

**ENVIRONMENTAL ASSESSMENT  
REGISTRATION DOCUMENT**

PENNECON LIMITED  
PROPOSED GRAVEL/SAND PIT  
HOLYROOD

Prepared by:

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- 1.0 NAME OF UNDERTAKING** Holyrood Gravel/Sand Pit
- 2.0 PROPONENT**
- 2.1 *Name of Corporate Body* Pennecon Limited
- 2.2 *Address* 1309 Topsail Road  
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- 2.3 *Chief Executive Officer* Larry Puddister, P.Eng.  
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### **3.0 THE UNDERTAKING**

#### *3.1 Nature of the Undertaking*

The proposed project involves the development of a sand and gravel pit site approximately 2.5 km southeast of the town of Holyrood, Newfoundland. The site is approximately 0.5 km northeast of the former Concrete Products pit at Round Marsh Gullies. Site access will be via an existing series access road (~ 2 km), which will be upgraded for site access. The proponent proposes to develop the area as a pit operation, mining, and transporting sand and gravel materials for use in Capital Ready Mix Ltd.'s concrete batching plant operations, located at the Trans-Canada Highway/Manuals Access Road interchange.

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

The purpose of this project is to produce a product (sand and gravel) for future use as raw materials in concrete production.

## 4.0 DESCRIPTION OF THE UNDERTAKING

### 4.1 Geographic Location

The project is located in an area known as Round Marsh Gullies, approximately 2 km southeast of the town of Holyrood on NTS Map Sheet 01N06. Refer to Figure 1: Site Location and Figure 2: Pit Location for details.

### 4.2 Physical Features

#### 4.2.1 Project Site Description

The primary physical feature for this project will be the pit itself, which will include the development of two pits. Access to the site will be by means of an existing access road. Secondary processing will be limited to screening and crushing. The pit boundary is sited to ensure a minimum 50 m buffer zone around all water bodies and streams adjacent to the proposed site.

#### 4.2.2 Existing Biophysical Environment

The proposed site is located within the *Maritime Barrens Ecoregion*, Southeastern Barrens Subregion. This subregion covers most of the Burin Peninsula, as well as the southern and central portions of the Avalon Peninsula. It is characterized by cool summers, with frequent fog and strong southerly winds, and short, somewhat moderate winters. The mean annual temperature is around 5.5°C, with a mean summer temperature of 11.5°C and a mean winter temperature of -1°C. The mean annual precipitation ranges from 1200 mm to over 1600 mm. Elevations range from sea level to approximately 250 m above sea level. A mixture of sedimentary rocks and granites are most common. The uplands are rugged and rocky due to erosion, while lower areas have a rolling topography.

#### Vegetation

This subregion is characterized by extensive barrens, with scarce forested areas. On barrens, the plant community known as “dwarf shrub heath” is common, including sheep laurel, purple-flowering rhodera and blueberry bushes. Larch, dogberry, mountain holly and stunted balsam fir are also common on barrens in this subregion. Balsam fir is the dominant tree species, however forests are limited to isolated, protected pockets. Yellow birch is also present, but limited to moister areas. Historical fires have led to the replacement of fir by sparse stands of black spruce, tamarack, and shrubs, along with mosses and lichen. Dense thickets of mountain alder are common along the edges of brooks.



