



PORT of  
**vancouver**

Vancouver Fraser  
Port Authority

# Project and Environmental Review Report

PER No. 20-189 Seaspan Vancouver Drydock Water Lot  
Expansion

Prepared for: Director, Project and Environmental Review

September 27, 2023

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## 1 Introduction

PER No.:	20-189
Tenant/Permit Holder:	Seaspan Vancouver Drydock Company
Project:	Seaspan Vancouver Drydock water lot expansion
Project location:	203 East Esplanade, North Vancouver
Land use designation:	Industrial
Applicant:	Seaspan Vancouver Drydock Company
Category of review:	C
Recommendation:	PER No.20-189 Seaspan Vancouver Drydock water lot expansion be approved.

This project and environmental review report (the “PER Report”) relates to the application submitted by the Vancouver Drydock Company Ltd. Partnership (Seaspan) (“Seaspan” or the “Applicant”) to expand and upgrade its existing Vancouver Drydock water lot facilities in North Vancouver (the “Project”) pursuant to PER No. 20-189. In order for the Applicant to undertake the Project, it requires authorization from the Vancouver Fraser Port Authority (the “port authority”). The port authority is a federal port authority responsible for managing the lands and waters as described in its Letters Patent. The port authority makes such decisions pursuant to the powers and responsibilities conferred upon it by the *Canada Marine Act* and supporting regulations, in particular the Port Authorities Operations Regulations and *Impact Assessment Act* (the “IAA”).

Operationally, the port authority carries out these review functions through the application of its project and environmental review process (the PER Process). The purpose of the PER Process is for the port authority to ensure projects and activities meet the applicable standards and reduce project effects. Reviews of proposed projects under the PER Process are broadly separated into four project categories (A, B, C, D), that range in complexity from a Category A being the least complex and Category D being the most complex. There is also a separate process to review permit applications for projects considered “designated projects” under the IAA. The steps of the PER Process depend on the categorization of the application. The proposed Project was found to be a “Category C”, indicating that it is a larger and more complicated project that would require additional studies and specialized mitigations.

This project and environmental review has been carried out to address the port authority’s responsibilities under the *Canada Marine Act*, and to meet the requirements of the IAA as applicable. The proposed Project is not considered a “designated project” under the IAA, and therefore, an impact assessment as described in the IAA is not required. Nonetheless, port authority authorization is required for the Project to proceed and in such circumstances, Section 82 of the IAA does require federal authorities to determine that projects are not likely to cause significant adverse environmental effects prior to providing authorization (unless otherwise approved by the Governor in Council). The PER Process is designed to assess these effects and aid in making a determination. The port authority also considers other interests, impacts and mitigations identified as relevant to the Project through the review process.

The project and environmental review considered the application along with supporting studies, information, assessments, and consultations carried out or commissioned by the Applicant, along with

other information and consultations available to the port authority. The port authority considered the following information sources in this review:

- Application form and materials submitted by Applicant from June 6, 2021 to February 22, 2022.
- All Project correspondence from June 6, 2021 to June 26, 2023.
- All plans and drawings labelled PER No.20-189 - A to C.

This PER Report is not itself a project authorization. Rather, it provides information and analysis to inform decision-making. Should the Project be approved, a permit would be issued, and it may include conditions related to various matters and findings addressed in this report. Attached to this PER report is a draft permit containing proposed conditions relevant to the findings and analysis in this report, developed for the consideration of the decision-maker.

## 2 Project description

The Applicant proposes an expansion of its Vancouver Drydock operation currently located at the south foot of St. Georges Avenue in North Vancouver. The proposal includes extending their current water lot by 40 metres to the west, in order to expand its operations and increasing drydock capacity by adding two additional drydocks to the facility. This expansion is estimated to increase drydock capacity by approximately 30% to better service small and medium sized vessels. Currently, the Applicant is conducting some of its ship repair activities at a nearby operation at the south foot of Pemberton Avenue, North Vancouver. The Project would allow Seaspan to consolidate repair activities to all occur at the Project's site.

Physical works for the proposal would include the installation of a work pontoon and two additional drydocks. The Project would be installed to the west of the two existing drydocks that are currently located on either side of the Applicant's deep-water outfitting pier.<sup>1</sup>

The additional drydocks will be purchased on the global market, and therefore the dimensions and exact details (such as number of cranes, colour, locations of light fixtures, etc.) for these structures are approximate at the time of application. The new drydocks would be equipped with dedicated fire pumps and fire monitors, which is consistent with the existing two drydocks on site.

The proposed work pontoon would also function as a water treatment system, where storm water and any runoff from the new drydocks would be collected and treated, prior to discharge to the municipal sanitary wastewater system. The Applicant would also upgrade the lighting across the site as a result of this project.

### 2.1 Proposed works

The work proposed to affect the Project includes:

- Installation of six new steel piles
- Installation of two new drydocks
  - One large drydock measuring approximately 100 m long x 30 m wide x 10 metres high
  - One small drydock measuring approximately 55 m long x 22 m wide x 8 metres high
- Installation of a new work pontoon measuring approximately 98 m long x 13 m wide x 4 metres high
- Installation of three ramps to connect the work pontoon to the drydocks and to the pier
- Installation or relocation of utilities including water, electrical, stormwater, process water, etc.

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<sup>1</sup> The existing Careen drydock (the smaller of the two existing drydocks) was relocated 40 metres to the south along the existing pier and did not require a PER permit, so the relocation is not considered in this report.

- Installation or relocation of lights
- Installation of four seasonal suspended herring spawn panels on the service pier, or at other suitable locations within the water lot over the course of a trial period
- Installation and use of several types of noise mitigation measures, including mobile panels and curtains, and equipment to facilitate environmental and noise monitoring

## 2.2 Proposed construction methods

Construction is anticipated to be largely water-based and would be conducted using floating equipment. Drydocks, work pontoon, and piles would all be delivered to the site by water.

The design pile embedment depth is expected to be up to 12 metres into the seabed. Steel pile installation would commence by utilizing a vibratory hammer on a barge mounted crane. This method is expected to be successful through to the till layer, however, it is uncertain if vibratory techniques will be successful beyond the till. Consequently, drilling from inside the pile, in combination with impact pile driving, may be required to advance the pile to deeper depths. Cuttings from this would be collected and discharged to a scow for off-site disposal.

Recognizing that pile cleanout is also required to allow concrete to be poured inside the piles, cutting removal is expected. If impact pile driving is required, additional measures would be implemented to mitigate aquatic noise levels as identified in the Construction Environmental Management Plan, and in keeping with the Letter of Advice from Fisheries and Oceans Canada.

Construction works are proposed to require up to four months to complete, including up to six weeks of pile driving work. Works are proposed to be undertaken during standard port authority construction hours, which are Monday to Saturday, 7:00 a.m. to 8:00 p.m., with no work permitted on Sundays, or statutory holidays in the province of British Columbia or Canada. If work is proposed outside of these hours, approval by the port authority would be required.

## 3 Public and stakeholder consultation

Section 3.1 describes the stakeholder and public consultation activities that were undertaken by the Applicant and the port authority as part of the PER Process and Section 3.2 includes a table summarizing comments received in the engagement process and the Applicant's responses to these comments, by theme listed in alphabetical order.

### 3.1 Engagement process

#### 3.1.1 Municipal consultation

Due to the proximity of the Project to the City of North Vancouver's (the "City") jurisdictional boundaries and infrastructure, the port authority determined it could have a potential impact on municipal interests. Therefore, the port authority engaged the City to seek comments on the proposed Project.

Engagement activities with the City included:

- The City met with the Applicant and port authority to discuss the Project in December 2020
- A referral letter was sent to the City on July 6, 2021, notifying it of the Project and requesting any feedback by August 5, 2021
- The City provided comments across several submissions throughout 2021

- A letter was sent to the City on March 21, 2023, responding to City comments, and providing additional Project documents, including a Seaspan Vancouver Dry Dock Alternate Siting Options Addendum, a Seaspan Traffic Impact Study, and a Fire Emergency Service Access document.
- A letter was received from the City on April 17, 2023, providing additional comments and proposed mitigations and permit conditions
- Consultation with the City of North Vancouver's Fire Department in August and December 2021, and in May 2023

The City also confirmed that the Fire Department and Seaspan have agreed to work together with the port authority to be better positioned for a coordinated marine fire response. Additional comments from the City are outlined in Section 3.2.

### **3.1.2 Federal, provincial, regional agency consultation**

The Project was assessed to have potential impacts on the interests of a regional agency, TransLink Transportation Authority ("TransLink").

A referral letter was sent to TransLink on July 7, 2021, notifying it of the Project and requesting any feedback by August 5, 2021. TransLink did not provide any comments on the Project.

As part of regular information-sharing with Transport Canada Navigation Protection Program, the agency was kept aware of the review status of the project as it progressed. The Applicant submitted a Notice of Work to Transport Canada for its review. The review by Transport Canada Navigation Protection Program is underway under Permit No. 2000-500994.

### **3.1.3 Adjacent tenant consultation**

The Project was assessed to be of potential interest to port authority tenant operations. A referral letter was sent to Richardson International Ltd. on July 7, 2021, notifying it of the proposed Project and requesting any feedback by August 5, 2021. Richardson responded with an email of support for the Project on July 7, 2021.

### **3.1.4 Marine users consultation**

The Project was assessed to be of potential interest to certain port authority marine user groups. A referral letter was sent to the British Columbia Coast Pilots Ltd. on July 7, 2021, notifying it of the Project and requesting any feedback by August 5, 2021. The British Columbia Coast Pilots did not provide any comments on the Project.

### **3.1.5 Community liaison committee**

The Project was assessed to be of potential interest to the North Shore Waterfront Liaison Committee. The Applicant presented the Project to the liaison committee on June 17, 2021. A number of questions were raised and were considered as part of the PER process (and are included in section 3.2).

The committee has been kept up to date throughout the PER process and received regular updates from the Applicant through the Seaspan representatives that sit on the liaison committee. The members of the liaison committee were also invited to share feedback on the Project through the Applicant-led public engagement processes.

### 3.1.6 Public engagement

The port authority required the Applicant to conduct public engagement after reviewing the proposed works and determining that the Project may have the potential to adversely impact community interests in the surrounding area during construction and once the Project is complete.

Public engagement occurred through the Canadian Impact Assessment Registry (federal registry) and Applicant-led public engagement, as follows:

- The port authority held a public comment period through the federal registry from June 25 to July 24, 2021, and later extended it to run from July 14 to August 12, 2021, to include Transport Canada in the notice of public participation.
- The Applicant held two public engagement periods:
  - An initial public engagement ran from June 25 to July 30, 2021. It was later extended to run until August 12, 2021, to accommodate changes to provincial health mandates which were in effect at that time.
  - A supplementary public engagement ran in two phases: Phase one ran from June 10 to August 22, 2022; and phase two ran from July 27 to September 14, 2022.

The details of each of these engagement periods are discussed in more detail below.

After reviewing the record of public engagement, the port authority is of the view that the Applicant made all reasonable efforts to engage with the public on the Project and has developed mitigations to address the feedback received.

#### 3.1.6.1 Federal registry and public/stakeholder engagement with the port authority

To meet the requirements of section 86 of the IAA, the port authority posted a description of the Project and notice of public participation to the federal registry to provide the public 30 calendar days to comment on the Project and provide community knowledge. The comment period ran from June 25 to July 24, 2021.

As the Project also requires a determination by Transport Canada under the IAA, the public comment period was extended to run from July 14 to August 12, 2021.

At the close of the extended 30-calendar day public comment period, the port authority received three comments from the public.

In addition to the federal registry public comment period, the port authority was involved in the following public engagement activities:

- Posting a description of the Project, proposed works, and supporting materials to the port authority's website on June 18, 2021. This posting is consistent with all projects of this scale (reviewed as Category C under the PER process).
- Responding to Minister Jonathan Wilkinson's correspondence from July 28, 2021, which detailed issues and concerns from constituents related to the Project.
- Attending an in-person meeting on November 18, 2021, with residents who had reached out to Minister Wilkinson. Also in attendance were staff from Minister Wilkinson's office, and two City of North Vancouver councillors.
- Tracking and responding to public comments (i.e., emails and phone calls) received outside of Applicant-led public engagement periods.

The issues the community raised to Minister Wilkinson and during the meeting, and those heard outside the public engagement periods were consistent with those heard during Applicant-led public engagement periods and are summarized in Section 3.2. and include the following, listed alphabetically:



- Air pollution
- Light pollution
- Monitoring (noise and air)
- Noise
- Siting of the proposed expansion
- Transparency regarding the PER process including the Applicant-led public engagement process
- Water pollution

All feedback received was considered by the Applicant in the development of mitigations and by the port authority in the development of proposed conditions for the draft Permit.

