

**HARBOUR REDEVELOPMENT
Raleigh
Newfoundland and Labrador
Environmental Registration Document**

**Submitted to the Government of Newfoundland and
Labrador
Department of Environment, Climate Change and
Municipalities
Environmental Assessment Division**

Prepared For: Fisheries and Oceans Canada, Small Craft Harbours (SCH)

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1.0 NAME OF UNDERTAKING

Harbour Redevelopment, Raleigh, Newfoundland and Labrador (NL).

2.0 PROPONENT

- I. Department of Fisheries and Oceans Canada
Small Craft Harbours (DFO-SCH)

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3.0 THE UNDERTAKING

3.1 Name of the Undertaking

Harbour Redevelopment - Raleigh, NL

3.2 Purpose/Rationale/Need for the Undertaking

The proposed undertaking represents the removal and replacement of the existing wharf infrastructure with a finger pier wharf, new storage building, and construction of a protective breakwater.

Recent fish landings and total landed values at Raleigh have declined in the last few years due in part to the deteriorated condition of the existing infrastructure. This project is designed to demolish the deteriorated wharf facility and construct a new facility that will better meet the needs of the current users. As the marine environment surrounding the project site is known to experience

strong wave action and heavy ice accumulation, a breakwater will be constructed on the outer face of the new wharf infrastructure to ensure structural longevity and safe use of the facility. Completion of this work will ensure that fishers have safe berthing, offloading and storage facilities within the harbour.

4.0 DESCRIPTION OF THE UNDERTAKING

The scope of work for this project involves the removal of a finger pier wharf consisting of ballasted timber crib with a concrete deck and the removal of an existing storage building situated on the existing wharf. The current infrastructure will be replaced with a new treated timber crib finger pier (531 m²) that will be protected with an armour stone breakwater (3147 m²). A new storage building (74.4 m²) will be constructed on the gravel parking area near the entrance of the facility and the approach to the wharf will be regraded (Appendix A, Photo 3).

The proposed project is a reconstruction of an already existing structure, therefore, alternative locations were not considered.

4.1 Geographical Location

The Project site is located within the community of Raleigh approximately 28 km northeast of the community of St. Anthony. The Raleigh SCH facility is located in Ha Ha Bay at coordinates 51° 33' 53" N, 55° 43' 55" W (Appendix A, Figure 1). The site is accessible by exiting the Viking Trail (Route 430) onto L'Anse aux Meadows Road (Route 436) and then onto Cape Onion Road (Route 437) which leads to the project site via Raleigh Spur Road (Route 437-10) (Appendix A, Figure 2).

4.2 Physical Features

The existing SCH facility is located on the end of a small peninsula in Ha Ha Bay. It includes a finger pier wharf with a storage building and a small gravel parking area inside the wharf (Appendix A, Photo 1). Adjacent to the wharf is a gravel launchway and a few private sheds and wharves along the shoreline. There is a paved access road leading to the project site. Project footprint and boundaries are outlined in Appendix A, Photo 3.

The project site will be accessed using an existing paved road. The building demolition, new building placement, uplands regrading and construction laydown will all occur within the existing infrastructure footprint. Wharf replacement will mostly occur within the same footprint with the exception of one section of marginal wharf with a new footprint of 152 m². Construction of the breakwater will take place along the outside face of the new wharf structure in a new marine footprint of 3147 m². The total area effected by the undertaking (new and existing footprint) is estimated at 5,300 m² (Appendix 1, Photo 3).

4.2.1 Physical and Biological Environment

4.2.1.1 Physical

The project site is located in the Strait of Belle Isle ecoregion covering 1889 km² occupying the northern tip and west coast of the Northern Peninsula on the island of Newfoundland. The Strait of Belle Isle is located on the northern entrance of the Atlantic Ocean on the eastern part of

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Canada. It separates the Island of Newfoundland from the Labrador Peninsula. Newfoundland is on the eastern side of the strait while the Labrador Peninsula is on the western side (World Atlas, 2021). The population of the ecoregion is approximately 11,900.

This ecoregion is classified as having an Atlantic low subarctic ecoclimate with low treeless coastal barrens on the west and rocky hills underlain by sandstone and slate to the east (Parks NL, 2008). This ecoregion is formed in part by the coastal lowlands and the northern tip of the highlands of Newfoundland. NL Department of Natural Resources (2008) mapping indicates that bedrock geology at the project site is in the Humber Zone consists of soft, mainly unfolded, crystalline Palaeozoic strata and Precambrian rocks (NLDNR, 2021). Surficial geology is noted as marine clay, sand, gravel and diamicton with some exposed bedrock around and near the project site (NLDNR, 2021). The shoreline at the project site is characterized by exposed bedrock with intermittent areas of pebble-cobble material. Elevations in this ecoregion range from sea level to about 630 m above sea level.

The maritime effect of the Atlantic Ocean is felt along the coast. Spring is typically delayed by sea ice and fog occurs throughout the entire year. The nearest Environment and Climate Change Canada (ECCC) weather station (Main Brook, 51° 11'N, 56° 01'W) shows an average annual rainfall of 708.8 mm and 515.0 cm of snow. Extreme precipitation events of up to 105.0 mm and extreme snow depths of 105.0 cm have been recorded. Temperatures range from an extreme minimum of -35.0°C to an extreme maximum of 31.0°C. The daily average temperature for the Main Brook weather station is 2.0°C (ECCC, 2021).

