

St. Bernard's Breakwater Construction

Environmental Registration Document

Prepared For: Department of Fisheries and Oceans
Small Craft Harbours Branch

Prepared By: Public Works & Government Services Canada
Environmental Services

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TABLE OF CONTENTS

1.0	NAME OF UNDERTAKING	1
2.0	PROPONENT	1
3.0	THE UNDERTAKING	1
4.0	DESCRIPTION OF THE UNDERTAKING	1
4.1	Geographical Location	2
4.2	Physical Features	2
4.3	Construction	2
4.4	Operation	2
4.5	Potential Resource Conflict	3
4.5.1	Navigation	3
4.5.2	Benthic Habitat	3
4.5.3	Marine Water Quality	3
4.5.4	Health & Safety	4
4.5.5	Air Quality	4
4.5.6	Aesthetics	5
4.6	Occupation	5
4.7	Project-Related Documents	5
5.0	APPROVAL OF THE UNDERTAKING	6
6.0	SCHEDULE	6
7.0	FUNDING	6

LIST OF APPENDICES

Appendix A	Site Plan
Appendix B	Topo Map

1.0 NAME OF UNDERTAKING:

St. Bernard's Breakwater Construction

2.0 PROPONENT:

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3.0 THE UNDERTAKING:

The proposed development will provide additional protection for the fishing fleet in St. Bernard's, Newfoundland. The proposed breakwater construction will reduce agitation in the harbour, thereby significantly increasing the protection to vessels utilizing the harbour, particularly during high wind and storm events. The breakwater protection will also enable berthing on both sides of the existing wharf.

4.0 DESCRIPTION OF THE UNDERTAKING:

4.1 Geographical Location:

The proposed project site is located in the community of St. Bernard's on the southern coast of Fox Cove, Fortune Bay, approximately forty-three kilometers in a straight line north-east of the Town of Marystown.

St. Bernard's is a rural fishing community located on the west coast of the Burin Peninsula in the waters of Fox Cove, Fortune Bay. According to the Department of Fisheries and Oceans 2002 statistics, this harbour serves thirty-two enterprises operating from forty-nine homeport vessels, as well as an additional nineteen transient vessels, which land at this site. Much of the current activity in St. Bernard's centers on the cod, lobster and crab fisheries, with home and transient vessels landing approximately 497, 494 kilograms of product.

4.2 Physical Features:

The rubblemound breakwater structure will measure approximately 115 m long, out into the waters of Fox Cove in a hockey stick formation, varying 20 m to 50 m in width along the ocean floor, with a crest width of 6 m. The breakwater will be constructed to an elevation of 5.5 m high and will be composed of a variety of materials such as core stone, filter stone and armour stone.

4.3 Construction:

The project will begin with the placement of core stone over the indented footprint, which will then be covered with filter stone. Layers of armour stone will then be placed on top of the filter stone layer. The armour stone will range in size from 2 – 4 tonne on the inside section of the breakwater to 4-6 tonne on the outside section.

The breakwater materials will be obtained from an approved licensed quarry and trucked to the project site where excavators will place the materials. The quarry source and specifications are not available at this time as that will be determined after award of the contract, before construction.

4.4 Operation:

The development of this facility will provide protection to the fishing fleet in St. Bernard's reducing agitation at the site, as well as increasing protection and berthage. The project is necessary to continue service, safety and access for the fishing fleet utilizing the harbour.

The operation and maintenance of the facility will be under the control of the Harbour Authority with the support of Small Craft Harbours.

4.5 Potential Resource Conflict:

Listed below are project related activities that have potential to cause environmental issues, and the actions required to mitigate these effects.

4.5.1 Navigation:

Environmental Concern

Breakwater construction has the potential to block/reduce vessel navigation in the harbour.

Mitigation

Transport Canada has been consulted regarding the application of the Navigable Waters Protection Act and the Harbour Authority will coordinate all vessel activities within the harbour for the duration of the project. All conditions and stipulations provided by Transport Canada must be implemented and complied with by the proponent.

