

## Appendix A

### Regulatory Approvals

**cFISHERIES AND OCEANS  
CANADIAN ENVIRONMENTAL ASSESSMENT ACT (CEAA) 2012  
BREAKWATER CONSTRUCTION, MARY'S HARBOUR DFO-SCH  
PROJECT EFFECTS DETERMINATION REPORT**

**GENERAL INFORMATION**

<b>1. Project Title:</b> Breakwater construction – Marys Harbour, NL	
<b>2 Proponent:</b> Fisheries and Oceans Canada, Small Craft Harbours (DFO-SCH)	
<b>3. Other Contacts</b> (Other Proponent, Consultant or Contractor):  Public Services and Procurement Canada (PSPC)	<b>4. Role:</b>  OGD Consultant
<b>5. Source of Project Information:</b> Dion Upward, Senior Project Engineer, DFO-SCH	
<b>6. Project Review Start Date:</b> August 8, 2018	
<b>7. DFO File No.:</b> 17-HNFL-00041	<b>8. PWGSC File No:</b>
<b>9. TC File No.:</b>	

**BACKGROUND**

<p><b>10. Background about Proposed Development (including a description of the proposed development):</b></p> <p>The proposed project at Mary's Harbour involves the construction of a rubble mound breakwater, which will provide necessary protection to the existing SCH facility. Construction materials will be obtained from a licensed quarry and trucked to the work site where excavators will place it along the ocean bottom. The finished structure will have an approximate footprint of 4,270m<sup>2</sup>, with a crest length of approximately 165m and width varying between 10 and 30 m. The placement of this proposed breakwater has been optimized to dissipate wave action in the harbour with the intention of providing protection to the existing infrastructure.</p> <p>Mary's Harbour Fisheries and Oceans Canada Small Craft Harbour (DFO-SCH) is located on the southern coast of Labrador, adjacent to the Town of Mary's Harbour. The harbour is considered to be a core fishing harbour and was developed to serve the fishing industry in the area, so the proposed project will directly benefit this industry and support the continued viability of the harbour. A project recently completed at the Mary's Harbour SCH (2017-18 fiscal year) added two floating docks support cribs, infill of a new service/parking area and dredging.</p>
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**PROJECT REVIEW**

<p><b>11. DFO's rationale for the project review:</b></p> <p>Project is on federal land <input checked="" type="checkbox"/> and;</p> <p><input checked="" type="checkbox"/> DFO is the proponent</p> <p><input type="checkbox"/> DFO to issue <i>Fisheries Act</i> Authorization, <i>Species at Risk Act</i> Permit or other regulatory permit</p> <p><input type="checkbox"/> DFO to provide financial assistance to another party to enable the project to proceed</p> <p><input type="checkbox"/> DFO to lease or sell federal land to enable the project to proceed</p> <p><input type="checkbox"/> Other</p>
<p><b>12. Fisheries Act Section(s) (if applicable):</b> n/a</p>

<b>13. Other Authorities involved in review:</b> Transport Canada – Navigation Protection Program (TC NPP)	<b>14. Other Authority's rationale for involvement:</b> <i>Navigation Protection Act</i>
<b>15. Other Jurisdiction:</b> Newfoundland and Labrador – Department of Municipal Affairs and Environment, Environmental Assessment Division (NLMAE EA)	
<b>16. Other Expert Departments Providing Advice:</b> Fisheries and Oceans Canada, Fisheries Protection Program (DFO FPP)	<b>17. Areas of Interest of Expert Departments:</b> <i>Fisheries Act</i>
<b>18. Other Contacts and Responses:</b> N/A	
<b>19. Scope of Project (details of the project subject to review):</b>  <u><b>Project Description</b></u>  The proposed project involves the construction of a rubble mound breakwater within Mary's Harbour. This project and its associated activities are described in further detail below, and are shown on the site drawings (Appendix B).  This proposed breakwater will measure approximately 165m along the crest of the structure, which will be +4.25 chart datum. The width of the structure is approximately 10m at the shoreline, but grows as the breakwater extends into the harbour and reaches an approximate width of 30m as the structure turns and runs perpendicular to the shore. The total footprint on the ocean bottom will be approximately 4,270m <sup>2</sup> .  The breakwater will be constructed with a base of corestone. Then, two layers of filterstone will be placed over this base. The completed filterstone will have a uniform thickness of approximately 1100mm. This will be topped with a layer of armourstone. The armourstone will have an approximate thickness of 1200mm on the sea side and crest of the breakwater, and an approximate thickness of 1000mm on the lee side. All rock material will be sourced from a licensed quarry and brought to the site by dump trucks. The process will be completed using an excavator to place materials.  <u><b>Operation</b></u>  The Environmental Management System (EMS) with an integrated Environmental Management Plan for the Harbour Authority of Mary's Harbour covers operational aspects of the environmental management and is the mitigation measure for the environmentally responsible aspects of harbour operation (fueling, waste disposal, activities on the property, and water).  <u><b>Decommissioning</b></u>  This facility is not presently planned to be decommissioned. At the time of decommissioning, DFO-SCH will develop a site specific re-use or reclamation plan that is appropriate for the applicable environmental legislation and Fisheries and Oceans Canada policies.  <u><b>Scheduling</b></u>  Subject to regulatory approval and DFO SCH operational priorities and funding, this Project may commence during the 2018-2019 fiscal year.	
<b>20. Location of Project:</b> The proposed project site is located adjacent to the Town of Mary's Harbour, NL, on the south coast of Labrador (see Appendix A). The harbour is within Northeast Cove, of Mary's Harbour, which subsequently opens into the St. Lewis Sound. The approximate UTM coordinates are 52.3096; -55.8363. Access to the site is provided by municipal roads through the community of Mary's Harbour, which is accessed via provincial Route 510; the Trans Labrador Highway, or via the Mary's Harbour airport.	

