Appendix “A”

FISHERIES AND OCEANS
CANADIAN ENVIRONMENTAL ASSESSMENT ACT (CEAA) 2012
PROJECT EFFECTS DETERMINATION REPORT

GENERAL INFORMATION

1. Project Title: Armour Stone Protection, Wild Cove, NL	
2 Proponent: Fisheries and Oceans Canada, Small Craft Harbours (DFO SCH)	
3. Other Contacts (Other Proponent, Consultant or Contractor): Public Works and Government Services Canada	**4. Role:** OGD Consultant
5. Source of Project Information: Sheila Hogarth, Engineering Technician, DFO SCH	
6. Project Review Start Date: April 18th, 2017	
7. DFO File No.: 17-HNFL-00181	**8. PWGSC File No:**
9. TC File No.: NPP #2017-200098 / NEATS: 45175	

BACKGROUND

10. Background about Proposed Development (including a description of the proposed development):

The proposed project is for the installation of armour stone protection along the seaward side of the existing finger pier wharf at the DFO-SCH facility in Wild Cove, NL (see Appendix A).

PROJECT REVIEW

11. DFO's rationale for the project review:

Project is on federal land ☒ and;

- ☒ DFO is the proponent
- ☐ DFO to issue *Fisheries Act* Authorization or *Species at Risk Act* Permit
- ☐ DFO to provide financial assistance to another party to enable the project to proceed
- ☐ DFO to lease or sell federal land to enable the project to proceed
- ☐ Other

12. Fisheries Act Sections (if applicable): NA

13. Other Authorities Transport Canada, Navigation Protection Program and Environmental Affairs & Aboriginal Consultation Unit	**14. Other Authorities rationale for involvement:** *Navigation Protection Act*

15. Other Jurisdiction: n/a

16. Other Expert Departments Providing Advice:	**17. Areas of Interest of Expert Departments:**
Fisheries and Oceans Canada	*Fisheries Act*

18. Other Contacts and Responses: n/a

19. Scope of Project (details of the project subject to review):

Project Description

The proposed project is for the installation of armour stone protection along the seaward side of the existing finger pier wharf. The armour stone protection will measure approximately 90m in length along the wharf structure, while the armour stone will have a width of 3m across the crest (refer to attached site plan in Appendix B). Construction will consist of importing and installing core material, filter stone, and armour stone. The armour stone protection materials will be obtained from a licensed quarry and trucked in dump trucks to the project site where excavators will place the materials along the ocean floor.

Operation

The operational aspects of environmental management of this site, as well, mitigation measures for the environmentally responsible aspects of harbour operation (fuelling, waste disposal, activities on the property and water) will be over seen by the local harbour users, in consultation with SCH.

Decommissioning

The Environmental Management System (EMS) with an integrated Environmental Management Plan (EMP) for the Harbour Authority of Wild Cove will cover operational aspects of environmental management at the harbour (fuelling, waste disposal, activities on the property and water).

Scheduling

Subject to regulatory approval and DFO SCH operational priorities and funding, this project may commence during the Summer of 2017.

20. Location of Project:

Wild Cove is located approximately 20 km west of the community of Baie Verte on the western side of the Baie Verte peninsula at coordinates 49°59'37.67" N, 56°20'27.93" W and is accessible from provincial highway route 419.

21. Environment Description:

Physical Environment:

Within the general vicinity of the project site there are numerous wharf structures, sheds and other buildings. The DFO SCH facility is comprised of the finger pier wharf, marginal wharf, service area, ice shed and several small sheds. The site of the proposed breakwater is located adjacent and to the west of the finger pier wharf. (Appendix A and Appendix B). The sea bed within the project area is a mixture of sand, pebble and rock with the shoreline consisting of sloping exposed bedrock. The landscape located immediately upland of the breakwater location is comprised of forested ground (Appendix A).

Wild Cove is located within the Central Newfoundland Forest Ecoregion, North-central subregion. The Central Newfoundland Forest ecoregion has the highest summer and lowest winter temperatures on the Island. Furthermore, this ecoregion experiences the least wind and fog on the island, and is also one of the driest ecoregions on the island. The north-central subregion is much more densely forested than areas to the north, east and southeast with bogs occurring regularly within the landscape. Soils within this ecoregion are primarily brown humo ferric podzols which

contain primarily inorganic material.

