
		04:00-04:59	43.50	
		05:00-05:59	42.10	
		06:00-06:59	42.60	
average			**39.68**	
		07:00-07:59	39.10	0700-1900 ≤65 dBA
		08:00-08:59	44.70	
		09:00-09:59	31.30	
		10:00-10:59	29.30	
		11:00-11:59	--	
average			**36.10**	

Note:
[1] Nova Scotia Environment - Pit and Quarry Guidelines May 4, 1999, revised August 20, 2003.
-- - Not full hour of data

Appendices

Appendix A

Flow Calibration Sheets

TE-5170V Calibration Worksheet

Site Information

Location:	Tote Road Qu	**Site ID:**	Tote Road	**Date:**	16-Aug-21
Sampler:	TE-5170V	**Serial No:**	GHD-TSP-2	**Tech:**	Jessica Romo

Site Conditions

Temp (deg F):	68.9		
Ta (deg K):	294	**Barometric Press (in Hg):**	30.11
Ta (deg C):	21	**Pa (mm Hg):**	765

Calibration Orifice

Make:	Tisch	**Qa Slope:**	0.99111
Model:	TE-5028A	**Qa Intercept:**	-0.00403
Serial#:	0888	**Calibration Due Date:**	21-Dec-21

Calibration Data

Run Number	Orifice "H2O	Qa (m3/min)	Sampler "H2O	Pf (mm Hg)	Po/Pa	Look Up (m3/min)	% Diff
1	3.63	1.195	6.40	11.944	0.984	1.133	-5.19
2	3.60	1.190	6.80	12.691	0.983	1.133	-4.79
3	3.60	1.190	7.20	13.437	0.982	1.133	-4.79
4	3.64	1.197	9.25	17.263	0.977	1.133	-5.35
5	3.63	1.195	10.20	19.036	0.975	1.133	-5.19

Calculations

Calibrator Flow (Qa) = 1/Slope*(SQRT(H20*(Ta/Pa))-Intercept)
Pressure Ratio (Po/Pa) = 1-Pf/Pa
% Difference = (Look Up Flow-Calibrator Flow)/Calibrator Flow*100

NOTE: Ensure calibration orifice has been certified within 12 months of use

TE-5170V Calibration Worksheet

Site Information

Location:	15 Hollyberr	**Site ID:**	Tote Road	**Date:**	16-Aug-21
Sampler:	TE-5170V	**Serial No:**	GHD-TSP-7	**Tech:**	Jessica Romo

Site Conditions

Temp (deg F):	68.9		
Ta (deg K):	294	**Barometric Press (in Hg):**	30.11
Ta (deg C):	21	**Pa (mm Hg):**	765

Calibration Orifice

Make:	Tisch	**Qa Slope:**	0.99111
Model:	TE-5028A	**Qa Intercept:**	-0.00403
Serial#:	0888	**Calibration Due Date:**	21-Dec-21

Calibration Data

Run Number	Orifice "H2O	Qa (m3/min)	Sampler "H2O	Pf (mm Hg)	Po/Pa	Look Up (m3/min)	% Diff
1	3.70	1.206	6.40	11.944	0.984	1.133	-6.05
2	3.73	1.211	6.80	12.691	0.983	1.133	-6.44
3	3.73	1.211	7.20	13.437	0.982	1.133	-6.44
4	3.74	1.213	9.25	17.263	0.977	1.133	-6.60
5	3.75	1.214	10.20	19.036	0.975	1.133	-6.67

Calculations

Calibrator Flow (Qa) = 1/Slope*(SQRT(H20*(Ta/Pa))-Intercept)
Pressure Ratio (Po/Pa) = 1-Pf/Pa
% Difference = (Look Up Flow-Calibrator Flow)/Calibrator Flow*100

NOTE: Ensure calibration orifice has been certified within 12 months of use

Appendix B

Meteorological Data

Station Name	BEDFORD RANGE
Province	NOVA SCOTIA
Current Station Op	DND
Latitude	44.75
Longitude	-63.66
Elevation	9.6
Climate Identifier	8200574
WMO Identifier	71325
TC Identifier	ABR

All times are specified in Local Standard Time (LST). Add 1 hour to adjust for Daylight Saving Time where and when it is observed.

