



**ENVIRONMENTAL ASSESSMENT
REGISTRATION DOCUMENT**

PROPOSED SEAL COVE QUARRY

Submitted by:

Mac Mix Concrete Limited
58 Lance Cove Road
Conception Bay South, NL
A1X 6R6

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TABLE OF CONTENTS

1.0	NAME OF UNDERTAKING	1
2.0	PROPOSER	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	1
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.....	2
4.3	Construction and Operation	5
4.3.1	Site Access	5
4.3.2	Site Clearing	5
4.3.3	Quarry Development.....	5
4.4	Potential Sources of Pollution during Construction and Operation.....	6
4.5	Potential Resource Conflicts	7
4.6	Occupations	7
4.7	Reclamation and Closure.....	7
4.7.1	Reclamation Methods	7
4.8	Project Options Considered	8
4.9	Project Related Documents	8
5.0	APPROVAL OF THE UNDERTAKING.....	8
6.0	SCHEDULE	8
7.0	FUNDING	9
8.0	SUBMISSION	9

LIST OF FIGURES

Figure 1.	Approximate Location of the Proposed Quarry.....	3
Figure 2.	Proposed Quarry Location and Existing Quarry Permit	4

1.0 NAME OF UNDERTAKING

Mac Mix Quarry

2.0 PROPONENT

2.1 Name of Corporate Body

Mac Mix Concrete Ltd.

2.2 Address

Lance Cove Road,
Seal Cove, NL
A0A 2J0

2.3 Chief Executive Officer

Dave Hodder
General Manager
Lance Cove Road,
Seal Cove, NL
A0A 2J0

2.4 Principal Contact Person

Deidre Puddister
709 689 8086
deidre.puddister@pennecon.com

3.0 THE UNDERTAKING

3.1 Nature of the Undertaking

The proposed Mac Mix Quarry site is 10 hectares in size, with 8.5 Ha to be developed in two separate zones (east zone and west zone) and 1.5 Ha of identified wetland to be preserved. The site is located approximately 1.4 km south west of the Conception Bay South Bypass Road Seal Cove Exit. Site access will be via an existing 1.7 km haul road, as well as established access roads developed within the adjacent quarry.

3.2 Purpose/Rationale/Need for the Undertaking

The development is required to allow the continued operation of Mac Mix Concrete Limited, a local, rural supplier of concrete products to the St. John's and Avalon Peninsula for 30+ years.

4.0 DESCRIPTION OF THE UNDERTAKING

4.1 Geographic Location

The proposed project is located in an area east of the northern tip White Hill Pond and immediately south of an existing quarry, near the Town of Seal Cove in Conception Bay South, Newfoundland. Please refer to Figure 1. Approximate Location of the Proposed Project Site, Figure 2. Proposed Quarry Location (with coordinates).

The proposed quarry site is located partially within the municipal boundaries of the Town of CBS (northern portion) and partially within undeveloped Crown Land (Butterpot-Witless Bay Environs) (southern end of the site). The site was strategically located to avoid the Open-Space Conservation Area, as designated by the Town of CBS. Rezoning will not be required to allow operations.

4.2 Physical Features

4.2.1 Project Site Description

The primary physical feature of this project will be the quarry itself. Access to the site will be via an existing 1.7 km haul road, as well as established access roads developed within the adjacent quarry. Access roads will be constructed as required within the proposed quarry property during development and quarry operations.

4.2.2 Existing Biophysical Environment

Climatic conditions in the region are characterized by cool summers with frequent fog and strong winds. Winters are relatively mild with intermittent snow cover, particularly near the coastline. The annual precipitation exceeds 1250 mm.

The site is located within the Maritime Barrens Northeastern Barrens subregion, which includes the western half of the northeast ecoregion Avalon Peninsula, most of the Bay de Verde Peninsula, and the eastern half of the Bonavista Peninsula. This ecoregion's vegetation is characterized primarily by Balsam fir, followed by black spruce and some white birch. Broom moss, feathermoss and other mosses, alders, sheep laurel, blueberry, crowberry, partridgeberry, dogberry, larch, mountain holly and stunted balsam fir can also be found.

