

# **BLACK RIDGE CONSTRUCTION LTD. HOLYROOD QUARRY PERMIT**

## ***Environmental Assessment Registration Document***

Submitted by:  
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## TABLE OF CONTENTS

	Page
1.0 NAME OF UNDERTAKING .....	1
2.0 PROPONENT .....	1
2.1 Name of Corporate Body .....	1
2.2 Address .....	1
2.3 Chief Executive Officer .....	1
2.4 Principal Contact Person .....	1
3.0 THE UNDERTAKING .....	1
3.1 Nature of the Undertaking .....	1
3.2 Purpose/ Rationale/ Need for the Undertaking .....	2
4.0 DESCRIPTION OF THE UNDERTAKING .....	2
4.1 Geographic Location .....	2
4.2 Physical Features .....	2
4.2.1 Project Site Description .....	2
4.2.2 Existing Biophysical Environment .....	8
4.3 Construction and Operation .....	8
4.3.1 Site Access .....	8
4.3.2 Site Clearing .....	8
4.3.3 Quarry Development and Operation .....	9
4.4 Potential Sources of Pollution During Construction and Operation .....	10
4.5 Potential Resource Conflicts During Operation .....	11
4.6 Occupation .....	12
4.7 Reclamation and Closure .....	12
5.0 APPROVAL OF THE UNDERTAKING .....	13
6.0 SCHEDULE .....	14
7.0 FUNDING .....	14
8.0 LIMITATIONS .....	14

**LIST OF FIGURES**

	Page
Figure 1: Project Location Map .....	3
Figure 2: Detailed Project Location Map .....	4
Figure 3: Quarry Permit Location Map 1 .....	5
Figure 4: Quarry Permit Location Map 2 .....	6
Figure 5: Receptor Location Map .....	7

**LIST OF TABLES**

	Page
Table 1: Referral Agencies, Responses and Possible Permits Required...	13

## **1.0 NAME OF UNDERTAKING**

Holyrood Quarry

- Quarry Permit Identification
  - File 711:12432 covering 4.0 ha

## **2.0 PROPONENT**

### **2.1 Name of Corporate Body**

Black Ridge Construction Ltd. (Black Ridge)

### **2.2 Address**

P.O. Box 171  
Holyrood, NL  
A0A 2R0

### **2.3 Chief Executive Officer**

Mr. Robert W. Crowley  
Director/Owner  
P.O. Box 171  
Holyrood, NL  
A0A 2R0

### **2.4 Principal Contact Person**

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P.O. Box 171  
Holyrood, NL  
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## **3.0 THE UNDERTAKING**

### **3.1 Nature of the Undertaking**

The proposed project is a 4.0 ha quarry site that will be developed over numerous years in a phased development plan to supply sand, gravel and rock to the surrounding communities in the Conception Bay area, similar to Black Ridge's bordering quarry (File 711:9124).

### **3.2 Purpose/Rationale/Requirement for the Undertaking**

The main purpose and rationale for the proposed 4.0 ha quarry area is to develop additional sand, gravel and rock resources similar in nature to Black Ridge's adjacent quarry, as the existing quarry is nearly depleted of sand and gravel. This will enable Black Ridge to continue supplying material to the public and private sectors.

## **4.0 DESCRIPTION OF THE UNDERTAKING**

### **4.1 Geographic Location**

The proposed project is located approximately 3.3 km from the Trans-Canada Highway, and 5.4 km from the town of Holyrood. It can be accessed via the Holyrood Access Road (Highway 62) and is located on NTS Map Sheet 01N/06 (**Figures 1 to 4**). Land zoning of the project area falls within the Holyrood municipal boundary as well as the Holyrood planning area. The municipal zoning is Rural whereby quarry development is a Discretionary Land Use. The application area is also located partially within the Butter Pot Provincial Park referral boundary zone. Any sensitive receptors located near the proposed project area are shown on **Figure 5** and include commercial businesses and private properties/houses, the nearest of which is a commercial building located 0.78 km from the nearest project boundary. Historically, the area has been actively quarried since 2009 based on available records, however the area has been known to have been quarried for many years prior to 2009.