Overall the ecoregion is dominated by gently rolling hills ranging from 150-200m above sea level. The geology of the North-central subregion is diverse with rock formations belonging to four geologic zones which range from 290 million to one billion years of age. These geologic zones are made up of mixtures of sandstones, shales and conglomerates with granite intrusions found throughout the subregion.

The North-central subregion experiences the most continental climate of the island portion of the province with a growing season ranging from 140-160 days. Mean annual temperatures range from between -4 to -8°C in February and 15 to 16°C in July. Annual rainfall is 740.6mm per year with annual snowfall of 389.1cm.

Biological Environment:

According to Fisheries and Oceans' Traditional Ecological Knowledge Maps of the area a mixture of groundfish (lumpfish), pelagic fish (capelin, brook trout, herring, mackerel, salmon), shellfish (rock crab, snail, sea urchin, toad crab) and kelp may be found within the project area. Furthermore groundfish species such as cod and winter flounder may also be found offshore outside Wild Cove.

The project site is also within the distribution range of several endangered species such as the blue whale (Atlantic population) (*Balaenoptera musculus*), North Atlantic right whale (*Eubalaena glacialis*), red crossbill (*Loxia curvirostra percna* subspecies) and the leatherback turtle (Dermochelys coriacea coriacea) which have been placed on Schedule 1 of the *Species at Risk Act* by the Committee on the Status of Endangered Wildlife in Canada (COSEWIC). It is not expected that the project site provides critical or limiting habitat for any of the above noted species at risk.

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

Table 1: Potential Project / Environnent Interactions Matrix

	As per Section 5(1)			Section 5(1c) Aboriginal Interest				Section 5(2)			Due Diligence			
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
Wharf Encasement														
Installation of Armour stone protection along wharf	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

Navigation Consideration

Environmental effects of the Project on navigation are taken into consideration as part of the environmental assessment 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 environmental assessment, but measures necessary to mitigate direct effects will be included as conditions of the *Navigation Protection Act* approval.

☒ Only direct effects are identified; therefore the effects of the Project on navigation are not addressed in this environmental assessment.

☐ Indirect effects were identified and have been addressed in this environmental assessment.

23. Environmental Effects of Project:

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

Fish / Aquatic Species:

- Sedimentation and temporary increase in turbidity as a result of placement of armour stone materials may negatively impact fish and quality of potential fish habitat.
- The proposed project will result in the destruction of fish habitat present within the footprint of the armour stone.
- Accidental discharge of heavy machinery fuel/fluids will negatively impact fish and potential fish habitat.

Health and Socio-economic:

- Potential for safety hazards to workers during construction activities, and during operation of the harbour.

Water:

- Sedimentation and temporary increase in turbidity as a result of placement of armour stone materials may decrease marine water quality at immediate project site.
- Construction related refuse may be deposited in water-body, decreasing marine water quality.
- Accidental discharge of heavy machinery fuel/fluids will result in a decrease of marine water quality.

Soils / Marine Sediment:

- Accidental discharge of heavy machinery fuel / fluids or other hazardous substances on land adjacent to the marine environment has the potential to contaminate the surrounding soil and marine sediment.
- Improper transport / disposal of demolition timber may result in contamination of soils.

Air Quality:

- Some minor disruptions and annoyance to facility users and residents who live in close proximity to the project site can be anticipated from project activities and the use of heavy equipment.

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

- Minimize duration of in-water work.
- Conduct in-water work during periods of low flow, or at low tide, to further reduce the risk to fish and their habitat or to allow work in water to be isolated from flows.
- Schedule work to avoid wet, windy and rainy periods that may increase erosion and sedimentation. Plan activities near water such that materials such as paint, primers, blasting abrasives, rust solvents, degreasers, grout, or other chemicals do not enter the watercourse.

- Develop a response plan that is to be implemented immediately in the event of a sediment release or spill of a deleterious substance and keep an emergency spill kit on site.

- Remove all construction materials from site upon project completion.

- Ensure that machinery arrives on site in a clean condition and is maintained free of fluid leaks, invasive species and noxious weeds.

- Whenever possible, operate machinery on land above the high water mark, on ice, or from a floating barge in a manner that minimizes disturbance to the banks and bed of the waterbody.

- Wash, refuel and service machinery and store fuel and other materials for the machinery in such a way as to prevent any deleterious substances from entering the water.

- The in-water use of heavy equipment is not permitted. The operation of such equipment must be confined to dry stable areas.

- All vehicles and equipment must be clean and in good repair, free of mud and oil, or other harmful substances that could impair water quality.