### 3.1.6.2 Summary of Applicant-led public engagement

The port authority required the Applicant to conduct public engagement activities with a 25-business day public engagement period, and to host opportunities for real-time engagement with the public, in keeping with the PER guideline for public engagement during COVID. The Applicant engaged with the public between June 25 and August 12, 2021, (33-business days), accounting for changes to COVID-19 provincial health mandates and an easing in restrictions during the summer of 2021.

Public engagement activities conducted by the Applicant included:

- **Informational materials:** A project information guide was created with key information about the Project
- **Creation of communication channels:** Dedicated contact details were created for the submission of inquiries and submissions.
  - email address: infodrydock@seaspan.com; telephone number: 778.729.0288; and mailing address: Vancouver Drydock, 203 East Esplanade, North Vancouver, BC, Canada V7L 1A1
  - 153 comments were received by the Applicant including:
    - 142 emails
    - 3 federal registry comments forwarded by the port authority)
    - 8 phone calls
- **Notification letters:** Notification postcards were sent by mail on June 24, 2021, to all residents and businesses within a one-kilometre radius of the Project location, which included approximately 7,200 residents and businesses
- **Efforts to promote awareness:** The following efforts were made to notify the public about the engagement period and announced opportunities for input.
  - Advertisements were placed in the North Shore News on June 30, July 7, and August 4, 2021
  - Paid Facebook advertisements were posted between June 28 and July 12, 2021, and between July 30 and August 11, 2021 (to promote the extension of the engagement period)
  - Two organic Facebook posts on June 25 and July 30, 2021
  - E-newsletter sent to 56 email subscribers who had self-selected to join Seaspan's project database on July 30, 2021
- **Public information sessions:** Two online public information sessions were hosted on July 13 and July 15, 2021, and covered the Project scope, design, environmental and other technical

assessments, and anticipated construction activities. The format included a presentation and a moderated Q&A session using a chat feature. In attendance were the Applicant's project

and technical consultants and the port authority's PER team representatives. These sessions were recorded and posted to the Applicant's website for future viewing.

- On July 13, 2021, 55 people attended; and on July 15, 2021, 72 people attended
- **Meeting with nearby strata councils:** An online meeting was held with representatives from the strata councils of the Cascade, Trophy, Atrium, Premier, Promenade and Esplanade buildings on July 28, 2021. 20 people attended this meeting.
- **Feedback form:** A feedback form was created to collect community input (both online and hard copy)
  - 162 people completed the online feedback form and four hard copy feedback forms were received
- **Online activities:** A dedicated webpage was created for the Project to inform the public, share project-related materials, provide engagement opportunities and accept online feedback: [drydockprojects.com](http://drydockprojects.com)

The Applicant provided a detailed summary of the public engagement process and all comments received in a Public Engagement Summary Report dated November 19, 2021. The port authority reviewed the document and found it to meet our requirements. The report was posted on the port authority and the Applicant's websites on November 25, 2021.

The port authority and the Applicant received a copy of an electronic petition established by a community member requesting that the Project not move forward or be relocated to the east. At the time of submission on August 11, 2021, the petition had been electronically signed by 1,700 people. Those who signed were able to provide additional comments about the Project. These comments were reviewed by the port authority and the Applicant and have been included in the report referenced above.

### 3.1.6.3 Supplementary Applicant-led public engagement

The port authority required the Applicant to undertake a supplementary public engagement period to seek input on mitigations developed by the Applicant to address concerns raised by the public in the first engagement period. A two-phased approach was developed by the Applicant for the supplementary engagement: phase one was outreach with a targeted subset of the community to allow in-depth dialogue focusing on concerns and potential solutions; phase two was a broad community outreach and request for comments via an online survey.

**During phase one** of the supplementary engagement, the Applicant engaged with the public between June 10 and August 22, 2022. The Applicant conducted the following:

- **Notification of supplementary engagement period:**
  - Email invitations were sent to residents who had self-selected to join Seaspans's project database on June 10, 2022
  - Phone calls and emails were sent to interested workshop attendees between June 10 and August 19, 2022
- **Mitigation workshop discussion guide:** A detailed guide was created to assist attendees to prepare in advance for the mitigation workshop. The guide included an overview of the Project, details on how the mitigation workshop would be run and facilitated, an overview of key themes and issues identified during the 2021 public engagement, and finally, details of Seapan's existing

and proposed mitigations for review and discussion.

- **In-person workshops:** The Applicant completed two workshops as follows:
  - June 23, 2022, from 6:00pm to 7:30pm
    - Attendees were invited to attend and have an opportunity to provide feedback on the proposed mitigation measures, including comments on what might work well, how mitigations could be adjusted to better address concerns, and if any proposed mitigations would not be sufficient.
    - In attendance were: two Seaspan representatives, two port authority representatives, 18 people in person attendees and three Zoom attendees
    - The meeting was recorded and posted online
  - August 22, 2022, between 6:00 p.m. and 7:30 p.m.
    - Attendees of the first workshop were invited back to have an opportunity to provide feedback on the proposed mitigation measures
    - In attendance were: two Seaspan representatives, two port authority representatives, 10 in-person attendees and one Zoom attendee
    - The meeting was recorded and posted online
- **Fact sheets:** A series of fact sheets were prepared, circulated, and added to the Project website, with details on the following topics: 2021 Public Engagement, Drydock Siting, Noise, Air Quality (including the Metro Vancouver air quality management permit process), Lighting, Land Use (developed in conjunction with the port authority), Marine Habitat, Spill Prevention & Emergency Response, Project Construction
- **Project site tour:** Site tour of the Seaspan Drydock on August 17, 2022, for those from the first small group workshop who were interested in participating. Eight local residents attended the site tour.

**During phase two** of the supplementary engagement, the Applicant engaged with the public between July 27 and September 14, 2022. Applicant conducted the following:

- **Notification letters:** Mailout of postcards to residents and businesses in North Vancouver at the start of the engagement process (on July 26, 2022, and follow-up postcards were sent on August 31, 2022), to approximately 7,200 residents and businesses within a one-kilometre radius of the Project location.
  - 116 comments were received including 108 emails, seven phone calls and one print letter
- **Efforts to promote awareness:** The following efforts were made to notify the public about the engagement period and announced opportunities for input.
  - Print and digital advertisements were placed in the North Shore News on July 27, August 2, and September 7, 2022 (for print) and between July 27 and August 12, and between September 6 and 14, 2022 (for digital).
  - Paid Facebook ads between July 27 and August 10, 2022, and an additional round of advertising to highlight the end of the engagement period, which ran from September 1 to 14, 2022.
  - Two organic social media posts made to each of the Applicant's corporate Facebook, Twitter, Instagram and LinkedIn platforms on July 27 and September 7, 2022.
  - E-newsletter sent to 90 email subscribers to notify of the supplementary engagement period and the online feedback form (the email subscriber list is a list of people who had self-selected to join Seaspan's project database. Over the time of the engagement this database increased in number).

- **Online feedback form:** Created to collect community input on the Applicant’s proposed mitigations
  - 652 online feedback forms were completed.
- **Online activities:**
  - The dedicated webpage was updated to inform the public about the supplementary engagement period, share project-related materials including the Fact Sheets (referenced above), and provide details on engagement opportunities: [drydockprojects.com](http://drydockprojects.com).

The Applicant provided the port authority with the following reports and several supporting appendices summarizing the engagement process:

- [Public Engagement Summary Report](#), dated February 22, 2023, with a detailed summary of the supplemental public engagement process and all comments received.
- [Public Engagement Consideration Report](#), dated February 22, 2023, with the Applicant’s formal responses to public comments, organized by theme.
- [Public Engagement Consideration Report Mitigation Table](#), dated February 22, 2023, outlining the evolution of the mitigations proposed by Applicant. Starting with the original mitigations from the Applicant’s initial application, then the new and revised mitigations developed following the 2021 public engagement period, and any additional revisions and new mitigations developed following the 2022 supplementary public engagement period.

The above reports and appendices were posted on the port authority and the Applicant’s websites on March 23, 2023. All feedback received was considered by the Applicant in the development of mitigations and by the port authority in the development of proposed conditions for the draft Permit. The feedback and mitigations are summarized in Section 3.2.

### 3.2 Summary of stakeholder and public engagement

A summary of stakeholder and public comments/concerns, as well as Applicant responses and mitigations is set out in the table below. The table also references potential conditions from the draft Permit accompanying this report and themes are listed in alphabetical order.

Summary of comment or concern	Source(s) of comment or concern	Response, Applicant proposed mitigation measures and/or proposed permit conditions
<b>Construction impacts</b>		
Concerns were raised regarding impacts to residential buildings due to vibrations from pile driving activity	<ul style="list-style-type: none"> <li>• The City of North Vancouver</li> <li>• Public engagement</li> </ul>	<p>Impacts to residential buildings from ground vibrations of in-water pile driving using heavy equipment are not anticipated due to the distance from the pile driving sites.</p> <p>The Applicant has committed to hire a specialist vibration consultant to instrument and monitor the vibrations adjacent to the foundation of the nearest building to ensure vibrations during construction remain within safe levels. Details on this and other</p>

Summary of comment or concern	Source(s) of comment or concern	Response, Applicant proposed mitigation measures and/or proposed permit conditions
		<p>construction related mitigations can be found on pages 39 – 42 of the Applicant’s Public Engagement Consideration report including references to working with the community working group during construction and muffling machinery to dampen noise.</p> <p>The draft Permit accompanying this report includes proposed conditions to address impacts caused by construction on the nearby community. These include:</p> <p>Condition No. 26 which requires the Permit Holder to submit an updated Construction Environmental Management Plan (CEMP). The CEMP will outline practices to be in place during construction to lessen impacts to the community and the environment.</p> <p>Condition No. 37 details that vibratory pile installation is recommended, and details additional mitigation measures should impact pile driving be required.</p> <p>Condition No. 38 requires the Permit Holder to hire a qualified vibration consultant to instrument and monitor any potential ground vibrations adjacent to the foundation of the nearest building.</p>
<p>Concerns that construction would be impactful to residents and businesses in the area (e.g., noise levels)</p>	<ul style="list-style-type: none"> <li>• Public engagement</li> </ul>	<p>Temporary noise is anticipated during the four-month construction period from pile installation (approximately six weeks duration) and construction equipment.</p>
<p>Concerns about air quality impacts during construction</p>	<ul style="list-style-type: none"> <li>• The City of North Vancouver</li> <li>• Public engagement</li> </ul>	<p>Impacts to air quality during construction are anticipated to be minimal due to the new drydocks being assembled off-site.</p> <p>The Applicant has put forward a mitigation to address the concern of air quality during construction which is detailed on page 42 of the Applicant’s Public Engagement Consideration report. The Applicant intends to work with the community working group to</p>

Summary of comment or concern	Source(s) of comment or concern	Response, Applicant proposed mitigation measures and/or proposed permit conditions
		<p>seek additional opportunities for community dialogue related to construction activities.</p> <p>The draft Permit accompanying this report includes proposed condition No. 26 to address air quality impacts caused by construction. This requires the Permit Holder to submit an updated Construction Environmental Management Plan (CEMP). The CEMP will outline practices to be in place during construction to lessen impacts to the community and the environment.</p>
<b>Environmental effects</b>		
<p>Concerns that the Project would impact water currents and marine circulation patterns</p>	<ul style="list-style-type: none"> <li>• The City of North Vancouver</li> </ul>	<p>Effects to currents and marine circulation, or the ability of the area to be used for potential future ocean energy technology purposes, are not anticipated as a result of the Project.</p>
<p>Concerns that the Project expansion would interfere with the marine habitat and wildlife</p>	<ul style="list-style-type: none"> <li>• The City of North Vancouver</li> <li>• Public engagement</li> </ul>	<p>To determine if there could be interference with marine habitat and wildlife, the Applicant undertook a Habitat Assessment. The Assessment indicated that due to depth of water and composition of the seabed at this location, there would be no negative effects of construction or operations on the marine habitat should the Project proceed.</p> <p>This report was submitted to Fisheries and Oceans Canada (DFO) who issued a Letter of Advice. DFO determined that a <i>Fisheries Act</i> Authorization was not required and set out measures to mitigate impacts to fish and fish habitat in the Letter of Advice.</p> <p>These mitigation measures are reflected in those outlined in the Applicant’s draft Construction Environmental Management Plan and in the Public Engagement Consideration Report (see pages 32 and 42). Measures include carrying out in-water works during least-risk windows for fish, underwater noise monitoring during impact pile driving, spill prevention, and implementing a stop</p>