The predominant vegetation of this ecoregion includes dwarfed, open and sometimes closed cover patches of white spruce with an understory of mosses. White spruce is more tolerant of salt spray and is more prevalent in near-coastal areas, whereas black spruce and tamarack are more prominent inland. Exposed sites tend to support a moss-lichen cover. The project site is located approximately 0.7km east of the Burnt Cape Ecological Reserve (Appendix A, Figure 1) which is one of the most important botanical sites on the Island of Newfoundland. This reserve is home to more than 300 plant species. About 30 of these are considered rare, including the Arctic bladderpod (*Lesquerella arctica*), alpine arnica (*Arnica angustifolia*), and dwarf hawk's beard (*Crepis nana*) (Government of Newfoundland and Labrador, 2006). Approximately 4km southeast of the project site is Pistolet Bay Provincial Park (Appendix A, Figure 1) which covers almost 9 km² of the Long Range Mountain Lowlands and is home to an array of rare plants and species.

The immediate upland area of the project site is gently sloped and sparsely vegetated with grass, although tree vegetation is present further inland (Appendix A, Photos 1 & 2). Rare and endangered species of calciphilic plants are numerous through the rock barrens of the general upland area, however, none are known to exist near the immediate project footprint.

Common wildlife found in this ecoregion include Polar Bear (*Ursus maritimus*), Red Fox (*Vulpes vulpes*), Red Squirrel (*Tamiasciurus hudsonicus*), Lynx (*Lynx canadensis*), Little Brown Bat (*Myotis lucifugus*), Snowshoe Hare (*Lepus americanus*), Arctic Hare (*Lepus arcticus bangsii*), Short Tailed Weasel (*Mustela erminea*), Black Bear (*Ursus americanus*), Caribou (*Rangifer tarandus*), Beaver (*Castor Canadensis*), Muskrat (*Ondatra zibethicus*), Otter (*Lutra canadensis*), Meadow Vole (*Microtus pennsylvanicus*), Mink (*Mustela vison*), and Masked Shrew (*Sorex*

cinereus). There are no amphibians or reptiles found in the Strait of Belle Isle barrens (Parks NL, 2008).

Many birds use the Strait of Belle Isle ecoregion on their migratory route as it lies along the Atlantic migratory flyway. Avian species found in this ecoregion include the Gyrfalcon (*Falco rusticolus*), Lapland Longspur (*Calcarius lapponicus*), Hoary Redpoll (*Acanthis hornemanni*), Ivory Gull (*Pagophila eburnea*), White-Rumped Sandpiper (*Calidris fuscicollis*), Ruddy Turnstone (*Arenaria interpres*), Tree Sparrow (*Passer montanus*), White-Crowned Sparrow (*Zonotrichia leucophrys*), Common Eiders (*Somateria mollissima*), Short Eared Owl (*Asio flammeus*), Rock Ptarmigan (*Lagopus muta*), Atlantic Puffin (*Fratercula arctica*), and Geese (Parks NL, 2008). The marine bird IBA sites near the Strait of Belle Isle and Northern Peninsula were designated IBAs for several species of marine birds and ducks including Common Eider (*Somateria mollissima*), Harlequin Duck (*Histrionicus histrionicus*), Black Guillemot (*Cephus grille*), Black-legged Kittiwake (*Rissa tridactyla*) and Alcid species. The immediate area around the marine based project site and nearby areas are not likely to provide critical or limiting habitat for any of these species.

Fish in this ecoregion include Threespined Stickleback (*Gasterosteus aculeatus*), Ninespined Stickleback (*Pungitius pungitius*), Atlantic Salmon (*Salmo salar*), Brook Trout (*Salvelinus fontinalis*), Brown Trout (*Salmo trutta*), Rainbow Smelt (*Osmerus mordax*), and American Eel (*Anguilla rostrata*) (Parks NL, 2008).

4.2.1.2 Biological

According to Fisheries and Oceans' Traditional Ecological Maps of the area, Atlantic Cod, seals, whales, and Arctic Char may be found within or very near the project area.

A search of the Atlantic Canada Conservation Data Centre (ACCDC) database was conducted on November 3, 2021 that produced a list of rare/unique species (i.e., plants and animals) observed within a 5 km buffer zone (standard ACCDC procedure) of the site of the proposed work. All species were cross-referenced with Schedule 1 of the Species at Risk Act (SARA). Results showed the Short-eared Owl (*Asio flammeus*) and the Fernald's Braya (*Braya fernaldii*) have been observed within this buffer (Table 4.1).

A search of the Government of Canada Open Maps database was conducted on November 3, 2021 that produced a list of rare/unique species (i.e., plants and animals) with distribution ranges near the site of the proposed work. All species were cross-referenced with Schedule 1 of the Species at Risk Act (SARA). Results showed the following Schedule 1 Species at Risk with distribution ranges that are within 5 km of the project site: Fernald's Braya (*Braya fernaldii*), Red Crossbill (*Loxia curvirostra percna*), Short-eared Owl (*Asio flammeus*), Porsild's Bryum (*Haplodontium macrocarpum*), Bank Swallow (*Riparia riparia*), Gypsy Cuckoo Bumble Bee (*Bombus bohemicus*) and Olive Sided Flycatcher (*Contopus cooperi*) (Table 4.2).

A search of the DFO Aquatic Species at Risk database was conducted on November 3, 2021 which produced a list of aquatic species at risk and the presence of their critical habitat potentially found within a 1km buffer (standard NASAR procedure) of the site of the proposed work. Results showed that the project site is within the distribution range of the following aquatic species at risk: Fin Whale (*Balaenoptera physalus*), Blue Whale (*Balaenoptera musculus*), Spotted Wolffish (*Anarhichas minor*), North Atlantic Right Whale (*Eubalaena glacialis*), Leatherback Sea Turtle

(*Dermochelys coriacea*), White Shark (*Carcharodon carcharias*) and Northern Wolffish (*Anarhichas denticulatus*) (Table 4.3).

