




PORT of
vancouver

PROJECT AND ENVIRONMENTAL REVIEW REPORT
PER NO. 17-407
SHIP LOAD-OUT GRAVEL BED AND SHORELINE PROTECTION

Prepared for:
Director, Environmental Programs

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		VANCOUVER FRASER PORT AUTHORITY PROJECT AND ENVIRONMENTAL REVIEW REPORT	
PER No.:	17-407		
Tenant:	Seaspan ULC		
Project:	Ship Load-out Gravel Bed and Shoreline Protection		
Project Location	10 Pemberton Avenue, North Vancouver		
Vancouver Fraser Port Authority SID No.:	DNV059, CNV061		
Land Use Designation:	Industrial and Port Terminal		
Applicant:	Seaspan ULC		
Applicant Address:	10 Pemberton Avenue, North Vancouver		
Category of Review:	C		
Recommendation:	That PER No. 17-407 be approved		

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 documents the port authority's project and environmental review of PER No. 17-407: Ship Load-out Gravel Bed and Shoreline Protection (the Project) proposed by Seaspan ULC (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 a "designated project" under the *Impact Assessment Act* and an impact assessment as described in the *Impact Assessment Act* is not required. However, port authority authorization is required for the proposed Project to proceed and in such circumstances, where applicable, Section 82 of the *Impact Assessment Act* requires federal authorities to assure themselves that projects will not likely cause significant adverse environmental effects. The project and environmental review process is designed to provide 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 Appendix B.

This project and environmental review report is NOT a project authorization. This project and environmental review report summarizes the review outcome, and provides the basis for approval or denial. Should the project be approved, the report is accompanied by a project permit (the Permit) and the conclusions described in this report require compliance with the conditions in the Permit.

2 PROJECT DESCRIPTION

Seaspan ULC proposes to construct a ship load-out gravel bed and install shoreline protection in Burrard Inlet adjacent to their facility located at 10 Pemberton Avenue in North Vancouver. The gravel bed (7,500 m²) is proposed in order to launch newly constructed Canadian Coast Guard and Royal Canadian Navy vessels. Vessels will be launched by submerging a careen to rest on the gravel bed, allowing the vessels to launch. Seaspan also proposes to install slope protection using rip-rap (1,500 m²) as part of a proposed infill of the east

basin at the site. The slope protection works are part of a broader project that also includes an infill of the east basin of the site. Those works are within District of North Vancouver lands and waters and are outside of the scope of this review.

The project will require marine habitat offsetting under a *Fisheries Act* Authorization. The proposed marine habitat is designed to enhance kelp and juvenile salmonid habitat at the estuary of MacKay Creek.

2.1 Proposed Works

The proposed project works for the gravel bed and shoreline protection include:

- Removal of any large wood/concrete debris in the gravel bed footprint by crane
- Removal of existing mooring dolphins (approximately 8 piles) and ramp in the gravel bed footprint by crane
- Installation of a 7,500 m² gravel bed by infilling with approximately 24,000 m³ of 25 to 50 mm gravel
- Slope protection (3,000 m³) of the gravel bed with larger grade rocks (260 mm)
- Installation of pre-cast concrete channels in the gravel bed to limit scour from the careen propeller wash
- Installation of rip-rap slope protection for the east basin infill (1,500 m²)

The proposed works for the habitat offsetting include:

- Regrading of the habitat area and removal of existing rip-rap
- Installation of stepped habitat benches approximately 5 m Chart Datum (CD) to – 4 m CD
 - Installation of rock berm and geotextile or rock gabion supports
 - Placement of sand fill material behind the rock berm to create elevated pocket beaches
 - Placement of cobble, small boulders and reuse of existing rip-rap to provide suitable substrate for kelp and salmonids.

2.2 Proposed Construction Methods

Project works are proposed to be conducted by barge using a clamshell bucket and crane. The project construction phase is proposed for August 2021 to March 2022. The habitat benches will be installed and monitored in accordance with a valid *Fisheries Act* Authorization. All marine construction works will take place during the fish least-risk window for Burrard Inlet.