Summary of comment or concern	Source(s) of comment or concern	Response, Applicant proposed mitigation measures and/or proposed permit conditions
		<p>work procedure if activities are observed to affect fish or marine mammals.</p> <p>The Applicant has committed to work with local marine-focused non-profit organizations to install four herring net panels on the existing service pier to support the herring population, over a trial period.</p> <p>Impact to bird habitat is not expected as no bird habitat was documented within the construction area.</p> <p>In addition, the Applicant has well established environmental practices at this facility, which has operated as a drydock facility for many years.</p> <p>The draft Permit accompanying this report includes a number of proposed conditions to address impacts to the marine and wildlife habitats during construction. These include:</p> <p>Condition No. 26 which requires the Permit Holder to submit an updated Construction Environmental Management Plan (CEMP). The CEMP will outline practices to be in place during construction to lessen impacts to the community and the environment.</p> <p>Condition No. 35 which requires the Permit Holder, or their contractor, to engage a qualified environmental professional to monitor the Project.</p> <p>Condition No. 36 which requires the Permit Holder to provide environmental monitoring reports to the port authority as specified in the draft CEMP.</p> <p>Condition No. 37 details that vibratory pile installation is recommended, and details additional mitigation measures should impact pile driving be required.</p> <p>Condition No. 39 requires the Permit Holder to cease work and notify the port authority</p>

Summary of comment or concern	Source(s) of comment or concern	Response, Applicant proposed mitigation measures and/or proposed permit conditions
		<p>should fish or fish habitat be harmed (i.e., observing distressed, injured or dead fish).</p> <p>Condition No. 40 relates to the use of concrete in a marine environment to ensure contamination does not occur.</p> <p>Condition No. 41 ensures that piles are capped to prevent wildlife entrapment.</p> <p>Condition No. 42 prohibits barges and other vessels used in construction from grounding on the foreshore or seabed.</p> <p>Condition No. 43 ensures that all in-water works be conducted during the marine least risk timing window for fish and fish habitat from August 16 to February 28 inclusive, unless approved in writing by Fisheries and Oceans Canada (DFO).</p> <p>Condition No. 44 states that the Permit Holder will not disturb the seabed outside the Project site.</p> <p>Condition No. 45 requires that the Permit Holder contain, test and dispose of any contaminated materials.</p> <p>Condition No. 46 requires that the Permit Holder shall not, directly or indirectly, deposit or permit the deposit of a deleterious substance in the marine environment.</p> <p>Condition No. 60 requires the Permit Holder to work with a local organization to install herring net panels for a three-year trial period.</p>
<p>Concerns that the existing and Project would increase waterborne pollution and spills</p>	<ul style="list-style-type: none"> <li>Public engagement</li> </ul>	<p>The Applicant has several processes in place to prevent and/or manage water-borne pollutants, including a Spill Prevention and Response Plan and a Fire and Emergency Response Plan for existing operations both on-land and on-water. Details were outlined in the Applicant's Public Engagement Consideration Report. The report also outlines mitigations to reduce impacts from operations and vessels (see pages 33-35) which includes</p>



Summary of comment or concern	Source(s) of comment or concern	Response, Applicant proposed mitigation measures and/or proposed permit conditions
		<p>connecting the new drydocks to the existing wastewater treatment system.</p> <p>The draft Permit accompanying this report includes a number of proposed conditions to address concerns regarding waterborne pollution and spills. These include:</p> <p>Condition No. 26 which requires the Permit Holder to submit an updated Construction Environmental Management Plan (CEMP). The CEMP will outline practices to be in place during construction to lessen impacts to the community and the environment.</p> <p>Condition No. 48 which requires the Permit Holder to conduct a risk-based analysis for the preparation of a comprehensive hazard and risk profile of the site. This document must also be provided to the City of North Vancouver Fire Department 40 business days prior to commencing operations.</p>
<b>Location</b>		
<p>Location of the expansion would bring the dry dock operations closer to residential areas, and suggestion to expand to the east towards a more industrial area.</p>	<ul style="list-style-type: none"> <li>• The City of North Vancouver</li> <li>• Public engagement</li> </ul>	<p>The Applicant submitted an Alternate Siting Options - Addendum to the port authority in June 2022 describing in more detail the considerations that went into the proposal to expand towards the west.</p> <p>The Applicant considered several potential locations for new drydocks within the existing and additional potential lease extension areas, including the adjacent water lot directly to the east of its current operations, an area referred to as Area 7 or Pier 94. The report indicates (page 14) that the east side expansion area was deemed unsuitable because:</p> <ul style="list-style-type: none"> <li>• This water lot is leased to Seaspans ULC for its Marine Transportation business. While they are related companies, they are separate legal entities.</li> <li>• The Pier 94 water lot is already in use for moorage, vessel maintenance and minor</li> </ul>

Summary of comment or concern	Source(s) of comment or concern	Response, Applicant proposed mitigation measures and/or proposed permit conditions
		<p>vessel repairs (activities not requiring heavy mobile equipment or drydock services) and will continue to be used for these activities.</p> <ul style="list-style-type: none"> <li>• Pier 94 is not structurally fit for use as a drydock. It would need to be removed and rebuilt to meet the weight bearing requirements for drydock operations, which is not economically feasible for this project.</li> <li>• Pier 94 is not directly accessible by land on the south side of the site from the Vancouver Drydock site. Workers and heavy equipment would need to travel back and forth 900 to 1,200m on the north side to access Pier 94 from the Vancouver Drydock. This would require moving between two secure areas and four security checkpoints (as they enter and exit each site) for each round trip. This would also include travel on an open roadway which would compromise security requirements that are part of some of the vessel repair activities. Overall, the logistical challenges operating drydocks on these separate sites would be inefficient and make the Project not economically feasible.</li> </ul>
<p>Concerns regarding views, including:</p> <ul style="list-style-type: none"> <li>• Existing site being unsightly (e.g., debris everywhere)</li> <li>• Increased industry could impact property values and enjoyment</li> </ul>	<ul style="list-style-type: none"> <li>• Public engagement</li> </ul>	<p>Port tenants are responsible for ensuring the maintenance, upkeep and operations at its site are kept in clean and sanitary conditions.</p> <p>It is unclear whether this Project would have any impact on property value as North Vancouver's waterfront has long been a hub of economic activity where shipbuilding and marine-related industries operate; the location for the proposed Project is publicly known and is designated as 'Industrial' under the port authority's land use plan.</p> <p>The Applicant has mitigations for site beautification and enhancement of the new proposed drydock's aesthetics with painting and/or murals in addition to site clean-up. See the Applicant's Public Engagement Consideration Report for more details (pages</p>

Summary of comment or concern	Source(s) of comment or concern	Response, Applicant proposed mitigation measures and/or proposed permit conditions
		<p>16). The Applicant has also committed to exploring landscaping and site beautification efforts with a community working group (see page 44 of the Applicant’s Public Engagement and Consideration Report for details on this group).</p> <p>The draft Permit accompanying this report includes proposed condition No. 16 that requires the Permit Holder to adhere to all the mitigations put forward in the Applicant’s Public Engagement Consideration Report mitigation table.</p> <p>In relation to debris removal, the attached draft Permit also includes proposed condition No. 59 which would require that the Permit Holder conduct a post-construction dive survey to characterize and remove all human-caused debris within their water lot. While this cleanup may not be visible to the public as it is subtidal, it is a project requirement.</p>
<p>Concerns of the proximity and/or encroachment of industrial activities to parks, playgrounds and residential areas</p>	<ul style="list-style-type: none"> <li>Public engagement</li> </ul>	<p>The area in and around the subject area is designated ‘Industrial’ or ‘Port terminal’, and the proposed Project is consistent with the port authority’s land use plan designation of ‘Industrial’.</p> <p>However, in their Public Engagement Consideration Report, the Applicant listed several mitigations to address all concerns raised by neighbouring residents. Mitigations that specifically address ways to better integrate the proposed Project with community activities to address viewscape (see page 16), noise outside of regular hours (7:00 a.m. to 11:00 p.m.) and on long weekends in July, August and September (see page 20), forming a community working group (see page 44), communicating with local residents, schools and interested individuals, providing \$75,000 for a community amenity (pages 44 and 45) and particulate sampling in the community every 6</p>

Summary of comment or concern	Source(s) of comment or concern	Response, Applicant proposed mitigation measures and/or proposed permit conditions
		<p>months for two years (page 23) among others.</p> <p>The draft Permit accompanying this report includes proposed condition No. 16 that requires the Permit Holder to adhere to all the mitigations put forward in the Applicant's Public Engagement Consideration Report mitigation table, of which a number are intended to reduce impacts from industrial activity on parks and residential areas.</p> <p>Proposed condition No. 50 requires the Permit Holder to submit a draft operations communications plan. This plan will outline how the Permit Holder will engage and communicate with the public and stakeholders during operations, including notifications about high-noise generating works.</p> <p>Proposed condition No. 51 requires the Permit Holder to provide an air emissions management plan prior to commencing operations.</p> <p>Proposed condition No. 56 requires the Permit Holder to conduct post-project noise monitoring to confirm the predictions of the 2021 Environmental Noise Assessment and indicate effectiveness of noise mitigations. The port authority may require additional mitigation measures if results deviate from the assessment.</p> <p>Proposed condition No. 57 requires the Permit Holder to install a permanent noise monitoring station in close proximity to the sensitive receptors located to the north of the drydocks. The data from the station must be shared with the port authority. Excessive noise, as determined by a qualified professional, must be reported to the community working group (this process must be reflected in the Permit Holder's Operations Communications Plan; see condition No. 50).</p>

Summary of comment or concern	Source(s) of comment or concern	Response, Applicant proposed mitigation measures and/or proposed permit conditions
		<p>Proposed condition No. 58 requires the Permit Holder to undertake a post-project lighting assessment to confirm the predictions of the 2021 Light Report and report back to the port authority and the community working group. The port authority may require additional mitigation measures if results deviate from the assessment.</p>
<p>Location of the expansion relative to City of North Vancouver owned properties and water lots leased from the port authority</p>	<ul style="list-style-type: none"> <li>• The City of North Vancouver</li> </ul>	<p>The port authority confirms that the proposed expansion is for an additional water lot lease area of 40m in width, to the west of the existing Seaspans water lot - within PID 008-998-477. There is no expansion (of either water lot or infrastructure) into City-controlled water. Accordingly, the Applicant was not required to provide any further response. Sketch Plan S2022-157, which shows the proposed additional area in yellow highlight, was attached for reference.</p> <p>Concerns were raised about the Applicant's intended use of an area of water (measuring approximately 22 metres north-south and 24 metres east-west) near the shore. The proposed westward expansion further abuts the City tenure area but does not impact the use of this area. To mitigate these concerns the port authority determined that the north-west corner, west of an existing buoy, would only be used for navigation purposes. The port authority's lease agreement with the Applicant will not permit moorage, or the installation of any improvements, within the area (see Appendix A, Figure A-2).</p>
<p>Question regarding the location of the expansion relative to the public Burrard Dry Dock Pier</p>	<ul style="list-style-type: none"> <li>• Northshore Waterfront Liaison Committee</li> <li>• Public engagement</li> </ul>	<p>The Applicant confirmed the proposed expansion would extend 40 metres west of the current operations, towards the public pier.</p>
<p>Request that the area be re-designated as</p>	<ul style="list-style-type: none"> <li>• Public engagement</li> </ul>	<p>Given that the area in and around the subject area is designated 'Industrial' or 'Port terminal', and the Project is consistent with</p>

Summary of comment or concern	Source(s) of comment or concern	Response, Applicant proposed mitigation measures and/or proposed permit conditions
'Conservation' in the port authority land use plan		the port authority's land use plan designation of 'Industrial', there is no plan to amend the area to 'Conservation'.
Request that the area to the west of the expansion be re-designated in the port authority land use plan	<ul style="list-style-type: none"> <li>The City of North Vancouver</li> </ul>	The port authority may consider a future designation change for waters to the west of the drydock (between the proposed drydock expansion area, and the Burrard Pier to the west) to reduce the potential for further westward expansions of industrial uses at this location. Should this designation change proceed, it would be considered as part of the comprehensive land use plan review process which occurs approximately every five years. The last review was completed in 2020.
<b><i>Opportunities for public engagement and continued communication</i></b>		
That opportunities for public engagement were insufficient	<ul style="list-style-type: none"> <li>The City of North Vancouver</li> <li>Public engagement</li> </ul>	<p>The Applicant conducted public engagement beyond what is required by the PER process or guideline. This included a 33-business day public comment period from June 25 to August 12, 2021, and a 34-business day supplementary public comment period focused on proposed mitigations, from July 27 to September 14, 2022.</p> <p>Prior to the supplementary engagement period commencing, two small group meeting dialogue sessions and a site tour were held between June 10 and August 22, 2022. Attendees included highly interested individuals residing in close proximity to the proposed site.</p>
The public engagement notification postcards were not delivered to all residents in the multi-unit residential buildings in 2021	<ul style="list-style-type: none"> <li>Public engagement</li> </ul>	While the initial notification mailout (2021) aligned with the PER guideline for public engagement, the Applicant refined its process for the supplementary public engagement period (2022) to mitigate the concerns raised about notification and ensure all residents and businesses in the notification area received the notice about public engagement. The specific method they used is outlined on page

