

PER No.:	19-187
Tenant:	Westshore Terminals Limited Partnership
Project:	Berth 2 Mooring Dolphin Upgrades
Project Location:	1 Roberts Bank Road, Delta BC V4M 4G5
Vancouver Fraser Port Authority SID No.:	DEL034
Land Use Designation:	Port Terminal
Applicant/Permit Holder:	Westshore Terminals Limited Partnership
Category of Review:	B
Date of Approval:	April 3, 2020
Date of Expiry:	February 28, 2022

1 INTRODUCTION

The Vancouver Fraser Port Authority (the port authority), a federal port authority, manages lands under the purview of the *Canada Marine Act*, which imparts responsibilities for environmental protection. The port authority accordingly conducts project and environmental reviews of works and activities undertaken on these lands to ensure that the works and activities will not likely cause significant adverse environmental effects. This project and environmental review report and project permit (the Permit) documents the port authority's project and environmental review of PER No. 19-187: Berth 2 Mooring Dolphin Upgrades (the Project) proposed by Westshore Terminals Limited Partnership (the Applicant).

This project and environmental review was carried out to address the port authority's responsibilities under the *Canada Marine Act*, and to meet the requirements of the *Impact Assessment Act*, as applicable. The proposed Project is not considered a "designated project" under the *Impact Assessment Act* and an impact assessment as described in the *Impact Assessment Act* is not required. However, the port authority authorization is required for the proposed Project to proceed and in such circumstances, where applicable, Section 82 of *Impact Assessment Act* requires federal authorities to assure themselves that projects will not likely cause significant adverse environmental effects. This review provides that assurance. In addition, the port authority considers other interests, impacts and mitigations through the project and environmental review.

The project and environmental review considered the application along with supporting studies, assessments and consultations carried out or commissioned by the Applicant, as well as other information provided by the Applicant. In addition, this project and environmental review considered other information available to the port authority and other consultations carried out by the port authority. A full list of information sources germane to the review is provided in the following pages of this report.

This Permit is the authorizing document allowing the Applicant to proceed with the Project subject to the listed project and environmental conditions.

2 PROJECT DESCRIPTION

The Applicant, Westshore Terminals Limited Partnership, proposes to upgrade four existing mooring dolphins at Berth 2 of its terminal in Delta, BC. These dolphins were originally designed for vessels with a capacity of 100,000 dead weight tons but are now handling vessels up to 185,000 dead weight tons. Marine inspections on the dolphins have indicated that the dolphins are approaching end-of-life and they need to be replaced with new upgraded dolphins.

There are four existing dolphins that each consist of nine 762 mm steel piles. Each dolphin has three vertical piles and six piles at a 45 degree angle (1:1 slope). The two inner dolphins will remain intact and no steel piles will be removed. The two outer dolphins will be demolished and have a total of eighteen piles removed. The dolphin at the wharf head will have the fenders removed to reduce stress on the structure. The two new inner dolphins will be designed to have fewer but higher capacity piles. The two new dolphins will have a total of sixteen 1524 mm steel piles. The mooring dolphins design is based on berthing vessels of 185,000 dead weight tons loaded to 75%.

Construction is proposed to take place during two shutdown periods at Berth 2, with Phase 1 occurring in the summer of 2020 and Phase 2 occurring in 2021. Both shutdowns are expected to occur over a 24 day period. Construction will be conducted by a marine contractor and will include pile removal, pile installation, metal works for fender removal, and concrete works for pile caps. Work will be carried out on a 24 hours per day and 7 days per week basis (i.e. 24/7). Work will be carried out on a 24/7 basis due to minimize berth downtime. Louder activities, such as pile installation, will be restricted to standard port construction hours.

In this project permit, the Project means the physical activities authorized by the port authority to be carried out pursuant to **PER No. 19-187**, as described below.