### **4.2 Physical Features**

#### **4.2.1 Project Site Description**

The proposed quarry area is located between two existing quarries: the existing 4.0 ha Black Ridge quarry permit (File 711:9124) located west of the proposed project, and a 6.073 ha quarry lease (File 711:8758) under Newcrete Investments, located adjacent to and northeast of the proposed project (**Figure 3 and 4**). Both properties are contiguous to the proposed quarry site. The primary physical feature of this project will be the quarry itself.

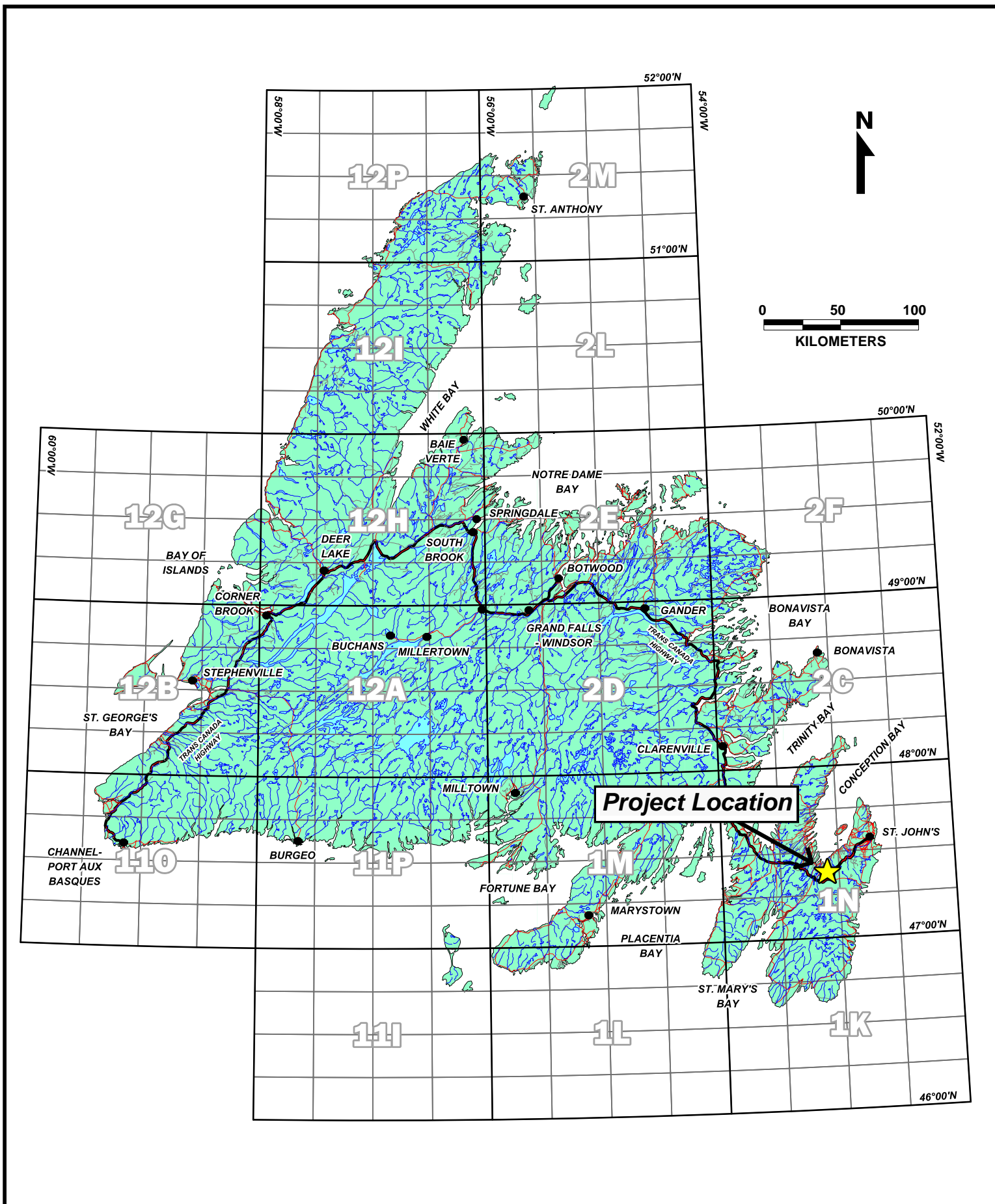


FIGURE 1: PROJECT LOCATION MAP (N.T.S. 01N/06)