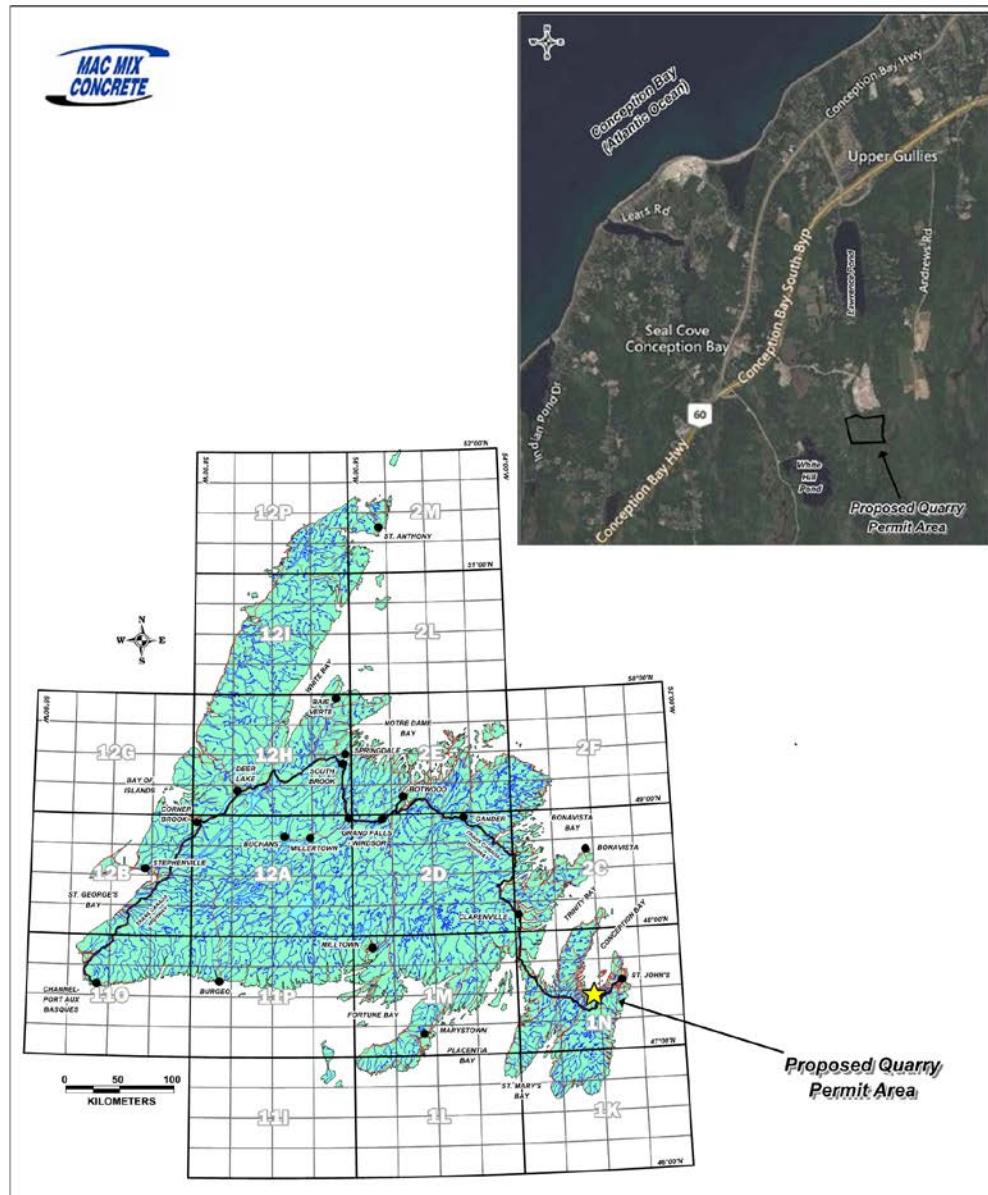


Figure 1. Approximate Location of the Proposed Quarry

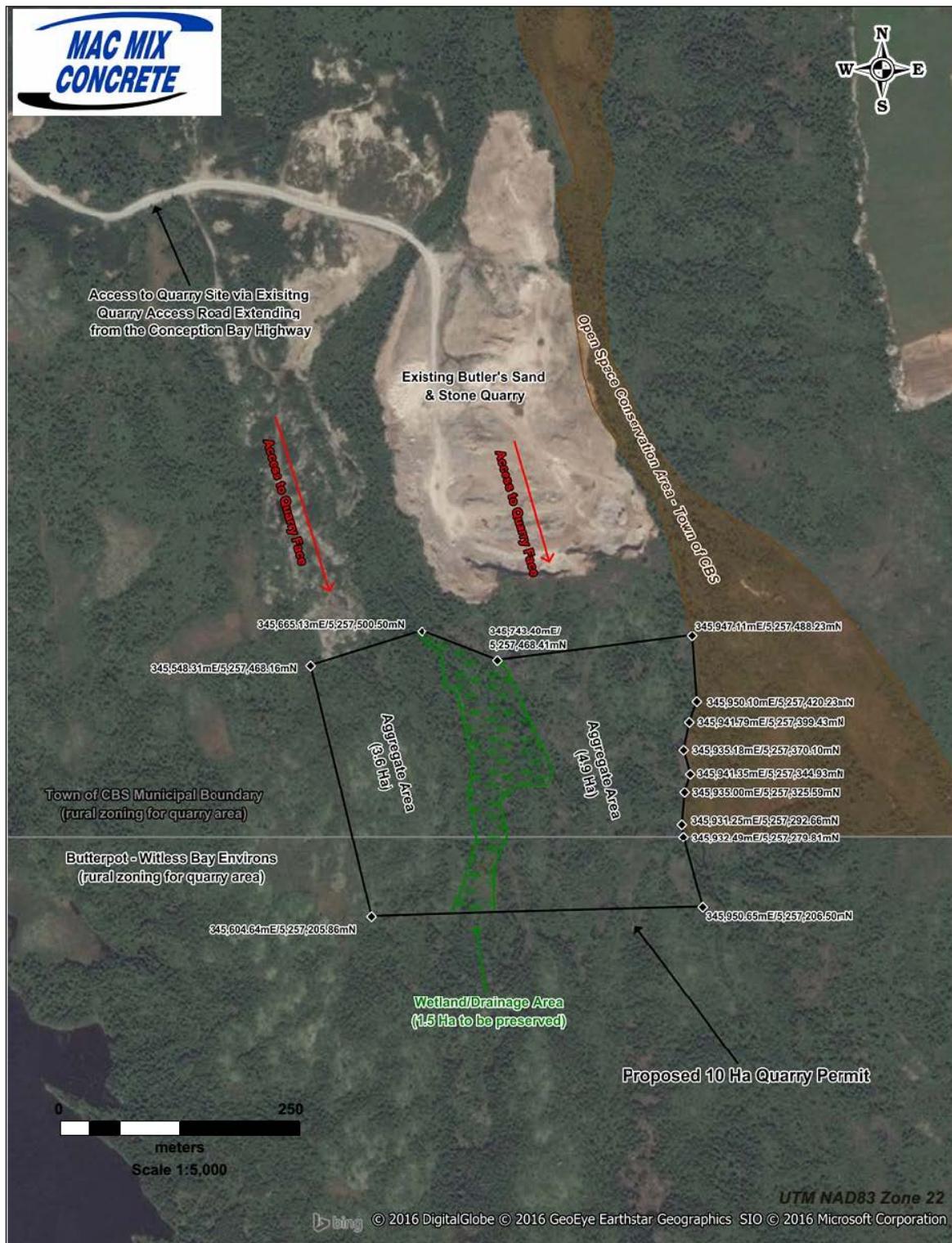


Figure 2. Proposed Quarry Location (with Coordinates)

The surficial geology within the proposed quarry area contains primarily a silty, sandy and gravelly secondary till, deposited as a result of a glacio-fluvial system present throughout the, generally, northwest-southeast trending topography. Observations through test pitting show that the aggregate is comprised primarily of silt, sand, gravel and boulders. The composition is on average 20% boulders, 20% gravel, 35% sand and 25% silt. The boulders are typically <1.5 m in diameter and generally around 0.5 to 0.8 m. Overall the composition of the aggregate is granite derived with defined silty lenses locally.

The proposed quarry area contains a drainage area as defined by the wetland/drainage area labelled on Figure 2. This water flows from south to north and there are smaller scale runoff channels that flow from the adjacent upslope areas to this bottom. The preserved 1.5 Ha wetland/drainage area provides a buffer zone around this south to north drainage area.

4.3 Construction and Operation

The proposed Mac Mix Quarry site is 10 Ha in size, with approximately 8.5 to be developed and 1.5 Ha to be preserved. The construction phase of site development will consist of the following main components:

- Site access;
- Site Clearing; and
- Quarry development.

4.3.1 Site Access

Access to the site will be via an existing 1.7 km haul road, as well as established access roads developed within the adjacent quarry. Access roads will be constructed as required within the proposed quarry property during development and quarry operations.

4.3.2 Site Clearing

Initially, trees within the area will be harvested both manually and utilizing mechanical equipment (i.e. a mulcher attached to an excavator). Merchantable timber will be salvaged through the use of a hand held chainsaw. This wood will be stacked in 6' to 8' lengths and subsequently removed from the site to be used primarily as firewood or it will be removed by an existing forest operator. Once all trees in the area have been harvested, the topsoil and grubbing will be removed and stockpiled for rehabilitation purposes (Figure 2).

4.3.3 Quarry Development

The limits of the proposed quarry site were defined by test pitting work, field observations of the local topography, and the general terrain in the area. Critical items that were taken into

consideration were the depth of the aggregate material, the quality of the aggregate, and generally how saturated the material was.