3 VANCOUVER FRASER PORT AUTHORITY INTERNAL REVIEWS

The following port authority departments have reviewed the application and have the following project considerations.

3.1 Planning

Planning has reviewed the application and has the following land use comments.

The proposal meets Planning's requirements, based on the primary considerations of the land use designation and current land use policies.

3.1.1 Land Use Designation

The proposed use conforms to the designation of "Industrial" in the port authority's Land Use Plan.

3.2 Engineering

The proposed Project intends to undertake the construction of a gravel bed infill and shoreline protection. To mitigate the risk of life safety during a seismic event, the Applicant carried out a seismic assessment of the two

structures. It was determined that ground improvements for the infilled area will be implemented to mitigate the risk. The gravel bed posed no risk to life safety during a seismic event therefore no improvements were proposed.

Engineering has reviewed the application and requires the Applicant to ensure the following:

- Issued for construction and record drawings are to be submitted

These are reflected in conditions No. 15 and 50 in the Permit.

The proposal meets Engineering's requirements, subject to adherence to the listed project and environmental conditions in the Permit. The proposal meets Transportation's requirements, subject to adherence to the listed project and environmental conditions in the Permit.

3.3 Marine Operations

The proposed Project intends to use and stage marine equipment to conduct infill works and install shoreline protection. Marine Operations has reviewed the application and requires the Applicant to conduct the following:

- Submit a marine construction and staging plan, to VFPA's satisfaction, at least 30 business days prior to commencing construction
- Submit a request for a Navigational Warning (NAVWARN) to advise the marine community of potential hazards associated with the Project
- Carry out marine notifications, as required
- Arrange for relevant updates to Canadian Hydrographic Service charts

These are reflected in conditions No. 18, 19, 20, 26, 32, and 52 in the Permit.

The proposal meets Marine Operations' requirements, subject to adherence to the listed project and environmental conditions in the Permit.

4 STAKEHOLDER CONSULTATION

The Project was assessed to have potential impacts to stakeholders and the local community and consultation activities were determined to be required. The following sections describe the stakeholder and public consultation activities undertaken by the Applicant and the port authority as part of the project and environmental review.

4.1 Municipal Consultation

The Project was assessed by the port authority to have potential impacts to municipal interests. A referral letter was sent to the following municipalities on February 12, 2020 notifying them of the proposed Project:

- District of North Vancouver
- City of North Vancouver

The port authority did not receive comments from the District of North Vancouver.

The City of North Vancouver responded with comments on the Project. Comments were associated with the habitat offsetting development component of the Project. The City was referred to the Applicant's *Fisheries Act* Authorization for the information requested.

4.2 Federal, Provincial, Regional Agency Consultation

The Project was assessed by the port authority to be of potential interest to other regulatory agencies. This project requires habitat offsetting under a *Fisheries Act* Authorization issued by Fisheries and Oceans Canada.

4.3 North Shore Community Liaison Committee Notification Activities

The proposed Project was assessed to be of potential interest to the North Shore Waterfront Liaison Committee (NSWLC). A verbal update on the proposed project was provided at the February 20, 2020 NSWLC meeting.

The port authority did not receive any comments from the NSWLC.

