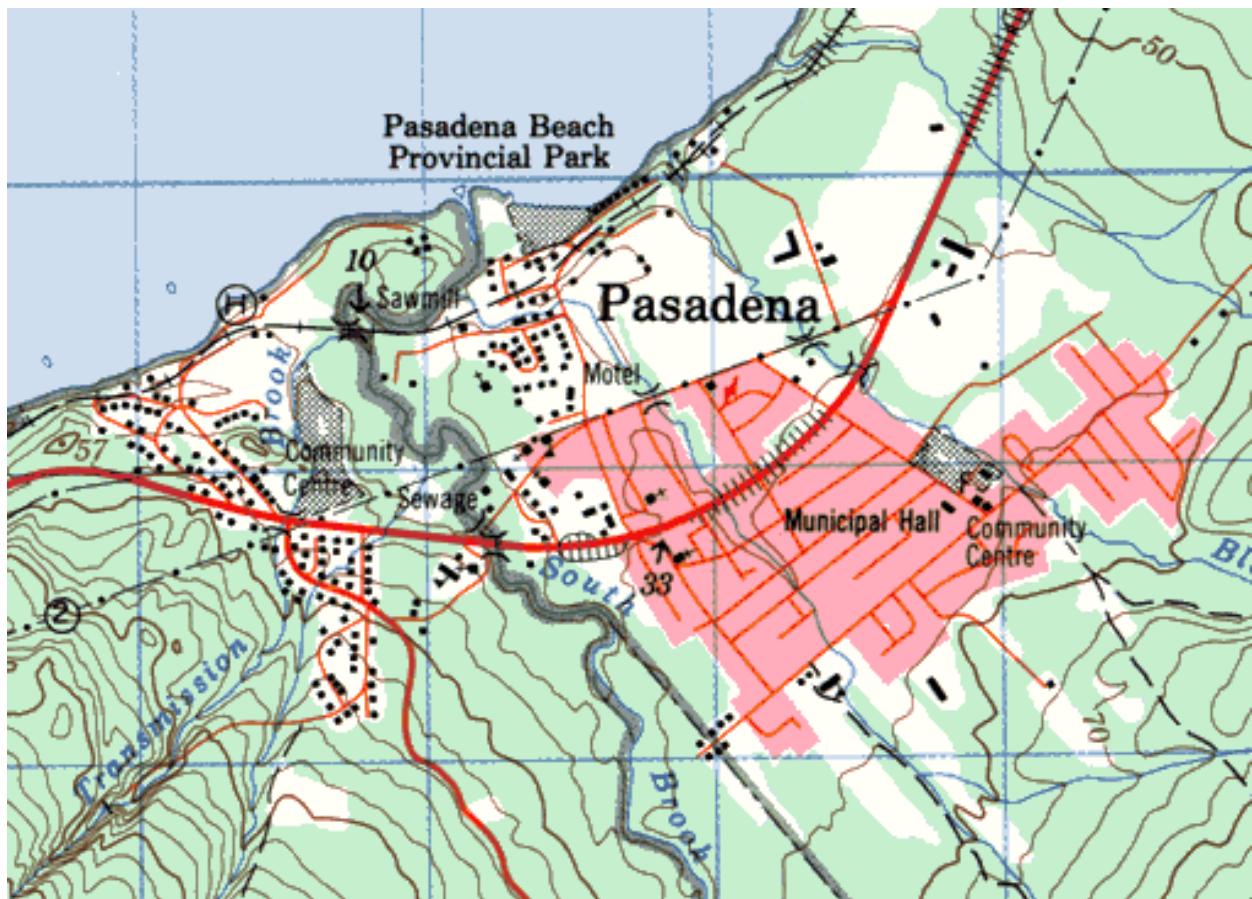


**ENVIRONMENTAL ASSESSMENT ACT
REGISTRATION OF AN UNDERTAKING**
South Brook Stabilization
Pasadena, NL



PREPARED BY: THE TOWN OF PASADENA
DATE: JANUARY 30, 2006

ENVIRONMENTAL ASSESSMENT ACT REGISTRATION OF AN UNDERTAKING

NAME OF UNDERTAKING: South Brook Channel Stabilization

PROPOSER:

(I) Name of Corporate Body: Town of Pasadena

(ii) Address: P O Box 149
Pasadena, NL A0L 1K0

(iii) Chief Executive Officer:

Name: Mr. James Merrigan
Official Title: Town Manager
Address: P O Box 149
Telephone No.: Pasadena, NL A0L 1K0

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

Name: Michael C. Gorman, P. Eng.
Official Title: Vice President, Atlantic Engineering Consultants Ltd
Address: 34 Main Street, Corner Brook, NL A2H 1C3
Telephone No.: 634-3612

THE UNDERTAKING:

(I) Nature of Undertaking:

Construction of armour stone to the western side of South Brook between Church Street and the sewage treatment lagoon.

