

# **Harbour Improvements**

**St. Lunaire, NL**

## **Environmental Registration Document**

**Submitted to the Government of Newfoundland and Labrador**

**Department of Environment and Conservation**

**Environmental Assessment Division**

**Prepared For:** Fisheries and Oceans Canada  
Small Craft Harbours Branch - Western Area

**Prepared By:** Public Works and Government Services Canada

**Date:** January 19, 2009

**Project No.:** R.032146.001

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**1.0 NAME OF UNDERTAKING:**

Harbour Improvements, St. Lunaire, NL (P/N R.032146.001)

**2.0 PROPONENT:**

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**3.0 THE UNDERTAKING:**

**3.1 Nature of the Undertaking:**

The proposed undertaking represents an enhancement of the existing DFO SCH facilities in St. Lunaire, Newfoundland and Labrador. It involves extending the existing marginal wharf and existing breakwater wharf to accommodate demand for additional berthing, dredging the approach to the existing facility to ensure adequate draft and berthage for vessels utilizing the site, and infilling a tidal and sub-tidal area immediately behind the proposed marginal wharf extension and southeast of the proposed project site.

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

The existing harbour is congested and poses a potential safety risk for both larger and smaller vessels. The proposed improvements will increase protected

berthage, reduce congestion at the existing facility, and allow for safer harbour operations. The proposed project complies with DFO SCH's mandate to keep harbours critical to the fishing industry open and in good repair.

#### **4.0 DESCRIPTION OF THE UNDERTAKING:**

##### **4.1 Geographical Location:**

The proposed project site is located along the eastern shoreline of Garden Cove, on the northeastern tip of the Northern Peninsula, Newfoundland. Project coordinates are approximately 51° 29' 58" N, 55° 28' 21" W. Access to the site is provided by municipal roads through the community of St. Lunaire, which may be assessed via provincial route 436.

##### **4.2 Physical Features:**

The proposed project may be considered in four (4) components:

Component 1 involves dredging the approach to the existing facility to ensure adequate draft and berthage for vessels utilizing the site (refer to attached site plan and photographs). The required dredging will be to a depth of approximately - 4.5 m LNT. In total, approximately 7100 m<sup>3</sup> of primarily Class 'A' (bedrock and boulder) material will be dredged from the entire site. To reach the target dredge area, drilling and/or blasting from a barge will likely be required. Overburden Class 'B' (sand, gravel, cobble) material may also be removed during dredging operations. Subject to regulatory approval, suitable dredge material will be reused on site; unsuitable material will be trucked to an approved waste disposal site.

Component 2 involves the extension of an existing marginal wharf to accommodate demand for additional berthing. The proposed extension will measure approximately 6.1 m wide by 36.6 m long and will be constructed of treated timber step-cribbing. The structure will be seated on the hard bottom. If suitable, dredged Class 'A' (bedrock and boulder) material from component 1 may be utilized as ballast for the new cribwork. If the material is deemed unsuitable, ballast material will be obtained from a provincially approved quarry and trucked to the site for placement. Infilling on the shoreward side of the new structure will be required to provide a level, upland approach.

Component 3 involves the extension of an existing breakwater wharf to accommodate demand for additional berthing. The proposed extension will measure approximately 7.6 m wide by 42.6 m long and will be constructed of treated timber cribwork. The structure will be seated on a rock mattress. If suitable, dredged Class 'A' material from component 1 may be utilized as ballast for the new cribwork and as part of the rock mattress. If the material is deemed unsuitable, ballast and rock mattress material will be obtained from a provincially approved quarry and trucked to the site for placement.

Component 4 involves the placement of Class 'A' dredge material from component 1 of the project along the shoreline southeast of the proposed project site (refer to attached site plan and photographs). Subject to regulatory approval,

the material will be placed in the tidal and sub-tidal zone and will extend an existing infilled area that was created as part of wharf extension and dredging project completed in 2002. There is existing scour protection protecting the existing rock fill. This scour protection will be removed and reinstalled once the currently proposed infilling is completed to further prevent any scour. The material will be placed by an excavator working in the dry with some assistance from dump trucks, if required. Note that the 2002 project was assessed under the Federal Canadian Environmental Assessment Act; no negative impacts were predicted or reported as a result of that process.

