



IMPACT ASSESSMENT ACT - SIGNIFICANCE OF ENVIRONMENTAL EFFECTS DETERMINATION (SEED) FORM BASIC **OR** NON-BASIC PROJECT

The purpose of this form is to summarize and document the significant adverse environmental effects of a project as per s.82 of the *Impact Assessment Act* (IAA). Consult the Basic/Non-Basic Project Requirements (s 3.6 of Departmental Procedure) for details and follow the SEED Guidelines (Entry Instructions & Linkages to PATH Record Keeping and IAA Registry). All completed and signed SEED documents shall be uploaded to PATH and the SCHED drive.

GENERAL INFORMATION

1. Project Title: Small Boat Basin Construction, Cartwright, NL	
2. Proponent: Fisheries and Oceans Canada-Small Craft Harbours (DFO-SCH)	
3. Other Contacts: Public Services and Procurement Canada (PSPC)	4. Role of each contact: OGD Consultant
5. Source (Contact): Paul Curran, Regional Engineer, DFO-SCH	
6. Received Date or Assessment Start Date: July 29, 2021	
7. PATH No(s):	8. DFO File No: 723335
9. EKME File No.:	10. Canadian Impact Assessment Registry Reference No.: 82851

PROJECT DESCRIPTION AND JUSTIFICATION

11. Project Location: The proposed Project is located within the waters of Favorite Tickle, at coordinates 55° 42' 14.71" N, 57° 01' 13.75" W (WGS84). The nearest community is Cartwright; located on Highway 516 and is accessible by air, land or ferry. A map and photo of the project location are provided in Appendix A.
12. Project Summary: The proposed Project involves the construction of a small boat basin, including dredging, construction of the service/laydown area, and floating dock placement. This Project is a continuation of work to replace the marginal wharf (primarily treated timber) with a steel sheet piling wharf. The proposed service/laydown area, measuring approximately 2,940 m ² , will be constructed north of the main Project site. A new drainage ditch will be constructed between the new service/laydown area and existing road to divert storm water runoff. Approximately 8,250 m ³ of sediment will be dredged from an area of approximately 6,000 m ² to allow for the installation of timber cribwork and to provide adequate draft for vessels. A portion of the dredged materials (approximately 1,790 m ³) will be used to infill the service/laydown area, thereby forming the bottom layer of the area. The remaining dredge materials will be disposed of at an approved facility. New materials such as geogrid, geotextile and rock fill, as well as Class A and Class B material will be placed to form the new service/laydown area and access road. Rip rap material will be installed along the side slopes of the drainage ditch, timber crib and launch way. The new berm will be topped with perimeter stones. A concrete topped timber boat launch will be constructed adjacent to the new service/laydown area and floating docks equipped with head blocks will be placed within the new service/laydown area.
13. Review of Alternatives: N/A



PROJECT REVIEW

14. Rationale for the Application of Section 82 of IAA:

Project is on federal land and;

- ☒ DFO-SCH is proposing the project, as the proponent
- ☐ DFO-SCH is proposing to issue *Fisheries Act* Authorization, *Species at Risk Act* Permit or other regulatory approval
- ☐ DFO-SCH is proposing to provide financial assistance to another party to enable the project to proceed
- ☐ DFO-SCH is proposing to grant a license or interest in federal land to enable the project to proceed
- ☐ Other

15. Primary Authority and Rationale for Involvement: DFO-SCH is the proponent

16. Other Authorities and Rationale for Involvement: Transport Canada – Navigation Protection Program (*Navigation Protection Act*) and Environmental Affairs and Aboriginal Consultation Unit.

17. Other Contacts and Nature of Response:

Fisheries and Oceans Canada – Fish and Fish Habitat Protection Program (DFO FFHPP)

DFO FFHPP reviewed the project and provided advice regarding the Implementation Measures to Avoid and Mitigate the Potential for Prohibited Effects to Fish and Fish Habitat. It was determined that the project is not likely to result in Serious Harm to fish and fish habitat provided that mitigations are implemented (Appendix B).

Newfoundland and Labrador Department of Environment, Climate Change and Municipalities, Water Resources Management Division (NLDECCM WRMD)

NLDECCM WRMD issued a Permit to Alter a Body of Water for dredging and infilling components of the project (Appendix B). SCH is currently engaged in discussions with NLDECCM WRMD regarding dredge volume limitations.

Service NL (SNL)

SNL approved the disposal of dredged material at an approved landfill (Appendix B).

18. Nature of Project:

- | | | |
|--|---|---|
| <input type="checkbox"/> Building and Property Development | <input type="checkbox"/> Remediation and conservation | <input type="checkbox"/> Airport and Airfields |
| <input type="checkbox"/> Mines and Minerals | <input type="checkbox"/> Maintenance Activities (fences, walls) | <input type="checkbox"/> Dams and Reservoirs |
| <input checked="" type="checkbox"/> Ports and Harbours | <input type="checkbox"/> Nuclear Energy | <input type="checkbox"/> Railways |
| <input type="checkbox"/> Oil and Gas | <input type="checkbox"/> Bridges | <input type="checkbox"/> Hydroelectric Energy |
| <input type="checkbox"/> Highways and Roads | <input type="checkbox"/> Waste Management | <input type="checkbox"/> Alternative Energy |
| <input type="checkbox"/> Water Management | <input type="checkbox"/> Agriculture | <input type="checkbox"/> Other, not otherwise specified |
| <input type="checkbox"/> Recreation and Tourism | <input type="checkbox"/> Forestry | |



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

Project Description

Construction/Installation

The proposed Project will consist of boat storage/laydown area and boat launch construction as well as the installation of headblocks and floating docks. A new drainage ditch will be constructed to divert storm water runoff. The boat storage/laydown area, measuring approximately 2,940 m², will be topped with gravel and protected by perimeter stones. The boat launch will consist of timber cribbing and will be topped with concrete. It will be constructed adjacent to the boat storage/laydown area. Rip rap will be installed along the side slopes of the ditch, timber crib and launchway. Head blocks with floating docks will also be installed within the new boat storage/laydown area. Standard construction methods and heavy equipment are anticipated to be used for this Project.

Dredging

The project will also involve dredging to allow for the installation of cribwork and floating docks as well as adequate draft for smaller vessels in the new boat service/laydown area. Approximately 8,250 m³ of sediment will be dredged immediately south of the service/laydown area. Some of the dredge spoils (approximately 1,790 m³) will be reused in the uplands service/laydown area development and the remainder will be transported to a landfill for disposal. It is anticipated that equipment such as excavators, dump trucks and loaders will be used for dredging. To reach the dredge area, a floating barge or a temporary access road will be utilized. It should be noted that the final decision on dredging methods will be determined by the successful contractor and executed upon approval by the DFO representative.

Schedule

The proposed work is expected to commence Fall 2021, pending funding and approvals. The work is expected to be completed within 52 weeks.

Operation / Maintenance

DFO-SCH's Environmental Management Plan (EMP) and site-specific Emergency Response Plans cover operational aspects of environmental management at Small Craft Harbour facilities and constitute the basis for the environmentally responsible management of harbour operations (i.e., fuelling, waste disposal, activities at the property and on the water). The proposed physical works will adhere to these environmental management standards established by DFO-SCH. The proposed project is intended to improve continued operations at the Cartwright SCH.

Maintenance of the boat storage/laydown area, boat launch, floating docks with head blocks and the dredged area for smaller vessels will be conducted on an as-needed basis and will undergo separate impact assessment and legislative review as future stand-alone project(s).

Environmental effects resulting from the operation and maintenance of the proposed physical works are not considered further in this assessment.

Abandonment / Decommissioning

There is currently no plan to decommission or abandon the Cartwright SCH. The very nature of the proposed project is intended to ensure the viability and safety of the harbour facility primarily for commercial fisheries and navigation.

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 DFO policies. The decommissioning of facilities would undergo separate impact assessment and legislative review as future stand-alone project.

Environmental effects resulting from the abandonment or decommissioning of the proposed physical works or the SCH facility are not considered further in this assessment.

Accidents and Malfunctions

Accidents and malfunctions have the potential to occur when undertaking a physical activity. Potential environmental effects resulting from accidents and malfunctions over the course of the proposed project are, therefore, considered in this assessment.