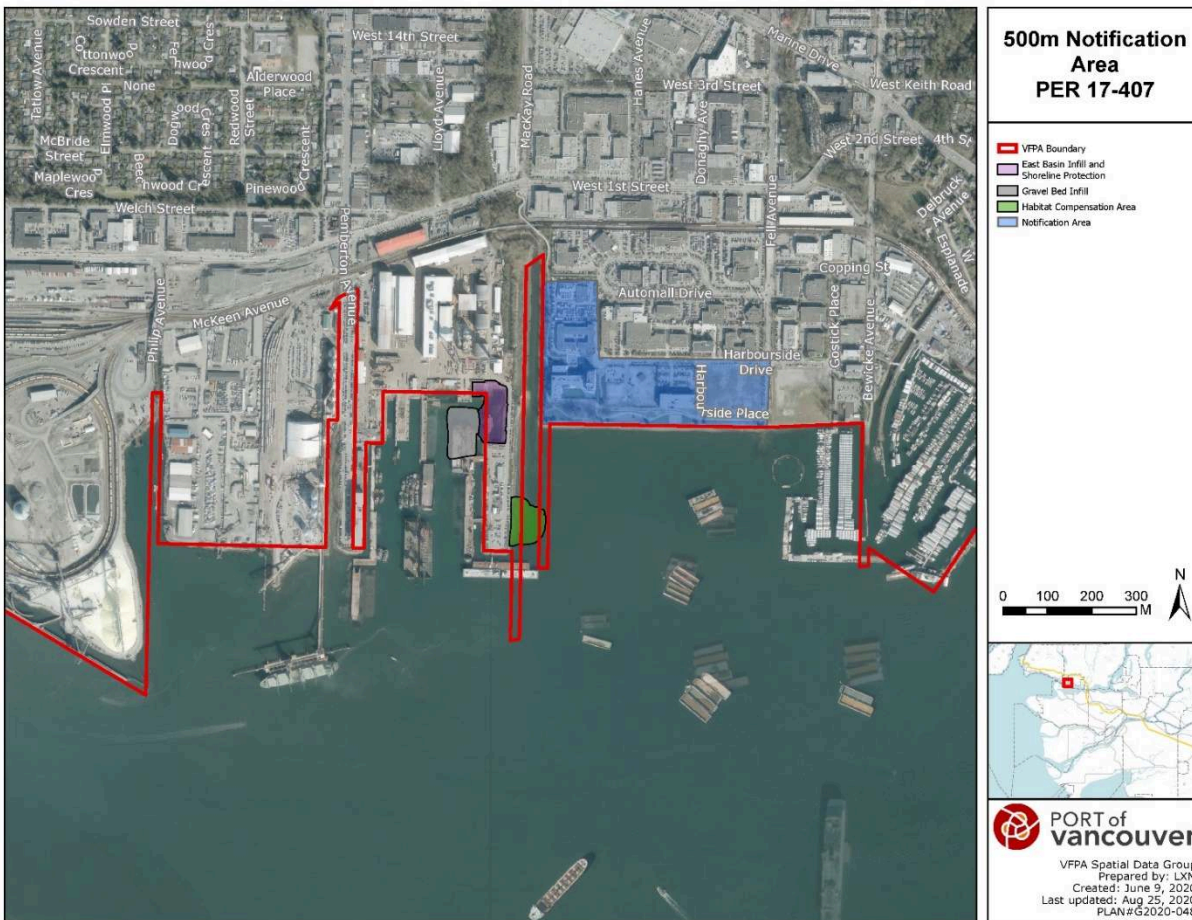
5 PUBLIC ENGAGEMENT

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. No comments were received.

The proposed Project was assessed by the port authority to have potential impacts to community interests in the surrounding area during construction and upon completion. These include potential impacts such as noise during construction to the surrounding community.

As a result, the Applicant is required to send a construction notice to adjacent residents and businesses in North Vancouver as shown in the map below. The construction notice shall be distributed by the Applicant at least 10 business days prior to the start of the works. The construction notice will be posted on the port authority’s and the Applicant’s websites. This is set out in conditions No. 16 and 17 in the project permit.

Map of notification area



6 INDIGENOUS CONSULTATION

The port authority reviewed the proposed works and determined that the project may have the potential to adversely impact Aboriginal or Treaty rights.

The following Indigenous groups were consulted:

- Musqueam Indian Band
- Squamish Nation
- Sto:lo Nations, via People of the River Referrals Office (PRRO); and
- Tsleil-Waututh Nation.

