Environmental Assessment

Registration Document

Barachois Brook Sand Quarry – Farrell's Excavating Ltd.

Quarry Referral 71113379

Submitted to:

Minister of Environment and Climate Change

P.O. Box 8700

St. John's, NL A1B 4J6

Attention: Director of Environmental Assessment

Prepared By:

Farrell's Excavating Ltd.

July 2025

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Barachois Brook Sand Quarry

2.0 Proponent

2.1 Name of Corporate Body	Farrell's Excavating Ltd.
2.2 Mailing Address	P.O. Box 909 Mount Pearl, NL A1N 3C8
2.3 Chief Executive Officer	William Farrell (Director)
2.4 Principal Contact Person	Justin Constantine B.Eng

3.0 The Undertaking

3.1 Nature of the Undertaking

Farrell's Excavating Ltd (FEL) is applying for a quarry located approximately 80m from Barachois Brook, Newfoundland. The desired quarry area measures roughly 6.92 ha with rough dimensions of 267m by 301m. This undertaking will be developed under quarry permit number 71113379, and will be used to source materials for various projects throughout Newfoundland. The area falls within pine martin habitat. Much of the surrounding land has pre-existing sand quarries in operation. If the area proves unsuitable for the needs of FEL, the process of quarry decommissioning and land rehabilitation will progress. Reasons for such would include a lack of material availability and/or a lack of material quality. Please see Figure 2 for the site plan.

3.2 Purpose of Undertaking

Farrell's Excavating Ltd is a well-established civil construction company that completes various road rehab projects across Newfoundland. Examples of our work include highway rehabilitation, roadway development, commercial and residential paving. The materials from the proposed site will be used in various projects in the area. Expected materials will be aggregated rock, asphalt mixtures, which offer wide-scale uses. If approved, the aggregated equipment will be moved to the site, which will be set up with a functioning scale house, to aid in the process of sales and tracking for government jobs. Thus, having all necessary operational equipment on site will lower our carbon footprint, as everything can be processed and shipped from one area.

The list of equipment expected to be on-site will vary, as this depends on what civil projects are received in the area. The function of the quarry will be raw material extraction; therefore, the list of equipment will include:

- Loaders
- Tandem Tandem Dump Trucks
- Tractor Trailers with:
    - Float Trailers for equipment mobilization
    - Live Bottom and/or Belly Dump Trailers for Material Hauling
- Scale House
- Rock Crusher
- Light-Duty Pick-Up Trucks

Some of the Raw materials expected to be processed are blending sand, winter sand, Class A, Class B, ¼ inch stone, ½ inch stone, ¾ inch stone, 1.5-inch stone, 3-inch minus, and 4-inch minus. There will be NO Blasting operations at this quarry; it will only be used for surface available materials.

4.0 Description of the Undertaking

4.1 Geographic Location

The location of the undertaking is approximately 760m down Carter's Road from Route 490. The coordinates are, respectively, (48°26'58.26", 58°24'15.21"). There is currently no access road to the proposed location itself, so an estimated 25m access road will be constructed. Quarry traffic will use Carter's Road to access the quarry access road. The quarry development will provide an ample supply of raw material to be processed into suitable aggregates for use in construction and has the potential to supply sufficient material for years to come. The application area lies within the Stephenville Crossing Municipality Boundary. The area falls into Forestry Zone 6, District 14, within the Southwestern Newfoundland Ecoregion. This region is characterized by cool summers and cold, snowy winters. The mean annual temperature is roughly 4°C, with a mean summer temperature of 12°C, and a mean winter temperature of -3.5°C. The mean annual precipitation in this area ranges from 1000mm to 1200mm. The proposed location sits roughly 16m above sea level throughout the boundaries.