#### *Physical and Biological Environment*

The project site is a developed area consisting of an 'L' shaped breakwater wharf, boat launch, service area and related buildings. The shoreline is characterized by exposed bedrock with intermittent areas of pebble-cobble material. The immediate upland is gently sloped and sparsely vegetated with grass, although tree vegetation is present further inland.

According to Fisheries and Oceans' Traditional Ecological Maps of the area, Atlantic Cod, seals, whales, and Arctic Char may be found within or very near the project area. Rare and endangered species of calciphillic plants are numerous through the rock barrens of the general upland area. However, none are known to exist near the immediate project site. The project site also falls within the Strait of Belle Isle ecoregion. This ecoregion lies along the Atlantic migratory flyway, and provides winter range for caribou as well as habitat for arctic hare, rock ptarmigan, Atlantic puffin, and geese. However, the immediate area around the project site and nearby areas is not likely to provide critical or limiting habitat for any of these species.

There are no scheduled salmon rivers within 200 m of the project site. The project site is within the distribution range of the Blue Whale (Atlantic population), North Atlantic Right Whale, and Red Crossbill (*perca* subspecies); placed on Schedule 1 of the Species at Risk Act by the Committee on the Status of Endangered Wildlife in Canada (COSEWIC). It is not expected that the project site provides critical or limiting habitat for any of the abovenoted species at risk.

According the provincial Department of Fisheries and Aquaculture, there are two (2) aquaculture sites within approximately 3 km of the proposed project site and a third site approximately 10 km to the north (refer to Appendix D).

#### **4.3** Construction:

Commencement of this project is subject to DFO SCH operational priorities and funding.

Construction of these harbour improvements is expected to require 3.5 - 4 months to complete. Commencement of the proposed project is tentatively scheduled for the 2010/2011 fiscal year.

The most probable sources of potential pollutants are related to the use of heavy equipment. Accidental spills of cement, heavy equipment fuel, engine oil, and

hydraulic fluids are a possibility. Short-term sedimentation as a result of dredging and the placement of rock material into the marine environment can also be anticipated. Dredging of benthic material may also result in the release of toxic elements into the overlying water column.

An active seasonal fishery is executed from the project area. The duration of the construction phase of the proposed project is likely to extend into the fishing season. As a result, minor disruptions to the harbour and nearby fish plant operations can be anticipated.

#### 4.4 Operation:

Routine maintenance and repair projects including repairs or replacement of deteriorated fenders, wales, wheel guard, chocks, and ladders will be carried out on an as-required basis over the estimated thirty (30) year life of the structure.

The proposed undertaking represents an enhancement of the existing DFO SCH facilities in St. Lunaire, Newfoundland and Labrador. The proposed improvements will increase protected berthage, reduce congestion at the existing facilities, and allow for safer harbour operations.

Reasonably foreseeable pollutants occurring during the operational phase of the proposed project are limited to accidental discharges of vessel fuels, engine oils, and fishing industry related refuse.

The operation and maintenance of the facility will be under the control of the Harbour Authority of St. Lunaire - Griquet with the support of Fisheries and Oceans Canada, Small Craft Harbours Branch. Potential resource conflicts are not anticipated as a result of the operation of the proposed project.

#### 4.5 Occupations:

Construction of the harbour improvements are expected to require 3.5 – 4 months to complete. Commencement of the proposed project is tentatively scheduled for the 2010/2011 fiscal year.

The following list outlines occupations which may be employed during the design and construction period. Please note that this list represents only an approximation of the number and type of occupations that may be produced as a result of the proposed project. Actual occupations created as a result of the proposed project will ultimately be determined by the successful contractor. Occupations are expected to be comparable to those created for similar construction projects throughout the Province.