ENVIRONMENTAL SETTING

20. Environment Description:

Physical Environment

The Project is located in the waters of Favourite Tickle, situated in the harbour in Cartwright at coordinates 55° 42' 14.71" N, 57° 01' 13.75" W (WGS84). The Project is located within the marine environment. The immediate shoreline consists of shoreline protection riprap, small docks, an infill area, and a sewage outfall pipe protected by a rock berm. There is also a fish plant and Woodward's Group of Vessels docking facilities in the area. A topographic map and site photo are provided in Appendix A.

Marine sediment sampling was previously conducted in the Project area to characterize sediment in the vicinity of the marginal wharf and the service area. Sediment sample analysis included but was not limited to petroleum hydrocarbons (PHCs), polycyclic aromatic hydrocarbons (PAHs) and metals. Sampling was conducted in two events: the first in June 2018 and the second in November 2018. The June 2018 sampling event involved collection in the vicinity of the marginal wharf (three (3) samples) and in the vicinity of the service area (three (3) samples). Of the six samples collected, one sample contained PHC concentrations in exceedance of Canadian Council of Ministers of the Environment (CCME) industrial soil quality guidelines (SQGs) and two samples contained PAH concentrations in exceedance of CCME human health guidelines. It should be noted that all other samples collected during the June 2018 event met applicable guidelines. A total of 12 samples were collected in front of the marginal wharf during the November 2018 event. Results from sediment analysis revealed that two samples contained concentrations of PAHs in exceedance of the CCME human health guideline. All samples (i.e., from both sampling events) collected in the area in front of the marginal wharf exceeded various Interim Sediment Quality Guidelines (ISQGs) and Probable Effect Levels (PELs) for PAHs. It should be noted that several samples also exceeded ISQGs for metals.

Canadian Climate Normals (1981-2010) for the Cartwright weather station (53° 42' 30" N, 57° 02' 06" W) indicate that the project area receives an average of 616.8 mm of rain and 462 cm of snow annually. Extreme precipitation events of up to 88.9 mm and extreme snow depths of 351 cm have been recorded. Temperatures range from an extreme minimum of -37.8°C to an extreme maximum of 36.1°C. The daily average temperature for the Cartwright weather station is 0.0°C.

Biological Environment

A number of wildlife species can be found in the vicinity of the general Project area. These species include moose, black bear, polar bear, caribou, seal (various species) and whale (various species). Additionally, a variety of bird species are present in the vicinity of the Project area, including several species of waterfowl, seabirds, shorebirds, and passerines. Due to the nature of the Project activities, a variety of marine fish species exist in the vicinity of the Project area. Marine fish species include shellfish (i.e., scallop, urchin and mussels), pelagics (i.e., capelin and herring) and groundfish (i.e., flounder, cod, skate and sculpin).

Work conducted by PSPC for a previous project involved taking benthic video in an area adjacent to the Project site. Video footage revealed the area had a soft, sandy bottom, including small amounts of small to medium sized rock. Kelp, mussels and mollusks (snails) were also observed in the video.

Species at Risk (Aquatic and Terrestrial)

The Project will occur within the range of several Species at Risk, all of which fall under the birds and mammals taxonomic groups. Bank Swallow (*Riparia riparia*), Ivory Gull (*Pagophila eburnea*), Harlequin Duck (*Histrionicus histrionicus*), Rusty Blackbird (*Euphagus carolinus*), Short-eared Owl (*Asio flammeus*) and Peregrine Falcon (*anatum/tundrius*) are known the region but significant information on populations is unavailable.

Bank Swallow is an insectivorous passerine that breeds in areas of sandy vertical slopes, often on the edge of waterbodies. Ivory Gull breeds in the high Arctic and would therefore only possibly interact with the Project during winter when pack ice exists off the coast. Harlequin Duck breeds in fast-moving mountain rivers but would possibly use the marine environment around Cartwright at other times of year before and after breeding. Rusty Blackbird, a (terrestrial) passerine breeds in treed wetlands, of which there would be none in proximity to the Project so interactions with this SAR would be highly unlikely. Short-eared Owl prefers vast, open habitats, including meadows, marshes, bogs, tundra, heathlands, and agricultural areas. Given the coastal nature of the Project, it is unlikely Short-eared Owl would have any



interaction with construction or operational activities. Peregrine Falcon is known to breed on cliffs along the coast of Labrador and on major rivers. The Project involves a small boat basin adjacent to the existing coastal infrastructure of Cartwright, which would be unsuitable habitat for Peregrine Falcon nesting. Hunting opportunities would remain unchanged for any individuals using the area.

Little Brown Bat (*Myotis lucifugus*) and Northern Myotis (*Myotis septentrionalis*) are both bat Species at Risk that are possibly using the forests, wetlands, and waterbodies around Cartwright. However, given the marine/coastal nature of the Project, interactions are unlikely. Polar bear (*Ursus maritimus*) is known from a wide range along the coast of Labrador, but the Cartwright area is not of particular significance to this species.

Human Environment

Cartwright is a small, remote community along the southern coast of Labrador. It is home to approximately 550 residents. The main industry in Cartwright is the crab fishery. The processing facility is located on the immediate shoreline of the Project area. An aerial photo of the Project area (Appendix A) indicates that the adjacent land use is industrial/commercial.

OTHER CONSIDERATIONS

21. Adverse Impact on the rights of Indigenous People of Canada:

PSPC and Transport Canada carried out an Indigenous Assessment on behalf of DFO-SCH at Cartwright SCH in accordance with DFO-SCH's Preliminary Duty to Consult Assessment Guide. This Guide is intended to provide basic information to DFO-SCH and to assist its Program Managers in making informed, prudent decisions that take into account statutory and other legal obligations, as well as policy objectives, related to Indigenous and treaty rights. The Supreme Court of Canada has held that the Crown has a duty to consult and, where appropriate, accommodate when the Crown contemplates conduct that might adversely impact potential or established Indigenous or treaty rights. While there may be other reasons to undertake consultations (e.g., good governance, policy-based, etc.), three elements are required for a legal duty to consult to arise:

1. There is contemplated or proposed Crown conduct.
2. The Crown has knowledge of potential or established Indigenous or treaty rights.
3. The potential or established Indigenous or treaty rights may be adversely impacted by the Crown.

Based on a preliminary assessment conducted by PSPC, on behalf of DFO-SCH and in conjunction with Transport Canada, provided an offer to consult with Aboriginal groups potentially affected by the Project.

On October 2, 2018, a notification letter was sent to President Todd Russell of the NunatuKavut Community Council. The letter provided a brief description of the proposed project and an offer to provide input during the environmental effects review process. No response has been received to date.

22. Indigenous knowledge provided in respect of the project:

Given the small scale, the temporal and spatial bounds and the current environmental setting of the proposed works, Indigenous Knowledge was not sought for this project.

23. Community knowledge provided in respect of the project:

Given the small scale, the temporal and spatial bounds and the current environmental setting of the proposed works, public consultation beyond that already discussed (Section 21) was not deemed warranted. Any available community knowledge is discussed in the applicable Environmental Description setting (Section 20).

24. Summary of public notification:

The project was posted to the public Navigation Protection Project Registry on July 28, 2021, and the public *Impact Assessment Act* Registry on July 29, 2021. Both notices were posted for the required 30-day public comment period.



ENVIRONMENTAL EFFECTS AND MITIGATION MEASURES

25. Evaluation of Environmental Effects and Determination of Significance:

Methodology

The environmental effects evaluation methodology used in this form focuses the evaluation of those environmental components of greatest concern. Other concerns identified should also be added on to the existing form. The Valued Components (VCs) most likely to be affected by the project as described are indicated in *Table 1: Potential Project / Environment Interactions Matrix*. VCs were selected based on ecological importance to the existing environment, the relative sensitivity of environmental components to project influences and their relative social, cultural or economic importance. The potential impacts resulting from the interactions are also identified in Table 1 as positive or negative in nature.

Gender-based Analysis Plus (GBA+) provides a framework to describe the full scope of potential positive and negative effects under the *Impact Assessment Act*. The application of GBA+ to impact assessment seeks to understand, describe and, where possible, mitigate adverse impacts on diverse populations. GBA+ is an analytical tool that will be utilized during the undertaking of this assessment as per the guidance provided by the IAA on *Gender-based Analysis Plus in Impact Assessment*. As such, the intention is to ensure that, as applicable, multiple community-relevant, diverse subgroups have been considered and proposed mitigation, where relevant, clearly addresses any issues identified.