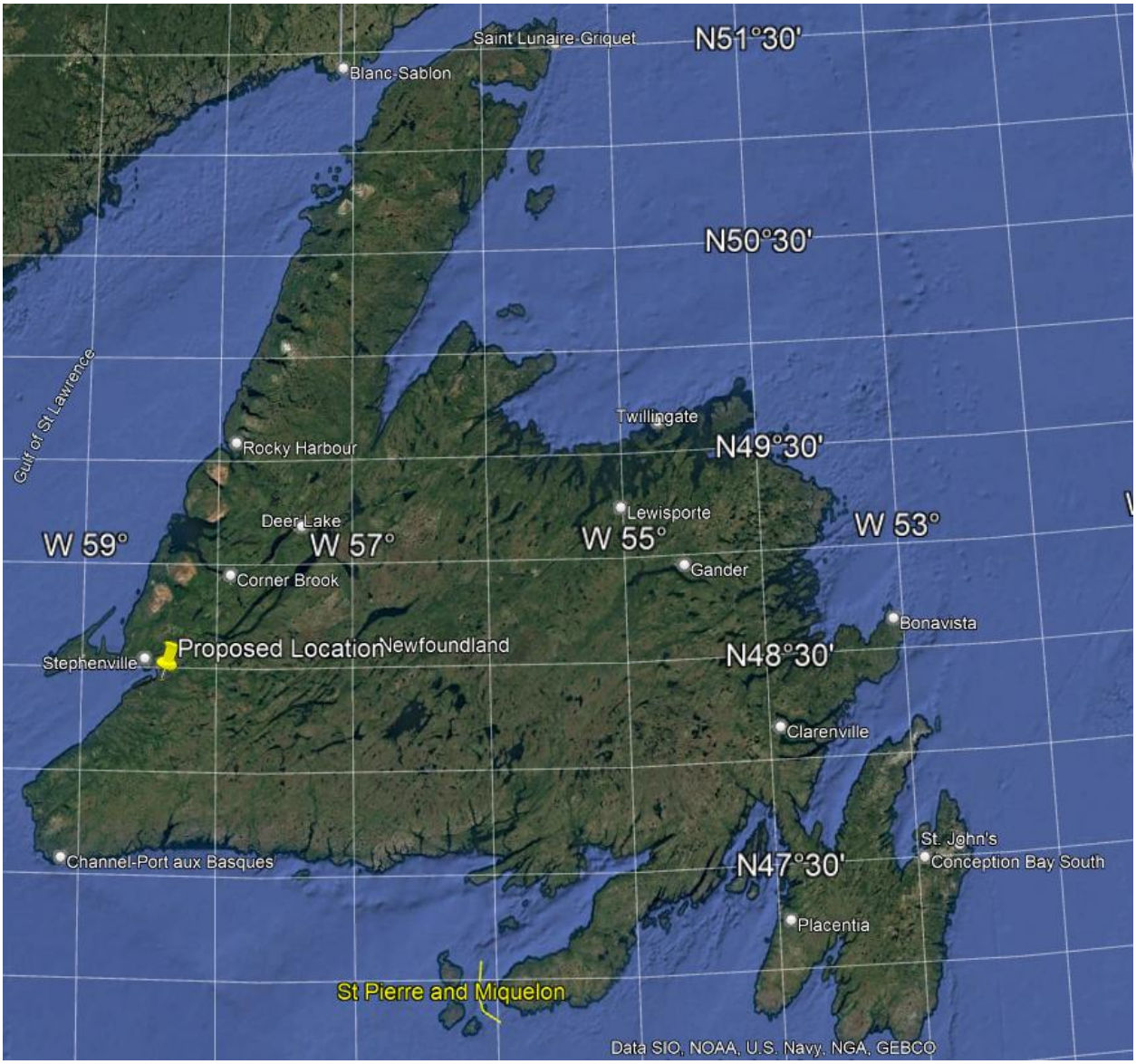

Figure 1: Proposed Site Location Near Barachois Brook, Newfoundland

4.2 Physical Features

The proposed location of the quarry is in a densely wooded area with a subtle slope. There is a central elevation of 16m above sea level. The highest elevation within the boundaries is 18m in the Northeastern corner of the boundaries, and the lowest is 10m at the Southern side. Approximately 80m to the South of the quarry boundary lies Barachois Brook. This area will be untouched and act as a buffer between the quarry and the brook; all other surroundings of the proposed land are forest. The Northern

side faces Carter's Road, which is located approximately 25m away, and Lomond's U-Pick Cranberry Farm about 240m away. The Eastern side is approximately 260m from another quarry of similar function, and 660m from Route 490. The Southern side is about 80m from Barachois Brook, and about 400m from the Trans-Canada Highway at its closest point. Finally, the Western boundary is about 580m from another quarry, and roughly 2.1km from the community of Little Barachois Brook.

