Fisheries and Oceans Canada
Pêches et Océans Canada

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Direction de la gestion des écosystèmes
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August 8, 2024

Our file *Notre référence*
24-HPAC-00487

Sunshine Coast Regional District
ATTENTION: Kelly Koper
1975 Field Road
Sechelt, BC
V7Z 0A8

Via email: Kelly.Koper@scrd.ca

Dear Kelly Koper:

Subject: Port Pile Replacement, Howe Sound, Gibsons – Implementation of Measures to Avoid and Mitigate the Potential for Prohibited Effects to Fish and Fish Habitat

The Fish and Fish Habitat Protection Program (the Program) of Fisheries and Oceans Canada (DFO) received your proposal on May 10, 2024. We understand that you propose to conduct works to repair and replace various components (piles, bents, rails, bolts and float) of the Eastbourne Port Facility on Keats Island, Howe Sound. The works will involve the following:

- A total of seven (7) timber piles will be replaced with new timber piles. Existing piles to be replaced will be cut at the mudline for easier removal and are proposed to be left in the ground to reduce disturbance and maintain substrate stability. The new pile will be installed with approximately 600 mm offset from the cut pile. Some of the pile caps will be replaced with similar-sized pile caps based on the location. Pile installation will also be performed with a vibratory hammer using support barges. Impact pile driving will only be undertaken if vibratory pile driving is not possible for geotechnical reasons.
- Where concrete footings need to be replaced, they will be placed during low tide when water is not present. Precast concrete footings will be replaced with cast-in-place concrete footings. For piles and concrete footings replaced together, the planned method is to place cast concrete footings and install the pile. However, where only the footing needs to be repaired, the proposed approach is to recast the concrete footing with a larger cast-in-place reinforced concrete block, anchored to the existing concrete block.
- Support barges may also be needed for pile storage and welding and will be secured alongside the spud barge.

- Cross bracings between the piles that require replacement will be constructed from new treated timbers the same size as the original timbers. The replacement will be completed with hot dip galvanized bolts, nuts and timber washers.
- Rusted/detached hardware (e.g., bolts, nuts, washers) requiring replacement will be replaced with hot dip galvanized parts.
- The float will be repaired on-site using marine-grade epoxy.

We understand the following aquatic species listed under the *Species at Risk Act* may use the area in the vicinity of where your proposal is to be located:

- Killer Whale (NE Pacific southern resident population), Leatherback Sea Turtle (Pacific population), Northern Abalone, Basking Shark - listed as Endangered;
- Killer Whale (NE Pacific northern transient population) - listed as Threatened; and
- Steller Sea Lion, Humpback Whale (North Pacific population), Harbour Porpoise (Pacific Ocean population), Grey Whale, Yelloweye Rockfish (Pacific Ocean outside waters population), Tope, Bluntnose Sixgill Shark, Longspine Thornyhead, Rougheye Rockfish type I, Rougheye Rockfish type II - listed as Special Concern.

Our review considered the following information:

- DFO Request for Review Form signed by Alasdair Lindop dated 10/05/2024 and attachments received via email from Alasdair Lindop, Hatfield Consultants on May 10, 2024, including:
    - Hatfield Consultants LLP Report titled “Eastbourne Port Facility, Keats Island – Habitat Assessment” dated May 2024.
    - Hatfield Consultants LLP Report titled “Eastbourne Port Facility – Environmental Protection Plan” dated May 2024.
- Email to Brian Naito, Fisheries and Oceans Canada from Rebecca Murphy, Hatfield Consultants sent on July 31, 2024 regarding “DFO #24-HPAC-00487 - Port Pile Replacement, Collingwood Channel, Keats Island” with attached Hatfield Consultants Memo to Brian Naito from Derek Nishimura, Hatfield Consultants dated July 31, 2024 regarding “DFO #24-HPAC-00487 - Port Pile Replacement, Collingwood Channel, Keats Island: Likelihood of disturbance to Northern Abalone during remediation works at Eastbourne Port”.

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*.

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), it is important that all proposed measures are implemented as set out in the information that was submitted to the Program in relation to your project. In addition, we recommend implementing the measures listed below. If there is a conflict between the proposed measures as set out in the information that was submitted to the Program and the following measures, the following measures shall prevail:

1. An experienced Qualified Environmental Professional (QEP) should be on site during any in-water activities to oversee the works, implement mitigation measures and suggest improvements, as necessary.
2. An experienced QEP is to monitor the area in the vicinity of the piles for the presence of fish during all pile driving activities. If injured or dead fish are observed, pile driving must cease immediately. Pile driving should only resume after additional mitigation measures are implemented to avoid and mitigate further impacts to fish.
3. Limit the duration of in-water works, undertakings and activities so that it does not diminish the ability of fish to carry out one or more of their life processes (spawning, rearing, feeding, migrating).
4. In-water works, undertakings and activities are to be scheduled to respect timing windows to protect fish, including their eggs, juveniles, spawning adults, and/or the organisms on which they feed and migrate.
5. Complete the works as quickly as possible once they are started.
6. Ensure vessels are not operating in shallow water causing direct physical impacts to the seabed and fish habitat from propeller scour.
7. Water-based equipment is not to ground upon the seabed except for the use of anchors or spuds needed to keep the water-based equipment in place.
8. Minimize movements/repositioning of barge and subsequent spudding down and anchoring to minimize direct physical disturbance to the seabed. No spudding or anchoring is to occur within sensitive habitats such as eelgrass or kelp beds.
9. Conduct in-water works during daylight hours and when weather conditions permit visual observations of fish and marine mammals.
10. If there is a risk of harm to a marine mammal from direct contact, temporarily suspend works until there is no longer risk of harm from direct contact or the individual has not been re-sighted for 30 minutes.
11. Salvage motile invertebrate species in association with pile extraction and return to nearby waters outside of the project footprint.
12. Dispose of removed creosote piles so that deleterious substances do not enter freshwater or marine environments. Deploy containment booms around creosote piles prior to removal.
13. Piles should not be dragged on the seabed following removal, but lifted clear by machine.