2.1 Proposed Works

- Staging marine equipment at Berth 2.
- Removal of eighteen (18) 762 mm piles using choker chains or vibratory hammers, comprising of six vertical steel piles and twelve angled steel piles.
- If the angled steel piles cannot be fully removed they may be cut at the mudline.
- Installation of sixteen (16) 1524 mm steel piles by vibratory hammer and impact hammer.
- Installation and removal of fenders, piles caps, and catwalks.

3 VANCOUVER FRASER PORT AUTHORITY INTERNAL REVIEWS

The following port authority departments have undertaken and completed a review of these works and confirm that the proposal meets their requirements, subject to the listed project and environmental conditions.

- | | | |
|---|--|---|
| <input checked="" type="checkbox"/> Planning | <input checked="" type="checkbox"/> Environmental Programs | <input checked="" type="checkbox"/> Engineering |
| <input checked="" type="checkbox"/> Marine Operations | <input checked="" type="checkbox"/> Public Engagement | <input type="checkbox"/> Transportation |
| <input checked="" type="checkbox"/> Indigenous Consultation | | |

4 INDIGENOUS CONSULTATION

The port authority has reviewed the proposed works and determined that adverse impacts to Aboriginal or Treaty rights are not expected.

5 NOTIFICATIONS

5.1 Marine User Stakeholder

The proposed Project was assessed by the port authority to have potential impacts to marine user interests. A notification letter was sent to the Pacific Pilotage Authority (PPA) and BC Coast Pilots (BCP) on February 14, 2020 notifying them of the proposed Project. BCP responded in an email requesting that a safety protocol and procedures be in place during the project to allow for the movement of other vessels in the area, i.e. movement to and from the Deltaport berths and Westshore Berth 1.

Marine Operations will review the Marine Construction Staging Plan to ensure the placement of barges and equipment does not impede the navigation of vessels accessing Deltaport and Westshore Berth 1. This measure is further detailed in Condition #18 below.

5.2 Adjacent Tenant Notification

The proposed Project was assessed by the port authority to have potential impacts to adjacent tenant interests. A notification letter was sent to GCT Canada on February 13, 2020, notifying them of the proposed Project. GCT Canada had no comments.

6.3 Public Engagement

To meet requirements of section 86 of the *Impact Assessment Act*, the port authority posted a description of the Project and notice of public participation to the Canadian Impact Assessment Registry to provide the public 30 calendar days to comment on the project and provide community knowledge.

5.3 Summary of Public Engagement

At the close of the 30 calendar day public comment period, no comments were received from the public. The proposed Project was assessed by the port authority to have minimal or no potential impacts to community interests in the surrounding area either during construction or once the project is completed. Therefore no construction notification was required.

6 INFORMATION SOURCES

The port authority has relied upon the following sources of information in its review of the Project.

- Application form and materials submitted by the Applicant on September 16, 2019.
- All Project correspondence from September 2019 to March 2020.
- All plans and drawings labelled PER No.19-187.
- “Supporting Documentation for Proposed Project: Westshore Terminals Limited Partnership Berth 2 Dolphin Replacement”, September 13, 2019, CWA Engineering Inc. This document includes a construction environmental management plan in Appendix D.
- March 20, 2020 email from Spencer Townsend (CWA Engineers) to Spencer Chaisson (the port authority) titled “RE: [External] - RE: (B2) Westshore Terminals - PER 19-187 Berth 2 Mooring Dolphins”.

7 ENVIRONMENTAL REVIEW DECISION

In completing the project and environmental review, the port authority has reviewed and taken into account relevant information available on the proposed project and has considered any adverse impact that the project may have on the rights of the Indigenous peoples, Indigenous knowledge, community knowledge, comments received from the public, and measures that would mitigate any significant adverse environmental effects of the project. We conclude that with the implementation of proposed mitigation measures and conditions described in the project and environmental conditions section below, the Project is not likely to cause significant adverse environmental effects.