4.2.1 Vegetation

Balsam fir is the dominant tree species in the area. Black spruce, tamarack, and shrubs grow in poorly drained sites. Elevations range from sea level to just over 800 m asl in the Lewis Hills, the highest point north of Stephenville. A lowland runs from St. George's Bay to Grand Lake. The Long-Range Mountains provide protection from northeasterly winds, resulting in the best growing conditions on the island. Forestry, pulp and paper, farming, and fishing are the most common land-use activities. The major communities include Stephenville and Corner Brook.

4.2.2 Wildlife

Typical wildlife in this area includes black bears, moose, caribou, red fox, martens, and lynx. Other Mammals to include would be the Common Vole and Shrews.

Several Migratory birds have been known to frequent the area, including Canadian Geese, Wood Duck, Blue-winged teal, Black Duck, Pintail, Eider, Goldeneye, Merganser, Seagulls, Crows, Bald Eagle, Spruce Grouse, Ruffed Grouse, Rock and Willow Ptarmigan. The only known species at this time at risk of endangerment in this area is the Little Brown Bat. The area falls within designated Pine Martin Habitat. During the construction phase of the quarry, there will be a temporary loss of habitat for some of the native wildlife in the proposed area. Upon decommissioning and the rehabilitation of the quarry's land, their habitat will be slowly regenerated.

4.3 Construction of Quarry

Once the Project is released from Environmental Assessment and conditions of release have been met, all other permits, licences, and approvals will be applied for. Once granted, Farrell's Excavating Ltd. will start transporting equipment to the site in preparation for the construction process.

Before any cutting or excavation, a Commercial Cutting Permit and Operating Permit will be obtained from the Department of Fisheries, Forestry and Agriculture. All usable timber will be salvaged, and any organic materials will be stockpiled to create berms within the quarry boundaries, which will then be used for land reclamation in the future. All extraction activities will be in accordance with the Occupational Health and Safety Act and the Quarry Materials Act. The development and construction of the land for the proposed quarry area will consist of the following, immediately after approval of the Quarry Permit:

a) Survey the proposed land.
b) Clearing of trees and vegetation.
c) Stripping soil and other loose material into a stockpile for rehabilitation upon closure of the quarry.
d) Installation and calibration of weight scales.
e) Installation of aggregate crusher/screeners.
f) Development of settling ponds and sediment control to reduce contaminating runoff.
g) Various quarry operations: excavation, crushing and stockpiling of materials.
h) Transportation of crushed materials to clients and job sites.

The completion of the quarry construction will take several weeks.

4.4 Operation of Quarry

When in operation, sections of the quarry will be grubbed off, and all loose materials will be removed to expose the sand underneath. Again, no blasting will occur on this quarry site. The materials will be used

for sale to other contractors and for heavy civil projects received in the area.. Figure 2 below shows an approximate site plan for the quarry.

Figure 2: Site Plan for Project

4.4.1 Occupations

For this site to become operational, both during construction and operation, it will require approximately 10 full-time employees in various positions such as:

- Heavy Equipment Operators (73400)
- Heavy Equipment Mechanics (72401)
- Quarry Supervisor (82020)
- Laborers/Scale House Personnel (75100)

These positions will be hired based on job qualifications, education and related work experience.

4.4.2 Decommissioning and Rehabilitation

At the end of the quarry's life, Farrell's Excavating Ltd. will decommission and rehabilitate the quarry area. We will ensure that the area will be sloped and graded in an acceptable manner, ensuring there are no areas for water to build up. We will utilize the stockpiled and bermed grubbed organic material from the quarry to cover all exposed areas. Once the area is covered in organic material/topsoil, the entire area will be covered in hydroseed to help with the regrowth of vegetation. It is anticipated that this will take approximately 1-2 weeks to fully decommission and rehabilitate the area. Once the excavated quarry area is rehabilitated, a natural berm on the access road will be made from some of the organic material used to cover the quarry to prevent access to the area. Once rehabilitation is complete, Farrell's Excavating Ltd. will conduct a follow-up assessment of the rehabilitated land to ensure no environmental problems arise. Examples of potential problems could include water build-ups or pooling, material slides, lack of vegetation growth, etc. The purpose of the follow-ups is to ensure the rehabilitation process is effective. Farrell's Excavating Ltd. does not anticipate having to import materials to complete the rehabilitation of the quarry, as the materials first excavated in the quarry construction process will be used for the rehabilitation.