- Shoreline areas disturbed during the proposed undertaking must be stabilized to prevent erosion before the area is abandoned.

- The proposed activities must be carried out in such a manner that sediment, and/or other construction related materials do not enter the watercourse.

- Armour stone material should be, to the greatest extent possible, free of fine grained materials to help minimize sedimentation of the waterbody and must not be obtained from below the highwater mark. Material should be clean, quarry run material.

- To the extent possible, the proposed work should be carried out during low tide and low wind-wave conditions to minimize turbidity and to minimize the area that might be affected by turbidity.

- Oil spill response equipment, such as absorbents and open-ended barrels should be available on-site in case of a spill or leak. All spills or leaks should be promptly contained, cleaned up and reported to the 24-hour environmental emergencies report system (1-800-563-2444).

- Where possible, armour stone material will be placed rather than end-dumped to minimize sedimentation of the waterbody

- In the event that the project could interfere with nesting migratory birds a survey of the wharf structure to identify nesting sites will be completed prior to the commencement of construction. In the event of a nesting migratory bird on the site appropriate measures will be taken to ensure that there are no adverse effects upon nesting site and nest.

- Proper safety procedures must be followed during the duration of the project as per applicable municipal, provincial, and federal regulations;

- Employees will be trained in health and safety protocols (e.g. safe work practices, emergency response).

25. Significance of Adverse Environmental Effects of project:

Significant adverse environmental effects are unlikely, taking into account the mitigation measures provided by the various regulatory agencies.

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

Public Consultation

Users of the Wild Cove site require that the proposed project be carried out in order to ensure the safe usage of the infrastructure at this site. As such, it is not anticipated that there would be any public opposition to the project.

Aboriginal Consultation

Aboriginal fishers are not known to utilize the Wild Cove SCH facility. As such, aboriginal consultation was not deemed necessary as part of this determination.

Government Consultation

Federal and provincial authorities likely to have an interest in the project were consulted by Public Works & Government Services 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
- As the Project is within federally regulated waters, it falls under jurisdiction of the *Navigation Protection Act*. As such, a Notice of Works Application was sent to TC for its review and approval.

Mitigations prescribed by DFO FPP have been incorporated into this report and may also be found in Appendix C. It is the proponents' responsibility to ensure that appropriate mitigation measures are adhered to.

TC NPP may issue an approval under the *Navigation Protection Act*. TCEA has reviewed this report and all comments received have been incorporated in the final report.

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 any 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: Cathy Martin **30. Date:** July 19, 2017