The VC interactions identified in Table 1 must be supplemented with a determination of significance for each resulting effect in order to assign adequate measures to mitigate a negative effect if negative and, if possible, enhance a positive effect. The significance of project-related impacts is determined in consideration of the impact's frequency, duration, and geographical extent as well as magnitude relative to natural or background levels, and whether they are reversible in nature. These criteria are described in *Table 2: Assessment Criteria for Determination of Significance*.

A description of each potential effect, its projected significance and assigned mitigation measures are detailed in Table 3 of Section 26.

The evaluation of effects, the determination of significance of the environmental effects and assignment of mitigation measures are all based on:

- information provided by the proponent;
- a review of project related activities;
- an appraisal of the environmental setting, and identification of resources at risk;
- the identification of potential impacts within the temporal and spatial bounds;
- community / indigenous knowledge;
- professional judgement of the assessor; and
- specialist advice/knowledge from experts.

Scoping

This environmental effects evaluation considers the full range of project / environment interactions and the environmental factors that could be affected by the project as defined above and the significance. The proposed project is anticipated to commence within the aforementioned timeframe; however, this timeline is subject to approvals and funding. As such, the temporal scope for the proposed project cover a 5-year period from the time of this assessment in order to account for this uncertainty. This assessment should, therefore, be considered accurate until August 20, 2026 unless a review of the information presented in this assessment prior to the end of the 5-year period prompts a re-assessment to ensure accuracy (e.g., legislative changes, changes in physical, biological, socio-economic features, input from ongoing Indigenous consultations, etc.).

As previously noted, physical activities such as maintenance, repair, replacement, or decommissioning of the proposed physical works are subject to their own stand-alone assessment at the time of need, therefore, are not considered further in this assessment.

Environmental effects of the project on navigation are taken into consideration as part of the SEED 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 SEED, but any measures necessary to mitigate direct effects will be included as terms and conditions associated with work approved or permitted pursuant to the *Canadian Navigable Waters Act (CNWA)*.



Table 1: Potential Project / Environment Interactions Matrix (Note, this is a reductive list of the scope of effects to consider. Include in the Matrix and other scopes applicable and refer to definition of Environment and Environmental Effects as noted in the Departmental Guidance). Also if an FA and/or SARA Permit is required, the project is considered Non-Basic.

Valued Components (VCs)	Section 7(1)(a) (Environmental Legislation)			Section 7(1)(c) and (d) (Indigenous Interests)				Other Impacts & Due Diligence											
	Fish (Fisheries Act)	SARA	Birds (MBCA)	Physical and Cultural Heritage	Land and Resource Use for Traditional Purposes	Structure, Site, or Thing of HAPA Significance	Health, Social or Economic Conditions	Physical and Cultural Heritage	Structure, Site, or Thing of HAPA Significance	Health, Social or Economic Conditions	Water (marine, ground, surface, drainage, water levels, flow etc.)	Wetlands	Terrestrial Species* and Habitat	Aquatic Species* and Habitat	Terrestrial Soils	Marine Sediments	Air Quality	Sensory Disturbance (air/water, noise and vibration)	Others (i.e. land/landscapes)
Small Boat Basin Construction, Cartwright, NL																			
Construction/Installation	-						-			-	-			-		-	-	-	
Dredging	-						-			-	-			-		-	-	-	
Accidents / Malfunctions	-						-			-	-			-		-			

*Non-Species at Risk

HAPA = Historical, Archaeological, Paleontological or Architectural

N/A = Not Applicable

“+” = potential positive interaction; “-“ = potential negative interaction; “+/-“ = potential positive and negative interactions.



Table 2: Assessment Criteria for Determination of Significance

Magnitude	Magnitude, in general terms, may vary among issues, but is a factor that accounts for size, intensity, concentration, importance, volume and social or monetary value. It is rated as compared with background conditions, protective standards or normal variability.	
	Small	Relative to natural or background levels
	Moderate	Relative to natural or background levels
	Large	Relative to natural or background levels
Reversibility	Reversible	Effects can be reversed
	Irreversible	Effects are permanent
Geographic Extent	Immediate	Confined to project site
	Local	Effects beyond immediate project site but not regional in scale
	Regional	Effects on a wide scale
Duration	Short-term	Between 0 and 6 months in duration
	Medium-term	Between 6 months and 2 years
	Long-term	Beyond 2 years
Frequency	Once	Occurs only once
	Intermittent	Occurs occasionally at irregular intervals
	Continuous	Occurs on a regular basis and regular intervals



26. Potential Environmental Effects and Mitigation Measures for the Project: *(List the effect and its mitigation measures of the work, including factors such as Habitat compensation, SARA, Migratory Birds Act, etc., if applicable. Mitigation measures are to be technically and economically feasible. Be consistent with the information provided in the IAA Mitigation Monitoring Form.). Only carry-forward Valued Components and describe interactions listed in Table 1.*

Table 3: Description and Significance of Potential Environmental Effects and Recommended Mitigation Measures

Potential Environmental Effects	Mitigation Measures
Valued Component: Fish	
<p>Construction/Installation:</p> <ul style="list-style-type: none"> Sedimentation as a result of construction activities may negatively affect fish and quality of potential fish habitat within the Project site. <i>Significance: Small, Reversible, Immediate, Short-term, and Intermittent.</i> Marine sediments are impacted with PHCs and PAHs. Improper handling of impacted sediment has the potential to negatively impact fish and fish habitat. <i>Significance: Small, Reversible, Immediate, Short-term, and Intermittent.</i> Disturbance of fish species from equipment use in the marine environment. <i>Significance: Moderate, Reversible, Local, Short-term, and Intermittent.</i> Project activities will result in the destruction of potential fish habitat. <i>Significance: Moderate, Reversible, Immediate, Medium-term, and Once.</i> <p>Dredging:</p> <ul style="list-style-type: none"> Sedimentation as a result of construction activities may negatively affect fish and quality of potential fish habitat within the Project site. <i>Significance: Small, Reversible, Immediate, Short-term, and Intermittent.</i> Marine sediments are impacted with PHCs and PAHs. Improper handling of impacted sediment has the potential to negatively impact fish and fish habitat. <i>Significance: Small, Reversible, Immediate, Short-term, and Intermittent.</i> Disturbance of fish species from equipment use in the marine environment. <i>Significance: Moderate, Reversible, Local, Short-term, and Intermittent.</i> Temporary alteration of fish habitat from the removal of benthic sediments within the dredge footprint. <i>Significance: Moderate, Reversible, Immediate, Medium-term, and Once.</i> Project activities will result in the destruction of potential fish habitat. <i>Significance: Moderate, Reversible, Immediate, Medium-term, and Once.</i> <p>Accidents/Malfunions:</p> <ul style="list-style-type: none"> Release of hazardous materials and/or heavy machinery fuel/fluids into waterway. <i>Significance: Moderate, Reversible, Immediate, Short-term, and Once.</i> 	<ul style="list-style-type: none"> Limit the duration of in-water works to only activity related to the project elements so that it does not diminish the ability of fish to carry out one or more of their life processes (spawning, rearing, feeding, migrating). Conduct in-water undertakings and activities during periods of low tide and low wind/wave conditions. Implement erosion and sedimentation controls as needed to avoid the introduction of sediment into any waterbody during all phases of work <ul style="list-style-type: none"> Install effective erosion and sediment control measures prior to beginning work in order to stabilize all erodible areas; Regularly inspect and maintain the erosion and sediment control measures and structures during all phases of the project; Regularly monitor the watercourse for signs of sedimentation during all phases of the project and take corrective action; Keep the erosion and sediment control measures in place until all disturbed ground has been permanently stabilized; Remove all exposed, non-biodegradable sediment control materials once the site is stabilized; Schedule work to avoid wet, windy, and rainy periods that may result in high flow volumes and/or increase erosion and sedimentation; Minimize the amount of dredged material removed by only dredging to the area and depth required; Dredged or excavated material may be re-used for the laydown area as described, i.e., placed/capped within a rock berm. However, any un-used dredge spoils should be disposed of at an approved site above the high water mark of any waterbody. If necessary, adequate sedimentation and erosion control measures should be deployed around stored dredge material; Operate machinery on land in stable, dry areas or from stable floating platforms. All materials placed in or near water should be clean and free of fines or any other deleterious substance and of sufficient size to resist displacement by wave action. Dredge material may be re-used for the laydown area provided it is placed/capped within a rock berm to avoid sedimentation. Armour stone should be blocky, angular shape and comprised of mixed gradation so that the smaller rock fill the voids between the larger rock to provide compaction and stability. Rock material should not be end dumped; rather, it should be placed on station using an excavator or similar equipment. When works are completed, shoreline and approaches should be restored to original condition.