Legend

E	Estimated
M	Missing
NA	Not Available

Date/Time	Year	Month	Day	Time	Temp (°C)	w Point Temp ('	Rel Hum (%)	Precip Amt (mm)	Wind Dir (10s deg)	Wind Spd (km/h)	Stn Press (kPa)
8/16/2021 0:00	2021	8	16	0:00	14	13.3	96	0	36	2	101.72
8/16/2021 1:00	2021	8	16	1:00	14	12.8	93	0	33	3	101.74
8/16/2021 2:00	2021	8	16	2:00	15.3	12.5	83	0	33	6	101.76
8/16/2021 3:00	2021	8	16	3:00	14.3	12.6	89	0	33	5	101.78
8/16/2021 4:00	2021	8	16	4:00	13.6	12.6	94	0	31	7	101.82
8/16/2021 5:00	2021	8	16	5:00	13	12.3	95	0	35	3	101.86
8/16/2021 6:00	2021	8	16	6:00	13.4	11.8	90	0	32	5	101.91
8/16/2021 7:00	2021	8	16	7:00	16.5	11.6	73	0	28	2	101.94
8/16/2021 8:00	2021	8	16	8:00	19	11.5	62	0	31	9	101.97
8/16/2021 9:00	2021	8	16	9:00	20.5	11.6	57	0	31	10	101.97
8/16/2021 10:00	2021	8	16	10:00	21.7	11	51	0	33	13	101.97
8/16/2021 11:00	2021	8	16	11:00	23	11	47	0	31	15	101.98
8/16/2021 12:00	2021	8	16	12:00	23.6	10.4	43	0	33	14	101.97
8/16/2021 13:00	2021	8	16	13:00	24.4	9.5	39	0	33	14	101.95
8/16/2021 14:00	2021	8	16	14:00	25.1	10.6	40	0	31	13	101.92
8/16/2021 15:00	2021	8	16	15:00	24.8	10.1	39	0	34	11	101.91
8/16/2021 16:00	2021	8	16	16:00	25.1	10.8	41	0	32	9	101.88
8/16/2021 17:00	2021	8	16	17:00	25.2	11.3	42	0	35	8	101.88
8/16/2021 18:00	2021	8	16	18:00	24.2	11.3	44	0	30	10	101.88
8/16/2021 19:00	2021	8	16	19:00	19.5	14	71	0	0	1	101.92
8/16/2021 20:00	2021	8	16	20:00	16.2	13.7	85	0	25	2	101.98
8/16/2021 21:00	2021	8	16	21:00	15.3	13.1	87	0	32	2	102
8/16/2021 22:00	2021	8	16	22:00	13.8	13	95	0	M	0	102
8/16/2021 23:00	2021	8	16	23:00	12.8	12.2	97	0	31	1	102.02
8/17/2021 0:00	2021	8	17	0:00	12.2	11.7	97	0	M	0	102.04
8/17/2021 1:00	2021	8	17	1:00	11.8	11.5	98	0	0	1	102.07
8/17/2021 2:00	2021	8	17	2:00	11.1	10.8	98	0	M	0	102.06
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8/17/2021 4:00	2021	8	17	4:00	10.7	10.4	98	0	0	1	102.11
8/17/2021 5:00	2021	8	17	5:00	10.3	10.1	99	0	31	3	102.15
8/17/2021 6:00	2021	8	17	6:00	11.1	10.8	99	0	31	2	102.2
8/17/2021 7:00	2021	8	17	7:00	14.6	13.2	91	0	28	1	102.22
