

# **Seldom Breakwater Construction**

## **Environmental Registration**

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

**Prepared By:** Public Works & Government Services Canada  
Environmental Services

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**1.0 NAME OF UNDERTAKING:**

Seldom Breakwater Construction

**2.0 PROPONENT:**

- (i) Department of Fisheries and Oceans  
Small Craft Harbours Branch – Central and Labrador Area
  
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- (iii) Mr. Wayne Bungay  
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**3.0 THE UNDERTAKING:**

Seldom is a rural fishing community located on the south coast of Fogo Island. According to the Department of Fisheries and Oceans 2001 statistics, this harbour serves seventy-one enterprises operating from fifty-five homeport vessels, as well as an additional sixty-one transient vessels, which landed at this site. Much of the current activity centers on crab landings and processing at the fish plant.

The proposed development will provide additional protection in order to continue service, safety and access for the fishing fleet utilizing this site in Seldom Harbour. The project will involve the construction of a rubblemound breakwater structure indented to reduce agitation in the harbour, thereby significantly

increasing protection to the vessels utilizing the harbour, particularly during high wind and storm events. The new breakwater will provide much needed protection to the marine infrastructure, especially the fish plant facilities.

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

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

The proposed project site is located on the west side of Seldom Harbour approximately eighty-five kilometers in a straight line north-east of the Town of Gander. Seldom Harbour is approximately 0.75 km wide by 0.5 km long and opening south into Seldom Cove.

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

The rubblemound breakwater structure will measure approximately 135 m long, out into Seldom Harbour in a hockey stick formation, and 40 m wide along the ocean floor with a crest width of 5 m. The breakwater will be constructed to an elevation of 5 m high, composed of a variety of materials such as core stone, filter stone and armour stone.

##### **4.3 Construction:**

Project design is underway and should enable tendering to proceed before March 31, 2003. Construction of the facility will commence early in May 2004 and should conclude by late October 2004.

The project will begin with the placement of 0.1 – 200 kg core stones over the indented footprint, which will then be covered with 200 – 800 kg filter stones. 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 6 – 8 tonne on the outside section.

##### **4.4 Operation:**

The development of this facility will provide protection to the fishing fleet in Seldom Harbour reducing agitation at the site, thereby significantly increasing the protection to vessels and facilities, particularly during high wind and storm events.

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*

The Canadian Coast Guard 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 CCG must be implemented and complied with by the proponent.

### **4.5.2** Benthic Habitat:

#### *Environmental Concern*

The breakwater structure will displace approximately 5,400 m<sup>2</sup> of bottom substrate material and result in the destruction of fish habitat.

#### *Mitigation*

Mitigations include placing armour stone on the sides of the breakwater, creating 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.

### **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 productions from heavy equipment machinery.

*Mitigation*

A floating silt curtain will be on hand if required for immediate deployment, in the case of a sediment plume, but it is anticipated that this sedimentation will be short-term and should quickly dissipate.

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.

**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 disturbing 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.

**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
Authorization for Works or Undertakings Affecting Fish Habitat	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	Canadian Coast Guard
Waste Disposal Approval	Department of Government Services and Lands - Government Services Centre

**6.0 SCHEDULE:**

This project is expected to go to tender before March 31, 2003. Construction is scheduled to begin in May of 2004, and is expected to continue until late October 2004.

**7.0 FUNDING:**

The Department of Fisheries and Oceans, Small Craft Harbours Branch will be providing the funding for this project. Capital costs of the undertaking will be in the order of \$1,000,000.

\_\_\_\_\_  
Date

\_\_\_\_\_  
Signature of Area Chief