The following consultation activities were conducted:

- On February 5, 2020, the port authority sent a referral letter to each Indigenous group listed above. The referral package included access to drawings, studies and additional details submitted as part of the project permit application, which were available for download on the port authority website: <https://www.portvancouver.com/development-and-permits/status-of-applications/seaspan-ship-load-out-gravel-bed-and-shoreline-protection/>.
- As part of the consultation process, participation funding was offered to facilitate participation in the project and environmental review process. Participation funding was provided to those Indigenous groups who signed and fulfilled the obligations set forth in the participation funding agreement.
- The referral requested that comments be received within 45 business days, or by April 1, 2020.
- On March 24, 2020, the port authority emailed Indigenous groups to provide an update on the proposed project, and advised updated materials would be shared once received.
- On May 21, 2020, the port authority shared updated spatial data for the proposed project. Comments were requested by June 5, 2020.
- On July 2, 2020, the port authority sent an email to Indigenous groups requesting any final comments on the proposed project be sent by July 15, 2020.
- The port authority received comments from one Indigenous group, and notification from another advising that they deferred the consultation process to other Indigenous groups.
- The port authority responded to comments received on August 24, 2020 and requested additional or further comments on the proposed project be provided by September 7, 2020.
- On September 14, 2020, the port authority received additional comments on the proposed project from an Indigenous group, which was responded to on September 21, 2020.
- No further comments were received by Indigenous groups on the proposed project.

Below is a table summarizing key issues received by the port authority from Indigenous groups and how they were considered as part of the Project and Environmental Review.

Issue	Port Authority Response	Mitigations and Permit Conditions
Request Archaeological Monitors be present during any ground disturbance activities.	The proposed Project is located entirely within subtidal and intertidal marine environment and no dredging is proposed. The port authority will include a stop work permit condition in relation to archeological resources.	The following condition will be applied: <i>If the Permit Holder encounters, expects to encounter, or should expect to encounter an actual or potential archaeological resource, the Permit Holder shall:</i>

		<ul style="list-style-type: none"> a) <i>Immediately stop any activities that may disturb the archaeological resource or the site in which it is contained (Site);</i> b) <i>Not move or otherwise disturb the archaeological resource or other remains present at the Site;</i> c) <i>Stake or flag the Site to prevent additional disturbances; and,</i> d) <i>Immediately notify the port authority by email and phone.</i>
<p>Comments and concerns raised with respect to the habitat offsetting and monitoring plans</p>	<p>Habitat offsetting and monitoring plans will be reviewed under a Fisheries and Oceans Canada (DFO) <i>Fisheries Act</i> Authorization, however the port authority shared Indigenous concerns and comments with DFO and the applicant.</p>	<p>None.</p>
<p>Concern regarding noxious weeds and invasive species</p>	<p>The Project scope under review by the port authority is located entirely within the subtidal and intertidal marine environment. Seaspan indicated that <i>Sargassum muticum</i> and Pacific oysters were observed in the subtidal, though neither are considered noxious in this area.</p> <p>Monitoring plans and success criteria for habitat offsetting will be reviewed under a Fisheries and Oceans Canada (DFO) <i>Fisheries Act</i> Authorization.</p>	<p>None.</p>
<p>Interest in source for fill</p>	<p>The proponent indicated that the contractor has not yet determined the source of the fill materials, however Fraser River sand has been used for similar other projects.</p>	<p>The port authority will include the following permit conditions in relation to fill materials.</p> <p><i>Without limiting the generality of permit condition #2, materials brought onto the project site to be used for backfilling, site preparation, or other uses shall be from sources demonstrated to be clean and free of environmental contamination, invasive species and noxious weeds. The Permit Holder shall maintain records to verify this.</i></p>

		<p><i>Rip rap and other fill materials shall be clean and free of fines and shall be lowered through the water column and deposited near the river/seabed and not dumped or deposited from above or near the water surface.</i></p> <p><i>The Permit Holder shall use an environmentally clean excavator bucket. The bucket and any portion of the excavator arm that will be in contact with or near the water shall be cleaned of any residual hydrocarbons or other contaminants prior to the start of works.</i></p>
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The port authority has made a meaningful effort to consult with all potentially affected Indigenous groups. Based on the record of consultation, the port authority is of the view that the duty to consult has been met.

7 ENVIRONMENTAL EFFECTS REVIEW

To fulfill its responsibilities under the *Canada Marine Act* and the *Impact Assessment Act*, the port authority must make a determination on the potential environmental effects of a proposed project on the port authority managed lands and waters prior to authorizing those works to proceed. To make that determination, the port authority considers the residual adverse effects of the Project, that is, the effects after mitigation measures have been taken into account.