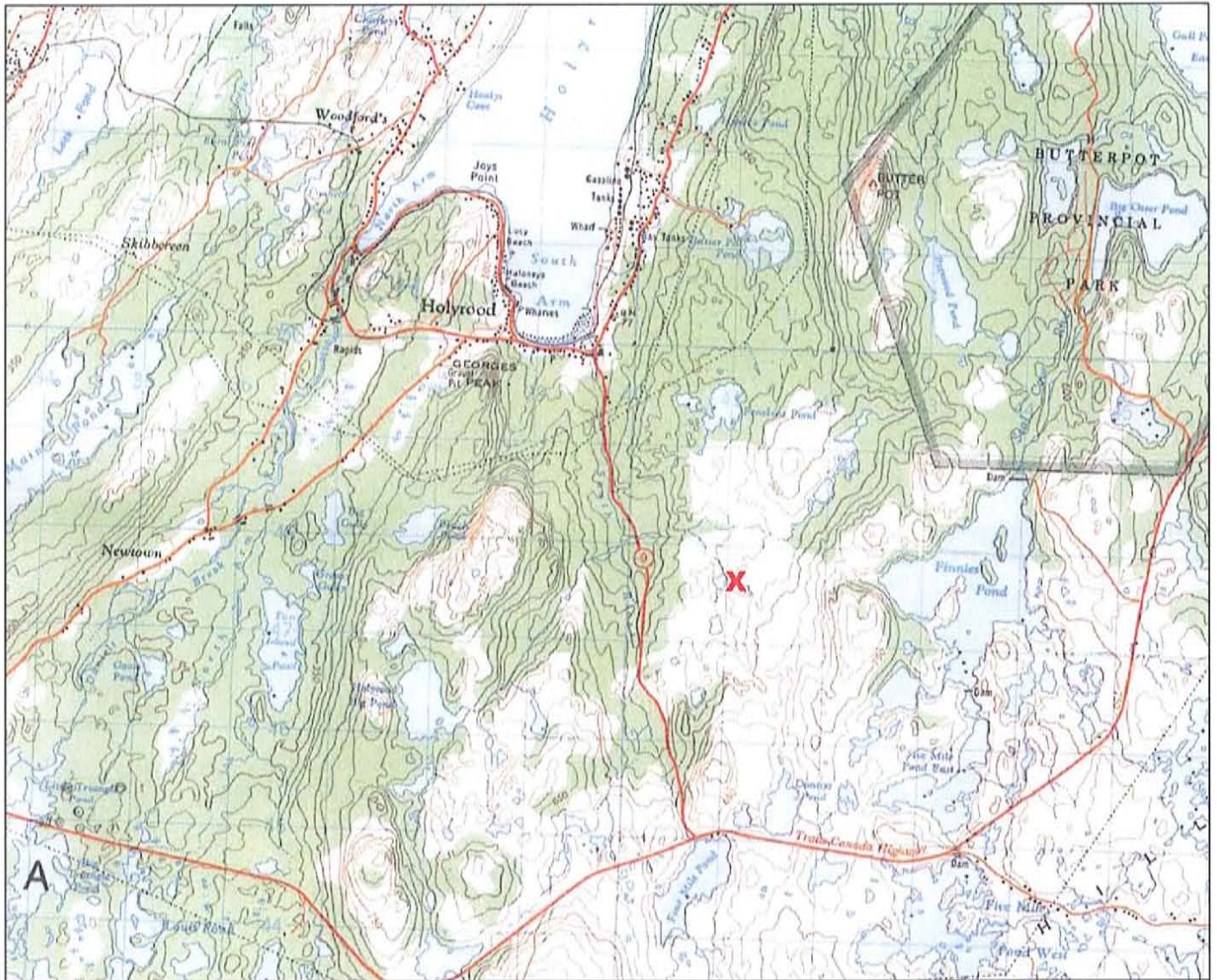
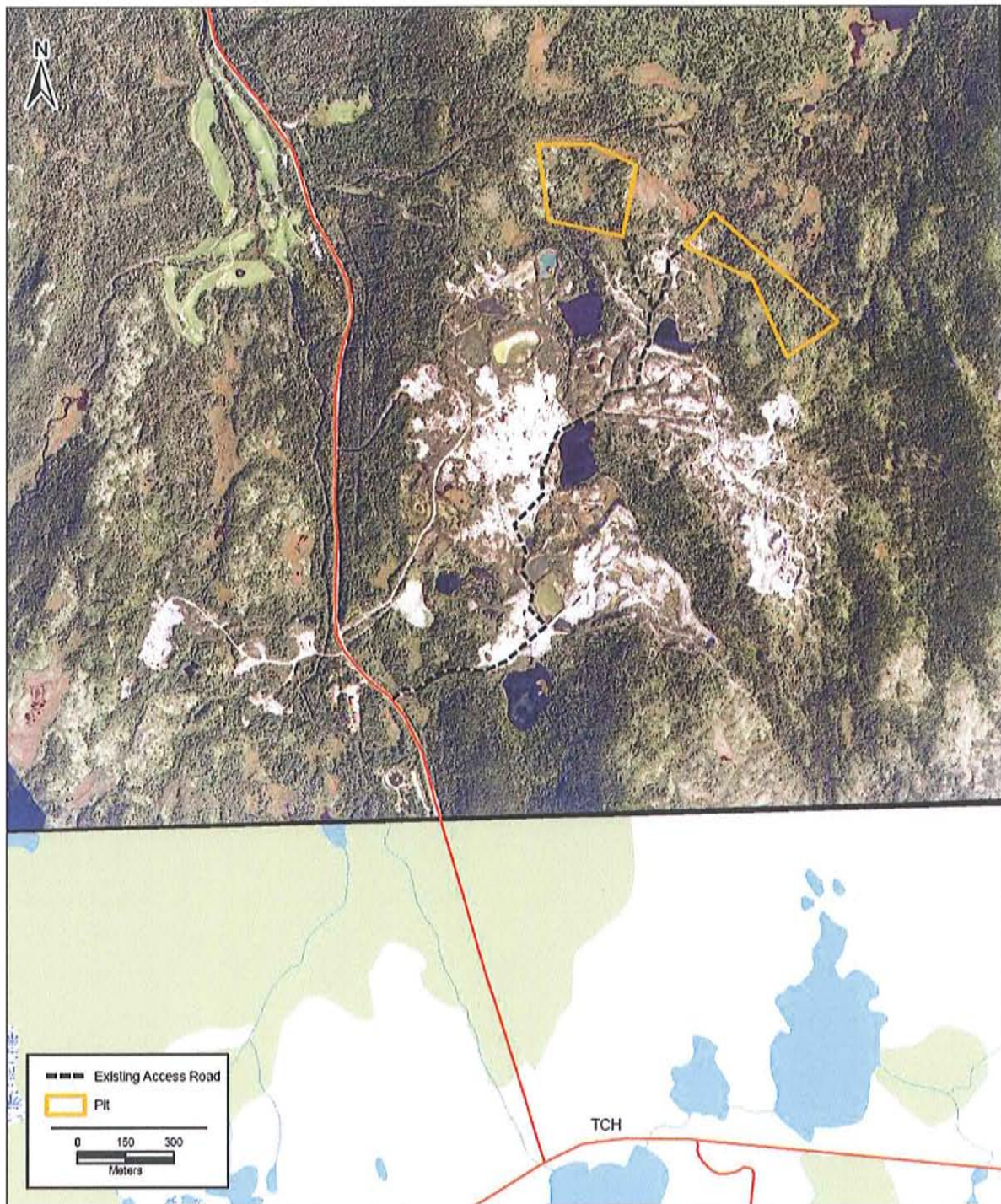