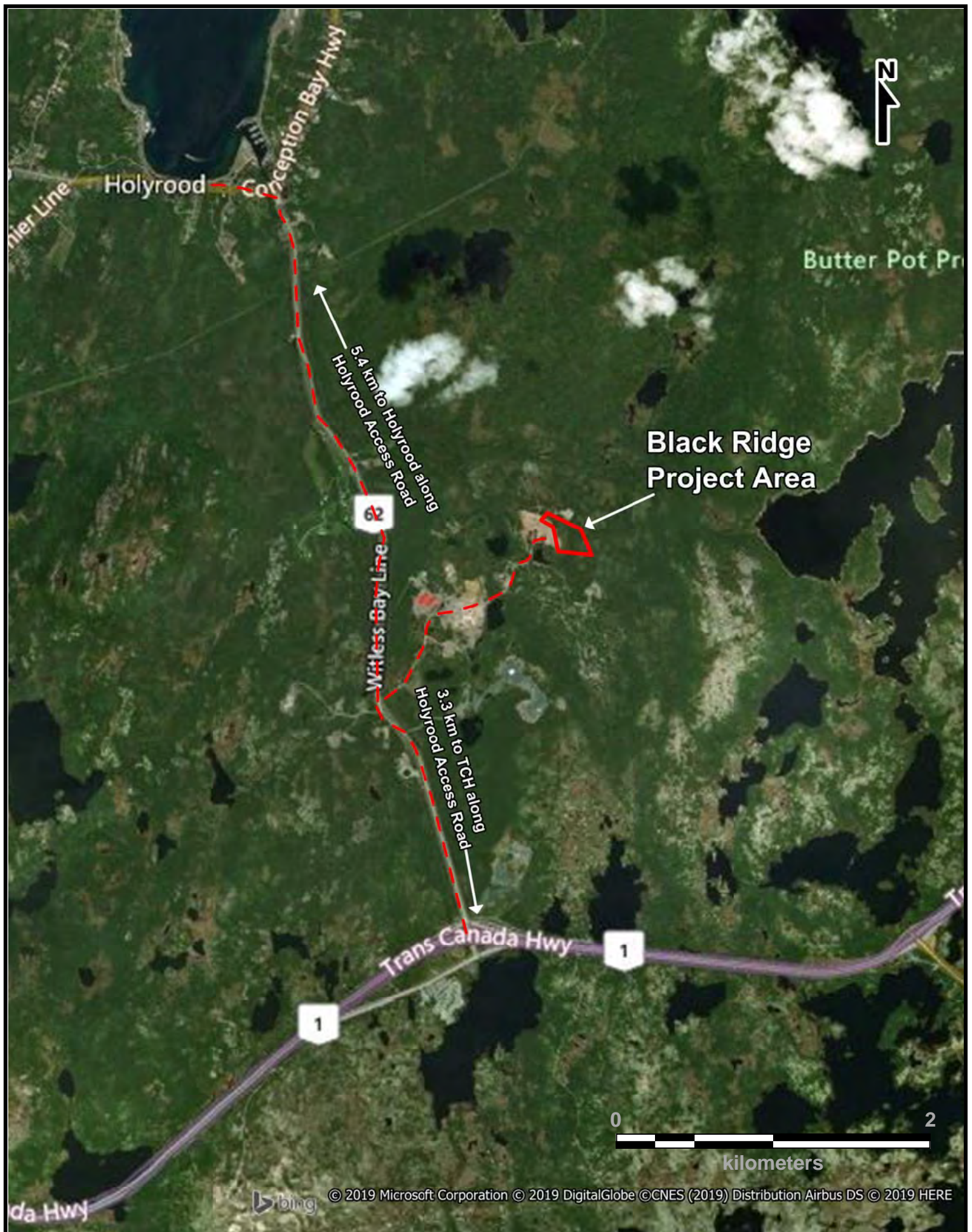


FIGURE 2: DETAILED PROJECT LOCATION MAP



FIGURE 3: QUARRY PERMIT LOCATION MAP 1



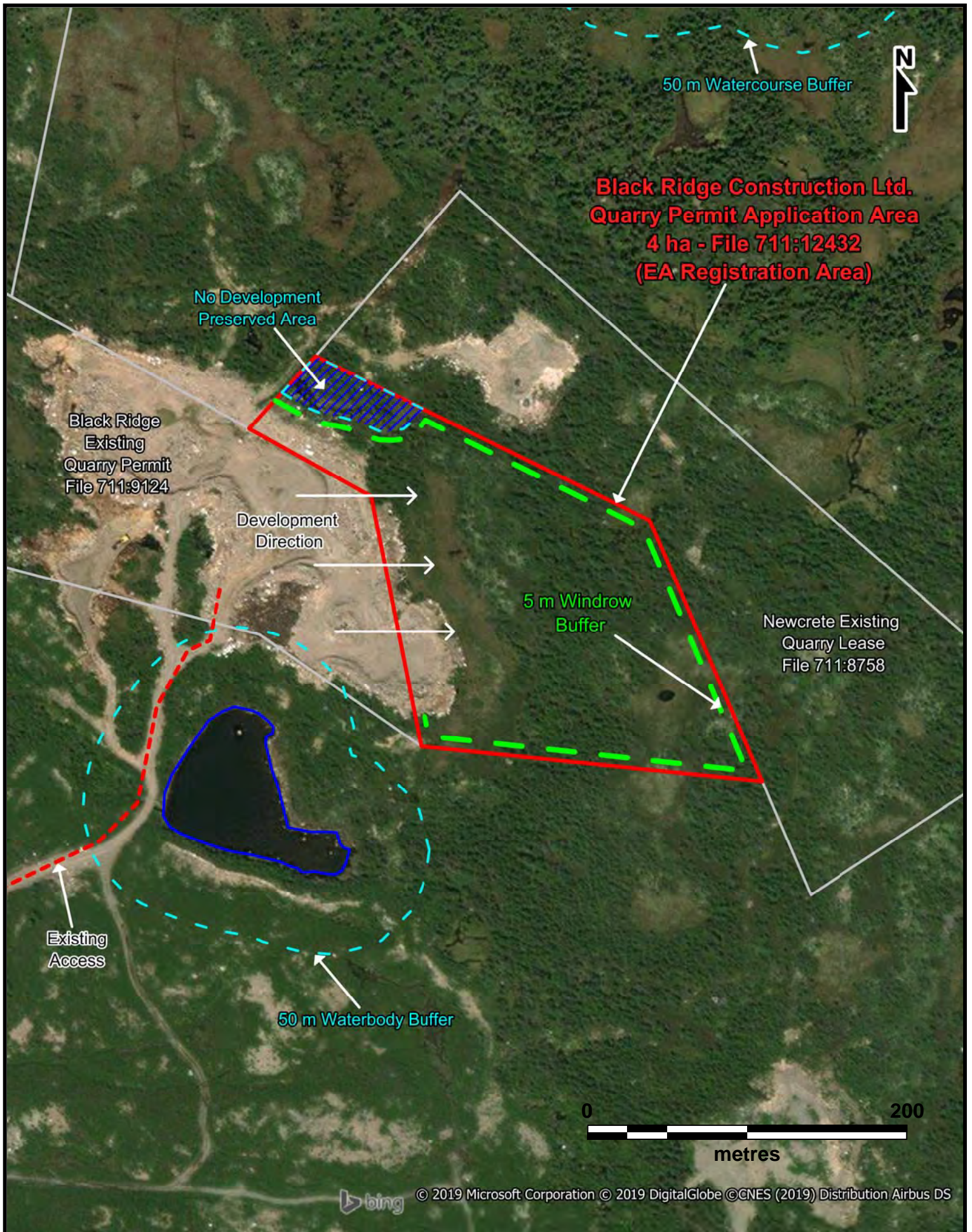


FIGURE 4: QUARRY PERMIT LOCATION MAP 2



FIGURE 5: RECEPTOR LOCATION MAP

## **4.2.2 Existing Biophysical Environment**

The proposed quarry site is located within the Maritime Barrens Ecoregion which, on the Avalon Peninsula, encompasses the southern-central portions. The climate in this region is characterized by cool summers with frequent fog and strong winds. Precipitation ranges from 1,200 mm to 1,600 mm. More specifically, the site is located within an area known as Round Marsh Gullies. Vegetation in the area is characterized by extensive barrens and sparsely forested areas, which is influenced by elevation, with higher areas being rockier with less tree cover. Tree cover, where present, is dominated by balsam fir, tamarack, black spruce and sporadic yellow birch. Elevations in the general area range from sea level to 250 m, with the proposed quarry site located approximately 120 m above sea level. Topography consists of plateaus and hills with the immediate area surrounding the quarry site consisting of fairly flat and hummocky ground.

The closest body of water is a small pond located 73 m southeast of the nearest proposed quarry site boundary. Additionally, one small stream is located 260 m to the west, and another is 312 m to the north of the nearest quarry site boundary. A small portion of the site contains low lying isolated sections that are not part of any flowing watercourses. The quarry area is underlain by glaciofluvial cobbly sand and gravel material that contains generally less than 15 % fine particles. The material is covered by peat, topsoil and stunted shrubs.

## **4.3 Construction and Operation**

The construction aspect of the proposed project will consist of clearing the site from vegetation, grubbing and organic matter before proceeding to development of the quarry.