31. Name: Cathy Martin

32. Title: 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: DION UPWARD, A/REG. ENG. **35. Date:** 21 July 2017

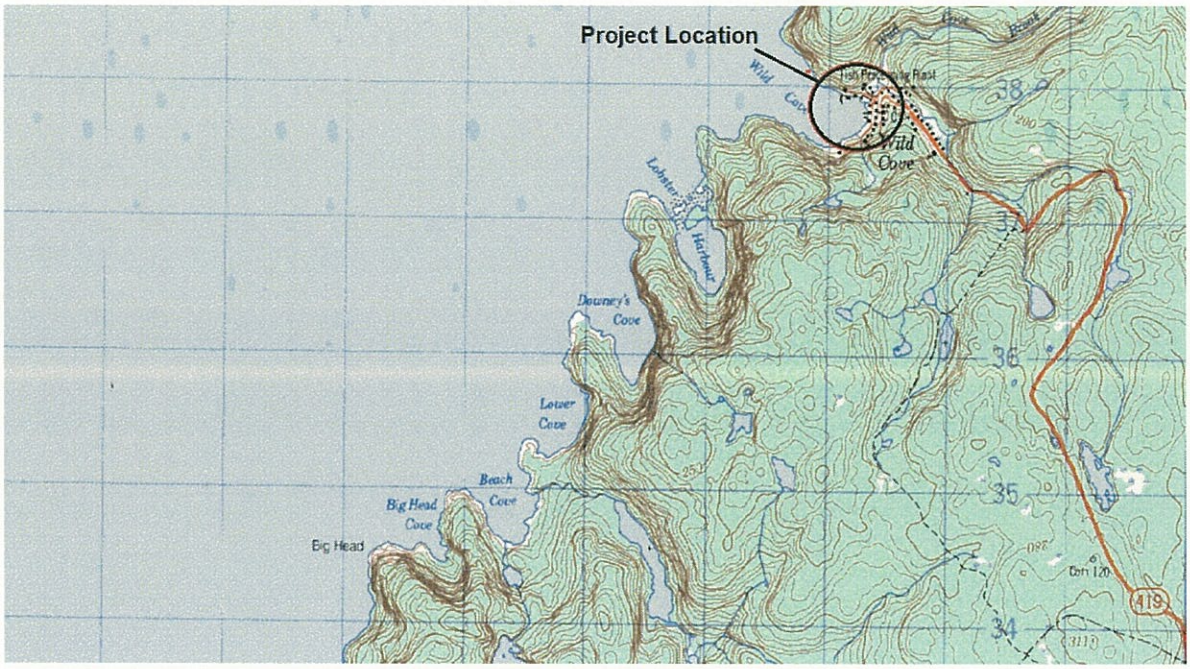
36. Name: Paul Curran

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

38. References: n/a

39. Transport Canada Decision		
Project Title:	Wild Cove, NL – Armour stone protection	
TC File No.:	NPP# 2017-200098	
NPP File No.:	45175	
Environmental Review Decision:	Taking into account the implementation of any mitigation measures that Transport Canada considers appropriate, the project **is not likely** 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.	
Prepared by:	**Melissa Ginn** Environmental Officer Environmental Affairs and Aboriginal Consultation Unit	
Signature:		**Date:**
Mailing Address:	10 Barter's Hill, St. John's, NL	
Tel:	709-351-3200 / 709-772-3088	
Fax:	709-772-3072	
Email:	melissa.ginn@tc.gc.ca	
Recommended by:	**J. Jason Flanagan** Senior Environmental Assessment Officer Environmental Affairs and Aboriginal Consultation Unit	
Signature:		**Date:**
Approved by:	**Kevin LeBlanc** Regional Manager Environmental Affairs and Aboriginal Consultation Unit	
Signature:		**Date:**