	<ul style="list-style-type: none">• Be aware of AIS species in the area and take precautions with respect to any vessel traffic and gear movement between affected and unaffected areas to prevent introductions and spread:<ul style="list-style-type: none">◦ All equipment used in water should be cleaned, drained and dried on land before and after use for the purposes of preventing the introduction or spread of aquatic invasive/non-indigenous species; and◦ Report any AIS and non-indigenous species to DFO at 1-855-862-1815 or AISEAE.XNFL@dfo-mpo.gc.ca.• Cement will be poured and formed away from the shoreline to reduce the potential of runoff or an accidental release of concrete mixture to the marine environment.• On site, crews must have emergency spill clean-up equipment adequate for the activity involved, and it must be on site. Spill equipment will include, as a minimum, at least one 250 L (i.e., 55 gallon) overpack spill kit containing items to prevent a spill from spreading; absorbent booms, pillows, and mats; rubber gloves; and plastic disposal bags. All spills or leaks must be promptly contained, cleaned up, and reported to the 24-Hour Environmental Emergencies Report System (1-800-565-1633). Note that this applies to spills to the aquatic environment or anything on land over 70 litres (L).
Valued Component: Health, Social or Economic Conditions	
<p>Construction/Installation:</p> <ul style="list-style-type: none">• Potential for safety hazards to workers during construction activities. <i>Significance: Small, Reversible, Immediate, Short-term, and Intermittent.</i>• Marine sediments are impacted with PHCs and PAHs. Improper handling of impacted sediment has the potential to negatively impact human health. <i>Significance: Small, Reversible, Immediate, Short-term, and Intermittent.</i> <p>Dredging:</p> <ul style="list-style-type: none">• Potential for safety hazards to workers during dredging. <i>Significance: Small, Reversible, Immediate, Short-term, and Intermittent.</i>• Marine sediments are impacted with PHCs and PAHs. Improper handling of impacted sediment has the potential to negatively impact human health. <i>Significance: Small, Reversible, Immediate, Short-term, and Intermittent.</i> <p>Accidents/Malfunions:</p> <ul style="list-style-type: none">• Accidental release of PHC and PAH impacted sediment. Improper handling/cleanup of impacted sediment has the potential to negatively impact human health. <i>Significance: Moderate, Reversible, Immediate, Short-term, and Once.</i>	<ul style="list-style-type: none">• Site access must be restricted to authorized personnel only.• 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.• Develop a response plan that is to be implemented 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.<ul style="list-style-type: none">◦ On site, crews must have emergency spill clean-up equipment adequate for the activity involved, and it must be on site. Spill equipment will include, as a minimum, at least one 250 L (i.e., 55 gallon) overpack spill kit containing items to prevent a spill from spreading; absorbent booms, pillows, and mats; rubber gloves; and plastic disposal bags. All spills or leaks must be promptly contained, cleaned up, and reported to the 24-Hour Environmental Emergencies Report System (1-800-565-1633). Note that this applies to spills to the aquatic environment or anything on land over 70 litres (L).• Weather conditions are to be assessed on a daily basis to determine the risk of extreme weather in the project area. Avoid work during periods which Environment and Climate Change Canada has issued rainfall or wave warning for the work area.• Excess dredged spoils are to be transported to an approved waste disposal site.
Valued Component: Water (marine, ground, surface, drainage, water levels, flow, etc.)	
<p>Construction/Installation:</p> <ul style="list-style-type: none">• Sedimentation as a result of construction activities may negatively affect water quality at the immediate Project site. <i>Significance: Small, Reversible, Immediate, Short-term, and Intermittent.</i>• Construction activities taking place near the shoreline may result in runoff/erosion. <i>Significance: Small, Reversible, Immediate, Short-term, and Intermittent.</i>	<ul style="list-style-type: none">• 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 water quality.• An Erosion and Sediment Control Plan will be developed for the site that minimizes risk of sedimentation to the marine environment.• Construction material and debris are not to become waterborne. Do not dispose of any materials or waste into marine environment.



<ul style="list-style-type: none"> Construction-related refuse may be deposited in the waterbody, decreasing marine water quality. <i>Significance: Small, Reversible, Immediate, Short-term, and Intermittent.</i> Disturbance of fish species from equipment use in the marine environment. <i>Significance: Moderate, Reversible, Local, Short-term, and Intermittent.</i> <p>Dredging:</p> <ul style="list-style-type: none"> Sedimentation as a result of dredging may negatively affect water quality at the immediate Project site. <i>Significance: Small, Reversible, Immediate, Short-term, and Intermittent.</i> Construction-related refuse may be deposited in the waterbody, decreasing marine water quality. <i>Significance: Small, Reversible, Immediate, Short-term, and Intermittent.</i> <p>Accidents/Malfuncions:</p> <ul style="list-style-type: none"> Release of hazardous materials and/or heavy machinery fuel/fluids into waterway. <i>Significance: Moderate, Reversible, Immediate, Short-term, and Once.</i> 	<ul style="list-style-type: none"> Cement will be poured and formed away from the shoreline, to reduce the potential of runoff or an accidental release of concrete mixture to the marine environment. Any hazardous materials produced as a result of this project are to be transported off-site for disposal/treatment at an approved waste handling facility, pursuant to applicable provincial and federal regulations/legislation. All equipment to be used in or over the marine environment is to be free from leaks or coating of hydrocarbon-based fluids and/or lubricants harmful to the environment. Hoses and tanks are to be inspected on a regular basis to prevent fractures and breaks. On site, crews must have emergency spill clean-up equipment adequate for the activity involved, and it must be on site. Spill equipment will include, as a minimum, at least one 250 L (i.e., 55 gallon) overpack spill kit containing items to prevent a spill from spreading; absorbent booms, pillows, and mats; rubber gloves; and plastic disposal bags. All spills or leaks must be promptly contained, cleaned up, and reported to the 24-Hour Environmental Emergencies Report System (1-800-565-1633). Note that this applies to spills to the aquatic environment or anything on land over 70 litres (L). All materials placed in or near water should be clean and free of fines or any other deleterious substance and of sufficient size to resist displacement by wave action. Dredge material may be re-used for the laydown area provided it is placed/capped within a rock berm to avoid sedimentation. Rock material should not be end dumped; rather, it should be placed on station using an excavator or similar equipment. When works are completed, shoreline and approaches should be restored to original condition.
<p>Valued Component: Aquatic Species and Habitat</p>	
<p>Construction/Installation:</p> <ul style="list-style-type: none"> Sedimentation as a result of construction activities may negatively affect aquatic species and quality of potential aquatic habitat within the Project site. <i>Significance: Small, Reversible, Immediate, Short-term, and Intermittent.</i> Smothering of sessile and slow-moving benthic species during infilling and placement of armour stone within the project footprint. <i>Significance: Small, Irreversible, Immediate, Short-term, and Intermittent.</i> Marine sediments are impacted with PHCs and PAHs. Improper handling of impacted sediment has the potential to negatively impact aquatic species and habitat. <i>Significance: Small, Reversible, Immediate, Short-term, and Intermittent.</i> Disturbance of aquatic species from equipment use in the marine environment. <i>Significance: Moderate, Reversible, Local, Short-term, and Intermittent.</i> Permanent loss of habitat used by aquatic species within the Project area. <i>Significance: Small, Irreversible, Immediate, Long-term, Once.</i> <p>Dredging:</p> <ul style="list-style-type: none"> Sedimentation as a result of dredging activities may negatively affect aquatic species and quality of potential aquatic habitat within the Project site. <i>Significance: Small, Reversible, Immediate, Short-term, and Intermittent.</i> Marine sediments are impacted with PHCs and PAHs. Improper handling of impacted sediment has the potential to negatively impact aquatic species and habitat. <i>Significance: Small, Reversible, Immediate, Short-term, and Intermittent.</i> 	<ul style="list-style-type: none"> 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 aquatic species and habitat. An Erosion and Sediment Control Plan will be developed for the site that minimizes risk of sedimentation to the marine environment. Construction material and debris are not to become waterborne. Do not dispose of any materials or waste into marine environment. Any hazardous materials produced as a result of this project are to be transported off-site for disposal/treatment at an approved waste handling facility, pursuant to applicable provincial and federal regulations/legislation. Cement will be poured and formed away from the shoreline, to reduce the potential of runoff or an accidental release of concrete mixture to the marine environment. Excess dredged spoils are to be transported to an approved waste disposal site. All equipment to be used in or over the marine environment is to be free from leaks or coating of hydrocarbon-based fluids and/or lubricants harmful to the environment. Hoses and tanks are to be inspected on a regular basis to prevent fractures and breaks. On site, crews must have emergency spill clean-up equipment adequate for the activity involved, and it must be on site. Spill equipment will include, as a minimum, at least one 250 L (i.e., 55 gallon) overpack spill kit containing items to prevent a spill from spreading; absorbent booms, pillows, and mats; rubber gloves; and plastic disposal bags. All spills or leaks must be promptly contained, cleaned up, and reported to the 24-Hour Environmental Emergencies Report System (1-800-565-1633). Note that this applies to spills to the aquatic environment or anything on land over 70 litres (L).