Table 4.1 Species at Risk Observed within 5km of the Project Site

Common Name	Scientific Name	Provincial Ranking	COSEWIC Ranking	SARA Ranking
Short-eared Owl	<i>Asio flammeus</i>	Vulnerable	Threatened	Special Concern
Fernald's Braya	<i>Braya fernaldii</i>	Threatened	Endangered	Endangered

Table 4.2 Species at Risk Distribution Ranges within 5km of the Project Site

Common Name	Scientific Name	Provincial Ranking	COSEWIC Ranking	SARA Ranking
Red Crossbill	<i>Loxia curvirostra percna</i>	Endangered	Threatened	Threatened
Porsild's Bryum	<i>Haplodontium macrocarpum</i>	Endangered	Threatened	Threatened
Bank Swallow	<i>Riparia riparia</i>	Unranked	Threatened	Threatened
Gypsy Cuckoo Bumble Bee	<i>Bombus bohemicus</i>	SNR (unranked)	Endangered	Endangered
Olive Sided Flycatcher	<i>Contopus cooperi</i>	Threatened	Special Concern	Threatened

Table 4.3 Aquatic Species at Risk Distribution Ranges within 1km of the Project Site

Common Name	Scientific Name	COSEWIC/SARA Ranking
Fin Whale	<i>Balaenoptera physalus</i>	Special Concern
Blue Whale	<i>Balaenoptera musculus</i>	Endangered
Spotted Wolffish	<i>Anarhichas minor</i>	Threatened
North Atlantic Right Whale	<i>Eubalaena glacialis</i>	Endangered
Leatherback Sea Turtle	<i>Dermochelys coriacea</i>	Endangered
White Shark	<i>Carcharodon carcharias</i>	Endangered
Northern Wolffish	<i>Anarhichas denticulatus</i>	Threatened

4.3 Construction

Commencement of this project is subject to DFO-SCH operational priorities and funding. Replacement of the wharf and construction of the breakwater is expected to require 15 months to

complete. The first physical construction on site will be during site preparation and demolition which is expected to commence in January 2022.

Construction activities will include:

- Demolition, removal and reconstruction of the finger pier wharf will be accomplished using machine mounted equipment (e.g., pneumatic hammer). Demolished materials will be removed from the site using heavy equipment and transported to an approved waste disposal location (e.g. regional landfill). The new wharf is very similar in design to the existing wharf and will be constructed primarily in the same footprint with the exception of one section (Appendix A, Photo 3). Concrete for the new finger pier wharf and associated structures will be placed on-site. Armor stone will be placed along the northwest side of the wharf using an excavator.
- The existing gravel parking area will be utilized for a construction lay-down area.
- Equipment and tools will be transported to the project site using local roads and access.
- Waste material (including treated timber waste) will be transported from the project site and disposed of at an approved waste disposal location.

The most probable sources of potential pollutants are related to the use of equipment. Accidental spills of equipment fuel/oil, sedimentation from disturbances to shoreline areas and establishment of laydown area are also a possibility. Other sources of potential pollutants include solid waste from construction and domestic waste from work crews.

Prior to demolition, the successful contractor is required to sample the treated wharf timber and send the results to the NL Department Environment, Climate Change and Municipalities, Pollution Prevention Division to determine if the timber is suitable for landfill disposal. Timber samples will be analyzed for benzo(a)pyrene, m/p-cresol, total cresol, and pentachlorophenol using the Toxicity Characteristic Leaching Procedure (TCLP). Based on the results, the Province will provide approval and instruction for proper disposal at a designated facility.

The project will be assessed pursuant to Section 67 of the *Canadian Environmental Assessment Act* (2012) or Section 82 of the *Impact Assessment Act*. All mitigations prescribed as part of that process will be implemented during project activities. The following mitigation measures will also be utilized to minimize potential interactions with the environment:

Fish / Fish Habitat and Water

- A Request for Review for the project will be submitted to Fisheries and Oceans Canada, Fisheries Protection Program.
- Minimize duration of in-water work. 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.
- Rock material should not be end dumped; rather, it should be placed on station using an excavator or similar equipment.
- No temporary or permanent increase in existing footprint below the high water mark.
- Operate machinery on land in stable dry areas, or from stable floating platforms.

- Schedule work to avoid wet, windy and rainy periods that may increase erosion and sedimentation.
- Plan activities near water such that materials such as paint, primers, blasting abrasives, rust solvents, degreasers, grout, or other chemicals do not enter the watercourse.
- All materials placed in or near water should be clean and free of fines, concrete or any other deleterious substance and of sufficient size to resist displacement by wave action.
- Develop a response plan that is to be implemented immediately in the event of a sediment release or spill of a deleterious substance and keep an emergency spill kit on site.
- Ensure that building material used in the watercourse has been handled and treated in a manner to prevent the release of leaching of substances into the water that may be deleterious to fish.
- Implement erosion and sediment control measures (sediment booms/bubble curtains) for the site that minimizes risk of sedimentation of the waterbody during all phases of the project.
- If there is any run-off of concrete or associated water, it should be directed to a drainage control device such as a settling pond and appropriately managed. No concrete run-off is allowed to enter the water.
- Dispose all demolition material, especially any demolished timber and concrete, at an approved waste disposal site.
- When works are completed, shoreline and approaches should be restored to original condition.
- 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-especies/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.