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		11 of the Applicant's Supplementary Engagement Summary Report.
The 2021 public engagement period was too short and held during the summer	<ul style="list-style-type: none"> <li>Public engagement</li> </ul>	The port authority required a 25-business day engagement period during COVID-19. The Applicant has met and exceeded the requirements for notification under the PER guideline for public engagement.
Attendees at the 2021 online information sessions were not able to speak freely, but had to write questions via the chat function in Zoom	<ul style="list-style-type: none"> <li>Public engagement</li> </ul>	<p>Given the large number of attendees, the Applicant chose to use the chat function of Zoom to provide sufficient opportunities for input from all participants and posted responses on its website. This is a standard approach to large groups when using online engagement platforms.</p> <p>The Applicant held public engagement sessions online as provincial COVID-19 restrictions for in-person meetings were in place at the time. In terms of accessibility, the Applicant met the port authority requirements for public engagement during the COVID-19 pandemic. The Applicant also met the typical requirements for applicants undertaking public engagement and provided transparency for responses.</p>
The meeting held with the strata councils in the summer 2021 was not open to all residents in the respective buildings	<ul style="list-style-type: none"> <li>Public engagement</li> </ul>	Prior to commencing these meetings, the Applicant submitted its approach to public consultation to the port authority for review. The Applicant completed these meeting in keeping with the plan approved by the port authority. This phase included targeted meetings with specific strata representatives and two in-person meetings for the broader public.
Renderings used in the 2021 Project Information Guide did not consistently include vessels	<ul style="list-style-type: none"> <li>Public engagement</li> </ul>	The port authority reviewed the Project Information Guide and understood that the images in the material were to serve as an illustrative way of depicting a variety of possible use scenarios at the site, including scenarios when the drydocks may be empty.

Summary of comment or concern	Source(s) of comment or concern	Response, Applicant proposed mitigation measures and/or proposed permit conditions
<p>Concerns were raised regarding how the port authority would ensure the Applicant meet the requirements set out in the permit should the Project be permitted.</p>	<ul style="list-style-type: none"> <li>Public engagement</li> </ul>	<p>To ensure adherence to all conditions of a Permit, the port authority's compliance monitoring and enforcement program monitors Permit Holders for compliance with permit conditions and acts upon non-compliance when necessary.</p> <p>The draft permit accompanying this report includes proposed conditions to address these concerns. These include:</p> <p>Draft condition No. 12 which requires the Permit Holder to prepare and submit self-report form demonstrating when compliance with conditions at each of the following project phases:</p> <ul style="list-style-type: none"> <li>Prior to construction conditions (to be submitted a minimum of 15 business days prior to commencement of construction)</li> <li>Construction conditions (to be submitted at 50% of construction)</li> <li>Conditions upon completion (to be submitted within 60 business days of completion of construction)</li> <li>Conditions prior to operations (to be submitted 15 business days prior to commencement of operations)</li> </ul> <p>Proposed condition No. 16 requires the Permit Holder to adhere to all the mitigations put forward in the Applicant's Public Engagement Consideration Report mitigation table.</p>
<p>Concerns were raised regarding the lack of communication between the Applicant and their neighbours. Including:</p> <ul style="list-style-type: none"> <li>Current operations and communication</li> <li>Lack of a complaint line</li> <li>Outreach to schools and tours</li> </ul>	<ul style="list-style-type: none"> <li>Public engagement</li> </ul>	<p>While these issues have been raised in the context of the existing operation, they have been addressed by the Applicant in their mitigations as detailed on pages 43 to 45 of their Public Engagement Consideration Report. Mitigations include:</p> <ul style="list-style-type: none"> <li>Increasing the frequency of the Seaspan e-Newsletter</li> <li>Establishing a community working group</li> <li>Exploring opportunities and outreach with schools and the local community</li> </ul>



Summary of comment or concern	Source(s) of comment or concern	Response, Applicant proposed mitigation measures and/or proposed permit conditions
		<ul style="list-style-type: none"> <li>• Establishing a complaints line and reporting out quarterly on their website</li> <li>• Contributing \$75,000 to a public amenity</li> </ul> <p>To ensure that the community are kept abreast of construction should the Project be approved, the draft permit includes the following proposed conditions regarding communication:</p> <p>Condition No. 17 which requires the Permit Holder to notify interested individuals of the issuance of the permit via the Seaspans Signal e-newsletter and the Drydock e-Newsletter (in the next monthly edition), and by email to individuals in Seaspans database of interested parties collated during the permit process (within 48 hours of permit issuance).</p> <p>Condition No. 20 which requires the Permit Holder to submit a draft construction communications plan outlining how they intend to engage and communicate with the public and stakeholders from pre-construction to completion. Bi-annual reporting of construction activities is required for two years.</p> <p>Condition No. 21 requires the Permit Holder to submit a draft construction notification letter to the port authority for review</p> <p>Condition No. 22 requires the Permit Holder to send a construction notification letter to an area with 500 m of the Project location 10 business days before commencing construction or physical activities onsite.</p> <p>Condition No. 50 requires the Permit Holder to submit a draft operations communications plan indicating notifications to the community throughout operations, including notifications specific to noisy activities. A bi-annual report summarizing operations communication activities is to be provided to the port authority for two years.</p>

Summary of comment or concern	Source(s) of comment or concern	Response, Applicant proposed mitigation measures and/or proposed permit conditions
<b>Safety and technical</b>		
<p>Marine Response -</p> <ul style="list-style-type: none"> <li>Marine Firefighting Resource Assessment Study</li> </ul>	<ul style="list-style-type: none"> <li>The City of North Vancouver</li> </ul>	<p>The Applicant completed a Marine Firefighting Resource Assessment Study, in cooperation with the port authority, prior to (and independent from) this application.</p> <p>The Applicant has noted that:</p> <p>Fire prevention at Vancouver Drydock is a top priority and the responsibility of all workers, management, contractors and visitors. This includes permits for hot work being obtained prior to starting any work that could potentially cause a fire (e.g., welding, plasma cutting, grinding etc.), observing appropriate fire watch and cool down periods for all hot work and maintaining all electrical equipment in good repair.</p> <p>All workers and visitors to Vancouver Drydock are given a health and safety, environment and emergency program orientation before starting work, and training is updated regularly. Fire and evacuation drills are conducted a minimum of once per year. Fire and emergency drills are followed by a debrief to review the drill and suggestions to continuously improve the fire and emergency plan.</p> <p>Recognizing the unique challenges faced by first responders to shipboard and drydock incidents, Seaspans has been working with all three North Shore fire departments for several years to develop comprehensive training to improve land-based marine firefighting and emergency response.</p> <p>The Applicant committed to:</p> <p>Update the Fire and Emergency Response Plan to include all components of the proposed project.</p>
<p>Marine Response –</p>	<ul style="list-style-type: none"> <li>The City of North Vancouver</li> </ul>	<p>The Applicant confirmed that they work collaboratively with all three North Shore</p>

Summary of comment or concern	Source(s) of comment or concern	Response, Applicant proposed mitigation measures and/or proposed permit conditions
Financial implications		<p>municipalities to develop training and improved cooperation in support of improved marine firefighting capability and capacity at Seaspans's North Vancouver operations, including at Vancouver Drydock.</p> <p>The Applicant regularly meets with the North Shore fire department Chiefs (and/or its alternates) to keep teams apprised of new developments at Seaspans's operations, and to ensure continuous improvement on emergency response.</p>
Emergency Planning and concerns about the ability of emergency services to respond	<ul style="list-style-type: none"> <li>The City of North Vancouver</li> </ul>	<p>The Applicant has participated in regular discussions with City and District of North Vancouver emergency response and planning officials, independent from this project.</p> <p>In response to the City's concerns the Applicant submitted a Fire Safety Plan prepared by Robert Furlong Design Co.</p> <p>The Applicant submitted a letter titled Fire and emergency service access, dated May 10, 2021, which outlines the locations of hydrants and standpipes, as well as access routes within the facility.</p> <p>In addition to the above, the Applicant proposed a mitigation to update their fire response plan to include all parts of the Project should it be approved (see page 35 of the Applicant's Public Engagement Consideration report).</p> <p>The draft Permit accompanying this report includes proposed conditions to address concerns over emergency planning. These include:</p> <p>Condition No. 47 which would require the Permit Holder to submit an updated Fire Safety Plan which includes the additional drydocks and work pontoon. A copy must be provided to the City of North Vancouver Fire Department 40 business days prior to commencing operations.</p>

Summary of comment or concern	Source(s) of comment or concern	Response, Applicant proposed mitigation measures and/or proposed permit conditions
		<p>Condition No. 48 which requires the Permit Holder to conduct a risk-based analysis for the preparation of a comprehensive hazard and risk profile of the site. This document must also be provided to the City of North Vancouver Fire Department 40 business days prior to commencing operations.</p> <p>Condition No. 49 requires the Permit Holder to convene a meeting with the port authority and the City and District of North Vancouver Fire Departments to discuss coordinated marine fire response. The Permit Holder is to submit a Coordinated Response Plan (combining marine and existing fire safety and response plans into one) to the port authority 40 days before commencing operations.</p>
<p>Water Supply for emergency planning, or firefighting operations</p>	<ul style="list-style-type: none"> <li>The City of North Vancouver</li> </ul>	<p>The current existing drydocks have capacity to draw City water from fire hydrant and salt water from the ocean for adequate firefighting. The proposed work pontoon also has a firefighting connection, as well as a connection to sprinkler rooms on the drydocks.</p> <p>The draft Permit accompanying this report includes proposed conditions to address concerns over emergency planning. These include: draft conditions 47, 48 and 49 detailed above.</p>
<p><b>Social and economic impacts</b></p>		
<p>Concerns regarding current noise levels, and potential noise levels increasing, including during evening hours.</p>	<ul style="list-style-type: none"> <li>The City of North Vancouver</li> <li>Northshore Waterfront Liaison Committee</li> <li>Public engagement</li> </ul>	<p>The Applicant submitted an Environmental Noise Assessment, prepared by BKL Consultants Ltd. In 2021, the BKL assessment was prepared in accordance with the port authority's environmental noise assessment guideline, which draws upon guidance provided in three key documents: ISO 1996-1 (2003), ANSI S12.9 2005/Part 4 and Michaud, D. S., Bly, S. H. P. &amp; Keith, S. E. (2008).</p>

Summary of comment or concern	Source(s) of comment or concern	Response, Applicant proposed mitigation measures and/or proposed permit conditions
		<p>The Applicant outlined mitigations for noise in the Public Engagement Consideration Report (see page 20) and committed to engage the community working group on these issues. (The Applicant committed to establishing a community working group, with the goal to share information about operations, receive feedback, and foster ongoing dialogue. The terms of reference would be developed in consultation with a qualified IAP2 facilitator and minutes of the meetings will be available on Seaspans website (see page 44 of the Public Engagement Consideration report for more details).</p> <p>The Applicant included mitigations that specifically address scheduling and notification of high-noise generating activities and has trialed a number of noise mitigations and committed to further trials (see pages 20 and 21 of the Public Engagement Consideration report).</p> <p>The draft Permit accompanying this report includes proposed conditions to address concerns over noise. This includes:</p> <p>Condition No. 50 which requires the Permit Holder to submit a draft Operations Communications plan indicating notifications to the community throughout operations, including notifications specific to noisy activities.</p> <p>Condition No. 56 which requires the Permit Holder to conduct post-project noise monitoring to confirm the predictions of the 2021 Environmental Noise Assessment and indicate effectiveness of noise mitigations. The port authority may require additional mitigation measures if results deviate from the assessment.</p> <p>Condition No. 57 requires the Permit Holder to install a permanent noise monitoring station in close proximity to the sensitive receptors</p>