(ii) Purpose/Rationale/Need for Undertaking:

The section of South Brook between Church Street and the Trans Canada Highway is an old section of Brook with serpentine course. Heavy flooding and ice jams during the past 15 years have caused extensive erosion along this course of brook and poses a significant threat to the Church Street Bridge, Aerial Sanitary Sewer crossing the bridge as well as to the 14M gallon sewage treatment lagoon. The majority of the erosion occurred during the flood of March 31, 2003 and September 27, 2005. Failure of the aerial sewer or lagoon embankments could cause up to 14M gallons of untreated sewage to flow into Deer Lake and subsequently the Humber River and the Bay of Islands. In early January 2006, mitigation work was conducted on the western side of South Brook under the Disaster Financial Assistance Program. The work consisted of placing armour stone along the section where the gabion wall was. It is now proposed to extend the armour stone further upstream (to McLeod's Brook) as well as to increase the height of armour stone by 1.5m together with lowering the east embankment to reduce the flood water depth.

DESCRIPTION OF THE UNDERTAKING:

(I) Geographical Location:

The proposed project is located within the Municipal Boundaries of the Town of Pasadena, more specifically, on South Brook between the Church Street bridge and the Trans Canada Highway (Refer to Map 1) the project is located at 5,429,000N, 455,000E (NAD 27).

(ii) Physical Features:

This project involves placing armour stone (3m high) a distance of 75m upstream of existing armour stone, adding 1.5m in height to existing armour stone and excavating 450mm \pm of the east bank of South Brook for a distance of approximately 120m. The embankment excavation would be approximately 6m wide and would be maintained above normal water level.

Ice rafting, causing blockage of the Brook has historically occurred primarily as a result of the low hydraulic grade and meandering nature of the brook. Ice damage immediately below the Church Street bridge has caused the Brook to backup above the bottom of the Church Street bridge, threatening both the aerial sewer and the bridge itself. Severe erosion at the gabion walls protecting the sewage treatment lagoon occurred on March 31, 2003 when the ice dam was dislodged and a wall of water rushed downstream, as well as September 27, 2005.

Generally the flood plain is covered with clumps of alders while the ground consists of sandy soil with cobbles and boulders which has facilitated the brook changing its

course during heavy runoff and following breakup of ice dams. During these conditions, heavy erosion occurred on the outside bends of the brook adjacent to the gabion retaining wall at the east side of the sewage treatment lagoon causing the gabion to partially fall into the brook. Flash flooding occurs when the ice dam is broken up.

In order to reduce the Brook level during flood conditions, it is proposed to remove the vegetation on the east bank of the Brook as well as to excavate a 6m wide x 450mm deep section along the area outlined on Map 2 and as indicated on SK-1 to SK-4. Removal of the vegetation should remove some of resistance to flow while lowering the east bank is expected to widen the “flood” channel and subsequently lower the high water level. Both of the forgoing when combined with additional armour stone on the west bank are anticipated to provide significantly improved protection to the lagoon embankments.

iii) Construction:

It is expected that this work would take place as soon as possible and be appropriately timed to coincide with low water levels. The work is expected to take two (2) weeks to complete. The exact date of commencement and duration of physical construction will be coordinated with appropriate authorities including the federal Department of Fisheries and Inland Waters. All work will be completed “in the day”.

The most significant source of potential pollutants associated with this work would be leakage of hydrocarbons or other liquids from equipment and possible higher silt loadings during rainfalls. Measures will be taken, in consultation with appropriate authorities, to eliminate these risks.

No equipment would be operating in the brook with the exception of an excavator bucket placing the armour stone. Lowering of the east embankment would be conducted “in the dry”.

(iv) Operation:

It is expected that upon completion of the construction, that there will be no operational requirements.

(v) Occupations:

The following is an enumeration of occupations anticipated to be associated for this undertaking in accordance with the “National Occupational Classification 2001;”

<u>Group</u>	<u>Title</u>	<u>No.</u>
2131	Civil Engineers	2
2231	Civil Engineering Technologist	2
2231	Civil Engineering Technicians	2
0016	General Manager - Construction Co.	1

7471	Excavator Operator	2
7611	Construction Labourer	2

(vi) Project Related Documents:

N/A

APPROVALS REQUIRED:

<u>Name of Authority</u>	<u>Permit/License/Approval Required</u>
1. Provincial Archeology Office	Excavation
2. Provincial Department of Environment	Appurtenant Structures
3. Provincial Department of Environment	Water Course Canalization
4. DFO Canada	Authorization for Undertaking Affecting Fish Habitat
5. Provincial Department of Municipal & Provincial Affairs	Funding (CNIP)
6. Provincial Department of Municipal & Provincial Affairs	Approval to Tender Contract/Award Contract
7. The Town of Pasadena	Approval to Construct

SCHEDULE:

This work would commence as soon as all necessary approvals, licenses, permits and funding are in place and tenders called and awarded.

The primary reason for this date is to mitigate hazards to aquatic habitat.

FUNDING:

Funding will be requested through the Federal/Provincial Canada-Newfoundland Infrastructure Program (CNIP). The cost will be determined based on Regulatory Agency Requirements.

Date

Signature of Chief Executive Officer

PROPOSER:

PROJECT:

Consultant:

THE TOWN OF PASADENA
SOUTH BROOK OVERFLOW CHANNEL

Atlantic Engineering Consultants Limited