### **4.3.1 Site Access**

Site access is already present and will not necessitate any further construction. The site is accessible through a ~2 km truck drivable gravel roadway that connects to the Holyrood access road which is used by adjacent quarries. A locked gate is located at the entrance to prevent unauthorized access to the site.

### **4.3.2 Site Clearing**

Any merchantable timber will be cleared by manpower/handheld chainsaws and will be harvested under a cutting permit issued by the Department of Fisheries and Land Resources. The wood will be stacked in 6 to 8 feet lengths and subsequently removed from site. Surficial soils, subsoils and grubbing will be stripped and windrowed to the

permit boundary. This windrowed material will be used to construct perimeter berms as required.

### **4.3.3 Quarry Development and Operation**

The location of the 4.0 ha proposed quarry area, in proximity to Black Ridges existing quarry (File 711:9124), was chosen to maximize efficiency and because of the continuation of aggregate resources present. The boundaries of the proposed quarry area were defined by the neighboring quarry properties on two sides utilizing what space was available to continue with development from the existing quarry.

Development of the quarry will progress towards the east from the proponent's existing quarry. Annual production from the site is anticipated to be approximately 10,000 m<sup>3</sup> per year. Development activities to be undertaken will consist of the removal and stockpiling of organics to the perimeter of the site. Operational activities will consist of pit run removal and stockpiling of sand and gravel material within the quarry and quarrying of rock resources by drilling and blasting. This will be performed using heavy equipment such as excavators, front end loaders and dump trucks. When necessary, processing activities such as screening