Summary of comment or concern	Source(s) of comment or concern	Response, Applicant proposed mitigation measures and/or proposed permit conditions
		<p>located to the north of the drydocks. The data from the station must be shared with the port authority. Excessive noise, as determined by a qualified professional, must be reported to the community working group (this process must be reflected in the Permit Holder's Operations Communications Plan; see condition No. 50).</p>
<p>Comments on the Environmental Noise Assessment regarding its credibility, and the lack of consultation with the community in scoping the study</p>	<ul style="list-style-type: none"> <li>Public engagement</li> </ul>	<p>The study was conducted by BKL Consultants Ltd., an independent engineering firm who specialize in the field of acoustics. The assessment was undertaken by two professional engineers utilizing a 3D model following an internationally recognized ISO 9613-2 (1996) standard for predicting exterior sound propagation.</p> <p>Port authority guidelines do not require public engagement on scope of studies required for a Permit application. The study met port authority guidelines and was satisfactorily completed.</p> <p>The Applicant has committed to undertaking a post-project noise assessment (see page 21 of the Applicants Public Engagement Consideration report).</p> <p>The draft permit accompanying this report includes proposed conditions to address concerns over noise. This includes:</p> <p>Condition No. 56 which requires the Permit Holder to conduct post-project noise monitoring to confirm the predictions of the 2021 Environmental Noise Assessment and indicate effectiveness of noise mitigations. The port authority may require additional mitigation measures if results deviate from the assessment.</p> <p>Condition No. 57 requires the Permit Holder to install a permanent noise monitoring station in close proximity to the sensitive receptors</p>

Summary of comment or concern	Source(s) of comment or concern	Response, Applicant proposed mitigation measures and/or proposed permit conditions
		<p>located to the north of the drydocks. The data from the station must be shared with the port authority. Excessive noise, as determined by a qualified professional, must be reported to the community working group (this process must be reflected in the Permit Holder's Operations Communications Plan; see condition No. 50).</p>
<p>Concerns that the proposed expansion would create additional light pollution. For example:</p> <ul style="list-style-type: none"> <li>• Height of light poles</li> <li>• Light temperatures</li> <li>• Lack of shielded fixtures</li> <li>• Request to turn off the lighting when not in use</li> <li>• Methodology, accuracy and credibility of the lighting study</li> </ul>	<ul style="list-style-type: none"> <li>• The City of North Vancouver</li> <li>• Public engagement</li> </ul>	<p>The Applicant submitted a Lighting Design &amp; Report prepared by RFT Engineering Ltd. The report was prepared in accordance with the port authority's lighting guideline. The purpose of the report was to design fixed position and flood lighting, while eliminating the potential for light spill to surrounding properties and passing vessels.</p> <p>The Applicant's lighting study was undertaken by a certified professional electrical engineer and meets the port authority's requirements as outlined in the PER lighting guideline.</p> <p>The Applicant committed to reducing light pole heights to 7.5m, modifying light bulb temperature from 4000k to 3000k (warmer bulbs) on all proposed fixtures, and installing motion-sensing fixtures where applicable.</p> <p>Six 7.5-meter light poles would be installed along the north side of the new work pontoon. To minimize light spill to the marine environment and community, the lights would:</p> <ul style="list-style-type: none"> <li>• be used only when needed (photocell and dimmer controlled)</li> <li>• illuminate only the areas needed (dark sky friendly)</li> <li>• be no brighter than necessary for safety</li> <li>• minimize blue light emissions</li> <li>• be house shielded</li> </ul> <p>Light fall-off from the work pontoon lighting would occur approximately 11 metres away, with light spill not resulting in glare to passing vessels or light spill to the surrounding community.</p>

Summary of comment or concern	Source(s) of comment or concern	Response, Applicant proposed mitigation measures and/or proposed permit conditions
		<p>There would also be lights on the two proposed new drydocks that would be positioned to face inward and down to only illuminate the interior of the drydocks. Once the proposed drydocks are onsite, the lighting system will be assessed and, if needed, be retrofitted to minimize light spill and be dark-sky friendly.</p> <p>The Applicant provided light mitigations on pages 37 and 38 of their Public Engagement Consideration report. These mitigations include ensuring lighting is dark-sky-friendly, house shields to be installed where possible, shorter light poles, warmer light colour and working with the community working group to seek additional opportunities to collaborate on light issues on site. The Applicant also proposed to retrofit their existing site to reduced light impacts.</p> <p>The draft Permit accompanying this report includes proposed conditions to address concerns over light impacts. This includes:</p> <p>Condition No. 52 which requires the Permit Holder to revise the lighting assessment to include all lighting associated with the Project.</p> <p>Condition No. 58 would require the Permit Holder to undertake a post-project lighting assessment to confirm the predictions of the 2021 Light Report and report back to the port authority and the community working group. The port authority may require additional mitigation measures if results deviate from the assessment.</p>
<p>Concerns that the existing facility light levels are disruptive</p>	<ul style="list-style-type: none"> <li>Public engagement</li> </ul>	<p>The Applicant initiated design work to retrofit existing light pole and building mounted lights across the entire Vancouver Drydock site with dark-sky friendly lighting, and to incorporate house side shields, where appropriate, to minimize light spill from their existing operations.</p>



Summary of comment or concern	Source(s) of comment or concern	Response, Applicant proposed mitigation measures and/or proposed permit conditions
		<p>The draft permit accompanying this report includes proposed conditions to address concerns over light impacts. This includes:</p> <p>Condition No. 52 and 58 which are detailed above.</p>
<p>Concerns that the Project would impact air quality and human health during operations</p>	<ul style="list-style-type: none"> <li>• The City of North Vancouver</li> <li>• Public engagement</li> </ul>	<p>The Applicant has put forward several mitigations to address the concern of air quality during operations which are detailed on pages 23 to 24 of the Applicant’s Public Engagement Consideration report and include the following:</p> <p>Committing to sampling and monitoring dust twice a year for two years. The results will be available on the Seaspan website, and the Applicant will work with experts to determine if any additional measures are necessary.</p> <p>Continuing to work with industry experts to assess new tools and technology in paint volatile organic compound (VOC) content, and non-solvent-based alternatives in the marine coating industry.</p> <p>The draft Permit accompanying this report includes proposed condition No. 26 to address air quality impacts caused by construction. This requires the Permit Holder to submit an updated Construction Environmental Management Plan (CEMP). The CEMP will outline practices to be in place during construction to lessen impacts to the community and the environment.</p> <p>The draft permit also has proposed conditions relating to operations. Condition No. 51 requires the Permit Holder to provide an Air Emissions Management Plan 60 business days prior to commencing operations. The plan shall include air quality monitoring as recommended by a qualified professional.</p>

Summary of comment or concern	Source(s) of comment or concern	Response, Applicant proposed mitigation measures and/or proposed permit conditions
<p>Comment indicating the Project would provide economic benefits to the community through long-term jobs</p>	<ul style="list-style-type: none"> <li>Public engagement</li> </ul>	<p>The Applicant has noted that the Project would add 100 new jobs to its existing workforce.</p>
<p><b>Traffic impacts (road and marine)</b></p>		
<p>Concerns regarding road traffic impacts, including:</p> <ul style="list-style-type: none"> <li>Parking and mode share</li> <li>Construction access from the east</li> </ul>	<ul style="list-style-type: none"> <li>The City of North Vancouver</li> <li>Public engagement</li> </ul>	<p>There are no expected material impacts to road traffic anticipated during construction, nor after Project completion.</p> <p>Construction equipment will be delivered via water and should allow for a limited increase in construction-related traffic accessing the site.</p> <p>The Applicant submitted a Traffic Impact Study that was prepared in accordance with the port authority's transportation guidelines. The Study concludes that the road network is adequate to support both construction and operation of the facility expansion as proposed. The facility expansion as proposed will not have negative impacts on the adjacent intersections of Victory Ship Way / St Georges Avenue, and Esplanade / St Georges Avenue (as described in the Traffic Impact Study).</p> <p>There is no longer road access to the drydock site from the east after completion of the Low Level Road project in 2013. All road access to the facility is from the west, through the intersection of St Georges Avenue and Victory Ship Way (this intersection is west of the facility).</p> <p>To reduce potential impacts, the Applicant has committed to work with the City of North Vancouver on traffic planning and sharing data on traffic (see pages 46-47 of the Applicant's Public Engagement Consideration Report for more details).</p>

Summary of comment or concern	Source(s) of comment or concern	Response, Applicant proposed mitigation measures and/or proposed permit conditions
Concerns about the potential constraint to large vessels mooring at Burrard Dry Dock pier, that the expansion would make this impossible in future	<ul style="list-style-type: none"> <li>The City of North Vancouver</li> <li>Northshore Waterfront Liaison Committee</li> </ul>	City staff who operate the Burrard Dry Dock pier have confirmed that the proposed expansion will not negatively affect the ability of large vessels to navigate to the pier, or the ability to establish any required security booms around vessels berthed on the east side of the pier.

Further details on the comments received during the consultation process can be reviewed in the following documents published on both the Applicant and the port authority websites:

- [Public Engagement Summary Report, November 19, 2021](#)
- [Public Engagement Consideration Report, dated February 22, 2023](#)
- [Public Engagement Consideration Report Mitigation Table, dated February 22, 2023](#)

## 4 Indigenous consultation

The port authority reviewed the proposed works and determined that the Project may have the potential to adversely impact the following Indigenous groups:

- Musqueam Indian Band
- S'ólhTéméxw Stewardship Alliance (via Sto:lo Connect to the People of the River Referrals Office)
- Squamish Nation
- Tsleil-Waututh Nation

### 4.1 Consultation process

The following consultation activities were conducted with the above-noted Indigenous groups:

- Referral packages were sent for review, including consultation letters and documents providing detailed information on the Project. Each consultation letter also included a request for comments and an offer to meet with the port authority to discuss the Project.
- Check-ins and project updates were conducted with Indigenous groups at monthly standing PER sessions
- Follow-up and reminder emails were sent prior to the completion of the application's comment period
- Comments were received by various Indigenous groups, (as outlined in section 4.2) and responses to comments were delivered to every group that provided comments

## 4.2 Summary of Indigenous comments/concerns, Applicant responses, and proposed conditions

Summary of comment or concern	Response/proposed mitigation measure/proposed draft conditions
<p>Inquiry about the proposed increase in vessel traffic from additional dry dock facilities.</p>	<p>The Applicant indicated that each dry dock typically receives a single vessel every 2-3 weeks. Accordingly, the Project would only increase vessel traffic at the dry dock by approximately 50-75 vessels annually.</p> <p>As a result of the minimal increase, no mitigation measure was provided.</p>
<p>Concerns about the impact of additional lighting on wildlife. Request that all existing facility light fixtures incorporate Dark Sky Friendly principles, where possible, in addition to light fixtures associated with new works.</p>	<p>The Applicant has proposed mitigation measures to reduce the potential adverse effects, including installing horizontal, full cut-off dark-sky-friendly technology lights to prevent forward and backward glare. Lights will also be fitted with motion sensors to dim lights when no motion is detected.</p> <p>The Applicant proposed to also apply these mitigation measures to the existing operations by retrofitting the lighting across the entire project site.</p> <p>The draft Permit accompanying this report includes proposed condition No. 58, which is intended to address this concern by requiring a revised lighting assessment and a post-project lighting test be completed.</p>
<p>Concerns about noise from construction and operational activities. For example:</p> <ul style="list-style-type: none"> <li>• Impacts on fish and wildlife from pile installation activities with requests for double bubble curtains and stop work procedure should pile driving noise levels reach 85% thresholds</li> <li>• Impacts on wildlife from increased operational noise</li> <li>• Impacts on cultural use from increased noise</li> <li>• Impacts of Ultra High Pressure (UHP) washing</li> </ul>	<p>Temporary noise is anticipated during the four-month construction period from pile installation (approximately six week duration) and construction equipment.</p> <p>Section 4.4 of the Applicant’s CEMP outlines proposed mitigations that will be implemented to minimize noise and vibration impacts to wildlife, as well as users and residents of the surrounding area during construction activities, including the use of bubble curtains and stop work procedures should the results of acoustic monitoring require it.</p> <p>During operations, noise would be predicted to increase by up to 3 dBA at nearby residences when the Project is operating at full capacity.</p> <p>The Applicant has committed to use noise-reducing barrier panels around the UHP pump while working on barge or ship decks and whenever technically feasible.</p> <p>The Applicant has also committed to investigating the use of curtains to reduce noise and will work with the community working group to install measuring devices at the drydock.</p>