## **21. Environment Description:**

### **Physical Environment**

The Project site is characterized primarily of exposed bedrock and placed armourstone protection. As this is an existing harbour located within an existing community, there is anthropogenic influence on the surrounding site characteristics. This includes a gravel road, and multiple slipways and wharves existing at the site.

Mary's Harbour is located on the southern coast of Labrador, approximately 178 kilometers SSE of Cartwright, NL, and approximately 130 kilometers NE of Blanc-Sablon, QC. It is within the Paradise River Ecoregion of Labrador, which has a climate characterized by cool summers and short, cold winters. The waterbody of Mary's Harbour is connected to the St. Lewis Sound in the Atlantic Ocean, so the area is directly influenced by maritime conditions. The ecoregion is included in the zone of discontinuous permafrost that encompasses much of southern Labrador.

Canadian Climate Normals (1981-2010) were obtained for the closest Canadian climate station, which is in Main Brook (46°39'00"N, 60°57'00"W), approximately 126.78 kilometers away. The climate station lists the mean annual temperature in the area to be 2.0°C with extremes ranging from -35.0° to 31.0°C. Measurable precipitation has been recorded an average of 140.5 days per year, totalling 1223.9 mm annually. Extreme daily precipitation of 105.0 mm of snow was recorded at this station in 1988 (Environment Canada, 2018). As the climate station is over 100 kilometers south, the exact data will vary slightly from these values. Mean annual reported temperatures for the area of Mary's Harbour are approximately 8.5°C in the summer months and -8.5°C in the winter months.

### **Biological Environment**

A mixture of groundfish (cod, lumpfish, flounder), marine mammals (dolphin/porpoise, whale, seal and other mammals), pelagic fish (capelin, herring, mackerel, salmon) and shellfish (mussels, rock crab, and snow crab) may be found within the general project area. On land, common coastal animals include the moose, black bear, polar bear, wolverine, caribou, red fox, grey wolf, and short-tailed weasel. A variety of bird species may be present in this region, such as warbler, thrush, sparrow, snipe, greater yellowlegs, red-necked phalarope, and Canada goose. Trees that are found frequently in the area include black spruce, tamarack, white spruce and aspen. Ericaceous shrubs, sedge, lichens, moss and Labrador tea bushes are also prevalent. According to the Fisheries and Oceans' Traditional Knowledge Maps of the area, cod, flounder, halibut, lumpfish, sand lance, arctic char, capelin and herring may be found in the general surrounding area.

Mary's Harbour is close to a Canadian Important Bird Area (IBA). This area is the St. Peter Bay IBA, approximately 9.55 kilometers southeast of the project site. It is approximately 170.59km<sup>2</sup> and encompasses St. Peter Bay and its shoreline, as well as the islands within it. The IBA is used by Harlequin ducks, which are nationally endangered. In June 1994, 50 individuals were observed in a premoulting concentration, representing approximately 3.3% of the North American population. Additionally, the IBA is a major moulting area for Common Eiders. A survey in 1998 reported that 5,000 Common Eiders (6.4% of the Atlantic population) were found at this site (IBA Canada, 2017).