Appendix A
Topographic Map and Aerial Photos



Description

Figure 1: Topographic Map of Proposed Site Location: Wild Cove, Newfoundland

Scale 1:50,000

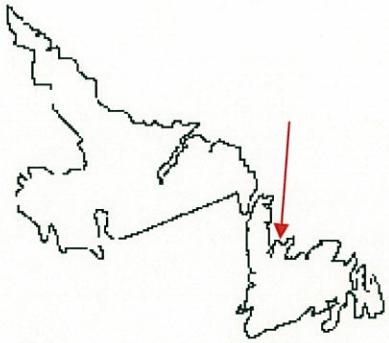


Figure 2. Location of proposed project

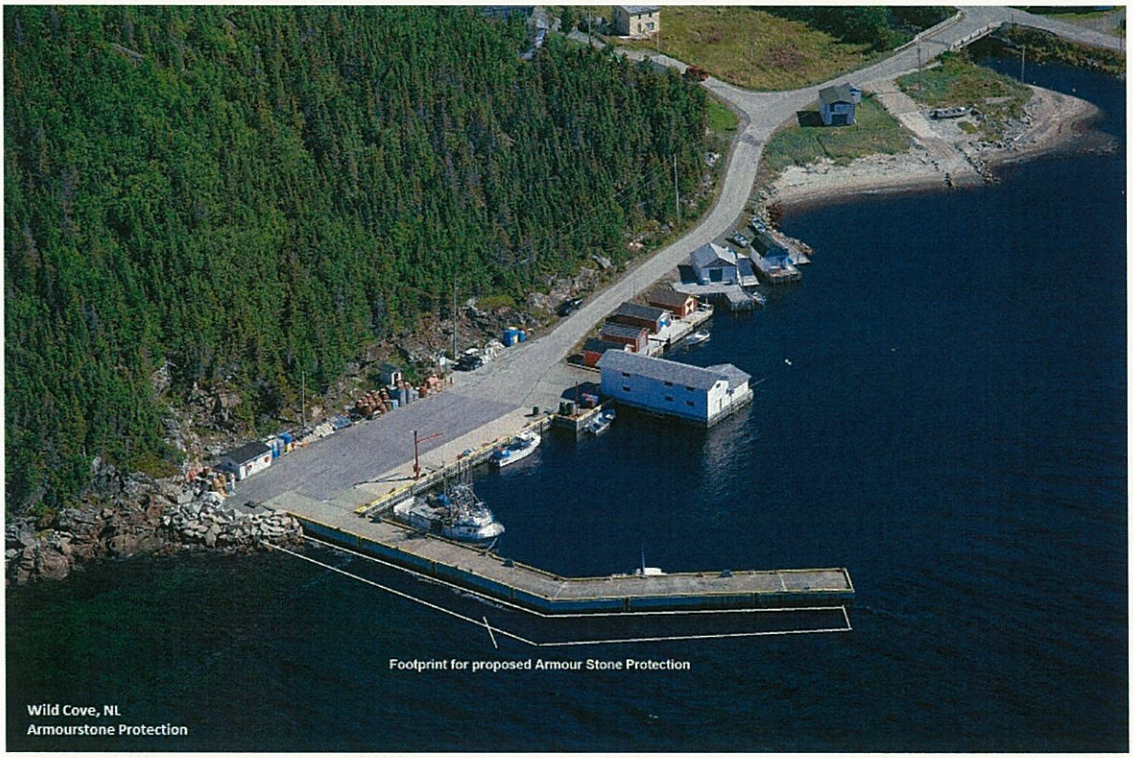


Figure 3. Proposed project Site (Source, DFO 2010)

Appendix B
Site Plan of proposed project

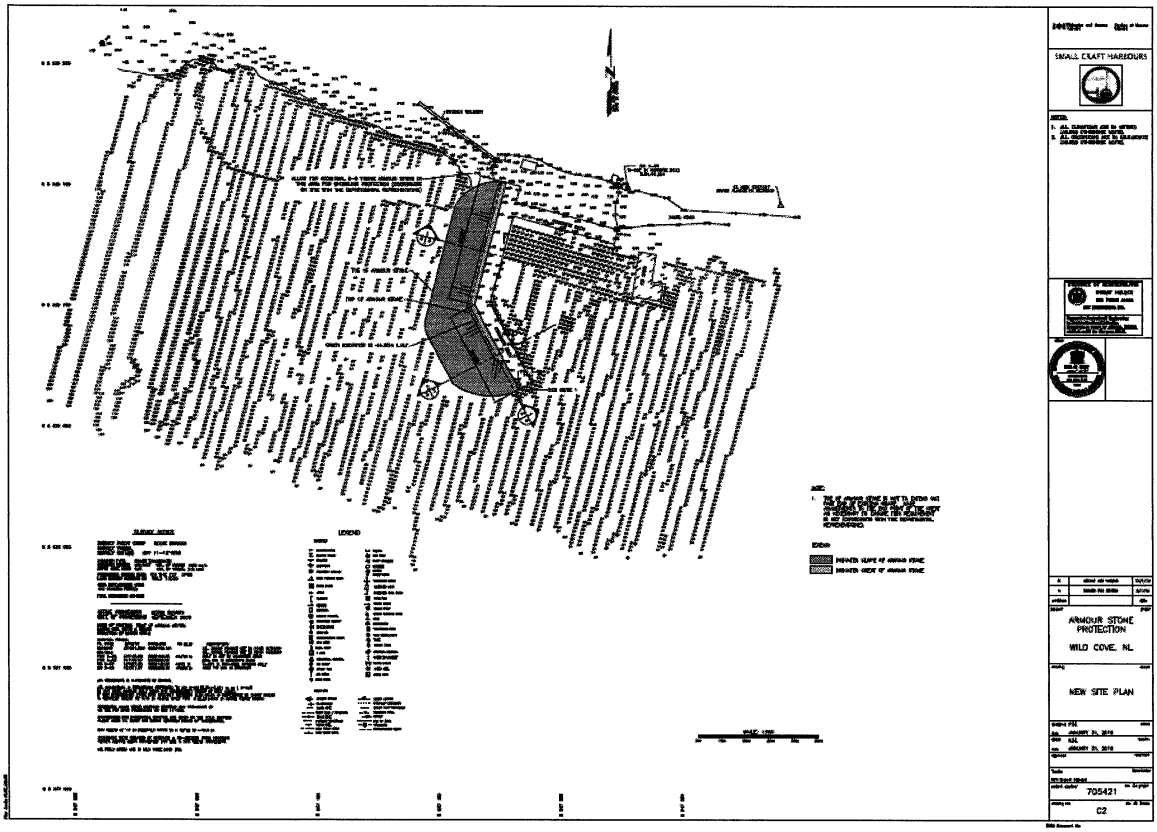


Figure 4. Proposed Project site plan

Appendix C
Regulatory Approvals / Responses

Fisheries and Oceans Canada | Pêches et Océans Canada

P.O. Box 5667
St. John's, NL A1C 5X1

Your file *Votre référence*

Our file *Notre référence*
17-HNFL-00181

SCH - DFO
10 Barter's Hill
St. John's NL A1C 5X1

Attention: Mr. Paul Curran

Dear Mr. Curran:

Subject: Implementation of mitigation measures to avoid and mitigate serious harm to fish – Armour Stone Protection – Wild Cove, NL

The Fisheries Protection Program (the Program) of Fisheries and Oceans Canada received your proposal on June 2, 2017.