Wildlife

- There is a zero tolerance policy regarding the harassment, disturbance, and feeding of wildlife whilst working on the project.
- Speed limits will be implemented to minimize negative effects to wildlife.
- Project personnel will receive training or be provided training material to minimize negative effects to wildlife.
- Work site boundaries will be fenced off to prevent inadvertent loss or alteration of habitat outside of the project footprint and fenced to deter wildlife from entering the site, minimizing human-wildlife interactions.
- If there are large flocks of marine or migratory birds near the project during sound producing activities work may need to be paused to allow birds to resume normal activity if birds continually flush or appear agitated by the activities.

- Through site induction and toolbox sessions, project personnel will be educated on the wildlife (particularly species at risk) expected to occur in the area as outlined in the project Significance of Environmental Effects Determination (SEED) document.
- All vehicles on site, when not in use, must be locked and all windows must be closed.

Species at Risk

- All work to be conducted in accordance with the *Species at Risk Act*, which outlines that no protected species, their residence and critical habitat be moved or obstructed during the construction or operation phase of the project.
- Species listed under the *Species at Risk Act* shall not be approached throughout the construction or operation phase of the project.
- All construction materials shall be removed from the site upon project completion.
- If species at risk are reported, contractor will consult with the SCH Project Manager and determine potential impacts to species at risk as well as perform any modifications to construction activities that may be required to protect species at risk.

Birds (including MBCA) and Bird Habitat

- The contractor is responsible to ensure a spill kit is on site. Equipment within the spill kit should be adequate for the proposed project. In case of a spill, the contractor should contact Environment Canada at 1-800-563-9089.
- All construction equipment must be fitted with standard and well maintained noise suppression devices. Appropriate dust suppression methods are to be employed when required. Air filters should be used to minimize exhaust emissions.
- Vegetation removal should be avoided or kept to a minimum.
- Migratory birds, their eggs, nests and young are protected under the MBCA. All work to be conducted in accordance with the Migratory Birds Convention Act (MBCA), which outlines that no migratory bird nests or eggs will be moved or obstructed during the construction or operation phase of the project. It is recommended that vegetation clearing not take place during the breeding season until fledglings have left parental territories.
- Concentrations of seabirds, waterfowl, or shorebirds shall not be approached when anchoring equipment, accessing wharves, or ferrying supplies.
- All construction materials shall be removed from the site upon project completion.

Soil (surface and subsurface)

- Work should be scheduled to avoid periods of heavy precipitation. Erosion control structures (temporary matting, geotextile filter fabric) are to be used, as appropriate, to prevent erosion runoff or sediment laden water during the construction phase.
- Any exposed soil must be minimized by limiting the area exposed at any one time and by limiting the time that any one area is exposed. All stockpiled soil must be covered and/or dyked to prevent erosion or runoff of sediment-laden water from leaving the site.

- Whenever possible, exposed soil should be replanted or sodded to ensure soil stabilization.
- All wastes must be recycled where possible or otherwise disposed of appropriately.
 - Fill material is to be free of contaminants and from an approved quarry site.
 - Machinery must be checked for leakage of lubricants or fuel and must be in good working order. Refueling must be done at least 100 m from any waterbody. Basic petroleum spill cleanup equipment should be on site. All spills or leaks should be promptly contained, cleaned up and reported to the 24 hour environmental emergencies reporting system (1-800-563-9089).
 - Containers of petroleum products or chemicals that may be required on site will be tightly sealed against corrosion and rust, and surrounded by an impermeable barrier in a dry, water-tight building or shed with an impermeable floor.
 - Waste oils and used lubricating oil will be retained in a tank or closed container and disposed of by a company licensed for handling and disposing of used oil products.
 - Mechanical inspections will be conducted routinely on equipment to search for leaks. Leaks will be repaired immediately.

Water and Aquatic Species and Habitat

- 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.
- Erosion and sediment control measures (sediment booms/bubble curtains) will be implemented to minimize the 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.
- 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 liters (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.

Vegetation

- Disturbed areas will be restored through manual re-seeding.
- Construction fencing will be placed on site to avoid any disturbance to adjacent vegetated areas outside of the project footprint.

Air Quality and Sensory Disturbance

- All construction equipment must be fitted with standard and well maintained noise suppression devices. Appropriate dust suppression methods are to be employed when required. Air filters should be used to minimize exhaust emissions.
- Construction equipment will be turned off when not in use, where practical, to minimize idling.
- Project activities must be carried out during times acceptable to local authorities and smaller, less disruptive equipment will be used where possible.

Health, Social or Economic Conditions

- 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.
- 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.
- Project personnel will receive training or be provided training material to minimize human-Polar Bear interactions and ensure awareness and safe response to Polar Bear occurrences on site.

4.4 Operation

The new facility will be utilized by local and transient fishers and recreational boaters for berthing, offloading and storage. The facility will be overseen by a DFO-SCH Area Manager and managed, operated and maintained by a local Harbour Authority (not-for profit).

Routine maintenance and repair projects will be carried out by DFO-SCH on an as-required basis over the estimated life of the new infrastructure (wharf = 35yrs., breakwater = 75yrs.).

Reasonably foreseeable pollutants occurring during the operational phase of the proposed project are limited to accidental discharges of fuel or oil and solid waste disposal. DFO-SCH's Environmental Management Plan (EMP) and site-specific Emergency Response Plans cover operational aspects of environmental management at SCH 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.

Potential resource conflicts are not anticipated as a result of the operation of the proposed project.

4.5 Occupations

All construction work will be carried out by a successful contractor overseen by DFO-SCH. Contract work is expected to take 15 months to complete beginning December 2021 (pending funding and approvals). Approximately 16 contract employees and 3 DFO-SCH employees will be required for construction and project management of the DFO-SCH facility at Raleigh. The project will be operated by DFO-SCH staff with on site representation and volunteer management support from the local Harbour Authority of Raleigh.