An underwater benthic survey was completed at the Project site in November 2016 utilizing video recordings taken along transects to investigate the habitat of the harbour. The results indicated that the benthic environment is primarily composed of silt, with increasing amounts of rock and sand near the shore. Observable marine life was limited to small amounts of mussels and snail shells. Due to the timing of the survey, the results may not reflect typical biological conditions of the site.

### **Species at Risk (Aquatic and Terrestrial)**

A search of the Atlantic Canada Conservation Data Centre (ACCDC) database was conducted that produced a list of rare / unique species (i.e., plants and animals) within a 5 km buffer zone (standard ACCDC procedure) of the site of the proposed work. Species were cross-referenced with Schedule 1 of the *Species at Risk Act* (SARA); no species were reported within this buffer.

**22. Scope of Effects Considered (sections 5(1) and 5(2)):**

**Table 1: Potential Project / Environment Interactions Matrix**

	As per Section 5(1)			Section 5(1c)				Section 5(2)			Due Diligence			
				Aboriginal Interest										
Project Phase / Physical Work/Activity	Fish (Fisheries Act)	Aquatic Species (SARA)	Birds (MBCA)	Health and Socio-economic	Physical and cultural heritage	Land use	*HAPA Significance	Health and Socio-economic	Physical and cultural heritage	*HAPA Significance	Water (ground, surface, drainage, etc.)	Terrestrial / Aquatic Species	Soil/Marine Sediment	Air Quality
Breakwater Construction														
Transportation of materials and equipment	-	-	-	-	-	-	-	P	-	-	P	P	P	P
Breakwater construction	P	-	-	-	-	-	-	P	-	-	P	P	P	P
Operation / Maintenance	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Decommissioning / Abandonment	-	-	-	-	-	-	-	-	-	-	-	-	-	-

\*structure, site or thing that is of historical, archaeological, paleontological or architectural significance.

Legend: P = Potential Effect of Project on Environment; '-' = No Interaction

### **23. Environmental Effects of Project:**

Potential Project/Environment Interactions and their effects are outlined below.

#### **Fish:**

- Sedimentation as a result of the breakwater construction components may negatively affect fish and quality of potential fish habitat at the immediate Project site.
- Accidental discharge of heavy machinery fuel/fluids or hazardous substances could negatively affect fish and potential fish habitat.
- Potential fish habitat within the Project footprint will be eliminated during construction activities.

#### **Health and Socio-economic:**

- Potential for safety hazards to workers during construction activities, and during construction activities and during operation of the harbour.
- Potential disturbance to nearby residents due to elevated noise levels generated by heavy machinery.

#### **Water**

- Sedimentation as a result of construction activities may negatively affect marine water quality at the immediate Project site.
- Construction-related waste may be accidentally deposited in the marine environment, reducing marine water quality.
- Accidental discharge of heavy machinery fuel / fluids or hazardous substances may result in a decrease of marine water quality.
- Invasive species may be present on machinery that present a risk of entering the waterbody.

#### **Aquatic Species**

- Sedimentation as a result of construction activities may temporarily disrupt and/or negatively affect aquatic species at the immediate Project site.
- Accidental discharge of heavy machinery fuel / fluids or hazardous substances could negatively affect aquatic species.

#### **Soil/Marine Sediment**

- An accidental discharge of heavy machinery fuel / fluids or hazardous substances on land may result in contamination of soils on the Project site.
- Construction debris or rubbish may be incorrectly disposed of, or left on site.

#### **Air Quality**

- Construction activities may result in nuisance effects due to an increase in noise and dust and the use of heavy equipment.

#### **Navigation Consideration**

Environmental effects of the project on navigation are taken into consideration as part of the Project Effects Determination (PED) only when the effects are indirect, i.e. resulting from a change in the environment affecting navigation. Direct effects on navigation are not considered in the PED, but any measures necessary to mitigate direct effects will be included as terms and conditions associated work approved or permitted pursuant to the *Navigation Protection Act*.