and crushing will be carried out only within the proponent's adjacent and established quarry (File 711:9124). Any washing of material will be completed in the nearby quarry area held by Black Ridge (File 711:10203). Quarrying activities will take place approximately between May and December of each year but will ultimately be dictated by the timing of seasonal spring melt and the onset of winter conditions. There is a possibility for quarry activities to occur during wintertime if unforeseen project demands arise.

Typical rock quarrying methods will be utilized at the site as have been since the area was initially developed. Blasting will be completed through a certified third-party subcontractor capable of producing the required rock size per blast. Quarry benches will be blasted on <10m lifts. The generally small-scale volume requirements will minimize noise and potential safety concerns during blasting. All blasting will adhere to the Government of Newfoundland and Labrador's Occupational Health and Safety Regulations under the Occupational Health and Safety Act and more specifically Part XIX pertaining to General Blasting. As per the conditional approval given by the Parks Division of the Department of Tourism, Culture, Industry and Innovation, blasting will not occur between May 1<sup>st</sup> and September 30<sup>th</sup>.

#### **4.4 Potential Sources of Pollution During Construction and Operation**

The construction and operational phases of the development will utilize equipment such as chainsaws, front end loaders, dump trucks, drilling equipment and excavators. This equipment represents a potential source of noise disturbance, exhaust emissions, the potential release of petroleum hydrocarbons, dust, domestic waste and general refuse. Also, construction and operational activities introduce the possibility of erosion and transport of fine-grained particles such as clay and silt to nearby water bodies.

