



ENVIRONMENTAL ASSESSMENT REGISTRATION

For Joint Registration Under:

- **The Environmental Protection Act SNL 2002, for Newfoundland & Labrador, and**
- **The Canadian Environmental Assessment Act, for Canada**

Name of the Undertaking:

Long Island Causeway

PROPONENT:

(i) Name of Proponent:

Department of Works, Services, and Transportation, Government of Newfoundland and Labrador.

(ii) Address:

P.O. Box 8700, St. John's, NL, A1B4J6.

(iii) Chief Executive Officer:

Mr. Don Osmond, Deputy Minister

(iv) Principal Contact Person for purposes of environmental assessment:

Name: Charlie Horwood
Official Title: Environmental Planner
Address: Policy & Planning Division, (same as above)
Telephone No: 709-7292632, fax 7293418

THE UNDERTAKING:

(i) Nature of the Undertaking:

The undertaking involves the construction of a rock fill causeway and a bridge structure across Long Island Tickle between Long Island and Pilley's Island in Notre Dame Bay, Newfoundland.

(ii) Purpose/ Rationale/Need for the Undertaking:

The purpose is to provide a permanent road link from Pilley's Island to Long Island to the communities of Lushes Bight and Beaumont to replace the present method of vehicular/ pedestrian access between these two islands which is by ferry.

DESCRIPTION OF THE UNDERTAKING:**(i) Geographical Location:**

The causeway would be constructed across Long Island Tickle at the narrowest point between Long Island and Pilley's Island in Notre Dame Bay, Newfoundland. (See attached topographic map.)

(ii) Physical Features:

The causeway would consist of a two lane gravel surface roadway with shouldering and guide rail on a mass rock fill, and protected in the storm surge zone with armour rock. The total length of the causeway would be about 630 meters including the bridge. The channel is relatively deep (up to 73 meters at the deepest point) and therefore requires a considerable amount of rock fill and substantial footprint on the channel bottom. (See attached preliminary engineering drawings and profile of the channel and bridge structure.)

In the north end of the causeway a two lane steel panel bridge structure would be provided with an opening dimension of 6.3 m high (above the high water level) by 25.3 m wide (subject to approval under the Navigable Waters Protection Act) to allow for passage of most vessels. The proposed height of the structure would allow passage of small open fishing boats, and small longliners, but preclude passage of larger vessels including longliners with high rigging, and most sailing vessels. These vessels, which use the Tickle recreationally, or to travel to eastern fishing grounds, or the Marine Services Center at Triton, would have to travel around Long Island.

Though significant seasonal ice conditions are present in Notre Dame Bay, the Tickle crossing remains relatively ice free due to tides and the ferry movement. The general area is subject to very close to compact ice and numerous icebergs occur. The causeway may alter ice occurrence and dynamics in the Tickle with particular regard to formation of new land fast bay ice which may result in longer periods of ice cover.

Normal tidal currents in the channel are estimated at 0.6 knots with a range of 0.5 to 1.0 knots. Wind augmented currents would be much higher which also create "flushing" of the channel. The causeway structure would significantly reduce tidal harmonics in the channel and confine currents to the bridge opening which is < 1% of the original cross section.

The biological environment of the channel hosts typical marine fish species, invertibrates, and marine mammals which commonly occur in the region.

(iii) Construction:

An extensive rock extraction operation would be established on the Pilley's Island side of the Tickle adjacent the causeway as the source for most of the mass rock fill and armour rock. There would also be equipment and materials marshalling yards and field offices established in this general area. There may also be a requirement for quarry rock from the Long Island side of the causeway.

The bridge structure would be constructed toward the northern end of the causeway. The steel panel bridge would be seated on concrete abutments placed above high tide level.

The causeway would be constructed in an area where fishing operations are known to occur. Purse seining is carried out there for capelin, herring, and mackerel.

Potential sources of pollutants include silt and blasting residue from rock extraction operations, and fuel and grease from equipment operations.

A detailed Environmental Protection Plan would be prepared for the project to address specific environmental concerns and would form part of the tender and contract documents for the project.

(iv) Operation:

Once completed, the causeway would require minimal cost to maintain and operate. Seasonal road surface maintenance including winter snow clearing and maintenance gravel in summer would be required. Maintenance on the bridge structure may be required occasionally.

(v) Occupations:

The following worker occupations are anticipated to be required for the project:
Civil Engineers, Structural Engineers, Project Managers, Engineering Technologists, Surveyors
Heavy Equipment Operators and Mechanics, Drillers/ Blasters, Labourers, Truck Drivers.

(vi) Project Related Documents:

In October, 2002 a Request For Proposal (RFP) was prepared by WST entitled Waterway User Study, Long Island Tickle, Notre Dame Bay, Newfoundland, Provision of Professional Services. The RFP was forwarded to engineering consulting firms with expertise in this work. AMEC Earth & Environmental Limited was selected to conduct the study.

In May, 2003, AMEC submitted their report to WST, entitled **Waterway User Study, Long Island Tickle, Notre Dame Bay, Newfoundland**. The report provided information to assist WST in conducting an engineering feasibility study on the construction of a rock fill causeway and bridge structure across Long Island Tickle. The report included information on the following:

- The usage of Long Island Tickle
- The physical environment setting
- Design considerations
- Recommendations on vertical and horizontal clearance requirements for the navigation opening of the bridge structure.

In August, 2003, WST completed Preliminary Engineering Drawings for submission to the Canadian Coast Guard. (Attached)

APPROVAL OF THE UNDERTAKING:

The main permits/ approvals required for the undertaking include the following:

<u>Type of Permit</u>	<u>Agency</u>
1. Navigable Waters Protection Act Authorization	Canada Coast Guard
2. Authorization For Work Affecting Fish Habitat	Fisheries and Oceans Canada
3. Authorization To Alter a Water Body	Dept. of Environment
4. Quarry Materials Permit	Dept. of Mines and Energy
5. Cutting, Clearing, and Burning Permits	Dept. of Natural Resources
6. Work Site Permits (Water Supply, Sewage Disposal)	Government Services Center
7. Solid Waste Disposal	Government Services Center

WST has submitted the Preliminary Engineering Drawings to the Canadian Coast Guard. Information on the proposed project as required under the NWPA is being advertised and posted locally to determine navigation or related concerns.

SCHEDULE:

Scheduling would be dependant upon receipt of necessary regulatory approvals, funding allocation, design, tendering, contract awards, and other factors.

FUNDING:

The project is a capital work of Department of Works, Services, and Transportation, Government of Newfoundland and Labrador. A preliminary cost estimate for the project is \$26,000,000.

Date

DON OSMOND
Deputy Minister