ORIGINAL COPY SIGNED

ANDREA MACLEOD
MANAGER, ENVIRONMENTAL PROGRAMS

April 3, 2020

DATE OF DECISION

8 CONCLUSION

In completing the project and environmental review, the port authority concludes that with the implementation of proposed mitigation measures and conditions described in the project and environmental conditions section below, the Project has appropriately addressed all identified concerns.

PROJECT AND ENVIRONMENTAL REVIEW DECISION

Project Permit PER No. 19-187 is approved by:

ORIGINAL COPY SIGNED

ANDREA MACLEOD
MANAGER, ENVIRONMENTAL PROGRAMS

April 3, 2020

DATE OF APPROVAL

9 PROJECT AND ENVIRONMENTAL CONDITIONS

The port authority has undertaken and completed a review of the Project in accordance with the *Canada Marine Act* and Section 5 of the *Port Authorities Operations Regulations* and, as applicable, Section 82 of the *Impact Assessment Act*.

If at any time Westshore Terminals Limited Partnership (the Permit Holder) fails to comply with any of the project and environmental conditions set out in the project permit (the Permit) below, or if the port authority determines that the Permit Holder has provided any incomplete, incorrect or misleading information in relation to the Project, the port authority may, in its sole and absolute discretion, cancel its authorization for the Project or change the project and environmental conditions to which such authorization is subject.

Pursuant to Section 29 of the *Port Authorities Operations Regulations*, the port authority may also cancel its authorization for the Project, or change the project and environmental conditions to which such authorization is subject, if new information is made available to the port authority at any time in relation to the potential adverse environmental and other effects of the Project.

The following are the minimum conditions that must be followed by the Permit Holder to mitigate potential or foreseeable adverse environmental and other effects.

All port authority Guidelines and Record Drawing Standards referenced in this document can be located at: <https://www.portvancouver.com/development-and-permits/project-and-environmental-reviews/technical-guidelines/>.

No.	GENERAL CONDITIONS
1.	The Permit Holder must have a valid lease, licence, or access agreement for the Project site prior to accessing the Project site or commencing construction or any other physical activities on the Project site. This Permit shall in no way limit any of the Permit Holder's obligations, or the port authority's rights, under such lease, licence, or access agreement.
2.	The Permit Holder shall at all times and in all respects, comply with and abide by all applicable statutes, laws, regulations and orders from time to time in force and effect, including all applicable environmental, labour and safety laws and regulations.
3.	This Permit in no way endorses or warrants the design, engineering, or construction of the Project and no person may rely upon this Permit for any purpose other than the fact that the port authority has permitted the construction of the Project, in accordance with the terms and conditions of this Permit.
4.	The Permit Holder shall indemnify and save harmless the port authority in respect of all claims, losses, costs, fines, penalties or other liabilities, including legal fees, arising out of: (a) any bodily injury or death, property damage or any loss or damage arising out of or in any way connected with the Project; and (b) any breach by the Permit Holder of its obligations under this Permit.