Summary of comment or concern	Response/proposed mitigation measure/proposed draft conditions
	<p>The site will continue to operate 24/7, with primary operating hours between 7:00 a.m. and 11:00 p.m. The Applicant has committed scheduling the noisiest activities before 7:00 p.m., where possible, and to cease ultra-high pressure washing after 7:00 p.m. on summer long weekends.</p> <p>Post-construction noise monitoring will be conducted to confirm the operational predictions of the environmental noise assessment and additional mitigation measures may be implemented.</p>
<p>Inquiry about the Environmental Monitor's (EM) ability to require specific actions be taken to remedy an issue.</p>	<p>No mitigation or response required by the Applicant.</p> <p>Should the Project be approved, the applicant will be required to follow mitigation measures, as outlined in the draft CEMP, to reduce potential for adverse, project-related effects due to accidents including environmental monitoring, emergency response procedures, and the implementation of a spill prevention and response plan.</p> <p>Should specific actions be required to remedy an issue, the EM would have the authority to issue a stop work order if works fail to meet environmental requirements. Work would only be allowed to resume once the issue has been rectified to the satisfaction of the EM.</p>
<p>Requests for a cumulative effects assessment to identify the magnitude of the Project's impacts on the immediate and surrounding environment. The anticipated effects from the Project to be considered include increased marine shading, vessel traffic, noise, lighting, and contamination in the inlet.</p>	<p>While s. 81-91 of the <i>Impact Assessment Act</i> do not require a cumulative environmental effects assessment be completed, the PER Process does cumulatively consider the past and current effects of development in the Project area including other activities or developments that could contribute to current conditions.</p> <p>The Applicant has also committed to:</p> <ul style="list-style-type: none"> <li>• Reduce the noise and lighting effects from existing operations to mitigate impacts to people and wildlife</li> <li>• Upgrading the entire sites lighting to align with dark-sky friendly principles</li> <li>• Installing and monitoring herring panels in the Project area</li> </ul> <p>The draft Permit accompanying this report includes proposed conditions, which in conjunction with the Applicant's proposed mitigation measures are considered to be a cumulative effects management strategy.</p>
<p>Request for Indigenous environmental monitoring</p>	<p>The Applicant will provide environmental monitoring opportunities for in-water works to interested Indigenous communities.</p> <p>The draft Permit accompanying this report includes proposed condition No. 30, which requires the Applicant to provide</p>

Summary of comment or concern	Response/proposed mitigation measure/proposed draft conditions
	opportunities for interested Indigenous groups to monitor and be present on the Project site at all times during in-water works.
Request that any water suppressant used to prevent dust or that comes in contact with uncured or partially uncured concrete must be discharged in a catch basin and treated for pH, TSS and turbidity before being disposed of at an appropriate facility.	<p>The Applicant will not be using water as a dust suppressant. The Applicant has proposed mitigations measures to be used for the concrete works, including: containing and testing water that contacts uncured or partially cured concrete; and treating or removing the water for off-site disposal at an approved facility.</p> <p>The EM would be onsite to monitor concrete works conducted adjacent to the marine environment.</p>
Request that the facility monitor and treat all stormwater collected from impermeable surfaces.	Wastewater from dry dock operations, both current and future, is managed through the onsite wastewater treatment plant and associated Waste Discharge Permit No. SC-100817-NSSA. When a vessel is dry docked, any storm water and vessel wash water is collected and redirected to the treatment plant.
Request that idling be restricted to no more than 2 minutes in a 60-minute period to align with local city bylaws.	<p>The Applicant has a companywide commitment to reduce idling. They have installed signage throughout the current site and all employees receive training regarding the importance of anti-idling practices.</p> <p>The Applicant advised that anti-idling commitments are a requirement of its Green Marine Certification (Air Emissions Level 2) and that the implementation of these commitments are bi-annually assessed by a third-party.</p>
Request that an Air Quality Management Plan be developed should the Project proceed.	<p>The Applicant included mitigation measures for impacts to air quality and to conduct air quality monitoring in their Public Engagement Consideration Report (see pages 23-24).</p> <p>The draft Permit accompanying this report includes proposed condition No. 51, which requires that the Permit Holder develop an air emissions management plan, including post-construction air quality monitoring.</p>
Request that Indigenous communities be notified in the event of a marine incident or spill to advise on containment, cleanup and further recommendation.	<p>In the event of an environmental incident or spill, the Environmental Monitor will notify regulatory agencies in accordance with the provincial and federal requirements for reporting.</p> <p>In the event of a marine incident or spill, the Applicant is required to report it to the Canadian Coast Guard (CCG) and Indigenous communities are automatically notified of a spill as part of the CCG spill response system.</p>

Summary of comment or concern	Response/proposed mitigation measure/proposed draft conditions
<p>Request that the effects of any environmental incident or spill be monitored for at least 5 years following the incident. Should environmental impacts continue to occur, clean-up/remediation etc. should continue to be conducted in consultation with Indigenous groups.</p>	<p>Monitoring requirements for an environmental incident or spill resulting from the Project would be determined on a case-by-case basis. Depending on the specifics of the incident, any required remediation may be subject to a new application to the port authority, at which time Indigenous groups could be consulted.</p>
<p>Request that Western Canada Marine Response Corporation contact information be included in the Spill Response Plan and the Environmental Emergency Plan.</p>	<p>The Applicant has confirmed that Western Canada Marine Response Corporation contact information will be added to both plans.</p> <p>The draft Permit accompanying this report includes proposed condition No. 26, which is intended to address this concern by requiring the Applicant to adhere to an updated CEMP.</p>
<p>Request that a large spill kit be onsite during all Project activities and that all construction equipment each have its own spill kit.</p>	<p>The Applicant has confirmed that a large spill kit will be onsite during construction activities and that a spill kit will be kept on each piece of construction equipment during construction activities. This commitment will be captured in the Applicant's spill response plan which is included within its CEMP.</p> <p>The draft Permit accompanying this report includes proposed condition No. 26, which is intended to address this concern by requiring the Applicant adhere to the mitigation measures contained in its CEMP.</p>
<p>Request that refueling to be conducted at least 50 m away from Burrard Inlet.</p>	<p>The draft CEMP specifies that equipment refueling will be required to occur at least 30m away from the high water mark, except when on a barge. This is consistent with the best practices included in the port authority's CEMP guideline.</p> <p>The draft Permit accompanying this report includes proposed condition No. 26, which is intended to address this concern by requiring the Applicant adhere to the mitigation measures contained in its CEMP.</p>
<p>Request that environmental monitoring reports to be sent to Indigenous groups.</p>	<p>The Applicant confirmed that environmental monitoring reports will be sent to all Indigenous groups that have requested them.</p> <p>The draft Permit accompanying this report includes proposed condition No. 31 which is intended to address this concern by requiring the Applicant to send its environmental monitoring reports to all Indigenous groups that have requested them.</p>

Summary of comment or concern	Response/proposed mitigation measure/proposed draft conditions
<p>Concerns about the assessed low quality of fish habitat and requests for habitat restoration/offsetting.</p>	<p>The applicant submitted a request for review to the Department of Fisheries and Oceans Canada (DFO). DFO determined that a <i>Fisheries Act Authorization</i> is not required and provided a Letter of Advice with recommended mitigations that have been incorporated into the CEMP. Mitigation measures include environmental monitoring, water quality monitoring, carrying out in-water works during least-risk windows for fish, underwater noise monitoring during impact pile driving, preventing the release of deleterious substances into the aquatic environment, implementing a spill prevention and response plan, and implementing a stop work procedure if activities are observed to affect fish or marine mammals.</p> <p>As an additional mitigation to address concerns related to improving fish habitat, the Applicant has committed to installing herring net panels to support herring populations.</p> <p>The draft Permit accompanying this report includes proposed condition No. 60, which is intended to address this concern by requiring the Applicant to conduct herring net panel reporting.</p>
<p>Request that the Applicant conduct a marine clean-up of its water lot.</p>	<p>The draft Permit accompanying this report includes proposed condition No. 59, which is intended to address this concern by requiring the Applicant conduct a post-construction dive survey and a marine clean-up of the water lot.</p>
<p>Request notification of works if construction is anticipated beyond the least-risk fish window for Burrard Inlet (August 16 to February 28, inclusive).</p>	<p>The Applicant will be required to avoid in-water works outside the least-risk fish window. Condition No. 43 in the draft Permit accompanying this report limits in-water works in relation to the least-risk fish window for Burrard Inlet</p>
<p>Request that all project updates and amendments continue to be sent for review.</p>	<p>The port authority will provide project updates and amendments to Indigenous communities that have requested them.</p>

## 5 Referral comments from other port authority departments

The Project’s application was reviewed by departments within the port authority. The following subsections provide a summary of each of the department’s perspectives following this review.

### 5.1 Planning and development

The planning and development department reviewed the application for the Project and provided the following perspectives/comments:

#### *Land Use Planning*



- The Applicant's proposed business fits within the list of permitted uses given that the proposed location of the Project is in waters designated for 'Industrial' use under the Vancouver Fraser Port Authority Land Use Plan.
- Title searches for the three residential condominium buildings located immediately north of the proposed expansion area (the Atrium at the Pier, Trophy at the Pier, and Cascade at the Pier) revealed covenants that were included on title at the time the land was developed for each of the buildings requiring that:
  - The builder include mechanical ventilation in the buildings
  - That the structures be designed in keeping with the findings of an acoustical report (which was conducted prior to construction)
  - That structures be designed on the assumption of an external noise level of not less than 65-70 dBA

Further text in the covenant includes the following (which is required to be incorporated into any disclosure statement and purchase and sale agreement for the strata units):

- The *Owner* acknowledge that the lands are situated in an urban, industrial, and commercial area which contains industrial, arterial traffic, residential, commercial, community, retail, traffic, parking and other uses which generate noise and activity consistent with an active urban, industrial, and commercial area and that such noise and activity may occur at times and at volumes which might not otherwise occur in a more traditional residential neighbourhood and which some residents may find disruptive.

While the port authority has not reviewed the title to every unit in these buildings, a random sample indicates that the covenant appears quite broadly and was applicable to each parcel reviewed.

- While the Project does not currently include the development of any buildings that require review, should any ancillary buildings be necessary for the Project the Applicant will require a port authority Building Permit under the 2020 National Building Code.

### *Transportation Planning*

- The expansion can be expected to add to the volume of road traffic from additional employees and suppliers. The Applicant estimates the number of employees at the facility will increase from 200 to 300 employees, spread over three daily shifts. The additional vehicle traffic from both employees and suppliers can be accommodated with the existing on-site parking and loading areas. The port authority considers this will be sufficient and no further improvements are recommended.
- The drydock facility receives no rail traffic and that is therefore outside of the scope of review.
- The Applicant submitted a Traffic Impact Study ("TIS") to assess the likely impact of the additional traffic on nearby intersections. The anticipated increase in traffic for the Project is expected to affect two intersections, as detailed below. Following a review of the TIS the port authority does not require any further improvements.
  - St. Georges Avenue/Esplanade Avenue East: This signalized intersection is anticipated to operate at Level of Service A under background traffic conditions.
  - St. Georges Avenue/Victory Ship Way: This stop controlled intersection is anticipated to operate well within acceptable thresholds under background traffic conditions. The intersection will operate with minimal delays and queuing.

Given the comments above, the Proposal meets the port authority's planning and development department requirements and no further recommendations are necessary.

## 5.2 Engineering and asset management

The engineering and asset management department reviewed the application for the Project and provided the following perspectives/comments:

- The pile driving activities are required to be further analyzed through a geotechnical assessment, which has not yet been prepared.

Should a permit be issued, the engineering and asset management department recommends that the following draft Permit conditions be included:

- Proposed Permit condition No. 18: Submission of Issued For Construction (“IFC”) drawings for review - 40 business days prior to construction.
  - While typically IFC drawings are only required 5 days prior to construction, the additional time is necessary to allow for a sufficient review given the level of design refinement for the proposed pile driving, at the time of application.
- Proposed Permit condition No. 19: Submission of a geotechnical report for review – 40 days prior to construction.

Subject to the Applicant’s adherence to the proposed permit conditions, the Proposal meets the port authority engineering and asset management department’s requirements.

## 5.3 Marine operations

The marine operations department reviewed the application for the Project and provided the following perspectives/comments:

- There is limited potential interference with public navigation, or with passing commercial vessels, given the location of the facility relative to other traffic within Burrard Inlet.
- The potential for conflict between the expanded facility and Burrard Pier, the facility to the immediate west, operated by the City, was considered as part of the review. Burrard Pier frequently hosts vessels for moorage, with the largest tied to the east side of the pier. Some of these vessels may require positioning tugs to berth at the pier. Certain vessels also require that a floating boom be installed around them for security or other reasons, while berthed. The maximum extent of this boom, and the space requirements for berthing larger vessels, has been considered as part of this review and no conflicts are anticipated.