- 2 – Professional Engineers - 0211 - entire project
- 2 – Engineering Techs - 2231 - entire project
- 1 – Surveyors - (1)-2113 and (1)-2154 - construction only
- 1 – Rod and Chainmen - 7612 - construction only
- 1 – Construction Inspector - 2264 - construction only
- 1 – Draftsperson - 2253 - 2 months work
- 1 – Secretary - 1241 - entire project

- 6 – Laborers - 7217 - construction only
- 2 – Heavy Equipment Operators - 7217 - construction only
- 5 – Truck Drivers - 7217 - construction only
- 1 – Flag Person - 7611 - construction only
- 2 – Office Clerk - 1211 - 1 for construction and 1 for engineering
- 1 – Construction Foremen/Superintendents - 7217 - construction only

**4.6 Project-Related Documents:**

- 1. Benthic Environment Survey – St. Lunaire  
Author: Baileys Marine Services – December 2009

**5.0 APPROVAL OF THE UNDERTAKING:**

The following is a list of the likely permits, licences and approvals required for this project.

| <b>Approvals/Certificate/Permits</b>     | <b>Regulatory Authority</b>  |
|--|--|
| NL Environmental Assessment Registration | NL Department of Environment and Conservation, Environmental Assessment Division |
| Fish Habitat Approval                    | Fisheries and Oceans Canada, Fish Habitat Protection Division                    |
| Application to Alter a Body of Water     | NL Department of Environment and Conservation, Water Resources Division          |
| Navigable Waters Protection Approval     | Transport Canada   |
| Quarry Permit                            | NL Department of Mines and Energy  |
| Lease / Permit to Occupy Crown Lands     | NL Department of Government Services   |

**6.0 SCHEDULE:**

The proposed project could commence at the earliest, April 1, 2010. This timeline would allow for completion of a federal environmental assessment prior to initiating a call for tender. Depending on the responses provided by the abovenoted regulators, commencement of the project could be delayed by up to 6 months to a year.

**7.0 FUNDING:**

The total cost estimate for all phases of the proposed project, as provided by the proponent, is approximately \$2.35 million. Funds will be provided by Small Craft Harbours Branch, Fisheries and Oceans Canada.