#### **24. Mitigation Measures for Project (including Habitat Compensation):**

- Reduce duration of in-water work wherever possible.
- Construction activities that involve in-water work will be conducted during periods of low flow, or at low tide, to further reduce the potential for effects on fish / fish habitat and water quality.
- Schedule work to avoid wet, windy, and rainy periods that may increase erosion and sedimentation into the marine environment. Weather conditions should be checked daily to manage / prepare the site for these events.
- Project activities will be suspended, and/or additional mitigation measures will be implemented if ocean conditions cause sediment or turbidity within the marine environment, outside the immediate vicinity of the Project.
- Develop and implement an Erosion and Sediment Control Plan for the site that reduces risk of sedimentation of the marine environment during all phases of the Project. Erosion and sediment control measures should be maintained until disturbed ground has been permanently stabilized, suspended sediment has resettled, or settling basin and runoff water is clear.
- Develop a response plan that is to be implemented immediately in the event of an accidental sediment release or spill of a deleterious substance, and keep an emergency spill kit on site with staff trained in its use.
- Construction materials used in a watercourse will be handled and treated in a manner to prevent the release or leaching of substances into the water that may be harmful to fish.
- Remove construction materials from site upon Project completion.
- Make a reasonable effort to make sure that machinery arriving on site is in a clean condition and is maintained free of fluid leaks and potential invasive species.
- Whenever possible, operate machinery on land above the high-water mark, or from a floating barge in a manner that reduces disturbance to the banks and bed of the waterbody.
- Machinery will be checked for leakage of lubricants or fuel and must be in good working order. Refuelling will be done at least 100 m from a water body. Basic petroleum spill clean-up equipment should be on-site, and Project employees will be trained in the use of these kits. Spills or leaks should be promptly contained, cleaned up, and reported to the 24-hour environmental emergencies report system (1-800-563-9089). The proponent should consider developing a contingency plan specific to the proposed undertaking to enable a quick and effective response to a spill event. Cribbing ballast material should be, to the greatest extent possible, free of fine-grained materials to help reduce sedimentation of the waterbody and must not be obtained from below the highwater mark.
- If using a floating barge for operations, vessels should be compliant with all *Canada Shipping Act, 2001* requirements for inspection, which includes certification of the vessel and adequate training and appropriate certificate of competency for the operators. The floating barge must be cleaned to prevent the spread of potential invasive species.
- Ensure that all vessels will have procedures in place to ensure safeguards against marine pollution: awareness training of all employees, means of retention of waste oil on board and discharge to shore-based reception facilities, capacity of responding to and clean-up of accidental spill caused by vessels involved in any particular project.
- Rock material will be moved and installed into the marine environment in a manner that reduces the potential for sedimentation or turbidity to occur. This includes using an excavator to place rocks in their locations instead of end dumping from a truck.
- Waste material is to be disposed of at an approved and permitted landfill site, pursuant to applicable guidelines, and regulations/legislation.
- Machinery used for the Project should be well muffled to reduce noise for local residents, and local municipality construction by-laws will be adhered to.

- Where feasible, mitigation measures, such as dust suppressors will be implemented to reduce the potential for increased dust during Project activities.
- Project employees will be equipped with the proper Personal Protective Equipment for Project tasks, and work will comply with provincial occupational health and safety regulations.
- An Environmental Protection Plan will be submitted to and approved by the provincial Minister of Municipal Affairs and Environment prior to commencement of project construction, as per a Ministerial approval dated November 1, 2018.
- The proponent is advised that a development approval is required from the Town of Marys Harbour prior to project commencement.
- Quarry material required from the project must be obtained from an existing licenced quarry or from another source approved by the provincial Department of Natural Resources.

**25. Significance of Adverse Environmental Effects of Project:**

Taking into account the proposed mitigation measures for the Project, significant adverse environmental effects from Project activities are not anticipated.



## **26. Other Considerations (Public Consultation, Aboriginal Consultation, Follow-up)**

### **Public Consultation**

The Project will provide a safer facility for vessels using this harbour. No negative public concern is expected as a result of this Project. As such, public consultation was not deemed necessary as part of this determination.

### **Aboriginal Consultation**

In the context of the Crown's legal duty to consult with Aboriginal groups, where it contemplates conduct that might adversely impact potential or established Aboriginal and Treaty rights:

PSPC and Transport Canada confirm that a preliminary assessment has been undertaken to determine if a legal duty to consult arises in respect of the project proposed. Based on this preliminary assessment, PSPC, on behalf of DFO SCH and in conjunction with Transport Canada, provided an offer to consult with Aboriginal groups potentially impacted by the proposed project.

A notification letter was sent to President Todd Russell of the Nunatukavut on August 14, 2018. The notification letter contained a description of the proposed project and an offer to provide input during the environmental effects review process (Appendix D). No response was received.