5.	The Permit Holder shall undertake and deliver the Project to total completion in a professional, timely and diligent manner in accordance with applicable standards and specifications set out in the sections above entitled Project Description and Information Sources. The Permit Holder shall not carry out any other physical activities unless expressly authorized by the port authority.	
6.	The Permit Holder shall cooperate fully with the port authority in respect of any review by the port authority of the Permit Holder's compliance with this Permit, including providing information and documentation in a timely manner, as required by the port authority. The Permit Holder is solely responsible for demonstrating the Permit Holder's compliance with this Permit.	
7.	The Permit Holder shall review the Permit with all employees, agents, contractors, licensees and invitees working on the Project site, prior to such parties participating in any construction or other physical activities on the Project site. The Permit Holder shall be solely responsible for ensuring that all such employees, agents, contractors, licensees and invitees comply with this Permit.	
8.	The Permit Holder shall make available upon request by any regulatory authority (such as a Fishery Officer) a copy of this Permit.	
9.	Unless otherwise specified, the Permit Holder shall provide all plans, documents, and notices required under this Permit to the following email address: per@portvancouver.com and referencing PER No.19-187 .	
10.	Unless otherwise specified, all plans, schedules, and other Project-related documentation that the Permit Holder is required to provide under this Permit must be to the port authority's satisfaction.	
11.	The port authority shall have unfettered access to environmental compliance documentation and the Project site at all times during construction without notice.	
12.	The Permit Holder must maintain and retain any records associated with, or produced by, actions or activities undertaken to achieve compliance or that indicate non-compliance with project permit conditions. These records must be made available at the request of the port authority.	
	CONDITIONS – PRIOR TO COMMENCING CONSTRUCTION OR ANY PHYSICAL ACTIVITIES	SUBMISSION TIMING (business days)
13.	At least two days prior to commencing any physical activities, the Permit Holder shall notify the Harbour Master and the port authority Environmental Programs, email: Harbour_Master@portvancouver.com EnvironmentalPrograms@portvancouver.com.	2 business days before commencing construction or any physical activities
14.	The Permit Holder shall submit signed and sealed drawings for proposed works approved for construction by a professional engineer licensed to practice in the Province of British Columbia.	5 business days before commencing construction or any physical activities
15.	The Permit Holder shall distribute a notification letter to adjacent tenant David McAdam (GCT Canada, dmcadam@globalterminals.com) to notify them of the proposed construction works prior to Phase 1 AND Phase 2 of the project schedule.	10 business days before commencing construction or any physical activities for Phase 1 and Phase 2
16.	Prior to the commencement of any vessel-related activities, the Permit Holder shall contact Canadian Coast Guard (CCG) Marine Communications and Traffic Services (MCTS), (email: NAVWARN.MCTSPPrinceRupert@innav.gc.ca; Phone: 250-627-3070) regarding the issuance of a Navigational Warning (NAVWARN) to advise the marine community of potential hazards associated with the Project.	As per Coast Guard requirements

17.	The Permit Holder shall provide the port authority with a copy of their Request for Review submission to Fisheries and Oceans Canada and any subsequent project-related correspondence (i.e. Letter of Advice) from Fisheries and Oceans Canada.	5 business days before commencing construction or any physical activities
18.	The Permit Holder shall provide the port authority an updated construction environmental management plan based on any advice and recommendations of Fisheries and Oceans Canada.	5 business days before commencing construction or any physical activities
19.	<p>The Permit Holder shall submit a marine construction and staging plan for the port authority's review and approval, which includes:</p> <ul style="list-style-type: none"> (a) staging and construction areas; (b) dates and hours of operations; (c) description of activities taking place; (d) participating equipment and vessels (dimensions must be included); (e) method of preferred communication; and (f) special requests and/or additional information. <p>The Permit Holder shall carry out the Project in accordance with the marine construction and staging plan, including any subsequent amendments approved by the port authority.</p>	20 business days before commencing construction or any physical activities
CONDITIONS – DURING CONSTRUCTION OR ANY PHYSICAL ACTIVITIES		
20.	The Permit Holder shall notify the port authority upon commencement of construction, or any physical activities (e.g., mobilization to the Project site).	
21.	Construction and any physical activities related to the Project may be conducted between Monday to Sunday for 24 hours a day, 7 days a week over 24 day berth shutdown periods. Pile installation activities shall only occur Monday to Saturday between the hours of 7:00 am and 8:00 pm. No construction works shall occur during statutory holidays. These hours shall not be modified without prior approval from the port authority.	
22.	The Permit Holder shall notify the port authority within two business days of any complaints received from the community and stakeholders during construction and indicate how the Permit Holder has responded to such complaints.	
23.	The Permit Holder shall ensure that an appropriately qualified archaeological monitor be on the Project site at all times during ground disturbing activities with the potential to intrude into native soils.	
24.	<p>If the Permit Holder encounters, expects to encounter, or should expect to encounter an actual or potential archaeological resource, the Permit Holder shall:</p> <ul style="list-style-type: none"> a) Immediately stop any activities that may disturb the archaeological resource or the site in which it is contained (Site); b) Not move or otherwise disturb the archaeological resource or other remains present at the Site; c) Stake or flag the Site to prevent additional disturbances; and, d) Immediately notify the port authority by email and phone. 	
25.	Without limiting the generality of permit condition #2, the Permit Holder shall not, directly or indirectly: (a) deposit or permit the deposit of a deleterious substance of any type in water frequented by fish in a manner contrary to Section 36(3) of the <i>Fisheries Act</i> ; or (b) adversely affect fish or fish habitat in a manner contrary to Section 35(1) of the <i>Fisheries Act</i> .	