8/17/2021 8:00	2021	8	17	8:00	19.1	13.5	70	0	M	0	102.19
8/17/2021 9:00	2021	8	17	9:00	22	13.9	60	0	14	6	102.12
8/17/2021 10:00	2021	8	17	10:00	24.2	10.8	43	0	25	6	102.11
8/17/2021 11:00	2021	8	17	11:00	25.3	11.2	41	0	29	9	102.1
8/17/2021 12:00	2021	8	17	12:00	26.1	11.8	41	0	27	6	102.04
8/17/2021 13:00	2021	8	17	13:00	26.5	14.1	47	0	23	6	102.02
8/17/2021 14:00	2021	8	17	14:00	26.1	14.9	50	0	20	11	101.98
8/17/2021 15:00	2021	8	17	15:00	25.5	13.9	49	0	20	13	101.98
8/17/2021 16:00	2021	8	17	16:00	24.6	13.8	51	0	20	11	101.99
8/17/2021 17:00	2021	8	17	17:00	23.6	14.3	56	0	20	9	102.01
8/17/2021 18:00	2021	8	17	18:00	22.5	13.8	58	0	18	6	102
8/17/2021 19:00	2021	8	17	19:00	20.6	13.6	64	0	19	6	102.04
8/17/2021 20:00	2021	8	17	20:00	16.9	14.5	86	0	M	0	102.08
8/17/2021 21:00	2021	8	17	21:00	15.9	14.6	92	0	30	1	102.13
8/17/2021 22:00	2021	8	17	22:00	14.9	14.2	95	0	M	0	102.15
8/17/2021 23:00	2021	8	17	23:00	14.3	13.9	97	0	31	2	102.18
8/18/2021 0:00	2021	8	18	0:00	13.5	13.2	98	0	31	2	102.18
8/18/2021 1:00	2021	8	18	1:00	12.9	12.6	98	0	0	1	102.18
8/18/2021 2:00	2021	8	18	2:00	12.1	11.7	98	0	0	1	102.17
8/18/2021 3:00	2021	8	18	3:00	11.8	11.6	99	0	M	0	102.2
8/18/2021 4:00	2021	8	18	4:00	11.3	11	98	0.2	30	2	102.21
8/18/2021 5:00	2021	8	18	5:00	11.1	11	99	0	0	1	102.26
8/18/2021 6:00	2021	8	18	6:00	13.3	13.2	99	0	32	1	102.28
8/18/2021 7:00	2021	8	18	7:00	15.3	15.1	99	0	M	0	102.3
8/18/2021 8:00	2021	8	18	8:00	17.4	16.6	95	0	20	4	102.33
8/18/2021 9:00	2021	8	18	9:00	19.2	16.8	86	0	22	9	102.32
8/18/2021 10:00	2021	8	18	10:00	20.8	17.7	82	0	16	11	102.3
8/18/2021 11:00	2021	8	18	11:00	21.9	17.8	78	0	15	12	102.23
8/18/2021 12:00	2021	8	18	12:00	23	17.6	72	0	25	8	102.18
8/18/2021 13:00	2021	8	18	13:00	22.6	17.4	72	0	21	10	102.16
8/18/2021 14:00	2021	8	18	14:00	23.5	18.2	72	0	20	9	102.13
8/18/2021 15:00	2021	8	18	15:00	23.3	18.5	74	0	21	7	102.12
8/18/2021 16:00	2021	8	18	16:00	22.7	18.3	76	0	20	7	102.1
8/18/2021 17:00	2021	8	18	17:00	22.5	18.3	77	0	18	7	102.07