January 19, 2010  
Date

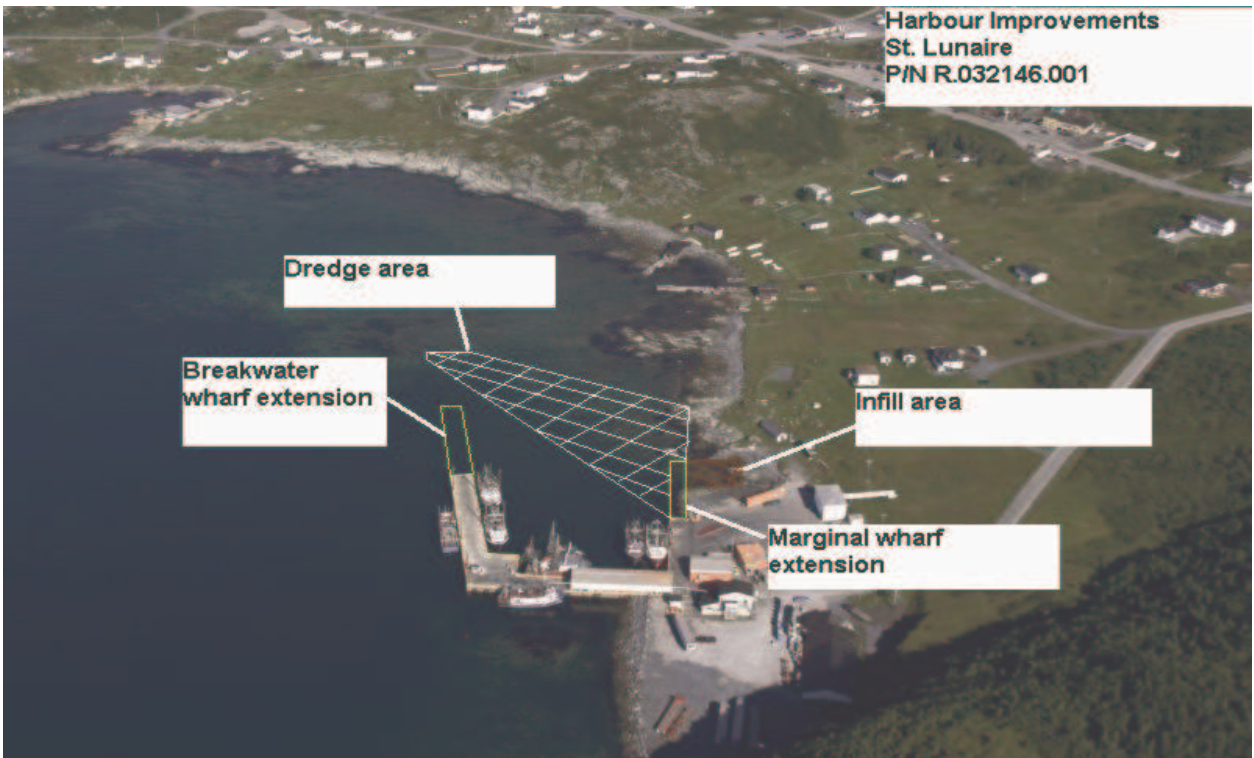
  
Environmental Assessment Representative

**APPENDIX A**  
**PHOTOS**

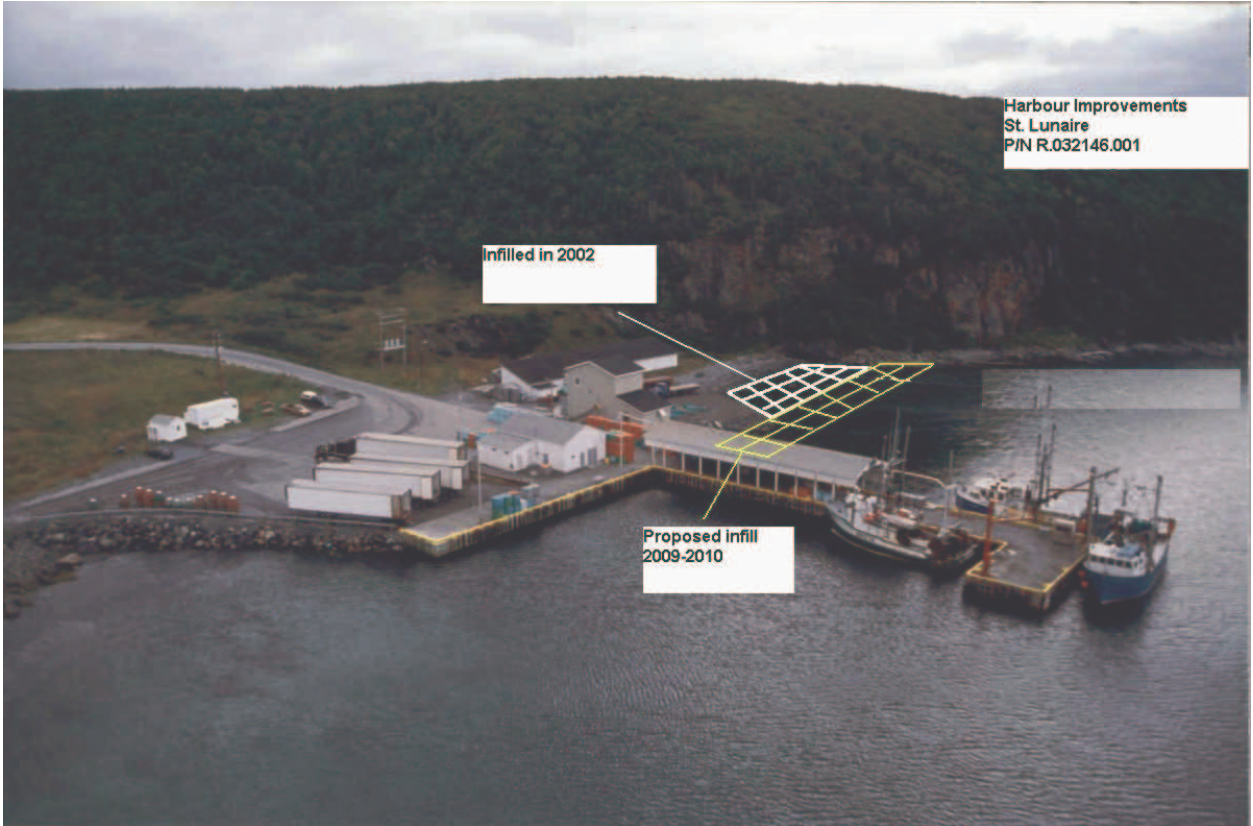




Appendix A-1. Location of proposed project



Appendix A-2. Approximate locations of proposed improvements including marginal wharf extension (including infill area), breakwater wharf extension, and dredge limits. Illustration is not to scale.