As part of the Newfoundland and Labrador Environmental Assessment Process, a description of this project was provided to the Nunatukavut. A response was issued on October 17, 2018 By George Russel Jr., Nunatukavut Department of Environment and Natural Resources which provided general comments on the project. DFO SCH issued a letter in response on October 29, 2018 to the Nunatukavut indicating its commitment to the comments received. Both letters are appended as Appendix D.

### **Government Consultation**

Federal and provincial authorities likely to have an interest in the Project were consulted by Public Services and Procurement Canada, Environmental Services, during the course of this assessment. A project description was distributed to the following authorities:

- Fisheries and Oceans Canada – Fisheries Protection Program (DFO FPP)
- Transport Canada – Navigation Protection Program (TC NPP)
- NL Department of Environment and Municipal Affairs, Environmental Assessment Division (NLDEMA EA)

DFO FPP determined that 'Serious Harm' to fish could be avoided by following standard mitigations as described within Appendix C.

TC NPP determined that an approval would be required under the *Navigation Protection Act*.

NLDEMA EA have determined that the scope of work will require a registration under the provincial *Environmental Assessment Act*. The project was successfully conditionally released from the EA process on November 2, 2018 (Appendix C).

All expert advice/specialist information provided by the above noted departments has been incorporated into this document.

### **Accuracy and Compliance Monitoring**

A follow-up program (as defined in S. 2(1) and as applicable to non-designated projects on federal lands) is a program for determining the effectiveness of mitigation measures. Site monitoring (accuracy and compliance monitoring) may be conducted to verify whether required mitigation measures were implemented. The proponent must provide site access to Responsible Authority officials and/or its agents upon request.

## **27. Other Monitoring and Compliance Requirements (e.g. *Fisheries Act* or *Species at Risk Act* requirements)**


N/A

## CONCLUSION

### 28. Conclusion on Significance of Adverse Environmental Effects:

The Federal Authorities have evaluated the project in accordance with Section 67 of *Canadian Environmental Assessment Act (CEAA), 2012*. On the basis of this evaluation, the departments have determined that the project is not likely to cause significant adverse environmental effects with mitigation and therefore can proceed as outlined.

29. Prepared by:



30. Date: November 12, 2018

31. Name: Mark McNeil

32. Title: Senior Environmental Specialist, PWGSC-ES

## DECISION

### 33. Decision Taken

- ☒ DFO may exercise its power, duty or function, i.e. may issue the authorization - where the project is not likely to cause significant adverse environmental effects. Confirm below the specific power, duty or function that may be exercised.
- ☐ DFO to issue *Fisheries Act* Authorization or *Species at Risk Act* Permit
  - ☒ DFO to proceed with project (as proponent)
  - ☐ DFO to provide financial assistance for project to proceed
  - ☐ DFO to provide federal land for project to proceed
- ☐ DFO has decided not to exercise its power, duty or function because the project is likely to cause significant adverse environmental effects.
- ☐ DFO to ask the Governor in Council to determine if the significant adverse environmental effects are justified in the circumstances

34. Approved by: \_\_\_\_\_

35. Date: \_\_\_\_\_

36. Name: Paul Curran

37. Title: Regional Engineer, DFO-SCH, NL

38. **References:** Environment Canada. (2018). *Canadian Climate Normals*. Retrieved September 5, 2018, from Government of Canada: [http://climate.weather.gc.ca/climate\\_normals/index\\_e.html](http://climate.weather.gc.ca/climate_normals/index_e.html)

IBA Canada. (2017). *IBA Site Summary - St. Peter Bay*. Retrieved September 6, 2018, from Important Bird Areas Canada: <https://www.ibacanada.org/site.jsp?siteID=LB023>