Station Name	BEDFORD RANGE
Province	NOVA SCOTIA
Current Station Op	DND
Latitude	44.75
Longitude	-63.66
Elevation	9.6
Climate Identifier	8200574
WMO Identifier	71325
TC Identifier	ABR

All times are specified in Local Standard Time (LST). Add 1 hour to adjust for Daylight Saving Time where and when it is observed.

Legend

E	Estimated
M	Missing
NA	Not Available

Date/Time	Year	Month	Day	Time	Temp (°C)	w Point Temp ('	Rel Hum (%)	Precip Amt (mm)	Wind Dir (10s deg)	Wind Spd (km/h)	Stn Press (kPa)
8/18/2021 18:00	2021	8	18	18:00	22.2	18.9	82	0	19	3	102.01
8/18/2021 19:00	2021	8	18	19:00	21.2	19.1	88	0	18	1	102
8/18/2021 20:00	2021	8	18	20:00	21.3	19.1	87	0	19	3	102.01
8/18/2021 21:00	2021	8	18	21:00	21.2	19.5	90	0	19	3	102.01
8/18/2021 22:00	2021	8	18	22:00	21.1	19.4	90	0	16	2	102.01
8/18/2021 23:00	2021	8	18	23:00	21.1	18.2	84	0	24	4	101.99
8/19/2021 0:00	2021	8	19	0:00	20.7	18.1	85	0	20	3	101.97
8/19/2021 1:00	2021	8	19	1:00	19.6	18.1	91	0.6	19	3	101.94
8/19/2021 2:00	2021	8	19	2:00	18.7	17.4	92	1	20	5	101.9
8/19/2021 3:00	2021	8	19	3:00	18.5	17.2	92	1.2	22	4	101.83
8/19/2021 4:00	2021	8	19	4:00	17.9	17	95	0.8	19	6	101.78
8/19/2021 5:00	2021	8	19	5:00	17.6	16.6	94	0.8	19	3	101.77
8/19/2021 6:00	2021	8	19	6:00	17.2	16.5	96	1	16	4	101.76
8/19/2021 7:00	2021	8	19	7:00	17.2	16.7	97	0	22	2	101.75
8/19/2021 8:00	2021	8	19	8:00	17.7	17.1	96	0.4	17	6	101.73
8/19/2021 9:00	2021	8	19	9:00	18.8	17.9	95	0	21	8	101.69
8/19/2021 10:00	2021	8	19	10:00	19.4	18.4	94	0	17	6	101.66
8/19/2021 11:00	2021	8	19	11:00	20.7	19.4	92	0	20	6	101.6
8/19/2021 12:00	2021	8	19	12:00	22	20.1	89	0	24	5	101.54
8/19/2021 13:00	2021	8	19	13:00	23.8	21.1	85	0	25	5	101.47
8/19/2021 14:00	2021	8	19	14:00	25.1	21.1	79	0	25	6	101.38
8/19/2021 15:00	2021	8	19	15:00	26.1	21.4	75	0	27	7	101.33
8/19/2021 16:00	2021	8	19	16:00	26.5	21.8	76	0	22	6	101.31
8/19/2021 17:00	2021	8	19	17:00	26.7	21.9	75	0	23	8	101.33
8/19/2021 18:00	2021	8	19	18:00	25.6	21.7	79	0	25	5	101.28
8/19/2021 19:00	2021	8	19	19:00	23.6	21.3	87	0	25	3	101.29
8/19/2021 20:00	2021	8	19	20:00	22.1	21.1	94	0	31	2	101.33
8/19/2021 21:00	2021	8	19	21:00	21	20.5	97	0	M	0	101.37
8/19/2021 22:00	2021	8	19	22:00	20.1	19.7	98	0	M	0	101.36
8/19/2021 23:00	2021	8	19	23:00	19.4	19.2	99	0	M	0	101.31

Appendix C

Analytical Certificates

AGAT Laboratories

11 Morris Drive, Unit 122
Dartmouth, Nova Scotia
CANADA B3B 1M2
TEL (902)468-8718
FAX (902)468-8924
http://www.agatlabs.com

CLIENT NAME: GHD LIMITED
120 WESTERN PARKWAY, SUITE 110
BEDFORD, NS B4B2V0
(902) 468-1248
ATTENTION TO: Jessica Romo
PROJECT: 11216599
AGAT WORK ORDER: 21X790362
AIR QUALITY MONITORING REVIEWED BY: Jason Coughtrey, Inorganics Supervisor
DATE REPORTED: Oct 26, 2021
PAGES (INCLUDING COVER): 4
VERSION*: 2

Should you require any information regarding this analysis please contact your client services representative at (902) 468-8718

*Notes

VERSION 2:This report supersedes all previous reports. It has been updated to reflect changes to sample dates. JM 10/26/21

AGAT Laboratories

11 Morris Drive, Unit 122
Dartmouth, Nova Scotia
CANADA B3B 1M2
TEL (902)468-8718
FAX (902)468-8924
http://www.agatlabs.com

Certificate of Analysis

AGAT WORK ORDER: 21X790362

PROJECT: 11216599

CLIENT NAME: GHD LIMITED

ATTENTION TO: Jessica Romo

SAMPLING SITE:

SAMPLED BY:

Particulate on Filter Paper (TSP)

DATE RECEIVED: 2021-08-19

DATE REPORTED: 2021-10-26

SAMPLE DESCRIPTION:				Quarry 9741711	Quarry 9741709	Quarry 9741707
SAMPLE TYPE:				Air	Air	Air
DATE SAMPLED:				2021-08-17	2021-08-18	2021-08-19
Parameter	Unit	G / S	RDL	2872163	2872166	2872167
Total Suspended Particulate	mg		10	26	35	22

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard

Analysis performed at AGAT Halifax (unless marked by *)

Certified By:

11 Morris Drive, Unit 122
Dartmouth, Nova Scotia
CANADA B3B 1M2
TEL (902)468-8718
FAX (902)468-8924
http://www.agatlabs.com

Method Summary

CLIENT NAME: GHD LIMITED

AGAT WORK ORDER: 21X790362

PROJECT: 11216599

ATTENTION TO: Jessica Romo

SAMPLING SITE:

SAMPLED BY:

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Air Quality Monitoring			
Total Suspended Particulate	INOR-121-6041	Modified EPA Method 5	GRAVIMETRIC

AGAT Laboratories

Unit 122 • 11 Morris Drive
Dartmouth, NS
B3B 1M2
webearth.agatlabs.com • www.agatlabs.com
P: 902.468.8718 • F: 902.468.8924

Chain of Custody Record

Laboratory Use Only
Arrival Condition: ☐ Good ☐ Poor (see notes)
Arrival Temperature: 24.4, 24.3, 24.3
Hold Time:
AGAT Job Number: 21X790362
Notes:

Report Information
Company: GHD Limited
Contact: Callie Andrews
Address: 120 Western Parkway, Bedford, NS
Phone: 902-468-1248 Fax:
Client Project #: 11216599
AGAT Quotation:
Please Note: If quotation number is not provided client will be billed full price for analysis.

Report Information (Please print):
1. Name: Callie Andrews
Email: Callie.Andrews@ghd.com
2. Name: Jessica Romo
Email: Jessica.Romo@ghd.com

Report Format
☐ Single Sample per page
☐ Multiple Samples per page
☐ Excel Format Included
☐ Export

Turnaround Time Required (TAT) 2021 AUG 19 4:31 PM
Regular TAT ☑ 5 to 7 working days
Rush TAT ☐ Same day ☐ 1 day ☐ 2 days ☐ 3 days
Date Required:

Invoice To Same Yes ☐ / No ☐
Company: GHD Limited
Contact:
Address:
Phone: Fax:
PO/Credit Card#: 73523232

Regulatory Requirements (Check):
☐ List Guidelines on Report ☐ Do not list Guidelines on Report
☐ PIRI
☐ Tier 1 ☐ Res ☐ Pot ☐ Coarse
☐ Tier 2 ☐ Com ☐ N/Pot ☐ Fine
☐ Gas ☐ Fuel ☐ Lube
☐ CCME ☐ CDWQ
☐ Industrial ☐ NSEQS-Cont Sites
☐ Commercial ☐ HRM 101
☐ Res/Park ☐ Storm Water
☐ Agricultural ☐ Waste Water
☐ FWAL
☐ Sediment ☐ Other

Drinking Water Sample: ☐ Yes ☐ No **Salt Water Sample** ☐ Yes ☐ No
Reg. No:

Sample Identification	Date/Time Sampled	Sample Matrix	# Containers	Comments – Site/Sample Info Sample Containment	TSP
Quarry 9741711	Aug 17/21 11:21 AM	Air	—		X
Quarry 9741709	Aug 18/21 11:41 AM	Air	—		X
Quarry 9741707	Aug 19/21 11:01 AM	Air	—		X

Samples Relinquished By (Print Name)	Date/Time	Samples Received By (Print Name)	Date/Time
Jessica Romo	Aug 19/21 4:27 pm		
Samples Relinquished By (Sign)	**Date/Time**	**Samples Received By (Sign)**	**Date/Time**
Jessica Romo	Aug 19/21 4:27 pm	Mariana Aguas	

Pink Copy - Client
Yellow Copy - AGAT
White Copy - AGAT

Page ☐ of ☐
N°:

11 Morris Drive, Unit 122
Dartmouth, Nova Scotia
CANADA B3B 1M2
TEL (902)468-8718
FAX (902)468-8924
http://www.agatlabs.com

CLIENT NAME: GHD LIMITED
120 WESTERN PARKWAY, SUITE 110
BEDFORD, NS B4B2V0
(902) 468-1248
ATTENTION TO: Jessica Romo
PROJECT: 11216599
AGAT WORK ORDER: 21X790386
AIR QUALITY MONITORING REVIEWED BY: Jason Coughtrey, Inorganics Supervisor
DATE REPORTED: Oct 26, 2021
PAGES (INCLUDING COVER): 4
VERSION*: 3

Should you require any information regarding this analysis please contact your client services representative at (902) 468-8718

*Notes

VERSION 3:This report supersedes all previous reports. It has been updated to reflect changes to the sample dates. JM 10/26/21

AGAT Laboratories

11 Morris Drive, Unit 122
Dartmouth, Nova Scotia
CANADA B3B 1M2
TEL (902)468-8718
FAX (902)468-8924
http://www.agatlabs.com