4.5 Potential Sources of Pollution

During the construction and operation of the quarry, various types of construction equipment will be utilized. This includes harvesting equipment, excavators, tandem tandem dump trucks, and bulldozers. These pieces of equipment emit potential noise and air pollution.

4.5.1 Noise Pollution

The development, extraction and processing of raw materials will require the use of heavy equipment and diesel-powered equipment. This should have a noise level very comparable to the existing quarries already surrounding the area. All equipment will be kept in good working order to prevent excessive noise, and all workers will have proper hearing protection while in the area.

4.5.2 Air Pollution

During normal quarry operations, there is generally dust created, which will be mitigated by filter screens on all crushing equipment. Access roads to the quarry will be monitored closely and will be watered frequently to keep dust from the equipment to a minimum. All equipment used in the quarry will have functioning emission control systems to reduce hydrocarbon air pollution.

4.5.3 Fuel

Diesel fuel will be mainly used to operate the equipment to develop the site and process the raw material. The fuel will be supplied by a petroleum company and will be delivered daily, or as needed, with only trained personnel doing the refuelling. All heavy equipment on site will be in good working order with regular inspections to prevent spills and leaks. All fuel spills will be immediately reported to the Provincial Environmental Emergency Telephone Line and cleaned up.

4.5.4 Visibility

The proposed location is approximately 660m from Route 290. The elevation on this route is approximately 20m. As seen in Figure 3, the area lies behind a significant tree line. Even the quarry that is closer to Route 490 cannot be seen from the roadway. The area lies approximately 425m from the TCH. See Figure 4, which shows the view from Barachois Brook Bridge on the TCH. A tree line creates a barrier between the highway and the proposed area.

Figure 3: View of the Proposed Site from Route 490 Ground Level.

Figure 4: View of the Quarry from Barachois Brook Bridge Along the TCH

From the figures above, we can see that this quarry will pose very little visual pollution to the surrounding area. The majority of the views are just of slivers of the quarry boundary, which indicates

that this site will be barely visible to the public. Again, there are other quarries in the area as well, which also cannot be seen in the above Figures.

4.5.5 Runoff

While the quarry is in operation, there is a potential for runoff. This will be mitigated by the usage of check dams' ditches, and silt fences to reduce the number of fine particles eroding and polluting nearby water sources. These will be in place in areas where excessive runoff is flowing based on features like topography and soil type. Along with areas suggested by the Department of Environment and Climate Change. Where applicable, ditch runoff will be directed into vegetated areas for natural percolation and filtration. This will be a main concern during the clearing process, as the natural material will be disturbed, causing changes in the percolation and flow of runoff. If a large footprint is developed, FEL will create a settling pond somewhere in the quarry to help suspend the sediments before releasing the water over the vegetation for natural percolation to occur.

4.5.6 Garbage Disposal

All forms of domestic and commercial waste will be compiled into appropriate storage bins to be collected and disposed of at an appropriate waste management location.

5.0 Potential Resource Conflicts

Potential resource conflicts during the operation of the quarry could include wildlife and residential woodcutting. These can be mitigated by proper signage and notification to the public prior to commencing work. Although wildlife encounters in the area are expected to be slim, FEL will follow the regulations in the Wildlife Act. Furthermore, any and all encounters with migratory birds will follow the Migratory Bird Conservation Act. This will ensure that all measures are taken to avoid accidental disturbances of the migratory birds and their breeding grounds.

Pedestrian conflict is not expected to cause any significant disturbances as there currently are no areas which are accessible to the public for hiking and ATV riding through the proposed location. This area has

been used as an industrial area for the last number of years, and there are no trail networks/paths that are going to be impacted by this development.

Domestic cutting can proceed in the area without issue, and access around the development area can still occur without conflict between parties.

The size of the development area being cleared will not cause any issues for the remaining forestry region; there is plenty of forest for woodcutters to have access to. FEL will also have signage installed informing people about private property and that quarry operations are occurring in that area.