Should the permit be issued, it is recommended that the following proposed permit conditions be included:

- Proposed Permit condition No. 24: Submit a marine construction and staging plan - 30 business days prior to the start of vessel-related activities.
- Proposed Permit condition No. 61: Complete a marine survey sufficient to allow Canadian Hydrographic Service charts to be updated.

Subject to the Applicant’s adherence to the proposed permit conditions, the Proposal meets the port authority marine operations department requirements.

## 6 Analysis

### 6.1 Project benefits relative to the port authority's mandate and Canada Marine Act

As a Canada port authority governed by the *Canada Marine Act*, the port authority has a mandate to responsibly facilitate Canada's trade through the Port of Vancouver. In keeping with that mandate and the purpose of the *Canada Marine Act*, the port authority has identified the following benefits of the Project:

- Would be responsive to local needs by increasing drydock capacity
- Provides economic benefits to the community through job creation
- Facilitates marine services that ultimately support port operations and trade

### 6.2 Potential for adverse environmental and social effects

To fulfill its responsibilities under the *Canada Marine Act* and the IAA the port authority must make a determination on the potential environmental effects of a proposed project on port authority managed lands and waters prior to authorizing those works to proceed. Environmental effects are defined in S. 81 of the IAA as "changes to the environment and the impact of these changes on the Indigenous peoples of Canada and on health, social or economic conditions". To make that determination, the port authority considers the residual adverse effects of the Project, that is, the effects that remain after mitigation measures have been taken into account. This section of the report summarizes the environmental effects review conducted for the Project. The environmental review also considers the information provided in the previous sections of this report.

#### 6.2.1 Air quality

Prior to the implementation of mitigation measures and the proposed Permit conditions, there is potential for adverse effects on air quality due to the Project during construction and operation.

Minimal effects to air quality are expected during construction, given that the drydock is anticipated to be assembled offsite. Temporary effects to air quality may occur from equipment exhaust for up to four months during the Project's construction. Mitigation measures to reduce emissions during construction, as outlined in the draft CEMP, include reducing idling, turning off emission sources when not in use, using electrical equipment where practical, and fitting all equipment with standard emission control devices.

During operations, the proposed drydocks would be in use approximately 80% of the time. Air emissions would be from exhaust from tugs, vessels, workshop machinery, and equipment, as well as from painted-related volatile organic compounds (VOCs) predominately from paint removal and painting activities.

Should the Project be approved, the accompanying draft Permit condition No. 51 requires an air emissions monitoring plan, including post construction air quality monitoring. The Applicant has also committed to assessing new tools and technologies in paint VOC content and reducing the volume of new paint thinner used.

During operation of the new drydocks, dust monitoring will be conducted in the community to confirm the composition and possible sources. Sampling results will be made publicly available. Operational changes may be required depending on sampling results.

With the implementation of Applicant mitigation measures and port authority Permit conditions, residual effects on air quality are predicted to be low in magnitude – given the minimal additional emissions related to the operation of the new drydocks. Air emissions from the Project may have a small adverse

effect on air quality for the nearby Shipyards residents. Effects on air quality will occur daily and will last throughout Project operations. Any effects of air quality from the Project will be reversible when the Project is decommissioned.

### 6.2.2 Lighting

Prior to the implementation of mitigation measures and the proposed Permit conditions, there is potential for adverse effects due to lighting due to the Project during construction and operation.

Construction would occur over four months during regular work hours (7:00 a.m. to 8:00 p.m., Monday to Saturday). Should the Project be approved, a condition of the accompanying draft Permit would require the CEMP to include mitigation measures for construction lighting, to the port authority's satisfaction.

The operation lighting design meets applicable safety codes and standards. New lighting would be installed on the new work pontoon and drydocks.

Six 7.5-meter light poles would be installed along the north side of the new work pontoon. To minimize light spill to the marine environment and community, the lights would:

- be used only when needed (photocell and dimmer controlled)
- illuminate only the areas needed (dark sky friendly)
- be no brighter than necessary for safety
- minimize blue light emissions
- be house shielded

Light fall-off from the work pontoon lighting would occur approximately 11 metres away, with light spill not resulting in glare to passing vessel or light spill to the surrounding community.

There would also be lights on the two proposed new drydocks that would be positioned to face inward and down to only illuminate the interior of the drydocks. Once the proposed drydocks are onsite, the lighting system will be assessed and, if needed, be retrofitted to minimize light spill and be dark-sky friendly.

Should the Project be approved, a condition of the accompanying draft Permit would require the lighting assessment be revised to include all lighting associated with the Project.

Post construction light monitoring would be conducted to confirm the predictions of the lighting assessment. Additional light reduction mitigation measures may be required.

The Applicant has also committed to reducing light spill throughout the existing operations by replacing existing lights with dark-sky friendly lighting and incorporating house-side shields, where appropriate, to minimize light spill.

With the implementation of Applicant mitigation measures and the proposed port authority Permit conditions, residual effects from lighting on the marine environment and local residents are predicted to be low in magnitude and the extent limited to the drydock site adjacent areas. Effects on lighting will occur daily and will last throughout Project operations. The effects are reversible when the Project is decommissioned.

### 6.2.3 Noise

Prior to the implementation of mitigation measures and the proposed Permit conditions, there is potential for adverse effects of noise in the adjacent community due to the Project during construction and operation.

Temporary noise is anticipated during the four-month construction period from construction equipment and pile installation. Mitigation measures, as outlined in the draft CEMP, include properly maintaining equipment to limit noise emissions, turning off machinery and equipment when not in use, and limiting construction activities to regular construction hours (7:00 a.m. to 8:00 p.m., Monday to Saturday). Six piles will be installed, with each pile anticipated to take three to six days for installation. Should the Project be approved, a condition of the accompanying draft Permit would require the use of lower noise-producing vibratory pile installation, where possible.

During operations, the dominant noise source will be from ultra-high pressure washing which would be conducted intermittently and largely during the day (7:00 a.m. to 7:00 p.m.). Noise levels at the first three floors of the nearest building are predicted to decrease slightly from moving the Careen drydock further away. However, there would be a marginal increase in noise for the upper floors where the reduction in noise from moving the Careen is offset by noise from the new drydocks, whose wing walls are not expected to provide noise shielding at heights above the third floor. The two buildings to the west are predicted to experience the greatest increase in noise due to the proximity of the new drydocks.

Overall, without mitigation measures applied, noise is predicted to increase by up to 3 dBA to about 66 dBA at nearby residences and playground when the new drydocks are operating at full capacity. A change in noise level of 3 dBA is the smallest change people can typically hear. This corresponds to an increase in the percentage of highly annoyed persons of up to 3.8%, which is below the Health Canada criterion for when noise mitigation measures should be considered (i.e., a change greater than 6.5%).

Mitigation measures will be implemented as detailed in the Public Engagement Consideration Report Mitigation Table, including use of noise attenuation panels around ultra-high pressure washing pumps while working on barge or ship decks for both the proposed new drydocks and the existing operations. The Applicant has also committed to investigating the use of curtains to reduce noise.

The site will continue to operate 24/7, with primary operating hours between 7:00 a.m. and 11:00 p.m. The Applicant has committed scheduling the noisiest activities before 7:00 p.m., where possible, and to cease ultra-high pressure washing between 7:00 p.m. and 7:00 a.m. for the entire site on summer long weekends. The Applicant has also committed to communicating deviations from their schedule to the community.

Should the Project be approved, a condition of the accompanying draft permit would require the Applicant to conduct a post-construction noise monitoring to confirm the operational predictions of the 2021 Environmental Noise Assessment. Additional mitigation measures may be required if noise levels exceed model predictions. The Applicant will also be required to install a permanent noise monitoring station in close proximity to the community and to report back to the community working group.

With the implementation of Applicant mitigation measures and the proposed port authority Permit conditions, residual adverse effects on noise are predicted to be low in magnitude. The magnitude of noise effects would be highest during construction from pile installation and during operations from ultra-high pressure washing. Operations noise is predicted to increase by up to 3 dBA in the nearest residential buildings within the Shipyards residential areas (i.e., Cascade east, Cascade west, and Trophy). The extent of residual effects will be limited to the nearby Shipyards residents. The Project will produce noise daily and effects will occur throughout the Project construction and operations. The noise effects from the Project are reversible when the Project is decommissioned.

## 6.2.4 Soil

The Project is located within subtidal areas in Burrard Inlet. Soils (terrestrial) are not anticipated to be affected by the Project.

### 6.2.5 Sediments

Prior to the implementation of mitigation measures and the proposed Permit conditions, there is potential for adverse effects on sediments (aquatic) due to the Project during construction.

During construction there is a risk of accidental equipment leaks or spills into aquatic environments. During in-water works, sediments would be disturbed within the Project footprint from pile installation. Drilling would be used to remove soil within installed piles prior to filling with concrete.

Mitigation measures, as outlined in the draft CEMP, include environmental monitoring, water quality monitoring, containing and collecting drill cuttings for offsite disposal, and implementing a spill prevention and response plan.

With the implementation of Applicant mitigation measures and the proposed port authority Permit conditions, there is a low likelihood of residual adverse effects on sediments. If adverse effects do occur, they would be low in magnitude, site-specific in extent, short-term in duration, occur infrequently, and be reversible with remediation.

### 6.2.6 Groundwater

The Project is located entirely within the subtidal marine environment. Groundwater is not anticipated to be affected by the Project.

### 6.2.7 Surface water and water bodies

Prior to the implementation of mitigation measures and the proposed Permit conditions, there is potential for adverse effects on surface water and water bodies due to the Project during construction and operations.

The Project is located within subtidal areas in Burrard Inlet. Impacts to surface water and waterbodies may occur during construction due to the use of equipment and installation of piles, including concrete infilling of piles. The Project could result in changes in water quality from suspended sediment concentrations and contaminants from pile installation activities.

Mitigation measures, as outlined in the draft CEMP, include environmental monitoring, water quality monitoring, the use of a tremie pipe for concrete infilling of piles to avoid spillage, preventing the release of deleterious substances into the aquatic environment, containing and isolating waste concrete, and implementing a spill prevention and response plan. Water from dewatering during tremie pours will be contained and treated prior to discharge to the marine environment or removed for off-site disposal at an approved facility.

During operation, while a vessel is drydocked, stormwater and vessel washwater will be collected and processed through the onsite permitted water treatment system prior to discharge to the municipal sewer.

With the implementation of Applicant mitigation measures and the proposed port authority Permit conditions, residual adverse effects on surface water and water bodies are predicted to be low in magnitude, limited to the drydock and adjacent areas, short-term in duration, occur infrequently, and would be reversible with remediation.

### 6.2.8 Species/habitat with special status

Species/habitat with special status is assessed under Section 79 of the *Species at Risk Act*, as applicable.

The Project is not anticipated to affect species that are extirpated, endangered, or threatened and/or their critical habitat that are protected under the *Species at Risk Act*.

### **6.2.9 Terrestrial resources (e.g. vegetation, wildlife, etc.)**

The Project is located within subtidal areas in Burrard Inlet. No disturbance or removal of terrestrial vegetation is proposed as part of the Project. No upland equipment staging will be required.

Terrestrial resources are not anticipated to be affected by the Project.

### **6.2.10 Wetlands**

The Project would not affect wetland resources. No wetlands are present near the Project site.

### **6.2.11 Aquatic resources (e.g. aquatic plants, fish and fish habitat, waterbirds, marine mammals etc.)**

Prior to the implementation of mitigation measures and the proposed Permit conditions, there is potential for adverse effects on aquatic resources due to the Project during construction and operation.

The Project is located within subtidal areas in Burrard Inlet. Based on field surveys, the Project area provides low-value marine habitat due to silt-dominated substrates and deep water limiting the growth of marine vegetation. Marine fauna include sessile anemones, slow moving sea stars, and highly mobile crabs and fish.

Effects to aquatic resources may occur during construction due to the installation of six new ~1.5 metre diameter steel piles. Pile installation would increase underwater noise and any accidental spills could affect water quality. Pile installation is anticipated to be completed in approximately six weeks.

Adverse effects to aquatic resources during project operations are anticipated due to increased artificial light and the positive impact from the increased marine habitat through the installation of new structures (floating structures and piles). The Project will also result in increased shading (approximately 5,400 metres squared), however, most of the species in the Project area are not anticipated to be affected by decreased sunlight.

The Applicant submitted a DFO Request for Review. DFO determined that a *Fisheries Act* Authorization was not required and issued a Letter of Advice with measures to mitigate impacts to fish and fish habitat.

Mitigation measures are outlined in the draft CEMP and reflect the recommendations in DFO's Letter of Advice. Measures include carrying out in-water works during least-risk windows for fish, underwater noise monitoring during impact pile driving, spill prevention, and implementing a stop work procedure if activities are observed to affect fish or marine mammals.