26.	<p>The Permit Holder shall not permit sediment, sediment-laden waters, or other deleterious substances to enter the water during the Project. The Permit Holder shall carry out all physical activities in a manner that prevents induced sedimentation of foreshore and near shore areas and induced turbidity of local waters, and the release of sediment, sediment-laden waters, and turbid waters to the aquatic environment. The Permit Holder shall manage turbidity in compliance with the following water quality criteria:</p> <ul style="list-style-type: none"> (a) when background is less than or equal to 50 nephelometric turbidity units (NTU), induced turbidity shall not exceed 5 NTU above the background values; and (b) when background is greater than 50 NTU, induced turbidity shall not exceed the background values by more than 10% of the background value. <p>For the purposes of this condition, "background" means the level at an appropriate adjacent reference site (as determined to the satisfaction of the port authority) that is affected neither by physical activities at the project site, nor sediment-laden or turbid waters resulting from physical activities at the project site.</p>
27.	<p>There shall be no in-water works during the fisheries sensitive period from March 1 to August 15, inclusive, unless otherwise approved in writing by Fisheries and Oceans Canada or the port authority. The port authority shall be notified of any Fisheries and Oceans Canada exemptions allowing works within the fisheries sensitive period.</p>
28.	<p>The Permit Holder shall establish a marine mammal safety zone around the Project site, including a 1,000 m safety zone for marine mammals and 150 m safety zone for harbor seal. If a marine mammal enters its respective safety zone during in-water construction activities, a work stoppage will be implemented.</p>
29.	<p>The Permit Holder shall assign a qualified Marine Mammal Observer to monitor marine mammal activity and enforce the marine mammal exclusion zone during in-water works as described within the CEMP.</p>
30.	<p>The Permit Holder shall conduct hydroacoustic monitoring during pile driving to monitor underwater sound. The Permit Holder shall monitor up to the edge of the marine mammal exclusion zone (1,000 m) during the first two pile driving attempts to confirm that underwater noise does not exceed 160 dB_{RMS re: 1 µPa} as described within the CEMP. After confirmation, the Permit Holder is permitted to monitor underwater noise at 10 m from pile installations. Sound levels must not exceed the injury threshold for fish of 206 dB_{re: 1 µPa} at 10 m from source.</p>
31.	<p>The Permit Holder shall cap any exposed hollow pipe piles to prevent wildlife entrapment.</p>
32.	<p>The Permit Holder shall conduct all activities involving the use of concrete, cement, mortars and other Portland cement or lime-containing construction materials in a manner that shall not deposit sediments, debris, concrete (cured or uncured), and concrete fines into the aquatic environment, either directly or indirectly. Water that has contacted uncured or partly cured concrete or Portland cement or lime-containing construction materials (such as the water that may be used for exposed aggregate wash-off, wet curing, equipment and truck washing) shall not be permitted to enter the aquatic environment. The Permit Holder shall provide containment facilities at the site for the wash-down water from concrete delivery trucks, concrete pumping equipment, and other tools and equipment, as required.</p>
33.	<p>The Permit Holder shall contain and collect debris and waste material in the immediate working area within the Project site. The Permit Holder shall dispose of waste material at suitable upland locations and maintain records of off-site disposal.</p>
34.	<p>The Permit Holder shall carry out the Project in accordance with the construction environmental management plan provided by the Permit Holder, and any subsequent amendments approved by the port authority.</p>