<ul style="list-style-type: none"> Disturbance of aquatic species from equipment use in the marine environment. Significance: <i>Moderate, Reversible, Local, Short-term, and Intermittent</i>. Temporary alteration of aquatic habitat from the removal of benthic sediments within the dredge footprint. Significance: <i>Moderate, Reversible, Immediate, Medium-term, and Once</i>. Permanent loss of habitat used by aquatic species within the Project area. Significance: <i>Small, Irreversible, Immediate, Long-term, Once</i>. <p>Accidents/Malfunctions:</p> <ul style="list-style-type: none"> Release of hazardous materials and/or heavy machinery fuel/fluids into waterway. Significance: <i>Moderate, Reversible, Immediate, Short-term, and Once</i>. 	<ul style="list-style-type: none"> All materials placed in or near water should be clean and free of fines or any other deleterious substance and of sufficient size to resist displacement by wave action. Dredge material may be re-used for the laydown area provided it is placed/capped within a rock berm to avoid sedimentation. Rock material should not be end dumped; rather, it should be placed on station using an excavator or similar equipment. When works are completed, shoreline and approaches should be restored to original condition.
<p>Valued Component: Marine Sediments</p>	
<p>Construction/Installation:</p> <ul style="list-style-type: none"> Construction activities at the site or natural events (e.g., rainfall) could result in erosion/sedimentation events. Significance: <i>Small, Reversible, Immediate, Short-term, and Intermittent</i>. Exposed soils may erode. Significance: <i>Small, Reversible, Immediate, Short-term, and Intermittent</i>. Marine sediments are impacted with PHCs and PAHs. Improper handling/transportation and disposal of impacted sediment has the potential to surrounding soils. Significance: <i>Small, Reversible, Immediate, Short-term, and Intermittent</i>. <p>Dredging:</p> <ul style="list-style-type: none"> Dredging activities at the site or natural events (e.g., rainfall) could result in erosion/sedimentation events. Significance: <i>Small, Reversible, Immediate, Short-term, and Intermittent</i>. Exposed dredge spoils may erode. Significance: <i>Small, Reversible, Immediate, Short-term, and Intermittent</i>. Marine sediments are impacted with PHCs and PAHs. Improper handling/transportation and disposal of dredge spoils has the potential to surrounding soils. Significance: <i>Small, Reversible, Immediate, Short-term, and Intermittent</i>. <p>Accidents/Malfunctions:</p> <ul style="list-style-type: none"> Release of hazardous materials and/or heavy machinery fuel/fluids into waterway. Significance: <i>Moderate, Reversible, Immediate, Short-term, and Once</i>. 	<ul style="list-style-type: none"> 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 aggregation of marine sediment. An Erosion and Sediment Control Plan will be developed for the site that minimizes risk of sedimentation to the marine environment. Construction material and debris are not to become waterborne. Do not dispose of any materials or waste into marine environment. Cement will be poured and formed away from the shoreline, to reduce the potential of runoff or an accidental release of concrete mixture to the marine environment. Any hazardous materials produced as a result of this project are to be transported off-site for disposal/treatment at an approved waste handling facility, pursuant to applicable provincial and federal regulations/legislation. Excess dredged spoils are to be transported to an approved waste disposal site. All equipment to be used in or over the marine environment is to be free from leaks or coating of hydrocarbon-based fluids and/or lubricants harmful to the environment. Hoses and tanks are to be inspected on a regular basis to prevent fractures and breaks. On site, crews must have emergency spill clean-up equipment adequate for the activity involved, and it must be on site. Spill equipment will include, as a minimum, at least one 250 L (i.e., 55 gallon) overpack spill kit containing items to prevent a spill from spreading; absorbent booms, pillows, and mats; rubber gloves; and plastic disposal bags. All spills or leaks must be promptly contained, cleaned up, and reported to the 24-Hour Environmental Emergencies Report System (1-800-565-1633). Note that this applies to spills to the aquatic environment or anything on land over 70 litres (L). All materials placed in or near water should be clean and free of fines or any other deleterious substance and of sufficient size to resist displacement by wave action. Rock material should not be end dumped; rather, it should be placed on station using an excavator or similar equipment. When works are completed, shoreline and approaches should be restored to original condition.
<p>Valued Component: Air Quality</p>	
<p>Construction/Installation:</p> <ul style="list-style-type: none"> Construction activities may result in nuisance effects due to an increase in dust. Significance: <i>Small, Reversible, Immediate, Short-term, and Intermittent</i>. 	<ul style="list-style-type: none"> Where feasible, mitigation measures, such as dust suppressors, will be implemented to reduce the potential for increased dust during Project activities. All construction materials shall be removed from the site upon project completion



<p>Dredging:</p> <ul style="list-style-type: none">• Dredging activities may result in nuisance effects due to an increase in dust. <i>Significance: Small, Reversible, Immediate, Short-term, and Intermittent.</i>• Marine sediments are impacted with PHCs and PAHs. Levels of PHCs in dredge sediments may result in a hydrocarbon odor. Improper storage and disposal of dredge spoils may result in unpleasant odours and provide annoyance to facility users, nearby residents, and visitors to the site. <i>Significance: Small, Reversible, Immediate, Short-term, and Intermittent.</i>	
Valued Component: Sensory Disturbance (air/water, noise, and/or vibration)	
<p>Construction/Installation:</p> <ul style="list-style-type: none">• Construction activities may result in nuisance effects due to an increase in dust and noise, and the use of heavy equipment. <i>Significance: Small, Reversible, Immediate, Short-term, and Intermittent.</i> <p>Dredging:</p> <ul style="list-style-type: none">• Dredging activities may result in nuisance effects due to an increase in dust and noise, and the use of heavy equipment. <i>Significance: Small, Reversible, Immediate, Short-term, and Intermittent.</i>	<ul style="list-style-type: none">• Project activities must be carried out during times acceptable to local authorities and smaller, less disruptive equipment will be used where possible.• Where feasible, mitigation measures, such as dust suppressors, will be implemented to reduce the potential for increased dust during Project activities.• 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.• All construction materials shall be removed from the site upon project completion.



27. Description of any Significant Adverse Environmental Effects of the project (after considering the application of mitigation measures):

Although the potential exists for short-term and/or medium-term environmental effects during the project, with the implementation of recommended mitigation measures no significant adverse effects are anticipated.

28. Cumulative Effects:

The proposed project under assessment is not projected to have any cumulative effects taking into consideration past and potential likely future projects. There are no other predicated effects that may result from the proposed activities. Project specific mitigation outlined in this assessment (Section 26) will be followed as well as proper safety procedures as per applicable municipal, provincial and federal regulations.

29. Climate Change/Sustainability:

Weather conditions should be assessed on a daily basis to determine the potential risks on the project activities. The Contractor is encouraged to consult Environment Canada's local forecast so that the construction work can be scheduled accordingly.

30. Fisheries Act, Species at Risk Act and/or Migratory Birds Convention Act permits or authorizations and general follow-up of the Mitigation Measures:

N/A

REFERENCES

31. References:

Environment and Climate Change Canada (ECCC). 2021. Canadian Climate Normals 1981-2010. Cartwright Climate Station, Newfoundland and Labrador. Accessed August 17, 2021.

https://climate.weather.gc.ca/climate_normals/results_1981_2010_e.html?searchType=stnProv&lstProvince=NL&txtCentralLatMin=0&txtCentralLatSec=0&txtCentralLongMin=0&txtCentralLongSec=0&stnID=6773&dispBack=0

Fisheries and Oceans Canada (DFO). 2018. Canadian Environmental Assessment Act (CEAA) 2012 Project Effects Determination Report: Wharf Replacement, Harbour Dredging, Service Area Construction – Cartwright, NL.