The following list¹ outlines occupations which may be employed during the design and construction period:

- 1 - Project Manager – 0711 - Contractor/Construction
- 1 - Office Administrator – 1221 - Contractor/Construction
- 1 - Project Supervisor/Foreman – 7302 - Contractor/Construction
- 1 - OHS Representative – 2263 - Contractor/Construction
- 2 - Carpenters – 7271 - Contractor/Construction
- 4 - Laborers – 7611 - Contractor/Construction
- 1 - Surveyor – 2154 - Contractor/Construction
- 4 – Equipment Operator – 7521 - Contractor/Construction
- 1 - Site Inspector – 2264 - Construction
- 1 - Professional Engineer – 0211 - Entire Project
- 1 - Engineering Technologist – 2231 - Construction Design (Engineering)
- 1 - Office Administrator – 1221 - Entire Project (Engineering)

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1 - This list represents only an approximation of the number and type of occupations that may be produced as a result of the proposed project. Actual occupations created as a result of the proposed project will ultimately be determined by the successful contractor. Occupations are expected to be comparable to those created for similar construction projects throughout the Province.

4.6 Project Related Documents

Project-related documents already generated by or for the proponent are as follows:

- Significance of Environmental Effects Determination (SEED) (IAA)
- Site Specific Environmental Management Plan (DFO-SCH)
- Permits and Approvals listed in Section 5.0 of this document.

5.0 APPROVAL OF THE UNDERTAKING

Table 5.1 is a list of the expected permits and approvals required for this project.

Table 5.1 Expected Permits and Regulatory Authorities

Approvals/ Permits	Regulatory Authority
NL Environmental Assessment Registration ²	NL Department of Environment, Climate Change and Municipalities, Environmental Assessment Division
DFO - Request for Review ³	DFO, Fish and Fish Habitat Protection Program
Permit to Alter a Body of Water ⁴	NL Department of Environment, Climate Change and Municipalities, Water Resources Division
Approval under <i>Canadian Navigable Waters Act</i> ⁵	Transport Canada, Navigation Protection Program
Approval to Dispose of Treated Timber Waste ⁶	NL Department of Environment, Climate Change and Municipalities, Pollution Prevention Division
<i>Canadian Impact Assessment Act</i> Registration ⁷	Impact Assessment Agency of Canada

Notes:

2 - This document; provincial permits are expected to be issued following release from further environmental assessment.

3 - An RFR will be submitted to DFO – Fisheries Protection Program.

4 - Approval was obtained from the Province on January 6, 2021, reference permit no. ALT11557-2021.

5 - As per the *Canadian Navigable Waters Act* (CNWA) for Works on non-scheduled waters, this project was posted to the CNWA Public Registry and in the community of Raleigh for a duration of 30-days.

6 - Timber sampling will be conducted and results will be submitted to the Province for approval to dispose at an designated facility.

7 - This project was posted on the public *Impact Assessment Act* Registry for a 30 day comment period.

6.0 ABORIGINAL CONSULTATION

PSPC and Transport Canada carried out an Indigenous Assessment on behalf of DFO-SCH at Raleigh 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, the legal duty to consult does not exist in this case as; the Crown does not have knowledge of potential or established Indigenous or treaty rights in the Raleigh area; and there are no potential or established Indigenous or treaty rights that may be adversely impacted by the Crown in completing the Raleigh 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.

A contractor will be awarded the work through a federal contract bidding process with no discrimination to gender, race or age.

7.0 SCHEDULE

The proposed project is expected to commence in January 2021 and construction would occur over a 15 month period. This date has been chosen in order to successfully complete the project within the allocated DFO-SCH funding window.

8.0 FUNDING

The total cost estimate for all phases of the proposed project, as provided by the proponent, is approximately **4.0 million** dollars (Canadian). Funds will be provided by Small Craft Harbours, Fisheries and Oceans Canada.

9.0 REFERENCES

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Project Registration
Harbour Redevelopment
Raleigh, NL
November 2021

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

Nature Conservancy Canada, 2020. Polar Bear Species Distribution. Accessed November 10, 2021. [p-bear-map-NCC-1000px-custom.jpg \(1000x773\)](p-bear-map-NCC-1000px-custom.jpg) (natureconservancy.ca)

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<https://www.gov.nl.ca/ecc/files/natural-areas-pdf-island-9-strait-of-belle-isle-barrens.pdf>

World Atlas, 2021. Geography of the Strait of Belle Isle. Accessed November 5, 2021.
<https://www.worldatlas.com/articles/where-is-the-strait-of-belle-isle.html#:~:text=The%20Strait%20of%20Belle%20Isle%20is%20about%20125,rocks%20and%20deposits%20make%20the%20strait%20less%20deep.>

Wikipedia. Raleigh (2021) Accessed on November 3, 2021. [Raleigh - Wikipedia](https://en.wikipedia.org/wiki/Raleigh)