Air pollution will be controlled by having all equipment on site fitted with the appropriate emission-control equipment, and dust will be kept at a minimum by the watering of haul roads as required. As the site is adjacent to the proponent's existing quarry, there will not be any additional equipment required since the equipment needed is already present and operations will remain the same as expansion in the quarry application area proceeds.

Noise levels are not anticipated to exceed previous maximum levels reached. Historical noise monitoring data for the area is not available, however there have been no documented complaints of noise related to blasting or noise associated with the operation of the quarry. Workers will have the proper hearing protection and the work site, as noted above, is a restricted and controlled work environment.

Domestic waste generated during construction will be collected and disposed of in accordance with the Environmental Protection Act 2002. There is no requirement for portable toilets inside the proposed quarry boundaries as washroom facilities are available in the nearby quarry area (File 711:10203). Sewage will be handled and maintained by an approved sewage service provider.

Fuel will not be stored on site but will be brought in as required by a petroleum product service company. The handling of petroleum products on site will comply with the Storage and Handling of Gasoline and Associated Products Regulations. Complete and regularly checked emergency spill kits will be available on site at all times for containment and cleanup of any hydrocarbon leaks.

The erosion and transport of fine-grained particles during construction and operational activities will be controlled by using appropriate mitigating measures such as erosion control ditches, check dams, hay bales, and silt fencing as required. Site runoff will ultimately be directed towards vegetated areas, acting as a secondary filter for fine particles (See **Section 4.5** below).

## 4.5 Potential Resource Conflicts During Operation

Potential resource conflicts during operations could include the use of the area for recreational purposes. There are currently no dirt roads or ATV trails inside the permit boundaries, and the area is not historically known to be used for such purposes.

Sediment erosion and control is one of the more significant items to be addressed with this undertaking based on the presence of low-lying areas in the proposed quarry. In respect to this, other quarries adjacent to the proposed project and in the general area have been successfully developed with no documented environmental concerns. Although the project is located beyond the required 50 m buffer from any water bodies that appear on the 1:50,000 NTS map sheet, the following design considerations and mitigation measures will be followed to mitigate any possible environmental impacts in general, and from excavating near low lying areas:

- Within the proposed 4.0 ha area, a 5 m wide buffer will be left inside and along the north, east and south boundaries where no resources will be excavated (**see Figure 3 and 4**). Berms constructed from the windrowed organics will be placed within the 5 m buffer area.
- The pit floor will be kept lower than the perimeter berms as it progresses so as to contain precipitation water within the quarry site.
- Should water runoff become a problem, erosion and sediment control measures in line with industry best management practices will be utilized. This will include silt fencing, hay bales and erosion control ditches with check dams to prevent unfiltered water drainage immediately from the quarry area. Also, a settling pond may be constructed, if required, to temporarily hold water within the quarry and allow for suspended sediment to deposit prior to water being released into vegetated areas.
- An area containing a small marshy area with possible flowing water identified during a site inspection has been isolated so that no development will occur in this area; it is identified as “*Preserved Area*” on **Figure 4**. A combination of the aforementioned erosion and sediment control measures, including protecting the area using berms and a 5 m wide buffer, will ensure the area is protected as much as possible against sediment runoff.
- A separate low-lying area located inside permit boundaries towards the southeast corner contains standing water that can be seen on the satellite imagery (**Figure 4**). This area was not sectioned off as it does not contain any running water that connects to any stream and is very shallow and small. The standing water is less than 10 m in width and covers 46.8 square meters.

## **4.6 Occupation**

The occupations required for the proponent's site are listed below and classified as per the National Occupational Classification (2011):

### ***Construction***

- 1 Site Foreman/Supervisor (7302)
- 1 Heavy Equipment Operator – Loader/Excavator (7521)
- 1 Heavy Equipment Operator – Tree Harvester (7521)

### ***Operation***

- 1 Pit Manager (7302)
- 1 Heavy Equipment Operator – Loader, Excavator, Screening (7521)
- 2 Heavy Equipment Operators – Tandem, Tandem-Tandem and/or Semi Dump Trailers (7521)

Operation of the quarry will necessitate one full time employee, with the remainder employed seasonally (6-8 months/year). These employees will be utilized to both clear the quarry site area (Construction Phase) and extract/process the aggregate material (Operation Phase). This dual role is possible based on the phased development of the site over years which enables the quarry site to operate efficiently. All required personnel will be hired and paid directly by Black Ridge Construction Ltd.