Appendix A-3. Approximate location of component 4 infill (dredge material disposal area). Note that the above photo was taken in 2000 and does not reflect changes to the site incurred during the 2002 construction season. Appendices A-1 and A-2 reflect the site as is currently exists.

**APPENDIX B**

**SITE PLAN**

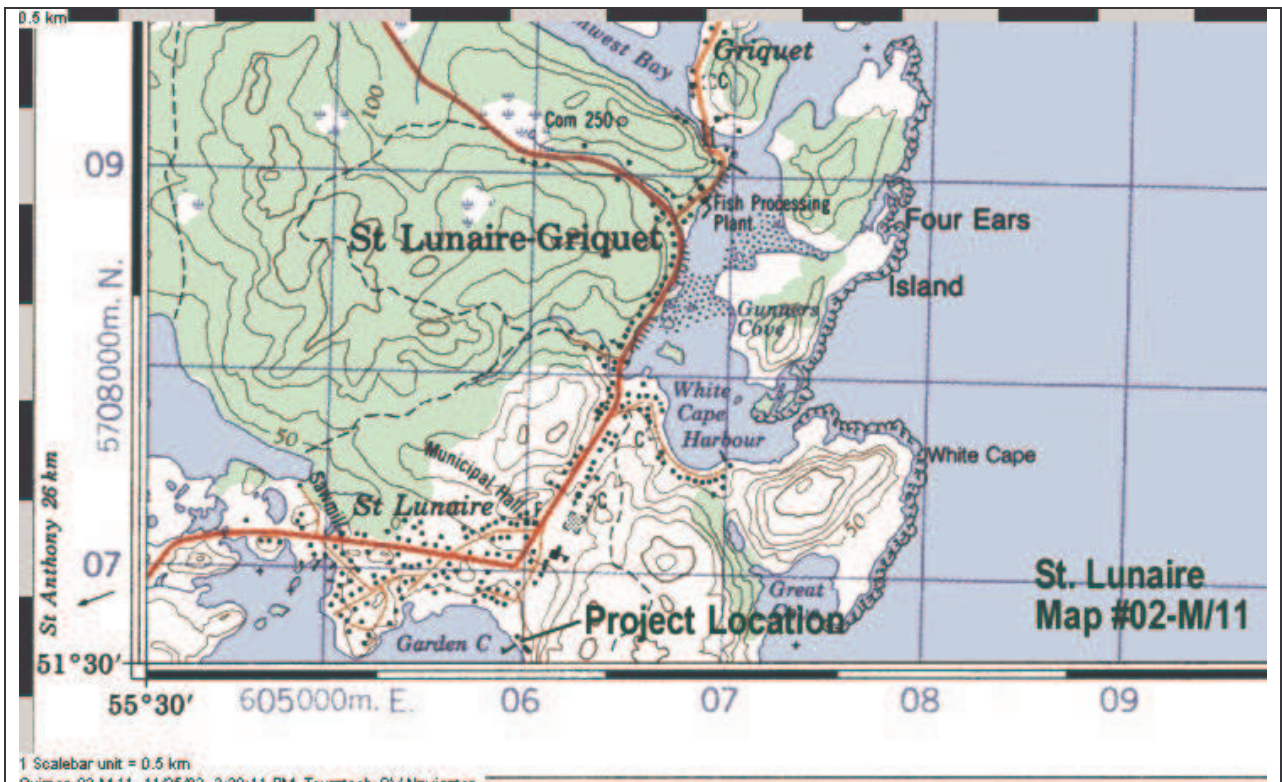




**APPENDIX C**

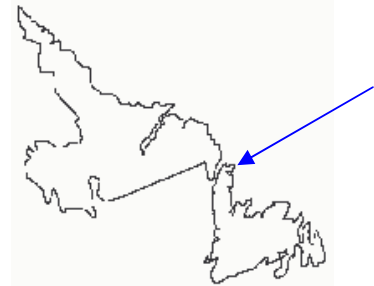