10.0 SIGNATURES

Environmental Assessment Representative

Date

APPENDIX A
Project Location Maps and Site Photos

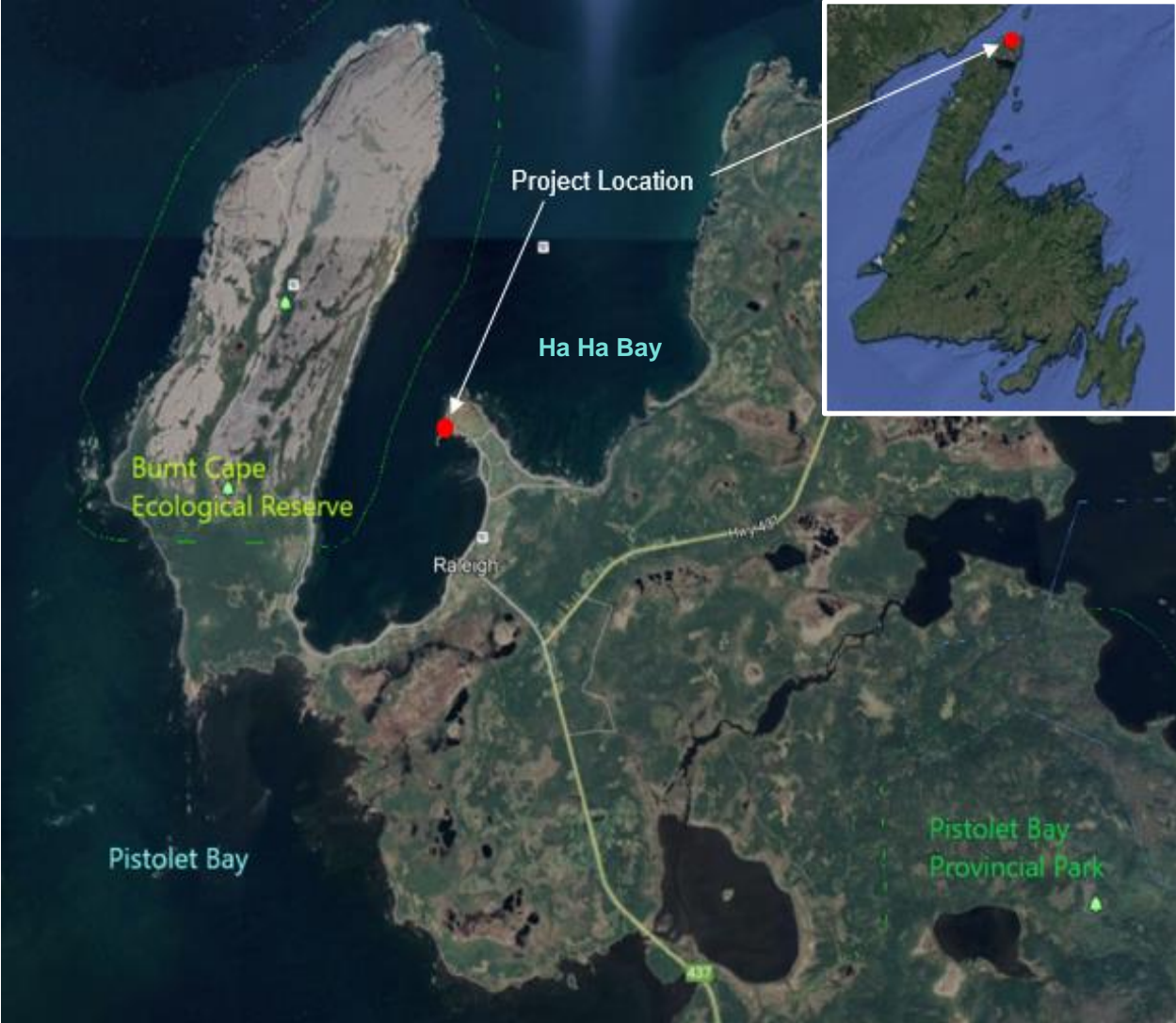


Figure 1. Project Location