6.0 Regulations and Approvals

This quarry development will be in coherence with the Department of Industry, Energy and Technology rules and regulations and the Environmental Protection Act 2002. Farrell's Excavating Ltd. will also follow all regulations set out by the Quarry Materials Act and obtain the proper land use permit. A commercial cutting permit, an operating permit and an access permit will all be acquired from their respective departments before development begins.

Approval Required	Issuing Authority
Quarry Permit	Mineral Lands Division, Department of Industry, Energy and Technology
Operating Permit, Development Permit	Department of Fisheries, Forestry and Agriculture
Commercial Cutting Permit	Department of Fisheries, Forestry and Agriculture
Municipal Approval	Stephenville Crossing Municipality
Access Approval	Department of Transportation and Infrastructure

7.0 Schedule

This project will commence as soon as approval for the Quarry Permit and all other permits are received, with an expected timeframe for full operation in the Fall of 2025. This quarry will be in operation annually, creating suitable aggregate until it is depleted of all usable resources.

Submission of Application – June 2025

Approval of Quarry – August 2025

Construction Begins – September 2025

Quarry becomes Operational – Fall 2025

Dates are tentative and depend on conditional approvals.

8.0 Conclusion

Farrell's Excavating Ltd. strives to minimize the environmental impact that the quarry will have on the area while yielding the most usable product and ensuring the sustainability of the quarry area. All risk of contamination and pollution will be monitored closely. In case of spillage, emergency kits will be administered immediately to prevent any further damage from occurring. Any concerns or recommendations from department members will be taken into account as well. This project will be fully funded by Farrell's Excavating Ltd.