**TOPO MAP**



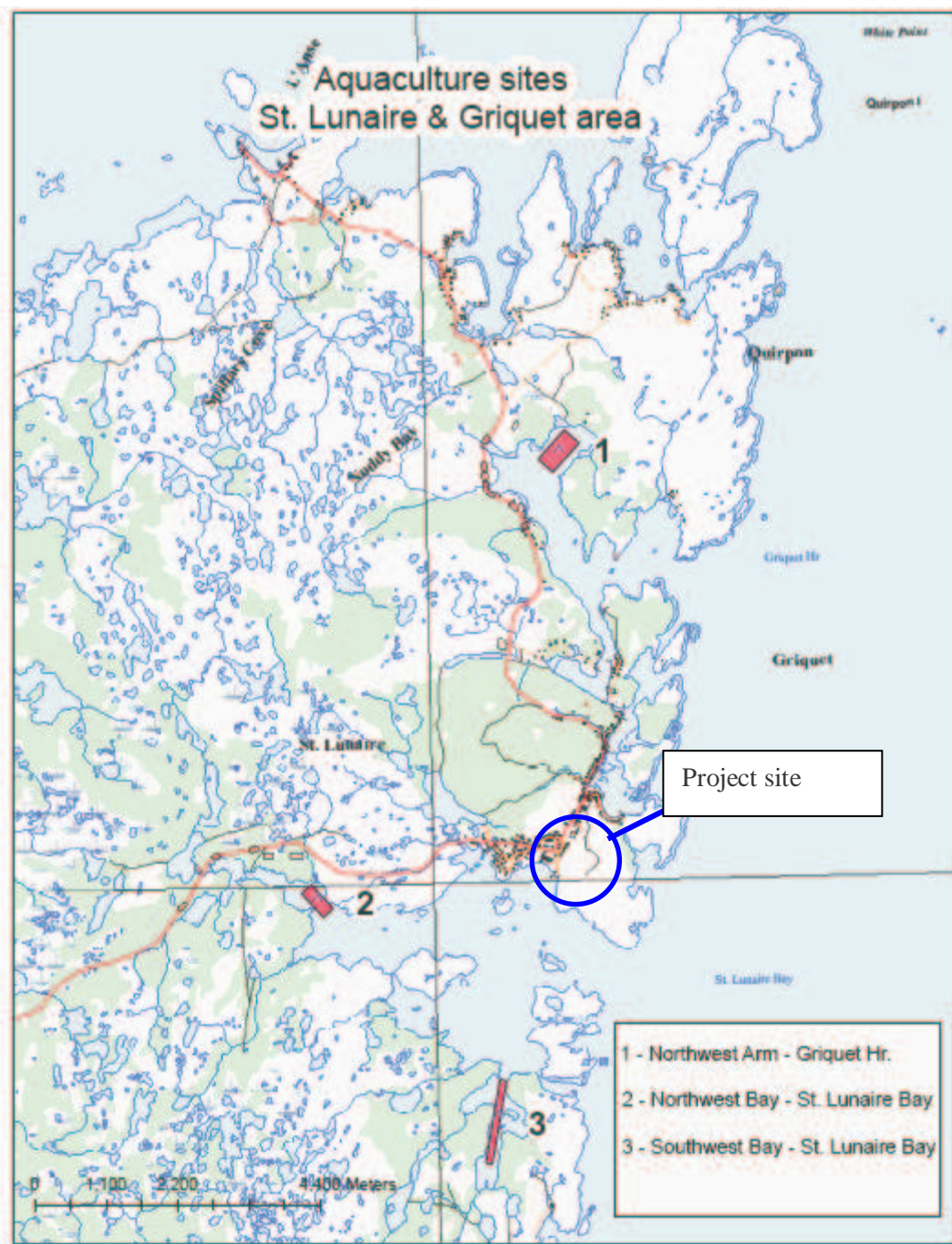


1 Scalebar unit = 0.5 km  
 Quirpon 02-M-11, 11/25/02, 2:38:11 PM, Teuratech-D\A\Navigator

Appendix C-1: Topographic Map of Proposed Site  
 Location: St. Lunaire  
 Scale 1:50,000  
 NTS Mapsheet 02-M-11 - Quirpon



**APPENDIX D**  
**AQUACULTURE SITES**



Appendix D-1. Mussel aquaculture sites relative to project location