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Public Works and Government Services Canada  
**Harbour Improvements**  
**Shag Harbour, Shelburne County, NS**  
**R.118063.001**

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**Appendix A**

**DFO-Fisheries and Fish Habitat Protection Program**  
**Letter of Advice**



PO Box 1006, P500  
Dartmouth, Nova Scotia  
B2Y 4A2

August 4, 2021

*Our file    Notre référence*

21-HMAR-00467

Fisheries and Oceans Canada – Small Craft Harbours  
Attention: Steven Deveau – Senior Project Engineer  
215 Main Street, Yarmouth, NS B5A 1C6

Primary Contact: Scott Burley  
A/ Senior Environmental Specialist, Environmental Services  
Public Services and Procurement Canada / Government of Canada  
1713 Bedford Row, Halifax, NS B3J 3C9

**Subject: Fender Pile Installation Project, Shag Harbour, Shelburne County, Nova Scotia. Implementation of Measures to Avoid and Mitigate the Potential for Prohibited Effects to Fish and Fish Habitat**

Dear Scott Burley,

The Fish and Fish Habitat Protection Program (the Program) of Fisheries and Oceans Canada (DFO) received your proposal on July 28<sup>th</sup>, 2021 to install fender piles Shag Harbour, Shelburne County, Nova Scotia. We understand the proposed project is:

- Removal of the existing steel piling wall to an elevation of -0.60 m above chart datum, and replacement with 160 timber close face piles. Steel angles and wales will also be replaced in the process. Repairs will be done on the reinforced concrete guard in areas where the material is cracked and deteriorated.
- The proposed project is located on the ell of the wharf at Shag Harbour DFO-SCH, Shelburne County, on the south shore of Nova Scotia. It provides access to the Shag Harbour waterbody, which leads to the Atlantic Ocean. The harbour is located at 5591 Highway 3.

It is also understood that the total project benthic footprint below the high water mark will be 11.31 m<sup>2</sup>. The work will not cut off fish access to under the wharf. The inside of the wharf will still be open for fish passage. There is no eel grass within the project footprint. The piles will be installed from the existing wharf and construction equipment will not enter the water. The work is planned to begin in January 2022.

Our review of the project considered the following information:

- DFO's Request For Review Form completed by Scott Burley of Public Service and Procurement Canada. Dated July 2021.
- DFO databases, scientific papers, interactive mapping, historical files etc.

Your proposal has been reviewed to determine whether it is likely to result in:

- the death of fish by means other than fishing and the harmful alteration, disruption or destruction of fish habitat which are prohibited under subsections 34.4(1) and 35(1) of the *Fisheries Act*;
- effects to listed aquatic species at risk, any part of their critical habitat or the residences of their individuals in a manner which is prohibited under sections 32, 33 and subsection 58(1) of the *Species at Risk Act*; and/or
- the introduction of aquatic species into regions or bodies of water frequented by fish where they are not indigenous, which is prohibited under section 10 of the Aquatic Invasive Species Regulations.

The aforementioned outcomes are prohibited unless authorized under their respective legislation and regulations.

To avoid and mitigate the potential for prohibited effects to fish and fish habitat (as listed above), we recommend implementing the applicable mitigation measures noted in the Request for Review Form as well as the measures noted below:

#### **Impacts to Fish Species**

- Pile driving in/near the water can generate underwater sound waves that can harm aquatic species and disrupt normal behaviour. To minimize this impact, pile driving will be ramped up over approximately 20 minutes from low to high intensity, so that aquatic species (particularly marine mammals) can leave the area before they are exposed to louder sounds.

#### **Change to Riparian Vegetation**

- Limit impacts on riparian vegetation to those approved for the works, undertakings and activities.

#### **Change or loss of Aquatic Habitat and Vegetation**

- Limit impacts on fish habitat components to those approved for the works, undertakings and activities.
  - Ensure there is no temporary or permanent increase in existing footprint below the ordinary high water mark, beyond what has been approved.
  - Operate machinery on land/wharf.
  - Conduct in-water undertakings and activities during low tide.

#### **Sedimentation of Fish Habitat**

- Use only clean materials (e.g., steel) for works, undertakings and activities.
- Develop and implement a Sediment Control Plan to minimize sedimentation of the waterbody during all phases of the works, undertakings and activities.
  - Schedule work to avoid wet, windy and rainy periods (and heed weather advisories).
  - Regularly inspect and maintain the erosion and sediment control measures and structures during all phases of the works, undertakings and activities.

- Use biodegradable sediment control materials whenever possible.
- Keep the erosion and sediment control measures in place until all disturbed ground has been permanently stabilized.
- Remove all sediment control materials once the site has been stabilized.
- Operate machinery on wharf or land.
- Monitor the watercourse to observe signs of sedimentation during all phases of the work, undertaking or activity and take corrective action.
- Dispose and stabilize all excavated material above the ordinary high water mark of nearby waterbodies to prevent entry in the water.

