Fisheries and Oceans Canada
Pêches et Océans Canada

Pacific Region
Ecosystem Management Branch
3190 Hammond Bay Road
Nanaimo, BC
V9T 6N7

Région du Pacifique
Direction de la gestion des écosystèmes
3190, rue Hammond Bay
Nanaimo, (C.-B.)
V9T 6N7

April 2, 2025

Our file *Notre référence*
23-HPAC-01043

British Columbia Ferry Services Inc.
ATTENTION: Jameson Mtanga
Suite 500 - 1321 Blanshard St.
Victoria, BC V8W 0B7

Via email: [redacted]

Subject: BC Ferries Terminal Berth Rebuild, Trincomali Channel, Village Bay – Implementation of Measures to Avoid and Mitigate the Potential for Prohibited Effects to Fish and Fish Habitat

Dear Jameson Mtanga:

The Fish and Fish Habitat Protection Program (the Program) of Fisheries and Oceans Canada (DFO) received your proposal on **October 19, 2023**. We understand that you propose to complete repairs at Berth 1 of the Village Bay ferry terminal on Mayne Island, BC. Proposed works include:

- Installation of eight steel piles (219 mm diameter) using drilling methods;
- Installation of six steel falsework piles (900 mm diameter) using vibratory hammer methods;
- Repairs to the existing riprap slope by regrading and placement of additional riprap;
- Construction of a new riprap buttress to the east of the repaired riprap slope to prevent erosion and potential slope failure; and
- Structural repairs to the vehicle ramp deck, apron, ramp tower, and ramp abutment all located above the high water mark (HWM).

Our review considered the following information:

- *Request for Review* form submitted by email on October 19, 2023;
- *Aquatic Effects Assessment – BC Ferries Village Bay Terminal Berth 1 Rebuild*, dated October 12, 2023 prepared by Keystone Environmental Ltd. (Keystone), submitted by email on October 19, 2023;
- Updated project design and bathymetry drawings, dated May 3, 2024, submitted by email on June 3, 2024;

- Memo entitled *Response to Fisheries and Oceans Canada Request for Information*, dated January 20, 2025, prepared by Keystone, submitted by email on January 20, 2025; and
- *Email communications* between Hailey O'Neill (the Program), Jameson Mtanga (BC Ferries), Adomas Lukas (Keystone), Dave Langill (Keystone), and Cara Poulsen (Keystone) from January 18, 2024 to January 20, 2025 regarding design updates and additional project details.

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.

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 (Northeast Pacific Southern Resident population) and Northern Abalone, both listed as Endangered;
- Killer Whale (Northeast Pacific Offshore and Transient populations) listed as Threatened; and
- Green Sturgeon, Grey Whale (Eastern North Pacific population), Harbour Porpoise (Pacific Ocean population), Humpback Whale (North Pacific population), and Steller Sea Lion, all listed as Special Concern.

To avoid and mitigate the potential for prohibited effects to fish and fish habitat (as listed above), we recommend implementing the measures listed below:

- A qualified environmental professional (QEP) is to conduct environmental monitoring, including water quality monitoring, during all project activities that may result in potential negative effects to fish and fish habitat.
- 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).
- Only conduct in-water works during daylight hours and weather conditions that permit visual observations of fish and marine mammals.
- If there is a risk of harm to a marine mammal from direct contact by barges, heavy equipment, etc., temporarily suspend construction until there is no longer a risk of harm from direct contact or the individual has not been sighted for 30 minutes.

- Ensure vessels are not operating in shallow water causing direct physical disturbance to the seabed/habitat from propeller scour.
- Water-based equipment used for demolition and construction is not to ground upon the seabed except for the use of anchors or spuds needed to keep the equipment in place.
- Minimize movements/repositioning of the barge and subsequent spudding to minimize physical disturbance to the seabed. No spudding or anchoring is to occur within sensitive habitats such as eelgrass beds.
- Vibratory pile driving and/or drilling are the preferred methods for pile installation rather than impact pile driving. The following mitigation measures are applicable to pile installation by vibratory hammer and/or drilling only:
    - Establish a 1000 m cetacean 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.
    - 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 is to cease immediately. Pile driving should only resume after additional mitigation measures are implemented to avoid and mitigate further impacts to fish.
    - Turbid water generated during pile drilling should be contained to the immediate worksite within a floating sediment curtain, or temporarily discharged to a suitable containment (e.g., tank on a barge), to allow sediments to settle before discharging to any waterbody.
    - Dispose of drill cuttings either within the pile casing or offsite at a facility approved for the materials rather than placing on the seabed.
    - Screen the intakes of pumps (i.e., used for marine water withdrawals for drilling) according to DFO's *Interim code of practice: End-of pipe fish protection screens for small water intakes in freshwater* (https://www.dfo-mpo.gc.ca/pnw-ppe/codes/screen-ecran-eng.html) to prevent entrainment and impingement of fish.
- Conduct works below the HWM during an appropriate tidal cycle to allow working in the dry (i.e., when the site is dewatered by a low or falling tide) to the extent possible.
- Clearly delineate the footprint for the riprap buttress to ensure that it does not extend beyond the planned footprint.
- Salvage motile invertebrate species (e.g., crabs, sea stars, etc.) from the project footprint prior to the riprap repair and placement works. Immediately relocate all salvaged animals to nearby waters outside of the project footprint.
- Construction works, undertakings or activities are not to result in the trapping or stranding of fish.

- Backfill voids in the riprap to the same or higher elevation as the adjacent beach to prevent trapping or stranding of fish.
- All placed rock materials (i.e., riprap) are to be non-acid generating, clean and free of fine sediment and debris.
- Place riprap slowly and carefully with appropriate equipment rather than dumping material into the marine environment.
- Operate machinery from land or from barges during all phases of the project.
- Use a single route for equipment access/egress in the intertidal zone to minimize the project footprint to the greatest extent possible. Ensure all rutting is graded smooth prior to incoming tides to prevent stranding of fish.
- Develop and implement a sediment control plan to minimize sedimentation during all phases of the work, undertaking or activity.
- Develop and immediately implement a response plan to avoid deleterious substances from entering any waterbody.
- Maintain all machinery on site in a clean condition and free of fluid leaks.

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 [redacted] 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 Hailey O'Neill at our Nanaimo office at 250-327-3197 or by email to [redacted] Please refer to the file number referenced above when corresponding with the Program.

Yours sincerely,

[redacted]

Andrew MacInnis
Senior Biologist, Coastal Watershed Regulatory Operations
Fish and Fish Habitat Protection Program

c.c.: Adomas Lukas, Keystone Environmental Inc., [redacted]