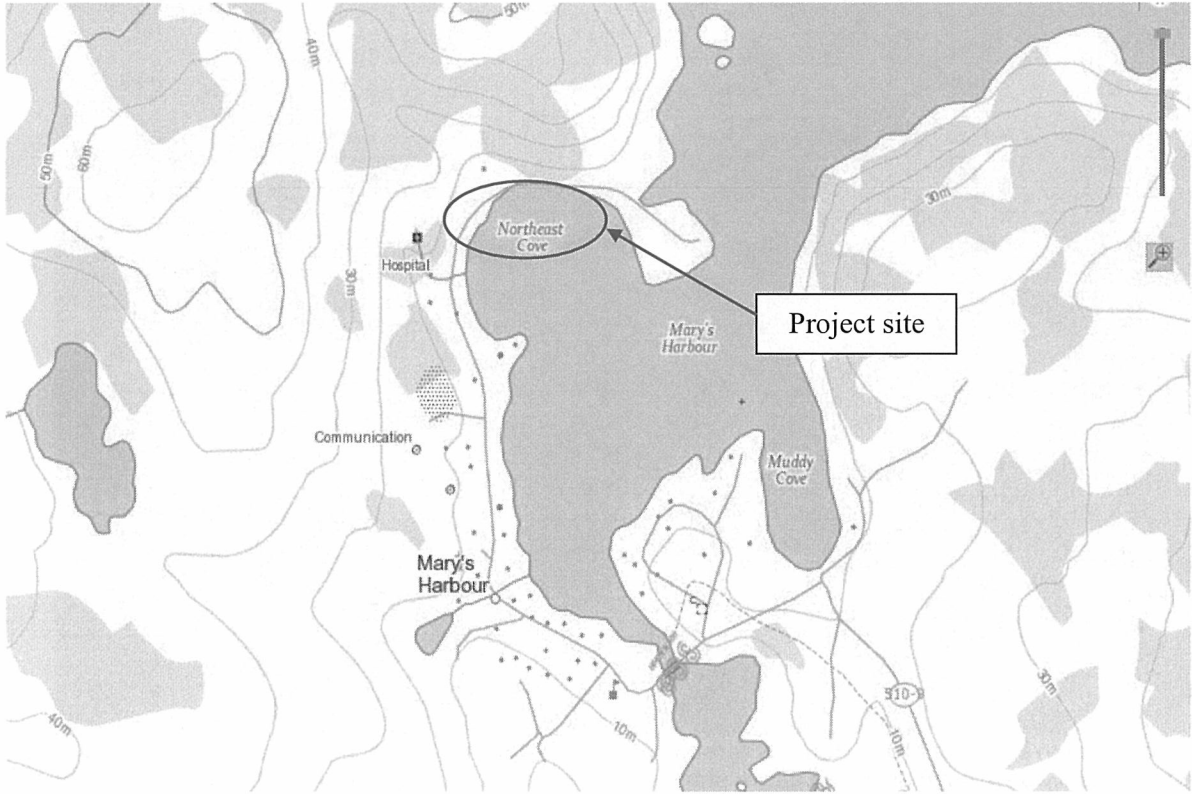
### 39. TRANSPORT CANADA RECOMMENDATION

<b>Project Title:</b>		
<b>TC File No.:</b>		
<b>NPP File No.:</b>		
<b>Environmental Review Decision:</b>	Taking into account the implementation of any mitigation measures that Transport Canada considers appropriate, the project <b><u>is not likely</u></b> to cause significant adverse environmental effects and, as such, Transport Canada may exercise any power or perform any duty or function that would permit the project to be carried out in whole or in part.	
<b>Prepared by:</b>	<b>Melissa Ginn</b> Environmental Officer Environmental Affairs and Aboriginal Consultation Unit	
<b>Signature:</b>		<b>Date:</b>
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<b>Recommended by:</b>	<b>J. Jason Flanagan</b> Senior Environmental Assessment Officer Environmental Affairs and Aboriginal Consultation Unit	
<b>Signature:</b>		<b>Date:</b>
<b>Approved by:</b>	<b>Stephen Corbett</b> A/Regional Manager Environmental Affairs and Aboriginal Consultation Unit	
<b>Signature:</b>		<b>Date:</b>

**List of Appendices:**

- Appendix A: Location of Project**
- Appendix B: Site drawings**
- Appendix C: Regulatory Approvals/Responses**
- Appendix D: DTC OTC Letter and Responses**

**Appendix A**  
**Topographic Map and Aerial Photograph**



**Description**

Figure 1: Topographic Map of Proposed Sites  
 Location: Marys Harbour

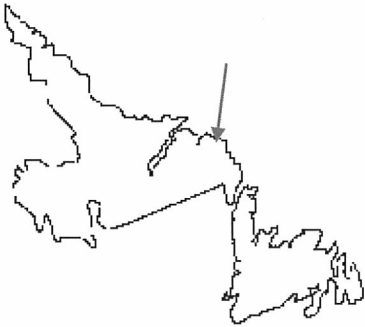




Figure 2: Aerial overview of Marys Harbour harbour including proposed project site (yellow). Note that this site has been partially developed since the above photograph was taken and currently includes an infill area, boat launch and floating dock.



**Appendix B**  
**Site plan**