The noted required occupations for the site will be filled with current staff based on the current demand. Should there be a significant increase in the requirement for development/extraction then either a new direct hire will be brought on or the work would be contracted out for a period of time to meet the increased demand. This is dependent on the length of the project requirements and urgency for the supply of the aggregate material. There is no obvious increased demand in the immediate to near future.

## **4.7 Reclamation and Closure**

Upon completion of the project, the quarry will be rehabilitated within the Department of Natural Resources' quarry permit guidelines. Quarry faces will be resurfaced to implement 30-degree sloping. Subsequently, the previously windrowed and preserved organic material that was stripped during the construction phase will be re-spread to promote natural revegetation. Also, once the quarry reaches a development phase that will not require additional expansion then progressive reclamation will begin to allow for revegetation of the site as quickly as possible.

## 5.0 APPROVAL OF THE UNDERTAKING

**Table 1** contains a list of referral agencies, responses received, and possible permits required for the project, most of which are already in progress.

**Table 1: Referral Agencies, Responses and Possible Permits Required**

Department/Regulatory Agency	Status	Possible Required Approvals/Permits
Works, Services & Transportation	Approved	
Tourism, Culture, Industry and Innovation -Historic Resources	Approved	
Government Service Center	Conditional Approval	
Fisheries and Land Resources -Crown Lands	Approved	
Fisheries and Land Resources -Wildlife	Conditional Approval	
Fisheries and Land Resources -Forestry	Approved	Operating Permit Commercial Cutting Permit
Fisheries and Land Resources -Natural Areas	Approved	
Fisheries and Land Resources -Agriculture	Approved	
Fisheries and Land Resources -Fisheries	Approved	
Municipal Affairs and Environment -Water Resources Management Division	Conditional Approval	
Municipal Affairs and Environment -Environmental Assessment Division	Project Registration Required	Environmental Assessment Registration
Natural Resources Lands Division -Quarry Materials	Conditional Approval	Quarry Permit Required
Tourism, Culture, Industry and Innovation -Tourism	Approved	
Tourism, Culture, Industry and Innovation -Parks	Conditional Approval	
Municipal and Provincial Affairs -Town of Holyrood	Approved	Development Permit Required
Town of Holyrood	Discretionary use advertising required; decision to be made after process is complete.	



## 6.0 SCHEDULE

The proposed schedule for this project is as follows:

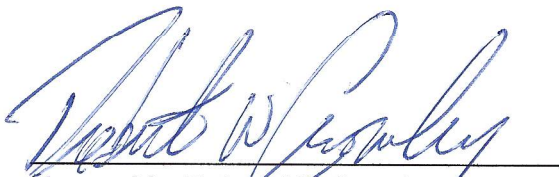
Submission of Registration Document	August 2019
Review of Submission Document by Government	Oct./Nov. 2019
Commencement of Construction and Operations	Fall 2020

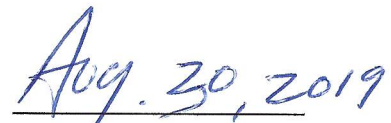
## 7.0 FUNDING

Funding for the construction and operation of project will be provided entirely by the proponent.

## 8.0 LIMITATIONS

This environmental registration document was prepared by NCD Consulting Ltd. in consultation with Black Ridge Construction Ltd. for their use under the terms defined in a written contract between the two parties. The information included in this document was provided by the client and relates to the scope of this project exclusively. NCD Consulting Ltd. has worked with the client and utilized NCD's combined extensive knowledge in quarry development and potential environment related concerns to, as accurately as possible and with the information available, layout the development of the site.

  
Name: Mr. Robert W. Crowley  
Position: Director/Owner,  
Black Ridge Construction Ltd.

  
Date