Figure 1. Site Location





**Figure 2.** Pit Location



## Wildlife

Several mammal species occur in Southeastern barrens subregion, including moose, snowshoe hare, red fox, and mink in the forest and shrub habitats, and beaver and muskrat near pond and streams. Other mammals, including the little brown bat, eastern chipmunk, masked shrew, meadow vole, and red-squirrel are also known to occur in the area. In addition, the Southeastern Barrens is home to the most southerly caribou herd in the world – the Avalon herd. This herd lives in an area known as the Avalon Wilderness Reserve located on the southeastern portion of the Avalon Peninsula, the closest boundary of which is approximately 10 km south of the proposed development.

Migratory bird species found in forested areas of the subregion include ruby-crowned kinglet, northern waterthrush, hermit thrush, white-throated and fox sparrow, and yellow-rumped warbler. Dark-eyed junco and pine grosbeak are found year-round in forested areas. On barrens, partridge (“willow ptarmigan”) are present year-round, while the American pilot, savannah sparrow and horned lark appear as migratory species. Swamp sparrow and shorebirds, eg. common snipe, greater yellowlegs, and least sandpiper, are migratory breeders found in wetlands in the subregion.

A number of seabird colonies occur on offshore islands in the Southeastern Barrens subregion, however these are far removed (~ 25 km SE) from the proposed area of development.

## Inland Fish

The rivers and ponds of the Southeastern Barrens subregion are host to a number of fish species, including stickleback (three-spine and nine-spine), brook trout, brown trout, rainbow smelt, American eel, and Atlantic salmon. In addition, the banded killifish, which is designated “special concern” in Newfoundland, has also been recorded in this subregion, but only on the Burin Peninsula.

## Reptile/Amphibians

There are no reptiles recorded for this subregion. One species of amphibian has been recorded in the subregion in low numbers, the green frog.

### *4.3 Construction*

The construction phase of site development will consist of the following main components:

- site access upgrades;
- clearing and grubbing; and
- pit development, including sediment control.

#### 4.3.1 Site Access

Access to the site will be from an existing ~ 2 km long gravel access road. The site access will require minimal upgrades.

#### 4.3.2 Salvageable Timber (Clearing) and Grubbing

Merchantable timber removed during pit development will be salvaged. All grubbed materials will be stockpiled for future use.

#### 4.3.3 Pit Development

The proposed pit site covers a total area of approximately 8 hectares. Initial construction activities will involve the removal of vegetative cover, as required, in order to advance the working face at both pits. Surficial organics and topsoil, where present, will be set aside for future use (eg. pit rehabilitation).

#### 4.4 Potential Sources of Pollution during Construction

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

Site run-off will be directed to vegetated areas which will filter suspended solids. In addition, barriers will be installed as required to prevent siltation of water bodies/streams.

Domestic waste generated during construction will be collected and disposed of at Robin Hood Bay Landfill, as per the *Waste Material Disposal Act*.

All equipment will have appropriate emission controls. All vehicles will follow a designated project route and be properly maintained to minimize noise. All vehicles will have exhaust systems regularly inspected and mufflers operating properly.

Dust control measures, such as water applications, will be provided on an as-required basis.