Certificate of Analysis

AGAT WORK ORDER: 21X790386

PROJECT: 11216599

CLIENT NAME: GHD LIMITED

ATTENTION TO: Jessica Romo

SAMPLING SITE:

SAMPLED BY:

Particulate on Filter Paper (TSP)

DATE RECEIVED: 2021-08-19

DATE REPORTED: 2021-10-26

				Hollyberry Ln	Hollyberry Ln	Hollyberry Ln
			SAMPLE DESCRIPTION:	9741712	9741710	9741708
			SAMPLE TYPE:	Air	Air	Air
			DATE SAMPLED:	2021-08-17 10:11	2021-08-18	2021-08-19
Parameter	Unit	G / S	RDL	2872405	2872433	2872434
Total Suspended Particulate	mg		10	12	16	16

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard

Analysis performed at AGAT Halifax (unless marked by *)

Certified By:

11 Morris Drive, Unit 122
Dartmouth, Nova Scotia
CANADA B3B 1M2
TEL (902)468-8718
FAX (902)468-8924
http://www.agatlabs.com

Method Summary

CLIENT NAME: GHD LIMITED

AGAT WORK ORDER: 21X790386

PROJECT: 11216599

ATTENTION TO: Jessica Romo

SAMPLING SITE:

SAMPLED BY:

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Air Quality Monitoring			
Total Suspended Particulate	INOR-121-6041	Modified EPA Method 5	GRAVIMETRIC

AGAT Laboratories

Unit 122 • 11 Morris Drive
Dartmouth, NS
B3B 1M2
webearth.agatlabs.com • www.agatlabs.com
P: 902.468.8718 • F: 902.468.8924

Chain of Custody Record

Laboratory Use Only
Arrival Condition: ☐ Good ☐ Poor (see notes)
Arrival Temperature: 24.2, 24.4, 24.4
Hold Time:
AGAT Job Number: 21X790386
Notes:
'21 AUG 19 4:[illegible]PM

Report Information
Company: GHD Limited
Contact: Callie Andrews
Address: 120 Western Parkway, Bedford, NS
Phone: 902-468-1248 Fax:
Client Project #: 11216599
AGAT Quotation:
Please Note: If quotation number is not provided client will be billed full price for analysis.

Report Information (Please print):
1. Name: Callie Andrews
Email: Callie.Andrews@ghd.com
2. Name: Jessica Romo
Email: Jessica.Romo@ghd.com

Report Format
☐ Single Sample per page
☐ Multiple Samples per page
☐ Excel Format Included
☐ Export

Turnaround Time Required (TAT)
Regular TAT ☑ 5 to 7 working days
Rush TAT ☐ Same day ☐ 1 day ☐ 2 days ☐ 3 days
Date Required:

Invoice To Same Yes ☐ / No ☐
Company: GHD Limited
Contact:
Address:
Phone: Fax:
PO/Credit Card#: 73523232

Regulatory Requirements (Check):
☐ List Guidelines on Report ☐ Do not list Guidelines on Report
☐ PIRI
☐ Tier 1 ☐ Res ☐ Pot ☐ Coarse
☐ Tier 2 ☐ Com ☐ N/Pot ☐ Fine
☐ Gas ☐ Fuel ☐ Lube
☐ CCME ☐ CDWQ
☐ Industrial ☐ NSEQS-Cont Sites
☐ Commercial
☐ Res/Park ☐ HRM 101
☐ Agricultural ☐ Storm Water
☐ FWAL ☐ Waste Water
☐ Sediment ☐ Other

Drinking Water Sample: ☐ Yes ☐ No Salt Water Sample ☐ Yes ☐ No
Reg. No.:

Sample Identification	Date/Time Sampled	Sample Matrix	# Containers	Comments – Site/Sample Info, Sample Containment	TSP
Hollyberry Ln 9741712	Aug 17/21 10:11AM	Air	—		X
Hollyberry Ln 9741710	Aug 18/21 10:09AM	Air	—		X
Hollyberry Ln 9741708	Aug 19/21 9:19AM	Air	—		X

Samples Relinquished By (Print Name)	Date/Time	Samples Received By (Print Name)	Date/Time
Jessica Romo	Aug 19/21 4:27 pm		
Samples Relinquished By (Sign)	Date/Time	Samples Received By (Sign)	Date/Time
Jessica Romo	Aug 19/21 4:27 pm	Mariano Agra	

Pink Copy - Client
Yellow Copy - AGAT
White Copy- AGAT

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N°:

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