Important Bird Areas Canada (2020) Map Viewer. Accessed August 16, 2021.

<http://www.ibacanada.ca/mapviewer.jsp?lang=en>



CONCLUSION

32. Conclusion on Significance of Adverse Environmental Effects (Sections 82-83):

The DFO-SCH has evaluated the project in accordance with Section 82 of the *Impact Assessment Act*, 2019. On the basis of this evaluation, the department has determined that the project is not likely to cause significant adverse environmental effects with mitigation and therefore can proceed using mitigation measures as outlined.

Prepared by: _____

Date: _____

Name:

Title:

(Note: Insert only if applicable (i.e. third party consultant completing SEED))

Reviewed by: _____

Date: _____

Name:

Title:

Approved by: _____

Date: _____

Name:

Title:



DECISION

33. Fisheries and Oceans Canada – Small Craft Harbours (sign after all other Federal Authorities have signed)

- ☐ The project is not likely to cause significant adverse environmental effects, and DFO-SCH may exercise its power, duty or function.
- ☐ The project is likely to cause significant adverse environmental effects, and DFO-SCH has decided not to exercise its power, duty or function.
- ☐ The project is likely to cause significant adverse environmental effects, and DFO-SCH will refer the project to the Governor in Council to determine if the significant adverse environmental effects are justified in the circumstances

Approved by: _____

Date: _____

Name:

Title:



34. Transport Canada

Project Title:	Small Boat Basin – Cartwright, Labrador	
TC File No.:	2017-200037	
NPP File No.:	2017-200037	
Environmental Review Decision:		
Reviewed by:		
Signature:		Date:
Mailing Address:		
Tel:		
Fax:		
Email:		
Recommended by:		
Signature:		Date:
Approved By:		
Signature:		Date:



APPENDIX A

Map & Aerial Photograph of Project Location



	Small Boat Basin Construction	PAGE NO: 1	PREPARED BY:
	Cartwright, Newfoundland & Labrador	COORDINATE SYSTEM: NAD 83 UTM Zone 21	DATE: 07/09/2021



Figure 2 Aerial Photograph of Project Location.



APPENDIX B

Regulatory Approvals



Fisheries and Oceans
Canada

Pêches et Océans
Canada

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

July 8, 2021

Your file *Votre référence*

Our file *Notre référence*

18-HNFL-00495

Mr. Paul Curran, P. Eng.
Regional Engineer, Small Craft Harbours
John Cabot Building, 10 Barter's Hill
St. John's, NL A1C 5X1

Subject: Revised Letter of Advice Re: Marginal Wharf Replacement, Laydown Area Development and Harbour Dredging – Favourite Tickle, Cartwright, Labrador – Implementation of Measures to Avoid and Mitigate the Potential for Prohibited Effects to Fish and Fish Habitat

Dear Mr. Curran:

The Fish and Fish Habitat Protection Program (the Program) of Fisheries and Oceans Canada (DFO) received your original proposal on July 12th, 2018 with an update provided July 6th, 2021. We understand that you propose to:

- Remove existing infrastructure (e.g. marginal wharf, timber retaining wall, and rip rap);
- Construct a new boat storage/laydown area (~40 m x ~62 m), with a new footprint of ~2170 m²;
- Remove existing structures, e.g. boulders, armour stone, outside the new laydown area, with a combined footprint of ~404 m²;
- Construct a temporary gravel boat launch adjacent to the new laydown area;
- Excavate/dredge within the footprint of the new wharf (~55 m x ~32 m) as well as within and adjacent to the new laydown area (~93 m x ~54 m), with a new footprint of ~3320 m²; and
- Construct a new steel sheet piling wharf (maximum ~54 m x ~15 m), with a new footprint of ~442 m².

Based on updated information received July 6th and 7th, 2021 we understand that replacement of the marginal wharf is in progress and there are no significant changes in the project design for the remaining components. However, slight changes include:

- Construction of a concrete topped timber crib boat launch rather than a temporary gravel boat launch;
- Addition of head blocks with floating docks within the new laydown area; and

Canada

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- Construction of the new boat storage/laydown area slightly larger (~42 m x ~70 m) than originally planned.

Our review considered the following information:

- Request for Review received on July 12th, 2018 (C. Martin to J. Baird);
- Additional information received on July 18th (M. McNeil to J. Baird), August 2nd (M. McNeil to A. Cheverie), September 24th (M. McNeil to A. Cheverie), and October 25th, 2018 (P. Curran to D. Sooley), and January 9th, 10th, and 31st, 2019 (D. Upward to A. Cheverie);
- Full-scale engineering drawings received on August 9th and October 2nd, 2018 (M. McNeil to A. Cheverie);
- Revised full-scale drawings received on January 11th and February 1st, 2019 (D. Upward to A. Cheverie);
- Updated drawings proposed for the new laydown area, boat launch and dredge area and photo of the new marginal wharf replacement in-progress received by email July 6th, 2021 (C. Martin to J. O'Rourke); and
- Clarification on updated project design and progress of project components received by email July 7th, 2021 (C. Martin to C. Andrews).

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*; and
- 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
- 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 measures listed below:

- Limit the duration of in-water works to only activity related to the above noted project elements so that it does not diminish the ability of fish to carry out one or more of their life processes (spawning, rearing, feeding, migrating);
- Conduct in-water undertakings and activities during periods of low tide and low wind/wave conditions;
- Implement erosion and sedimentation controls as needed to avoid the introduction of sediment into any waterbody during all phases of work
 - Install effective erosion and sediment control measures prior to beginning work in order to stabilize all erodible areas;



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- Regularly inspect and maintain the erosion and sediment control measures and structures during all phases of the project;
- Regularly monitor the watercourse for signs of sedimentation during all phases of the project and take corrective action;
- Keep the erosion and sediment control measures in place until all disturbed ground has been permanently stabilized;
- Remove all exposed, non-biodegradable sediment control materials once the site is stabilized;
- Schedule work to avoid wet, windy, and rainy periods that may result in high flow volumes and/or increase erosion and sedimentation;
- Minimize the amount of dredged material removed by only dredging to the area and depth required;
- Dredged or excavated material may be re-used for the laydown area as described i.e. placed/capped within a rock berm. However, any un-used dredge spoils should be disposed of at an approved site above the high water mark of any waterbody. If necessary, adequate sedimentation and erosion control measures should be deployed around stored dredge material;
- Operate machinery on land in stable dry areas, or from stable floating platforms;
- All materials placed in or near water should be clean and free of fines or any other deleterious substance and of sufficient size to resist displacement by wave action. Dredge material may be re-used for the laydown area provided it is placed/capped within a rock berm to avoid sedimentation;
- Armour stone should be blocky, angular shape and comprised of mixed gradation so that the smaller rock fill the voids between the larger rock to provide compaction and stability;
- Rock material should not be end dumped; rather, it should be placed on station using an excavator or similar equipment;
- When works are completed, shoreline and approaches should be restored to original condition; and
- Be aware of AIS species in the area and take precautions with respect to any vessel traffic and gear movement between affected and unaffected areas to prevent introductions and spread (<https://www.dfo-mpo.gc.ca/species-especes/ais-eae/index-eng.html>):
 - All equipment used in water should be cleaned, drained and dried on land before and after use for the purposes of preventing the introduction or spread of aquatic invasive/non-indigenous species; and
 - Report any AIS and non-indigenous species to DFO at 1-855-862-1815 or AISEAE.XNFL@dfo-mpo.gc.ca.

Provided that you incorporate these measures into your plans, the Program is of the view that your proposal 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->



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mpo.gc.ca/pnw-ppe/index-eng.html) or consult with a qualified environmental consultant to 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 as well as the local Conservation and Protection (C&P) 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 1 year 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 1 year period.

If you have any questions with the content of this letter, please contact Jack O'Rourke by cell at (709) 725-1286, by fax at (709) 772-5562, or by email at John.ROrourke@dfo-mpo.gc.ca. Please refer to the file number referenced above when corresponding with the Program.