Figure 2. Map of Project Access Route



Figure 3. Topographic Map of Project Area



Photos 1 & 2. Aerial Photos of the Project Location

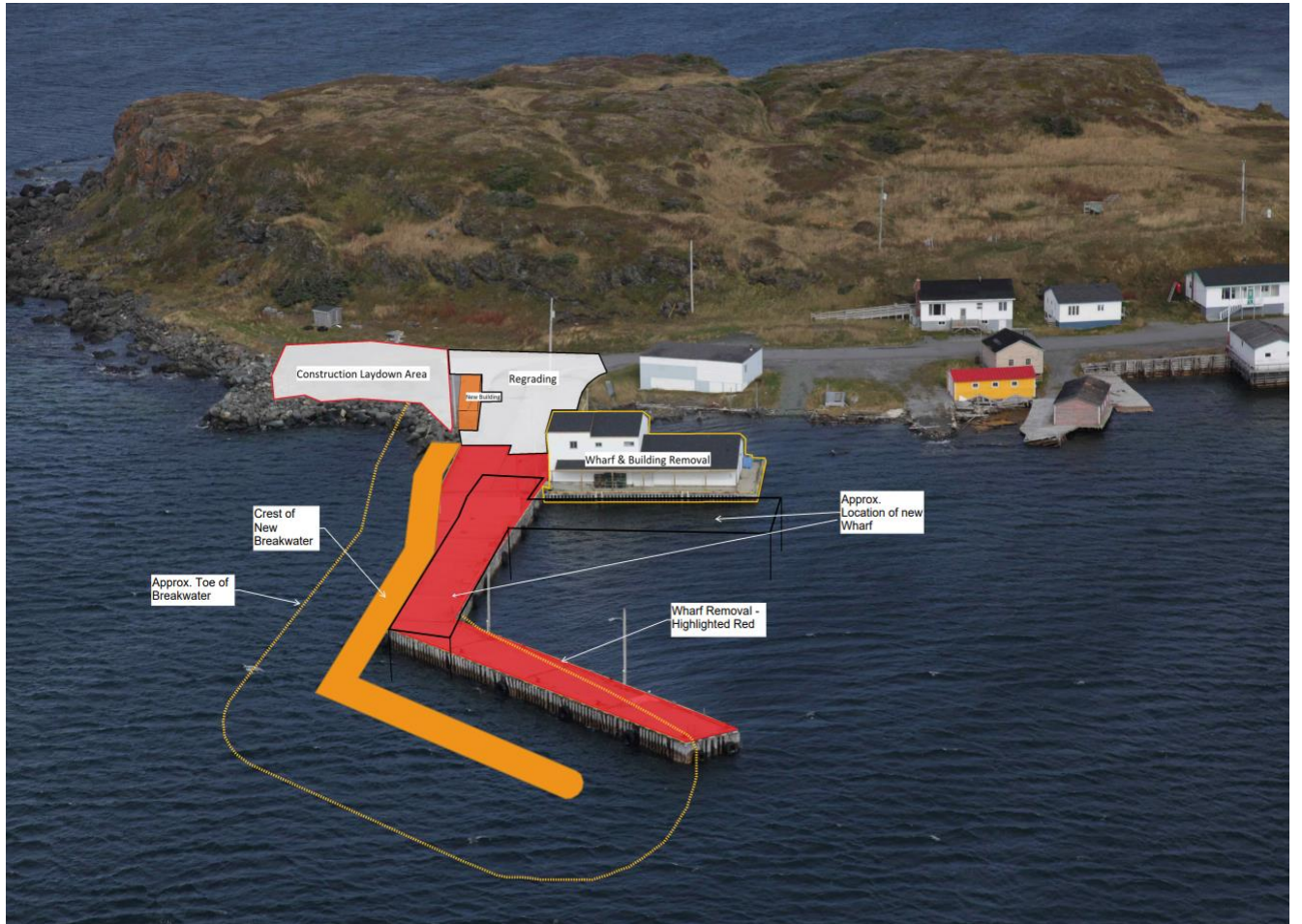
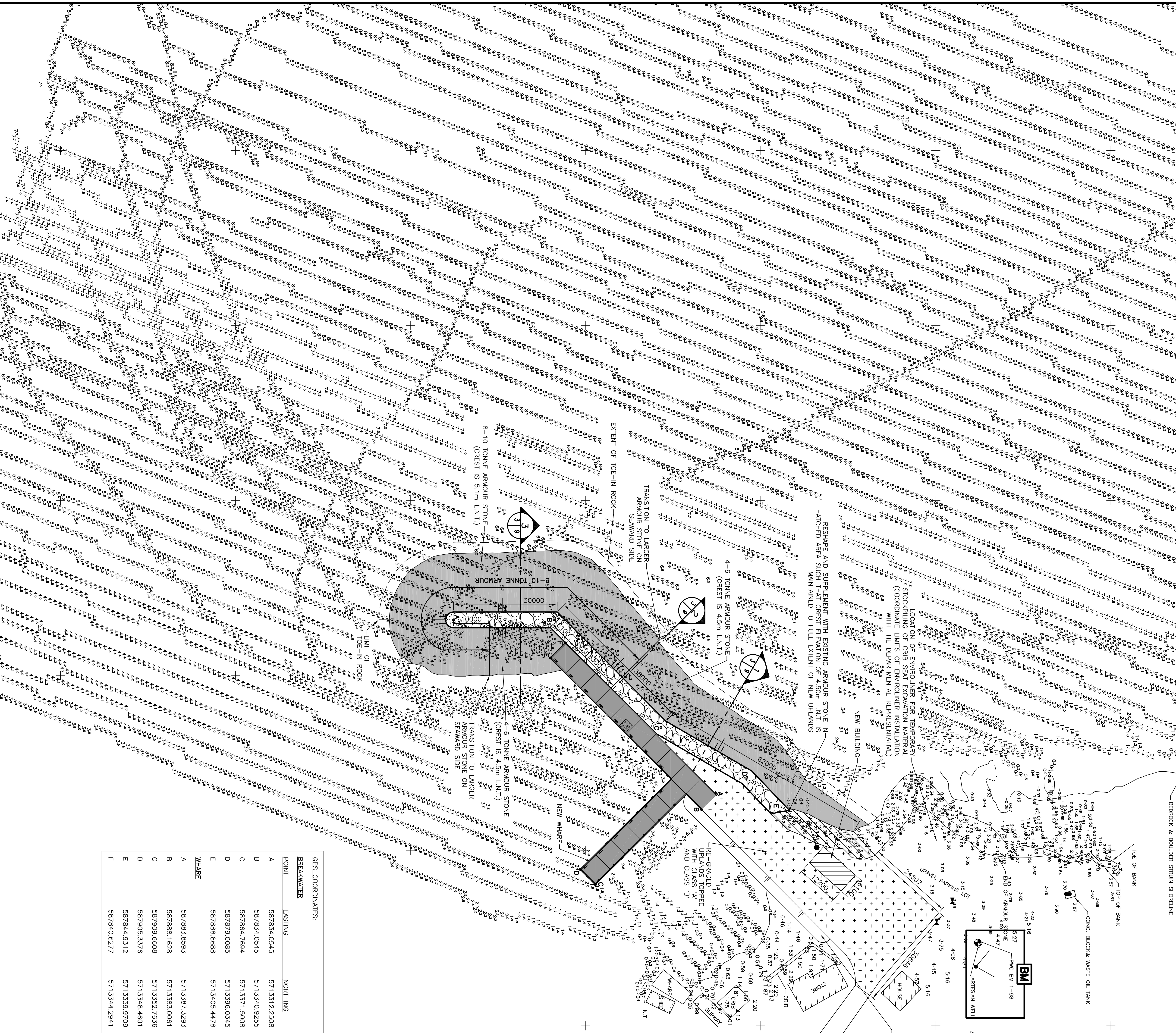