14. If piles are cut and left in place, it is recommended that they are cut off below the mudline.
15. Manage sediment that may be adhered to removed timber piles by disposing of the sediment in an appropriate location (e.g., at an upland facility approved to take the material) rather than depositing in fish habitat or in any area where it may re-enter fish-bearing waters.
16. Develop and implement a debris management plan for pile and dock removal works to address construction materials and debris (e.g., treated wood fragments, sawdust, cuttings, etc.) entering the marine environment.
17. Vibratory pile driving is the preferred method for pile installation rather than impact pile driving. The following mitigation measures are applicable to pile installation by vibratory hammer only:
    - Establish a 500 m marine mammal exclusion zone around the project site prior to pile installation.
    - Monitor for marine mammals for at least 30 minutes prior to the start of pile installation by vibratory hammer. If a cetacean enters the exclusion zone, temporarily suspend pile installation until the individual has left the exclusion zone or has not been sighted for 30 minutes.
18. If impact pile driving is required, the following mitigation measures are to be applied:
    - A QEP is to conduct hydroacoustic monitoring during all pile driving to verify that underwater acoustic thresholds are not exceeded.
    - Install an effective sound attenuation device (e.g., bubble curtain) to be used prior to and during pile driving to ensure sound levels do not exceed 207 dB re: 1 µPa and a SEL_{cum} of 203 dB re: 1 μPa^2s outside of the sound attenuation device.
    - Establish separate fish and marine mammal exclusion zones (e.g., perimeter) around the sound source prior to pile driving. The pinniped exclusion zone is to be a minimum 75 m. The cetacean exclusion zone is to be a minimum of 500 m or the distance to where sound levels do not exceed 160 dB_{RMS} re 1 µPa during pile driving, whichever is greater.
    - Monitor the exclusion zones for the presence of fish for at least 10 minutes and for marine mammals for at least 30 minutes prior to the start of pile driving.
    - An experienced and qualified marine mammal observer(s) must monitor for marine mammals in the exclusion zone for 30 minutes prior to the start of and during all pile driving.
    - If fish and marine mammals are not observed in the respective exclusion zones during the prestart period, a soft start procedure is recommended where the impact energy is gradually increased over a 10 minute period. The soft start procedure is also recommended any time after there is a break of 30 minutes or more during pile driving.
    - If a marine mammal enters the marine mammal exclusion zone, temporarily suspend pile driving until the individual has left the exclusion zone or has not been resighted for 30 minutes.

- If hydroacoustic monitoring indicates that these thresholds are being exceeded, work must be halted and additional measures (e.g., bubble curtain) implemented to effectively reduce sound levels below the above thresholds.

19. Avoid introducing or inducing sediments (e.g., silts, clays and sand) into the waterbody.
20. Develop and implement an erosion and sediment control plan to avoid and minimize the introduction of sediment into or induced sedimentation in the waterbody.
21. Do not deposit substances deleterious to fish directly or indirectly into fish bearing waters. It should be noted that uncured concrete or water containing uncured concrete may be deleterious to aquatic life.
22. Develop and implement a response plan to avoid a spill of deleterious substances.
23. Report spills of deleterious substances that have caused, or are about to cause, the unauthorized death of fish by means other than fishing and/or the harmful alteration, disruption or destruction of fish habitat to Observe, Record, Report at 1-800-465-4336 or DFO.ORR-ONS.MPO@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-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 the DFO-Pacific Observe, Record and Report phone line at 1-800-465-4336 or by email at DFO.ORR-ONS.MPO@dfo-mpo.gc.ca.

Please notify the Program by email at Brian.Naito@dfo-mpo.gc.ca at least 10 days before starting your project, ensuring your file number and appropriate on-site contact information is included. We recommend 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, 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 one 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 one year period.

If you have any questions with the content of this letter, please contact the undersigned at our Vancouver office by email at Brian.Naito@dfo-mpo.gc.ca. Please refer to the file number referenced above when corresponding with the Program.

Sincerely,

Brian Naito

Brian Naito
Senior Biologist
Fish and Fish Habitat Protection Program
Ecosystems Management Branch
Fisheries and Oceans Canada / Government of Canada

cc: Alasdair Lindop, Hatfield Consultants Email: alindop@hatfieldgroup.com