#### **Deposit of Deleterious Substances (including suspended sediment)**

- Develop and immediately implement a response plan to avoid a deleterious substances from entering a waterbody.
  - Stop works, undertakings and activities in the event of a spill of a deleterious substance.
  - Immediately report any spills (e.g., sewage, oil, fuel or other deleterious material), whether near or directly into a water body.
  - Keep an emergency spill kit on site during all phases of the works, undertakings and activities.
  - Contain water with deleterious substances.
  - Ensure clean-up measures are suitably applied so as not to result in further alteration of the bed and/or banks of the watercourse.
  - Clean-up and appropriately dispose of water contaminated with deleterious substances.
  - Maintain all machinery on site in a clean condition and free of fluid leaks.
  - 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.
  - Dispose of all waste material (e.g., construction, demolition, commercial logging) above the high water mark of nearby waterbodies to prevent entry into the watercourse.
  - Ensure that building material used in a watercourse has been handled and treated in a manner to prevent the release or leaching of substances into the water that may be deleterious to fish.
  - Plan activities near water such that materials such as paint, primers, blasting abrasives, rust solvents, degreasers, grout, poured concrete or other chemicals do not enter the watercourse.

We also recommend you implement the mitigation measures outlined in the request for review form signed by Scott Burley, dated July 26, 2021 specifically:

- A marine mammal and leatherback sea turtle safety zone must be established at the work site. The safety zone shall consist of a circle with a radius of at least 500 meters as measured from the center of the work site. If marine mammals or sea turtles are observed within the safety zone while in-water activities are underway, all activities must cease until the marine mammals, sharks or sea turtles leave the safety zone and are not observed within the

safety zone for a minimum period of 30 minutes. Work may start or restart if marine mammals or sea turtles are not observed within the safety zone within the 30 minute period. Regular watch of the safety zone shall occur at all other times.

- Ensure that all waste material will be disposed of in an environmentally responsible manner, and in accordance with provincial, territorial, municipal legislation.
- Ensure all construction material and debris does not become waterborne.
- Water contamination by preservative treated wood:
  - Preservative treated lumber and timber, whether plant or site treated, shall be cured for a minimum of 30 days from date of the treatment application before their installation in areas which will be in contact with the water.
  - Do not cut treated lumber over the surface of a watercourse or wetland.
  - Do not use liquid applied preservative products over the surface of a watercourse or wetland.
  - Wood treated with chromate copper arsenate or ammoniac copper zinc arsenate must be Canadian Standards Association or American Wood Preserver Association approved.
  - Do not use timber and lumber treated with creosote, petroleum, or pentachlorophenol for any part of the work.

Aquatic Invasive Species (AIS) are fish, invertebrate or plant species that have been introduced into an aquatic environment outside of their natural range and can result in harm to the indigenous species and subject to the Aquatic Invasive Species Regulations. The Program cannot confirm what, if any, AIS may exist at your project site at this time, however, it is important to ensure that you are taking any necessary measures to prevent the spread of AIS. Additional information on AIS can be found at this following link: <http://www.dfo-mpo.gc.ca/species-especes/ais-eae/about-sur/index-eng.html>

Provided that you incorporate these measures into your plans, the Program is of the view that your proposed project is not likely to result in the contravention of the above-mentioned prohibitions and requirements.

Should your plans change or if you have omitted some information in your proposal, further review by the Program may be required. Consult our website (<http://www.dfo-mpo.gc.ca/pnw-ppe/index-eng.html>) or contact the Program determine if further review may be necessary. It remains your responsibility to remain in compliance with the *Fisheries Act*, the *Species at Risk Act* and the *Aquatic Invasive Species Regulations*.

It is also your *Duty to Notify* DFO if you have caused, or are about to cause, the death of fish by means other than fishing and/or the harmful alteration, disruption or destruction of fish habitat. Such notifications should be directed to (<http://www.dfo-mpo.gc.ca/pnw-ppe/contact-eng.html>).

We recommend that you notify this office at least 10 days before starting your project and that a copy of this letter be kept on site while the work is in progress. It remains your responsibility to meet all other federal, territorial, provincial and municipal requirements that apply to your proposal.

Please note that the advice provided in this letter will remain valid for a period of 2 years from the date of issuance. If you plan to execute your proposal after the expiry of this letter, we recommend that you contact the Program to ensure that the advice remains up-to-date and accurate. Furthermore, the validity of the advice is also subject to there being no change in the relevant aquatic environment, including any legal protection orders or designations, during the 2 year period.

If you have any questions with the content of this letter, please contact Colleen Smith at our Dartmouth office at 902-293-7834 or by email at [Colleen.Smith@dfo-mpo.gc.ca](mailto:Colleen.Smith@dfo-mpo.gc.ca). Please refer to the file number referenced above when corresponding with the Program.

Yours sincerely,

Colleen Smith  
Senior Biologist, Regulatory Reviews  
Fisheries and Oceans Canada, Ecosystem Management

cc:  
DFO Conservation and Protection Program