As per the “Mac Mix Quarry Permit Application” submitted to the Department of Natural Resources Mineral Land Division, the proposed site will be mined using heavy equipment (ie. excavators and trucks) and a crusher. Settling ponds, a wash plant, etc will not be required to facilitate material production at this site. The crusher will be positioned in close proximity to the mining face in order to maximize productivity and will be moved as necessary to facilitate efficient production. The proposed site will be mined to correspond as closely as possible with the projected annual demand for concrete aggregate.

Typical quarrying methods will be utilized to collect the overburden, sand, and gravel deposit at the site. The operation will include the excavation, crushing, and loading of the sand and gravel materials at the working face of the quarry. Materials will be processed into granular materials of required specifications, and stockpiled on site. Waste and oversized rock will also be stockpiled for future use.

4.4 Potential Sources of Pollution during Construction and Operation

The construction phase of the development will consist of earth-moving activities. The potential sources of pollution during these activities include site drainage, waste and litter, noise, air emissions, and potential releases of petroleum hydrocarbons.

Erosion and sediment control measures will follow industry best management practises, including the use of silt fence, hay bales, ditches, swales, etc. Through the use of mitigation measures, best management practices, and monitoring of installed erosion and sediment control structures, site drainage can be appropriately managed.

Domestic waste generated during construction will be collected and disposed of per the Waste Material Disposal Act. Sewage will be handled by approved facilities during construction. Holding tanks will be pumped on an as-required basis.

Equipment on site will have appropriate emission-control equipment. Dust control measures, such as application of water, will be provided on an as-required basis. Noise levels associated with the work is not expected to increase over typical operations in the area.

The handling of petroleum products on site will comply with the Storage and Handling of Gasoline and Associated Products Regulations.

4.5 Potential Resource Conflicts

Potential resource conflicts are limited due to restricted site access, but could include the potential use of the area for recreational purposes or domestic firewood cutting (Domestic Cutting Area F-5D Andrew's Road).

4.6 Occupations

Site construction and operations for the proposed quarry will likely include the following occupations, classified as per *National Occupational Classification, 2006*, and equipment. All listed personnel are anticipated to be direct-hires, if available.

Site construction and operations for the proposed quarry will include the following occupations, classified per National Occupational Classification 2001:

Quarry Operations

- 1 Quarry Foreman/Supervisor (8221)
- 2 Heavy Equipment Operator - Loader/Excavator (7421)
- 1 Crushing Equipment Operator - Screening/Crusher (7421)
- 3 Truck Drivers (7411)
- 1 Quarry Laborer (7611).

Mac Mix Concrete Limited is committed to equity in employment and will encourage all qualified individuals to apply.

4.7 Reclamation and Closure

4.7.1 Reclamation Methods

Mac Mix's standard reclamation practices, in keeping with DNR's standard Quarry Permit conditions, include the following measures:

- Surficial soils, subsoil, and grubbing will be stripped to the top of the aggregate to prepare each excavation phase.
- This material will be used as required for on-going and future reclamation.
- Sloping around the perimeter of the area will be achieved by leaving a buffer of sufficient aggregate in place along the boundary so that when re-contoured with a bulldozer, the pit-face of the mined out area can be sloped to the required 30 degree angle.
- Following final sloping and the contouring of the pit floor, the preserved organic material and subsoil will be spread and seeded.

4.8 Project Options Considered

Consideration has been given to alternate project locations, however the current location was selected as the preferred site due to availability of acceptable aggregate resources and proximity to existing quarry operations, as well as a more localized project footprint for future rehabilitation. In addition, aggregate resources within the proposed footprint are of a significant thickness to allow for a reduced footprint (1.5 Ha of preserved area within the 10 Ha application), while still meeting aggregate supply demands.

4.9 Project Related Documents

Mac Mix has previously applied for a Quarry Permit for the identified area.

5.0 APPROVAL OF THE UNDERTAKING

The following is a list of the likely permits, licences and approvals required for this project, some of which are already in progress.

APPROVALS/CERTIFICATE/PERMITS	REGULATORY AUTHORITY
NL Environmental Assessment Registration	NL Department of Environment and Conservation, Environmental Assessment Division
Lease / Permit to Occupy Crown Lands	NL Department of Environment and Conservation, Crown Lands Division
Preliminary Application to Develop Land	Service NL
Water Use Licence	NL Department of Environment and Conservation, Water Resources Division
Commercial Cutting Permit	NL Department of Natural Resources, Forestry and Agrifoods Agency

6.0 SCHEDULE

Registration Document Submission	January 2017
Government Review and Decision	March 2017
Operations	May 2017

7.0 FUNDING

The approximate cost of the project will be 0.5 million CAD. The funding for this project will be provided by Mac Mic Concrete Limited.

8.0 SUBMISSION


Jan 23/17

Date



Name: Mr. Dave Hodder

Position: General Manager, Mac Mix Concrete Limited