Photo 3. Project Components

APPENDIX B
New Site Plan Drawing



GNS COORDINATES:	
EASTING	NORTHING
567834.0545	5713312.2508
567834.0545	5713340.9255
567864.7684	5713371.5008
567879.0085	5713396.0345
567888.8688	5713405.4478
WHAIR:	
567883.8593	5713387.3293
567888.1628	5713383.0061
567909.6608	5713352.7636
567905.3376	5713348.4601
567844.9312	5713339.9709
567840.6277	5713344.2941

LEGEND:

	NEW WHARF
	NEW RE-GRADED UPLANDS TOPPED WITH CLASS 'A'/B'
	NEW BREAKWATER SIDE SLOPES
	NEW BREAKWATER CREST
	NEW BUILDING

SURVEY NOTES

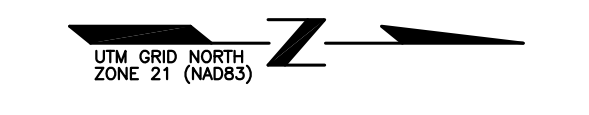
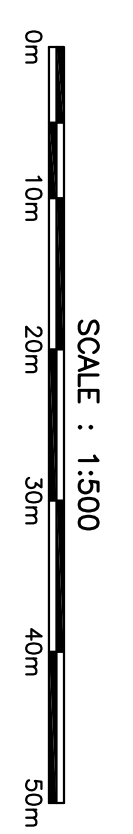
SURVEY PARTY CHIEF RICHARD HEALEY
 SURVEY VESSEL ALUMINUM BOAT
 SURVEY DATES AUGUST 29-30, 2017
 SOUNDER TYPE SINGLE TRANSDUCER
 SOUNDER TYPE N/A/NSI
 DEPTH UNIT USED FEET
 DEPTH CHECKED BY FRE. OF TRANS.
 POSITIONING SYSTEM USED TRIMBLE R7 GNSS DGPS WITH O1P
 DATA COLLECTION O1P
 LAND SURVEY POSITION BY TRIMBLE R7 GNSS DGPS (WITH O1P)
 TOTAL REDUCTION SCHEME

OFFICE PROCESSOR EDDIE BEARNS
 DATE OF PROCESSING SEPTEMBER 2017
 MODE OF PLOTTING LEAST OF MINIMUM DEPTHS
 MATRIX CELL WIDTH X LENGTH
 REDUCTION OF MATRIX CELLS

CONTROL POINTS:

PT. NAME	NORTHING	EASTING	CD ELEV	DESCRIPTION
070032	5713461.134	567952.994	+16.33 m	CROWN LAMBS BRASS PLAQUE SET IN BEDROCK.
070033	571215.049	567871.479	+2.90 m	CROWN LAMBS BRASS PLAQUE SET IN CONCRETE CYLINDER.
9802	5713434.774	567921.424	+3.26 m	I.P. DRIVEN IN PAVEMENT.
BM 1-98	5713462.20	567926.21	+4.51 m	BOLT CEMENTED IN CONC. BLOCK.
BM 897437		447.486 m		GEODETIC BRASS PLAQUE SET IN BEDROCK ALONG ROUTE NO. 430.

ALL SOUNDINGS & ELEVATIONS IN METRES.
 ALL SOUNDINGS & ELEVATIONS REFERRED TO P.M.C. 9801. ELEV. +2.97 m. (N.M.L. RAISED IN CONCRETE DECK).
 WAS ESTABLISHED FROM DGPS TRANSFER FROM GEODETIC BM 897437. ELEV. 47.468m USING A DIFFERENCE OF 0.65m BETWEEN GEODETIC AND CHART DATUMS.
 SOUNDINGS TAKEN USING NAVSOUND 210 ECHO SOUNDER AND POSITIONED BY TRIMBLE R7 GNSS DIFFERENTIAL GPS POSITIONING SYSTEM ON AUGUST 29-30, 2017 BY PMWGC SURVEY CREW.
 COORDINATES FOR HORIZONTAL CONTROL ARE GIVEN ON THE U.T.M. MAPPING PLANE, ZONE 22, USING THE NORTH AMERICAN DATUM OF 1983 (NAD83).
 SOUNDINGS WERE REDUCED BY DISTANCE & RE-CHECKED FROM SOUNDING CHARTS BEFORE BEING CORRECTED FOR TIDE & BAR CHECK CORRECTION.
 SOUNDINGS WERE REDUCED USING HPACK MAX VER. 2013 'X'.
 SPEED OF SOUND WAS OBTAINED BY "BAR CHECK" METHOD.
 ALL FIELD NOTES ARE IN RALEIGH BOOK #278.



SMALL CRAFT HARBOURS

NOTES:
 1. ALL ELEVATIONS ARE IN METRES
 UNLESS OTHERWISE NOTED.
 2. ALL DIMENSIONS ARE IN MILLIMETRES
 UNLESS OTHERWISE NOTED.

PROVINCE OF NEWFOUNDLAND
 PERMIT HOLDER
 This Permit Allows
 APN ENGINEERING INC.

Registered Professional Engineer
 Permit No. as issued by APN, 20282
 which is valid for the year 2021

REGISTERED PROFESSIONAL ENGINEER
 NIELL C. HUBB
 REG. NO. 1115
 2017-2021
 NEWFOUNDLAND & LABRADOR

drawing no.	C2-00213	no. of sheets	no. of project	C3
title	NEW SITE PLAN			
client	HARBOUR REDEVELOPMENT RALEIGH, NL			
date	NOVEMBER 1, 2021	scale		
drawn	P.H.	checked		
date	NOVEMBER 1, 2021	approved		
project	HARBOUR REDEVELOPMENT RALEIGH, NL			
revision	ISSUED FOR RE-TOUCH	11/1/21		
revision	ISSUED FOR REVIEW	7/14/21		