35.	<p>During any vessel-related activities, the Permit Holder shall:</p> <ul style="list-style-type: none"> a) Position vessels and equipment associated with the Project in such a manner so as not to obstruct line of sight to navigational aids or markers; b) Exhibit the appropriate lights and day shapes at all times; c) Monitor the VHF channel used for MCTS communications in the respective area at all times and participate as necessary; d) Be familiar with vessel movements in areas affected by the Project. e) Plan and execute the Project in a manner that will not impede navigation or interfere with vessel operations; and, f) During night hours, unless working 24 hours per day, ensure that the rig and associated equipment is moored outside the navigation channel and lit in accordance with all applicable regulations. 	
36.	<p>The Permit Holder shall remove piles completely by extracting the entire length of pile from the river/seabed. If physical conditions result in the breakage of piles, the Permit Holder shall remove the remaining pile stubs with the least amount of disturbance of the river/seabed as possible. Should it be impossible to remove the remaining pile stubs, they are to be cut as close as possible to the nominal bed elevation in the immediate area of each pile. In regards to batter piles, If the angle of the pile is such that the construction equipment is unable to extract the pile, then a document from the contractor stating the limitations of the equipment and rationale for not being able to extract the piles is required. If the rationale is reasonable, the piles are to be cut as close as possible to the nominal bed elevation in the immediate area of each pile. Upon successful completion of the pile extraction work, a hydrographic survey of the location is required with survey data and post extraction drawing provided to the port authority within one week.</p>	
	CONDITIONS – UPON COMPLETION	SUBMISSION TIMING (Business Days)
37.	The Permit Holder shall notify the port authority upon completion of the Project.	Upon substantial completion
38.	The Permit Holder must provide record drawings in accordance with the port authority's Record Drawing Standards (available at: http://www.portvancouver.com/development-and-permits/project-and-environmental-reviews/technical-guidelines/), in both AutoCAD and Adobe (PDF) format to the port authority, including a Project site plan that clearly identifies the location of works.	Within 40 business days of completion
39.	The Permit Holder must send record drawings of all newly constructed and/or demolished marine works to the Database Information Office of the Canadian Hydrographic Service (250-363-6360 or chsdatacentre@dfo-mpo.gc.ca) to arrange for the relevant Canadian Hydrographic Service charts to be updated. The port authority's Marine Operations department must be carbon copied into the request (navigation.review@portvancouver.com).	Within 40 business days of completion
The port authority reserves the right to rescind or revise these conditions at any time that new information warranting this action is made available to the port authority.		
LENGTH OF PERMIT VALIDITY		
The Project must be completed no later than February 28, 2022 (the Expiry Date).		

AMENDMENTS

- Details of any material proposed changes to the Project, including days and hours when construction and any physical activities will be conducted, must be submitted to the port authority for consideration of an amendment to this Permit.
- For an extension to the Expiry Date, the Permit Holder must apply in writing to the port authority no later than 30 days prior to that date.

Failure to apply for an extension as required may, at the sole discretion of the port authority, result in termination of this Permit.

CONTACT INFORMATION

Vancouver Fraser Port Authority
100 The Pointe, 999 Canada Place
Vancouver BC V6C 3T4 Canada

Project & Environmental Review
Tel.: 604-665-9047
Fax: 1-866-284-4271
Email: PER@portvancouver.com
Website: www.portvancouver.com

After normal business hours:

In the event of any land or marine construction incidents or concerns related to works carried out on-site under this permit, please contact the 24/7 Port Operations Centre 604-665-9086. In the event of an emergency requiring 'First Responders', please call 911 first.