4.5.2 Benthic Habitat:

Environmental Concern

The breakwater structure will displace approximately 4,100 m² of bottom substrate material and result in the destruction of fish habitat.

Mitigation

Mitigations, including the construction of the armour stone breakwater, will create additional lobster habitat in the interspatial areas. The proponent is required to obtain the approval of the DFO Area Habitat Biologist prior to undertaking the project. The mitigations stipulated in the DFO Letter of Advice are designed to protect fish and fish habitat and should be adhered to. No significant aquatic vegetation or fish habitat is known to exist within the affected areas.

4.5.3 Marine Water Quality:

Environmental Concern

Placement of the breakwater materials has the potential to conflict with the marine habitat by introducing suspended sediments into the water column.

There is also potential for accidental spills of hydrocarbon products from heavy equipment machinery.

Mitigation

This sedimentation will be short-term and should quickly dissipate due to wave and tidal action.

Machinery must be checked for leakage of lubricants or fuel and must be in good working order. Refuelling must be done at least 30m from any water body. Basic petroleum spill clean-up equipment should be on-site. All spills or leaks should be promptly contained, cleaned up and reported to the 24-hour environmental emergencies report system (1-800-563-2444).

4.5.4 Health & Safety:

Environmental Concern

Project activities may be a risk to the public.

Mitigation

Access to work areas is to be controlled and restricted to construction personnel. Equipment will utilize existing roads to gain access to the site. Some minor impacts due to speed, noise, spillage or traffic congestion can be anticipated. Reduced speed limits and appropriate signage will be put in place, if warranted. Local municipal construction bylaws will be adhered to. With appropriate mitigations in place, minimal adverse environmental effects, as a result of construction traffic, are predicted.

4.5.5 Air Quality:

Environmental Concern

Construction activities could result in nuisance impacts due to noise and dust.

Mitigation

All construction equipment must be fitted with standard and well-maintained noise suppression devices. Construction activities must respect appropriate time restriction and use smaller, less disruptive equipment where possible. Appropriate dust suppression methods are to be employed when required.

4.5.6 Aesthetics:

Environmental Concern

There is potential for local aesthetics to be affected by the proposed project.

Mitigation

The breakwater will remain low enough as to not permanently hinder the view provided from the shoreline. The contractor is required to return the site to its original condition prior to the conclusion of the project.

4.6 Occupation:

The following list outlines occupations, which will be employed during the design and construction period.

- 4 – Professional Engineers
- 2 – Engineering Technicians
- 2 – Surveyors
- 1 – Rod and Chainmen
- 1 – Construction Inspector
- 1 – Draftsperson
- 1 – Secretaries
- 2 – Labourers
- 5 – Heavy Equipment Operators
- 15 – Truck Drivers
- 2 – Flag People
- 4 – Drillers/Blasters
- 1 – Office Clerks
- 1 – Construction Foremen/Superintendents

4.7 Project-Related Documents:

To date, there are no project related documents available.

5.0 APPROVAL OF THE UNDERTAKING:

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

<u>Approvals/Certificate/Permits</u>	<u>Authority</u>
Environmental Registration	Department of Environment & Labour Environmental Assessment Division
Letter of Advice	Fisheries and Oceans Canada
Application for Environmental Approval to Alter a Body of Water	Department of Environment & Labour Water Resources Division
Construction of a Breakwater Structure	Transport Canada
Waste Disposal Approval	Department of Government Services and Lands - Government Services Centre
Quarry Permit	Department of Mines and Energy

6.0 SCHEDULE:

This project is expected to go to tender early in August 2004. Construction is scheduled to begin by mid August and is expected to continue as client resources permit, possibly until later March 2005.

7.0 FUNDING:

The Department of Fisheries and Oceans, Small Craft Harbours Branch will be providing the funding for this project. Approximate capital costs for the undertaking will be in the order of \$750,000.

Date

Signature of SCH Regional Engineer