This section of the project and environmental review report summarizes the environmental effects review conducted for the Project, and provides the environmental effects decision. The environmental review also considered the information provided in the previous sections of this report.

7.1 Scope of Environmental Review

The environmental review includes consideration of the potential environmental effects of the proposed Project, taking into account mitigation measures to avoid or reduce those effects. This review considered the Project components and physical activities described in Section 2.

The temporal scope of the review includes the Project construction phase.

The environmental review considered potential adverse environmental and social effects of the Project on 14 environmental components (e.g., species with special status, aquatic species and their habitat, recreational interests, etc.) and from accidents and malfunctions. These environmental components are aspects of the biophysical and socio-economic environment considered to have ecological, economic, social, cultural, archaeological, or historical importance.

Section 7.2 summarizes the results of the environmental effects review and proposed mitigations.

7.2 Environmental Effects and Mitigation Summary

A desktop literature review and a field survey consisting of video transects were undertaken in 2018 to assess and characterize the marine environment potentially affected by the project. Sediment samples were also analysed for a range of possible contaminants of environmental concern.

The proposed infill habitat was classified as having a low to moderate habitat value, with low numbers of fish and invertebrates identified during the fish survey.

The substrate in the offsetting location comprises a mix of sediment types, but the majority of the substrate was comprised of fine sediments and woody debris. Sugar kelp was abundant to the north and the west of the offsetting location, but very little kelp was found within the offsetting footprint. Rocky reef habitat is planned for the offsetting location to support broad-bladed kelp, invertebrates, and to provide habitat and food for a variety of aquatic species.

The following table summarizes the potential environmental effects from the Project on the identified environmental components.

The following table summarizes the potential environmental effects the project could have on the identified environmental components.

Environmental Component	Potential Adverse Effects?		Overview of Potential Adverse Effects, Mitigation Measures, and Residual Adverse Effects	Significant Residual Adverse Effects?	
	Yes	No		Yes	No
Air quality	■	<input type="checkbox"/>	<p>There is potential for adverse effects on air quality during construction activities from equipment operation. Mitigation measures to reduce the potential for adverse effects will be implemented as detailed in the construction environmental management plan (CEMP). This includes an idling reduction, the turning off of emission sources when not in use, and dust control if needed. Construction activities will be temporary and short-term in duration (i.e., intermittent over an 8 month period).</p> <p>With mitigation in place, residual adverse effects on air quality are not expected to be significant.</p>	<input type="checkbox"/>	■
Lighting	■	<input type="checkbox"/>	<p>No new lighting will be installed as part of the Project.</p> <p>Work will be undertaken during standard construction hours as described in the CEMP. There is potential for adverse effects from lighting during winter night-time construction works (i.e., 4 pm to 8 pm). Mitigation measures will be implemented to reduce those effects, including the use of directional lighting focused on the works area, and limiting night-time works when applicable.</p> <p>With mitigation in place, residual adverse effects from Project-related lighting are expected to be not significant.</p>	<input type="checkbox"/>	■