Your proposal has been reviewed to determine whether it is likely to result in serious harm to fish which is prohibited under subsection 35(1) of the *Fisheries Act*.

The proposal has also been reviewed to determine whether it will adversely impact listed aquatic species at risk and contravene sections 32, 33 and 58 of the *Species at Risk Act*.

Our review consisted of:

- An Application for Review and associated documentation

We understand that you propose to:

- Install armour stone protection along the seaward side of the existing finger pier wharf.

To avoid the potential of serious harm to fish and their habitat, we are recommending that the attached mitigation measures be included into your plans. Provided that these mitigation measures are incorporated into your plans, the Program is of the view that your proposal will not result in serious harm to fish. The Program is also of the view that your proposal will not contravene Sections 32, 33, or 58 of the *Species at Risk Act*. No formal approval is required from the Program under the *Fisheries Act* or the *Species at Risk Act* in order to proceed with your proposal.

If your plans have changed or if the description of your proposal is incomplete, or changes in the future, you should consult our website (http://www.dfo-mpo.gc.ca/pnw-ppe/index-eng.html) or consult with a qualified environmental consultant to determine if further review is required by the Program.

A copy of this letter should be kept on site while the work is in progress.

Canada

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It remains your responsibility to meet the other requirements of federal, provincial and municipal agencies.

If you have any questions, please contact Triage & Planning at our St. John's office at (709) 772-4140, by fax at (709) 772-5562, or by email at FPP.XNFL@dfo-mpo.gc.ca. Please refer to the file number referenced above when corresponding with the Program.

Sincerely,

Michelle Roberge
Team Leader, Triage and Planning
Regulatory Review – Fisheries Protection Program

Attach – Marine Armour Stone Placement

Fisheries and Oceans Canada | Pêches et Océans Canada

Marine Armour Stone Placement

Fisheries and Oceans Canada
Measures to Avoid Causing Harm to Fish and Fish Habitat

On November 25, 2013 the Fisheries Protection Provisions of the ***Fisheries Act*** came into force. The ***Fisheries Act*** requires that projects avoid causing *serious harm to fish* unless authorized by the Minister of Fisheries and Oceans. This applies to work being conducted in or near waterbodies that support fish that are part of or that support a commercial, recreational or Aboriginal fishery.

If you are conducting a project near water, it is your responsibility to ensure you avoid causing serious harm to fish in compliance with the ***Fisheries Act***. The following advice will help you avoid causing harm and comply with the ***Act***.

a. *Armour stone should be clean blasted rock or boulders, free of fines or sediment, concrete or any other deleterious substance and of sufficient size to resist displacement by wave action or tidal activity.*
b. *Armour Stone should be blocky, angular shape and comprised of mixed gradation so that smaller rock fill the voids between the larger rock to provide compaction and stability.*
c. *Use site isolation measures (e.g., silt boom or silt curtain) for containing suspended sediment where in-water work is required.*
d. *Armour stone placement should not obstruct fish passage.*
e. *Work should be carried out during low wind, wave and tidal conditions.*
f. *Equipment should be mechanically sound to avoid leaks of oil, gas, and/or hydraulic fluids.*
g. *When works are completed, shoreline and approaches should be restored to original condition.*

Additional measures that may be required to protect fish and fish habitat can be found on the DFO national website (http://www.dfo-mpo.gc.ca/pnw-ppe/index-eng.html) and in the *Guidelines for the Protection of Freshwater Fish Habitat in Newfoundland & Labrador* (http://www.dfo-mpo.gc.ca/Library/240270.pdf)

Should your plans change please contact the Fisheries Protection Program-Regulatory Review:

Fisheries Protection Program
Fisheries and Ocean Canada
80 East White Hills Road
St. John's NL A1C 5X1
Telephone: (709) 772-4140
Fax: (709) 772-5562
Email: FPP-NL@dfo-mpo.gc.ca

Note: This advice is only applicable to the project specified on the accompanying DFO letter.

Canada