Yours sincerely,

ORourke, John

Digitally signed by ORourke, John
Date: 2021.07.06 09:12:22 -02'00'

John O'Rourke
Senior Biologist – Hydro, Flows & Linear Development
Regulatory Review, Fish and Fish Habitat Protection Program

CC: Ms. Cathy Martin, Environmental Services, PWGSC



Government of Newfoundland and Labrador
Department of Environment, Climate Change and Municipalities
Water Resources Management Division

PERMIT TO ALTER A BODY OF WATER

Pursuant to the *Water Resources Act*, SNL 2002 cW-4.01, specifically Section(s) 48

Date: JANUARY 06, 2021 File No: 532-02
Permit No: ALT11557-2021
Permit Holder: Department of Fisheries and Oceans - SCH
John Cabot Building, 10 Barter's Hill
St. John's, NL A1C 5X1
paul.curran@dfo-mpo.gc.ca
Attention: Paul Curran
Re: Minor DFO Dredging, Infilling, and Works Projects - Blanket Permit

Permission is hereby given for : routine dredging or beach grading of 3500 cubic metres or less of primarily sand, gravel, cobble and boulder material in order to provide safe navigation at various Department of Fisheries and Oceans' Small Craft Harbours (SCH) facilities around the Province of Newfoundland and Labrador as well as the infilling of 500 square metres or less of DFO SCH leased waterlot to construct new or increase existing service/laydown areas at existing DFO SCH facilities, with reference to the application dated November 26, 2020.

- This Permit does not release the Permit Holder from the obligation to obtain appropriate approvals from other concerned municipal, provincial and federal agencies.
- The Permit Holder must obtain the approval of the Crown Lands Administration Division if the project is being carried out on Crown Land.
- This Permit is subject to the terms and conditions indicated in Appendices A and B (attached).
- It should be noted that prior to any significant changes in the design or installation of the proposed works, or in event of changes in ownership or management of the project, an amendment to this Permit must be obtained from the Department of Environment, Climate Change and Municipalities under Section 49 of the *Water Resources Act*.

(for) MINISTER



GOVERNMENT OF NEWFOUNDLAND AND LABRADOR
Department of Environment, Climate Change and Municipalities

File No: 532-02
Permit No: ALT11557-2021

APPENDIX A

Terms and Conditions for Permit

Dredging/Debris Removal

1. Dredging activity must only be carried out during periods when wind, wave and tide conditions minimize the dispersion of silt and sediment from the work site.
2. The area to be dredged must be enclosed and isolated from the rest of the body of water through the use of a filter fabric curtain or similar method.
3. Dredged material must be disposed of in accordance with the regional Service NL Centre of the Department of Service NL. The Department of Service NL may require samples to be submitted for testing and analysis.

Infilling

4. The slopes along the perimeter of infilled areas must be no steeper than two horizontal to one vertical (2H:1V).
5. The constructed works must be inspected regularly so that action can be taken to undertake repairs as required.
6. Fill material must be obtained from an approved quarry site. It must not be taken from beaches or streams, and must not be dredged from a body of water.
7. The natural course of any stream must not be altered.
8. Infilling must not cause increased water elevation upstream or increase flow velocity downstream of the site. Reduction of the natural cross sectional area of any watercourse is not permitted.
9. Infilling must not disrupt the established surface drainage pattern of the area.
10. Infilling must not cause increased water elevation upstream or increase flow velocity downstream of the site.
11. Before infilling, any vegetation and topsoil must be completely removed and under no circumstances shall it be used as fill material. Topsoil must be stored and reused in final landscaping of the infilled area.
12. The constructed works must comply with all other terms and conditions provided in the Crown Lands grant, lease, or license for occupancy.
13. Select heavy rocks must be placed along the toe of any infilling to provide slope stability and erosion protection.
14. A minimum 15 metre wide vegetated buffer zone must be maintained along the edge of the waterbody in order to provide bank stability and maintain local aesthetics.

Special Conditions



15. The Permit Holder must apply for and obtain a separate permit under the Water Resources Act, SNL 2002 cW-4.01, specifically Section 39 <https://assembly.nl.ca/Legislation/sr/statutes/w04-01.htm> for any minor dredging or associated works that may take place within any Protected Public Water Supply Area servicing any community as indicated in Water Resources Portal available at <https://maps.gov.nl.ca/water/mapbrowser/Default.aspx>.
16. The Permit Holder must apply for and obtain a separate permit under the Water Resources Act, SNL 2002 cW-4.01, specifically Section 48 <https://assembly.nl.ca/legislation/sr/statutes/w04-01.htm> for any minor dredging or associated works that may take place within any designated flood risk area as indicated at <https://www.gov.nl.ca/eccm/waterres/flooding/fm/>
17. The Permit Holder must apply for and obtain a separate permit under the Water Resources Act, SNL 2002 cW-4.01, specifically Section 48 <https://assembly.nl.ca/legislation/sr/statutes/w04-01.htm> for any minor dredging or associated works that may take place within any municipal boundary.
18. Any alteration in or near a freshwater body (including wetlands) requires a separate permit under the Water Resources Act, SNL 2002 cW-4.01, specifically Section 48 <https://assembly.nl.ca/legislation/sr/statutes/w04-01.htm>. The Permit Holder must avoid work activities in wetlands wherever possible.
19. A water quality monitoring program is not required at this time. However, the Department reserves the right to require that the Permit Holder sample, analyze, and submit results of water quality tests, for the purpose of ensuring that the water quality is maintained within acceptable guidelines. All analyses must be undertaken by a CALA accredited laboratory.
20. Suitable booms must be deployed around work sites to contain any floating debris that might otherwise be carried away. All booms must be properly maintained and remain in place until all work is completed.
21. Creosote treated wood must not be used in the construction of any structures in or within 15 metre of any body of water.
22. If a minor dredging or associated work carried out under this Permit does prohibit, restrict or impede public access along the shoreline reservation then the Permit Holder shall restore the shoreline reservation to the satisfaction of the Minister within sixty (60) days of a written notice.
23. For each minor dredging or associated work carried out under this Permit, the Permit Holder must notify this Department via email to waterinvestigations@gov.nl.ca or facsimile at (709)729-0320, in accordance with a reporting protocol as deemed necessary and appropriate in the opinion of the Minister. Also, each minor dredging or associated work carried out under this Permit shall be subject to the payment of applicable fee by the Permit Holder as stated in the application fee schedules approved by the Minister.
24. The acknowledgment of the receipt of this Permit by the Permit Holder constitutes the acceptance of this Permit and its terms and conditions and requirements stated in Appendices A, B and C.
25. Annually (at the end of the year), the permit holder is required to submit a work done report under this permit along with the applicable fees incurred during the period.

General Alterations

26. Any work that must be performed below the high water mark must be carried out during a period of low water levels.
27. Any flowing or standing water must be diverted around work sites so that work is carried out in the dry.



28. Water pumped from excavations or work areas, or any runoff or effluent directed out of work sites, must have silt and turbidity removed by settling ponds, filtration, or other suitable treatment before discharging to a body of water. Effluent discharged into receiving waters must comply with the *Environmental Control Water and Sewage Regulations, 2003*.
29. All operations must be carried out in a manner that prevents damage to land, vegetation, and watercourses, and which prevents pollution of bodies of water.
30. The use of heavy equipment in streams or bodies of water is not permitted. The operation of heavy equipment must be confined to dry stable areas.
31. 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.
32. During the construction of concrete components, formwork must be properly constructed to prevent any fresh concrete from entering a body of water. Dumping of concrete or washing of tools and equipment in any body of water is prohibited.
33. Wood preservatives such as penta, CCA or other such chemicals must not be applied to timber near a body of water. All treated wood or timber must be thoroughly dry before being brought to any work site and installed.
34. Any areas adversely affected by this project must be restored to a state that resembles local natural conditions. Further remedial measures to mitigate environmental impacts on water resources can and will be specified, if considered necessary in the opinion of this Department.
35. The bed, banks and floodplains of watercourses, or other vulnerable areas affected by this project, must be adequately protected from erosion by seeding, sodding or placing of rip-rap.
36. All waste materials resulting from this project must be disposed of at a site approved by the Department of Digital Government and Service NL.
37. Periodic maintenance such as painting, resurfacing, clearing of debris, or minor repairs, must be carried out without causing any physical disruption of any watercourse. Care must be taken to prevent spillage of pollutants into the water.
38. The owners of structures are responsible for any environmental damage resulting from dislodgement caused by wind, wave, ice action, or structural failure.
39. Sediment and erosion control measures must be installed before starting work. All control measures must be inspected regularly and any necessary repairs made if damage is discovered.
40. Fill material must be of good quality, free of fines or other substances including metals, organics, or chemicals that may be harmful to the receiving waters.
41. The attached Completion Report (Appendix C) for Permit No. 11557 must be completed and returned to this Department upon completion of the approved works. Pictures must be submitted along with the completion report, showing the project site prior to and after development.