Environmental Component	Potential Adverse Effects?		Overview of Potential Adverse Effects, Mitigation Measures, and Residual Adverse Effects	Significant Residual Adverse Effects?	
	Yes	No		Yes	No
Noise	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<p>There is potential for adverse noise effects during construction activities.</p> <p>Mitigation measures to reduce the potential for adverse effects will be implemented as detailed in the CEMP. Construction work will be conducted during regular hours. Construction noise is anticipated to have minimal adverse effects due to the location of the project site in an industrial area and works being limited to marine activities (e.g., rip-rap placement).</p> <p>With mitigation in place, residual adverse effects on noise are expected to be not significant.</p>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Soils	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<p>The Project is located entirely within subtidal and intertidal marine environment. Soils are not anticipated to be affected by the Project.</p>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Sediments	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<p>There is potential for adverse effects to sediment from spills during marine construction activities or from introduction of fill materials and rip-rap placement.</p> <p>Mitigation measures outlined in the CEMP will be implemented during construction to mitigate adverse effects to sediments. Materials brought to the site for infill will be clean and free of fines. Clean equipment will be used during construction. An Environmental Monitor will be onsite during in-water works to monitor for turbidity. If suspended sediment is above water quality guidelines additional mitigation measures will be implemented (e.g., silt curtain). A spill prevention, containment and clean-up plan will be implemented prior to works.</p> <p>With mitigation in place, residual adverse effects on sediment quality are expected to be not significant.</p>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Ground water	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<p>The Project is located entirely within subtidal and intertidal marine environment. Groundwater is not anticipated to be affected by the Project.</p>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Environmental Component	Potential Adverse Effects?		Overview of Potential Adverse Effects, Mitigation Measures, and Residual Adverse Effects	Significant Residual Adverse Effects?	
	Yes	No		Yes	No
Surface water and water bodies	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<p>There is potential for adverse effects on surface water and water bodies during construction activities, including fill placement. Potential adverse effects are anticipated to be limited to water quality effects including total suspended solids (TSS) concentrations.</p> <p>The material used for the gravel bed infill will not contain fines and has a lower potential to increase TSS. Materials brought to the site for infill will be clean and free of fines. Clean equipment will be used during construction. An Environmental Monitor will be onsite during in-water works to monitor for turbidity. If suspended sediment is above water quality guidelines additional mitigation measures will be implemented (e.g., silt curtain). A spill prevention, containment and clean-up plan will be implemented prior to works.</p> <p>With mitigation in place, residual adverse effects on surface water and water bodies are expected to be not significant.</p>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<p>Species/habitat with special status</p> <p>Assessed under section 79 of the <i>Species at Risk Act</i>, as applicable</p>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<p>There is potential for adverse effects on species with special status during construction activities.</p> <p>Federally-listed fish and marine mammal species with ranges that potentially overlap with the Project site include: yelloweye rockfish (<i>Sebastes ruberrimus</i>), northern abalone (<i>Haliotis kamtschatkana</i>) and stellar sea lions (<i>Eumetopias jubatus</i>). These species have the potential to be found in the project area. None of these species were identified at the site during the biophysical assessments and are unlikely to be present based on known habitat preferences.</p> <p>Mitigation measures to reduce the potential for adverse effects will be implemented as detailed in the CEMP. These include: construction works will be conducted within the fish least-risk window (August 16 to February 28); a pre-construction crab salvage will be conducted prior to infill activities; and marine mammals will be monitored visually during construction works. If a marine mammal enters the work zone during in-water construction activities, a work stoppage will be implemented.</p> <p>With mitigation in place, residual adverse effects on species/habitat with special status are expected to be not significant.</p>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Environmental Component	Potential Adverse Effects?		Overview of Potential Adverse Effects, Mitigation Measures, and Residual Adverse Effects	Significant Residual Adverse Effects?	
	Yes	No		Yes	No
Terrestrial resources (e.g., vegetation, wildlife, etc.)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<p>The Project is located entirely within the subtidal and intertidal marine environment, and the site to the north of the project area is predominantly industrial land. Terrestrial vegetation is not anticipated to be affected by the Project. No works will be conducted from land and mitigation measures will be in place to reduce noise to wildlife.</p> <p>With mitigation in place, residual adverse effects on terrestrial resources are expected to be not significant.</p>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Wetlands	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<p>The Project is located entirely within subtidal and intertidal marine environment. Wetland habitat is not anticipated to be affected by the Project.</p>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Aquatic resources (e.g., aquatic plants, fish and fish habitat, waterbirds, marine mammals, etc.)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<p>There is potential for adverse effects on aquatic resources during construction activities.</p> <p>A crab salvage will be conducted in the project area prior to the placement of rock and fill materials. Salvaged organisms will be relocated to similar habitat outside of the works area. A fin fish salvage will be conducted for the east infill after the berm is in place. For the gravel bed infill, no berm will be in place and fin fish will not be targeted by the salvage as they are likely to move out of the work area as construction activities begin.</p> <p>The permanent loss or alteration of habitat within the footprint of the gravel bed and shoreline protection will be mitigated through marine habitat offsetting as required under a <i>Fisheries Act</i> Authorization.</p> <p>With mitigation in place, residual adverse effects on aquatic resources are expected to be not significant.</p>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Health and socio-economic conditions	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<p>Based on the very low magnitude of residual effects on air and noise, the Project is not expected to cause adverse effects on health or socio-economic conditions of people, including Indigenous people.</p>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Archaeological, physical, and cultural heritage resources	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<p>The project site is located within an area of historical fill and disturbance to native soil is not required. Adverse effects on archaeological, physical, and cultural heritage resources are not anticipated.</p>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Environmental Component	Potential Adverse Effects?		Overview of Potential Adverse Effects, Mitigation Measures, and Residual Adverse Effects	Significant Residual Adverse Effects?	
	Yes	No		Yes	No
Accidents and malfunctions Assessed as required by the <i>Canada Marine Act</i>	■	<input type="checkbox"/>	There is potential for adverse effects on surface water from accidental equipment leaks or spills. Mitigation measures will be in place to reduce potential for adverse, project-related effects due to accidents, by implementing the measures outlined in the Construction Environmental Management Plan. With mitigation measures in place, the effect of an accident or malfunction on the environment, if it were to occur, is predicted to be not significant.	<input type="checkbox"/>	■