APPENDIX A – Site Location Detail

Figure 5: Site Location for New Quarry and Access Road

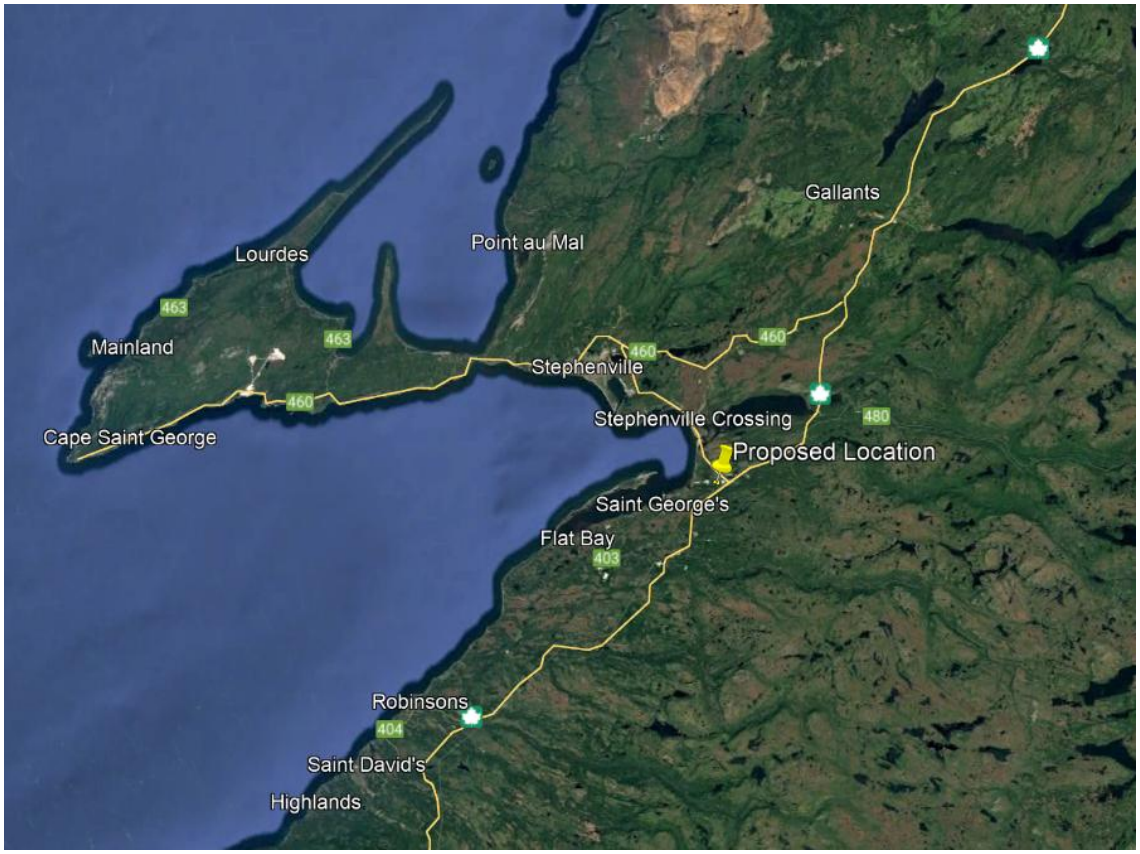

Figure 6: Proposed Location Overview

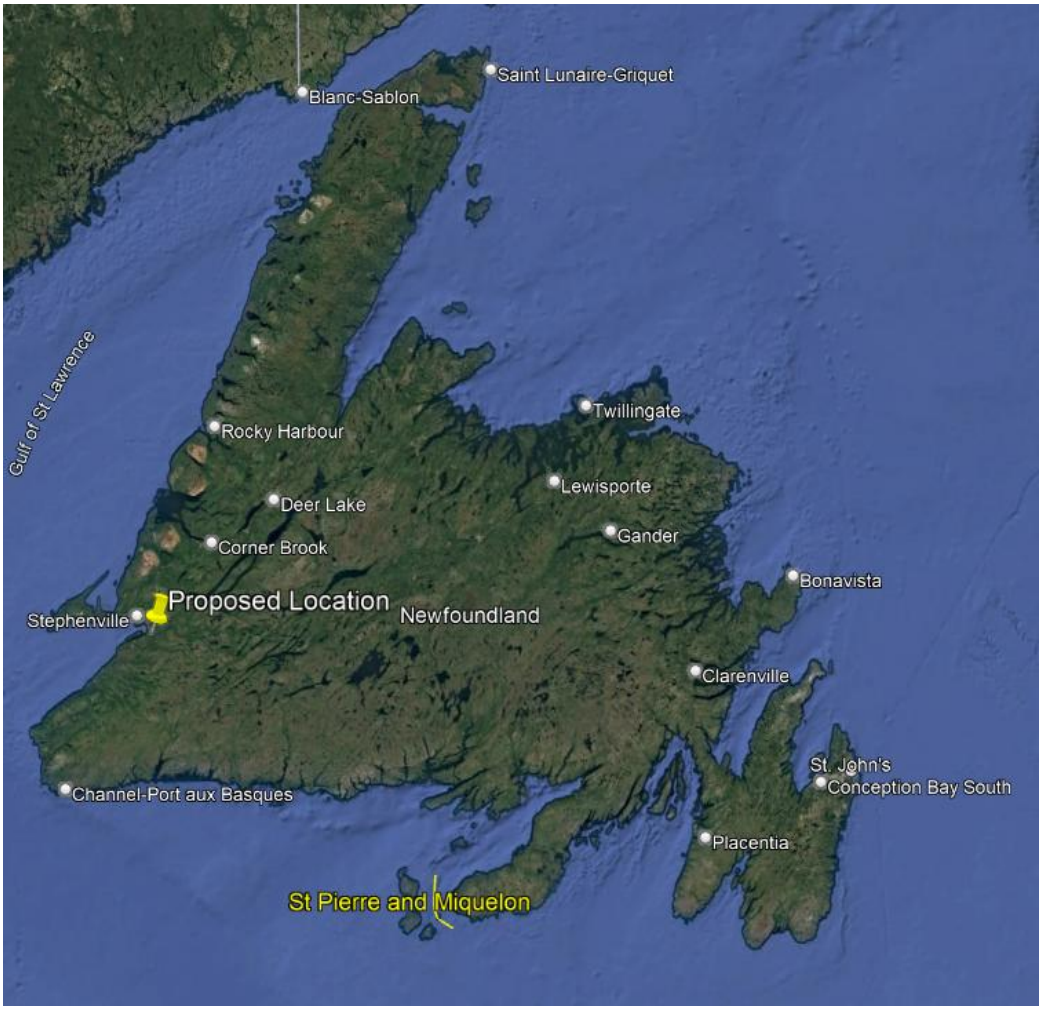

Figure 5: Site Location on Map of Newfoundland