42. This Permit is effective from January 6, 2021 and shall expire on January 6, 2023 or earlier if modified, suspended or cancelled by the Minister. Also, this Permit may be renewed by the Minister for such renewal term as the Minister deems appropriate, on such terms and conditions as the Minister considers appropriate and in the public interest, provided the Permit Holder applies for the renewal at least ninety (90) days before the expiry of this Permit.

43. All work must be carried out within the Permit Holder's legal property boundaries.



GOVERNMENT OF NEWFOUNDLAND AND LABRADOR
Department of Environment, Climate Change and Municipalities

File No: 532-02
Permit No: ALT11557-2021

APPENDIX B

Special Terms and Conditions for Permit

1. The Permit Holder and its agent(s), subcontractor(s), and consultant(s) shall keep all systems and works in good condition and repair and in accordance with all laws, by-laws, directions, rules and regulations of any governmental authority. The Permit Holder or its agent(s), subcontractor(s), or consultant(s) shall immediately notify the Minister if any problem arises which may threaten the structural stability of the systems and works, endanger public safety and/or the environment or adversely affect others and/or any body of water either in or outside the said Project areas. The Permit Holder and its agent(s), subcontractor(s), and consultant(s) shall be responsible for all damages suffered by the Minister and Government resulting from any defect in the systems and works, operational deficiencies/inadequacies, or structural failure.
2. The Permit Holder and its agent(s), subcontractor(s), and consultant(s) shall operate the said Project and its systems and works in a manner which does not cause any water related and/or environmental problems, including but not limited to problems of erosion, deposition, flooding, and deterioration of water quality and groundwater depletion, in or outside the said Project areas. The Permit Holder and its agent(s), subcontractor(s), and consultant(s) shall be responsible for any and all damages associated with these problems caused as a result of changes, deficiencies, and inadequacies in the operational procedures by the Permit Holder or its agent(s), subcontractor(s), or consultant(s).
3. If the Permit Holder or its agent(s), subcontractor(s), or consultant(s) fails to perform, fulfil, or observe any of the terms and conditions, or provisions of this Permit, as determined by this Department, the Minister may, without notice, amend, modify, suspend or cancel this Permit in accordance with the *Water Resources Act*.
4. The Permit Holder and its agent(s), subcontractor(s), and consultant(s) indemnify and hold the Minister and Government harmless against any and all liabilities, losses, claims, demands, damages or expenses including legal expenses of any nature whatsoever whether arising in tort, contract, statute, trust or otherwise resulting directly or indirectly from granting this Permit, systems and works in or outside the said Project areas, or any act or omission of the Permit Holder or its agent(s), subcontractor(s), or consultant(s) in or outside the said Project areas, or arising out of a breach or non-performance of any of the terms and conditions, or provisions of this Permit by the Permit Holder or its agent(s), subcontractor(s), or consultant(s).
5. This Permit is subject to all provisions of the *Water Resources Act* and any regulations in effect either at the date of this Permit or hereafter made pursuant thereto or any other relevant legislation enacted by the Province of Newfoundland and Labrador in the future.
6. This Permit shall be construed and interpreted in accordance with the laws of the Province of Newfoundland and Labrador.



File No: 532-02
Permit No: ALT11557-2021

- cc: Amir Ali Khan, Ph.D., P.Eng.
Manager, Water Rights, Investigations and Modelling Section
Water Resources Management Division
Department of Environment, Climate Change and Municipalities
P.O. Box 8700
4th Floor, West Block, Confederation Building
St. John's, NL A1B 4J6
akhan@gov.nl.ca
- cc: Dean Shute
Manager Operations
Digital Government and Service NL
7-9 Roddick Crescent, Pirate Cave
Harbour Grace
DeanShute@gov.nl.ca
- cc: Ken Russell
Environmental Protection Officer, GSC - Happy Valley - Goose Bay
krussell@gov.nl.ca
- cc: Mr. Rick Curran (Eastern)
Director of Regional Operations Avalon
Digital Government and Service Newfoundland and Labrador
149 Smallwood Drive, Mount Pearl
PO Box 8700
St. John's NL A1B 4J6
rjcurran@gov.nl.ca
- cc: Mr. Wayne Lynch (Central)
Regional Director (Central)
Digital Government and Service Newfoundland and Labrador
P.O. Box 2222
Gander, NL A1V 2N9
waynelynch@gov.nl.ca
- cc: Ms. Susan Hoddinott (Western/Labrador)
Regional Director
Digital Government and Service Newfoundland and Labrador
PO Box 2006
Corner Brook NL A2H 6J8
SusanHoddinott@gov.nl.ca
- cc: Ms. Tammy McDonald
Manager of Operations (Environmental Health)
Digital Government and Service NL
PO Box 8700
St. John's NL A1B 4J6
TammyMcDonald@gov.nl.ca
- cc: Marine Safety
Transport Canada, Atlantic Regional Headquarters
Airports, Harbours and Ports, and Environmental Services
95 Foundry St.



P.O. Box 42
Moncton, NB E1C 8K6
NPPATL-PPNATL@tc.gc.ca

cc: Mark McNeil
Public Works and Government Service Canada
Suite 204, 1 Regent Square
Corner Brook, NL A2H 7K6
mark.mcneil@pwgsc-tpsgc.gc.ca

cc: Mr. Shawn Kean
Environmental Services
Public Works & Government Services Canada
John Cabot Building, 10 Barter's Hill
P.O. Box 4600
St. John's, NL A1C 5T2
shawn.kean@pwgsc.gc.ca



Government of Newfoundland and Labrador
Department of Environment, Climate Change and Municipalities
Water Resources Management Division

Appendix C - Completion Report

Pursuant to the *Water Resources Act*, SNL 2002 cW-4.01, specifically Section(s) 48

Date: JANUARY 06, 2021

File No: 532-02
Permit No: ALT11557-2021

Permit Holder: Department of Fisheries and Oceans - SCH
John Cabot Building, 10 Barter's Hill
St. John's, NL A1C 5X1
paul.curran@dfo-mpo.gc.ca

Attention: Paul Curran

Re: Minor DFO Dredging, Infilling, and Works Projects - Blanket Permit

Permission was given for : routine dredging or beach grading of 3500 cubic metres or less of primarily sand, gravel, cobble and boulder material in order to provide safe navigation at various Department of Fisheries and Oceans' Small Craft Harbours (SCH) facilities around the Province of Newfoundland and Labrador as well as the infilling of 500 square metres or less of DFO SCH leased waterlot to construct new or increase existing service/laydown areas at existing DFO SCH facilities, with reference to the application dated November 26, 2020.

I (the Permit Holder named above or agent authorized to represent the Permit Holder) do hereby certify that the project described above was completed in accordance with the plans and specifications submitted to the Department of Environment, Climate Change and Municipalities and that the work was carried out in strict compliance with the terms and conditions of the Permit issued for this project.

Date: _____ Signature: _____

This completion report must be completed and forwarded to the following address upon completion of the approved work.

Department of Environment, Climate Change and Municipalities
Water Resources Management Division
PO Box 8700
St. John's NL A1B 4J6



Government of Newfoundland and Labrador
Service NL

February 28, 2019

Natasha Warren
Public Works and Government Services Canada
P.O. Box 4600
10 Barter's Hill
St. John's, NL
A1C 5T2

Dear Ms. Warren:

Re: Wharf Reconstruction, Cartwright, NL

The Government Service Centre has received and reviewed your request of January 18, 2019 and Mark McNeil's e-mail of February 27, 2019 regarding the above mentioned project. Based on the results of chemical analyses provided, the Government Service Centre has no objections to the disposal of 12,000 m³ of dredged material at an approved waste disposal site with prior permission from the owner/operator. It is recommended that there mixing of the dredge material taken from Dredge Area A.

If you have any questions, please do not hesitate to contact me at (709) 896-5473 or at the address below.

Sincerely,

Ken Russell
Environmental Protection Officer

cc: Mark McNeil, Environmental Services, Public Works and Government Services Canada