Residual adverse effects (i.e., effects that remain with mitigation in place) were identified for the following environmental components:

- Air quality
- Light
- Noise
- Soils
- Sediment
- Surface water and waterbodies
- Species or habitat with special status
- Aquatic resources
- Accidents and malfunctions

Overall, the residual adverse effects of the Project on all of the environmental components are characterized as:

- Low in magnitude due to impacts on surface water and aquatic resources anticipated to be not significant with mitigations in place, and the temporary nature of the construction activities.
- Local in geographic extent, because effects will be limited to the Project area and immediate vicinity.
- Short-term in duration because the Project construction will be intermittent and temporary for up to 8 months and is unlikely to result in ongoing effects on water quality or aquatic resources once construction is complete.
- Continuous (daily to weekly) in frequency during Project construction.
- Reversible/temporary because residual adverse effects of the Project would cease once the Project construction is complete.

In conclusion, based on the characterization above, the mitigation measures proposed by the Applicant and the permit conditions, the residual adverse effects from the Project are predicted to be not significant.

7.3 Environmental Effects Review Decision

In completing the project and environmental effects 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 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 Permit conditions, the Project is not likely to cause significant adverse environmental effects.

Original copy signed

CARRIE BROWN
DIRECTOR, ENVIRONMENTAL PROGRAMS

September 28, 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 Permit, the Project has appropriately addressed all identified concerns.

It is the recommendation of staff that this application be approved subject to conformance with the project and environmental conditions listed in project permit **PER No.** 17-407.

APPENDIX A Location Plan

Ship Load-out Gravel Bed and Shoreline Protection

PER 17-407

-  VFPA Boundary
-  East Basin Infill and Shoreline Protection
-  Gravel Bed Infill
-  Habitat Compensation Area

0 15 30 60
Meters



VFPA Spatial Data Group
Prepared by: MGM
Created: Feb 10, 2020
Last updated: Jun 04, 2020
PLAN#G2020-015

APPENDIX B
List of Information Sources

The port authority has relied on the following sources of information in the project and environmental review of the Project:

- Application form and materials submitted by Applicant on behalf of the tenant on December 16, 2019
- All Project correspondence from December 16, 2019 to September 20, 2020
- All plans and drawings submitted by the Applicant
- “JSS Load-out Gravel Bed and East Infill Project, Supplemental Report”, June 2020, Hatfield Consultants LLP
- “JSS Load-out Gravel Bed and East Infill Project, Construction Environmental Management Plan”, June 2020, Hatfield Consultants LLP
- Letter titled “Boat Basin North East Infill and JSS Load Out – Seismic Considerations“, October 22, 2019, Westmar Advisors