Petroleum products will not be stored on site during construction; petroleum products will be handled as per *Storage and Handling of Gasoline and Associated Products Regulations*, under the *Environmental Protection Act*.

#### 4.5 Operation

Typical excavation methods will be employed to collect the overburden materials (sand and gravel) at the proposed site. The operation will include the excavation and loading of the native sand and gravel materials at the working face of the pit, crushing/screening, and transportation of these materials for use off-site at Capital Ready Mix Ltd.'s concrete operations located at its Trans-Canada Highway/Manuals Access Road property. Waste and oversized rock will also be stockpiled for future use.

Appropriate ditching will be maintained on site to ensure silt and general site run-off is controlled, and does not adversely affect the surrounding environment. In addition, perimeter ditching and settling basins, as required, will be located to prevent migration of surface water drainage from non-operating and off-site areas into operating areas. The grounds and facilities will be maintained according to environmental health and safety standards and regulations.



Equipment on site will include the following:

- tracked excavator (access road construction and loading at the working face);
- tandem dump trucks (material transportation);
- front end loader (material handling);
- mobile crusher-screener.

The pit operation will typically run from April to November, in accordance with demand for the product. The pit will potentially operate for 10 years.

#### 4.6 Potential Sources of Pollution during Operation

The potential sources of pollution will be dust, noise, site run-off, or an accidental spill of fuel.

##### Dust and Noise

All equipment will have appropriate emission controls. All vehicles will follow a designated project route and be properly maintained to minimize noise. All vehicles will have exhaust systems regularly inspected and mufflers operating properly. Dust control measures, such as water applications, will be provided on an as-required basis.

##### Site Run-off

Where possible, run-off will be directed to vegetated areas within the project area, which will filter any potential suspended solids. Adsorbents will be used to recover any hydrocarbon sheen in the pit water.

Sewage will be handled by an approved portable facility during operation. The holding tanks will be emptied by a pump truck on a regular basis and disposed of in an appropriate manner.

All fuel handling and storage will comply with the *Storage and Handling of Gasoline and Associated Products Regulations*. Vehicles and mechanical equipment will be maintained in good working order to prevent leaks and spills. There will be no on-site bulk storage of fuel or oil. All waste oil generated at the pit will be disposed of by a licensed disposal agent.

##### Waste and Litter

During operation, domestic garbage will be collected and hauled to the local waste disposal facility in accordance with the *Waste Material Disposal Act*. Any food or organic garbage onsite will be held in animal-proof containers to prevent attracting wildlife.

#### 4.7 Potential Resource Conflicts during Operation

Resource conflicts are not expected as the site. A literature review did not reveal reference to historic sites in the area. If, however, historic resources are encountered, work in the area of the discovery will stop and the foreman will notify the proper authorities.

#### 4.8 Decommissioning/rehabilitation

Site decommissioning and rehabilitation shall be in accordance with standard pit operations, including:

- Upon completion of all pit activities, all pit slopes shall be graded to a 30° slope;
- Waster overburden will be used for sloping;
- Stockpiled topsoil or other organic material will be spread over the entire mined out area and seeding will be completed to produce plant growth.

#### 4.9 Occupations

Site construction and operations for the proposed pit will include the following occupations, classified as per *National Occupational Classification, 2006*, and equipment.

##### Construction Phase

1 Site Foreman/Supervisor (7217)  
1 Heavy Equipment Operator (7421)

##### Operations Phase

1 Pit Manager (0811)  
1 Pit Foreman/supervisor (8221)  
4 Heavy Equipment Operators – 2 Excavators, 1 Loader, 1 Crusher (7421)  
4 Truck Drivers (7411)  
2 Heavy Equipment Mechanics (7312) – located offsite

#### 4.10 Project Related Documents

There are no project related documents.

### 5.0 APPROVAL OF THE UNDERTAKING

*Environmental Protection Act – Assessment Regulations: Permit to Proceed*  
*Quarry Materials Act and Quarry Minerals Regulations: Quarry Permit*

### 6.0 SCHEDULE

Registration Document Submission	January, 2009
Government Review and Decision	February, 2009
Access Road Upgrades	April 2010
Pit Operations	April 2010

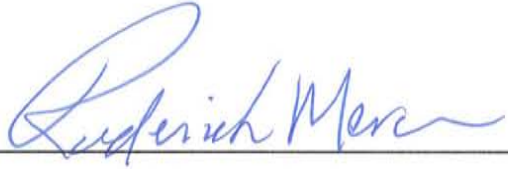
### 7.0 FUNDING

The funding for this project will be provided by Pennecon Limited.



**8.0 SUBMISSION**

Jan 5/10  
\_\_\_\_\_  
Date

  
\_\_\_\_\_  
Name: Roderick Mercer, P. Geo.  
Position: Aggregate and Mineral Resources Manager