The Applicant has also committed to beneficial measures for aquatic resources by installing herring spawning panels. In addition, should the Project be approved, a condition of the accompanying draft permit would require a water lot clean-up of anthropogenic debris.

With the implementation of Applicant mitigation measures and the proposed port authority Permit conditions, residual adverse effects on aquatic resources are anticipated to be negligible in magnitude given the low-value of the marine habitat. Adverse effects on fish habitat will be site-specific in extent, long-term in duration due to potential minor adverse effects of artificial light, and reversible with Project decommissioning. Effects on underwater noise during pile driving will be low in magnitude, local in extent, short-term in duration and reversible after pile driving is complete.

### 6.2.12 Health and socio-economic conditions

Prior to the implementation of mitigation measures and the proposed Permit conditions, there is potential for adverse effects on health and socio-economic conditions due to the Project during construction and operations.

During construction, the Project may result in temporary low magnitude effects on air quality, lighting, and noise from equipment use and pile installation.

Mitigation measures, as outlined in the draft CEMP, include properly maintaining equipment to limit emissions, turning off machinery and equipment when not in use, and limiting work to regular construction hours.

The Project is anticipated to result in low magnitude adverse effects on lighting, air quality, and noise related to operations of the new drydocks. Noise modelling predicted an increase of no more than 3 dBA at nearby residences with the Project operating at full capacity. A change in noise level of 3 dBA is the smallest change people can hear. The change in the percentage of people highly annoyed is predicted to be less than Health Canada criterion for when noise mitigation measures should be considered.

Maximum noise levels associated with highly intermittent noise (i.e., ultra-high pressure washing) will be conducted largely during the day, before 7:00 p.m. Key mitigation measures include installing dark sky friendly lighting throughout the drydock site, using noise attenuation panels, trialing new technologies to reduce air and noise emissions, and developing an air emissions management plan. Air quality, noise, and light monitoring will be conducted once the Project is operating and results will be shared with the public.

The public's enjoyment of the nearby outdoor space may be affected during high pressure washing. To minimize the effects on local users and businesses in the Shipyards District, high noise generating activities will cease between 7:00 p.m. and 7:00 a.m. on summer long weekends.

Nearby residents also expressed concern about residential enjoyment and property values. It is unclear whether the Project would have any impact on property value as this waterfront area has long been a hub of economic activity where shipbuilding and marine-related industries operate. The location for the proposed expansion is publicly known to be designated as 'Industrial' under the port authority's land use plan.

The draft Permit accompanying this report includes proposed condition 16 which requires the Applicant to adhere to the mitigations listed in the Public Engagement Consideration Report, which includes mitigation measure to reduce impacts from industrial activities on parks and residential areas. Mitigations in the Public Engagement Consideration Report include ways to better integrate the Project with community activities (see page 16), measures to reduce noise on weekends (see page 20), and forming a community working group (see page 44) among others.

With the implementation of Applicant mitigation measures and the proposed port authority Permit conditions, residual effects on health and socio-economic conditions are anticipated to be low in magnitude, given the low magnitude effects on air quality, noise, and lighting, and because noise modeling predicted increases that are barely perceptible and are below Health Canada's criterion. The low magnitude effects will be experienced by the nearest residents within the Shipyards, be long-term in duration, and reversible with Project decommissioning.

### 6.2.13 Archaeological, physical, and cultural heritage resources

Archaeological, physical, and cultural heritage resources includes the rights and knowledge of Indigenous groups.



The Project is located within an area of historical fill and disturbance. The risk of impact to archaeological or protected historical resources is low. Adverse effects on archaeological, physical, and cultural heritage resources are not anticipated.

### 6.2.14 Accidents and malfunctions

Accidents and malfunctions are assessed as required by the *Canada Marine Act*.

Prior to the implementation of mitigation measures and the proposed Permit conditions, there is potential for adverse effects on surface water, aquatic resources, and sediments from accidental equipment leaks or spills and potential adverse effects from fire risk during Project construction and operations.

During construction, mitigation measures, as outlined in the draft CEMP, will be in place to reduce potential for adverse, project-related effects due to accidents including environmental monitoring, emergency response training, and the implementation of a spill prevention and response plan.

During operations, mitigation measures would be in place to reduce potential adverse effects, including the fire and emergency response plan.

## 6.3 Environmental effects characterization

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

- Air quality
- Lighting
- Noise
- Sediments
- Surface water and waterbodies
- Aquatic resources
- Health and socio-economic conditions
- Accidents and malfunctions

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

- **Low in magnitude:** Residual effects differ from current conditions but are below associated guideline or threshold values. The construction footprint is relatively small and the most notable residual effects during construction are anticipated to be low in magnitude, including noise emissions, water quality impacts, and the potential for spills. During operations, low magnitude residual effects are anticipated due to potential changes to noise, air quality, lighting, sediments, surface water and waterbodies, health and socio-economic conditions and accidents and malfunctions.
- **Site specific to local in geographic extent:** Most effects would occur within the Project site, however some effects (e.g., noise during operations) could extend to the adjacent Shipyards residential community. The noise assessment predicted the nearest residents (located approximately 100 metres away) would experience a slight increase in noise.
- **Duration and frequency of effects ranges from temporary/intermittent during construction to long-term/continuous during operations.**
  - During construction, effects would be temporary in duration with intermittent frequency: The effects during construction would last for approximately four months.
  - During operations, effects would be long-term and continuous in frequency: The effects from operations noise emissions would occur until the drydock is removed or until the end of its lifespan and will occur daily throughout operation.

- Reversible: Effects from construction to water quality, aquatic resources, noise, and air emissions will cease once construction is complete. Should operations cease, infrastructure could be decommissioned and removed, and the site restored and effects from operations would cease.

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

## 6.4 Application of relevant regulatory standards

### 6.4.1 Vancouver Fraser Port Authority Land Use Plan

The port authority's land use plan contains goals, objectives, policy directions, and land use designations to guide the physical development of port lands and waters. The proposed Project is consistent with the land use plan.

The proposed location of the Project is in waters designated for 'Industrial' use under the land use plan. The 'Industrial' designation allows for light to heavy industrial activities in support of port operations and marine support services, including such primary uses as ship repair and barge moorage. The Applicant's proposed business fits within the list of permitted uses for this designation given that the primary activities anticipated in the proposal are ship repairs to various types and sizes of vessels.

The land use plan was updated in 2020, but no changes to the water or land use designations at, or near the proposed Project location were contemplated.

### 6.4.2 Port Authorities Operations Regulations

The port authority makes decisions pursuant to the powers and responsibilities conferred upon it by the *Canada Marine Act* and supporting regulations, in particular the Port Authorities Operations Regulations (the "Regulations") and *Impact Assessment Act*.

Pursuant to section 24 of the Regulations, the port authority must not authorize an activity that has or is likely to have any result that is prohibited under section 5 of the Regulations, unless appropriate mitigation measures have been applied. For all the reasons noted above, authorization of the Project would be considered in compliance with sections 5 and 24 of the Regulations.

### 6.4.3 *Impact Assessment Act*, s. 82

The Project is not considered a "designated project" under the *Impact Assessment Act* and therefore, an impact assessment as described in the *Impact Assessment Act* is not required. However, port authority authorization is still required for the Project to proceed and in such circumstances, Section 82 of the *Impact Assessment Act* requires federal authorities to determine that the Project will not likely cause significant adverse environmental effects, unless otherwise approved by the Governor in Council. The PER Process is designed to assess those concerns and provide assistance in that determination.

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. A summary of the potential environmental effects, mitigation measures and the port authority's analysis and draft permit conditions are set out in this report.

In assessing the significance of the effects, and for the reasons set out in this report, the mitigation measures proposed by the Applicant together with the proposed permit conditions are considered

sufficient to address any concerns, such that the Project is considered not likely to cause any significant adverse environmental effects.

## 6.5 Duty to consult

The port authority has made a meaningful effort to consult with potentially affected Indigenous groups as outlined in the consultation record and in section 4 above. Two Indigenous groups responded with comments on the application. Key topics raised were:

- Vessel traffic
- Noise (pile driving and operations)
  - Impacts to fish and wildlife
  - Impacts to culture
- Lighting
- Cumulative effects
- Environmental monitoring
  - Indigenous monitoring
  - Spill management
- Stormwater management
- Air quality management practices
- Water lot maintenance (clean-up of seabed under operations)

Seven permit conditions address Indigenous concerns, including a condition requiring a construction and environmental management plan that outlines the environmental mitigation measures required should the Project be approved. Based on the Indigenous consultation process, the port authority is of the view that the duty to consult has been met.

## 7 Conclusion

It is the recommendation of staff that this application be approved subject to conformance with the project and environmental conditions listed in the accompanying project permit No. 20-189.

## Appendix A

### Location plan and additional lease area

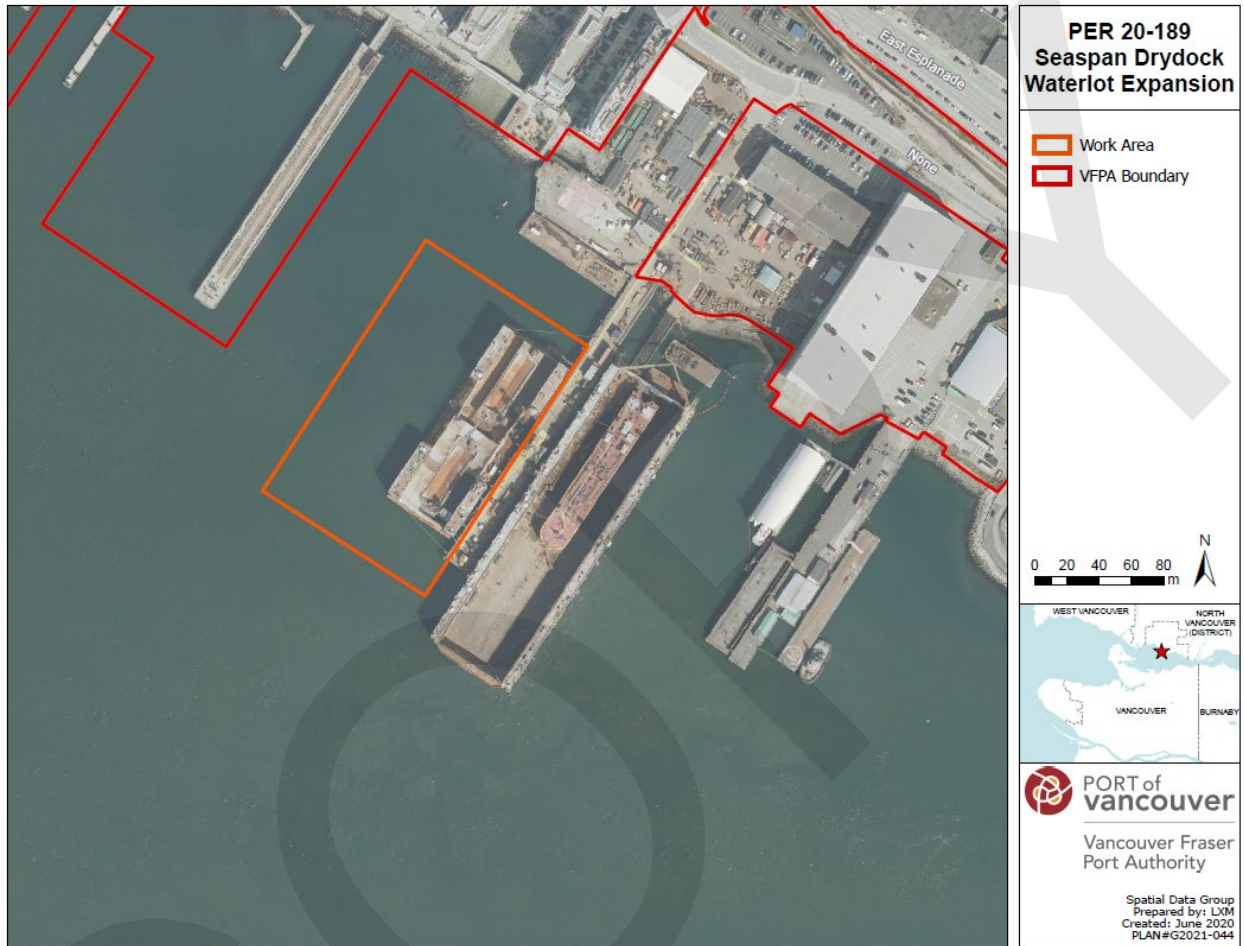
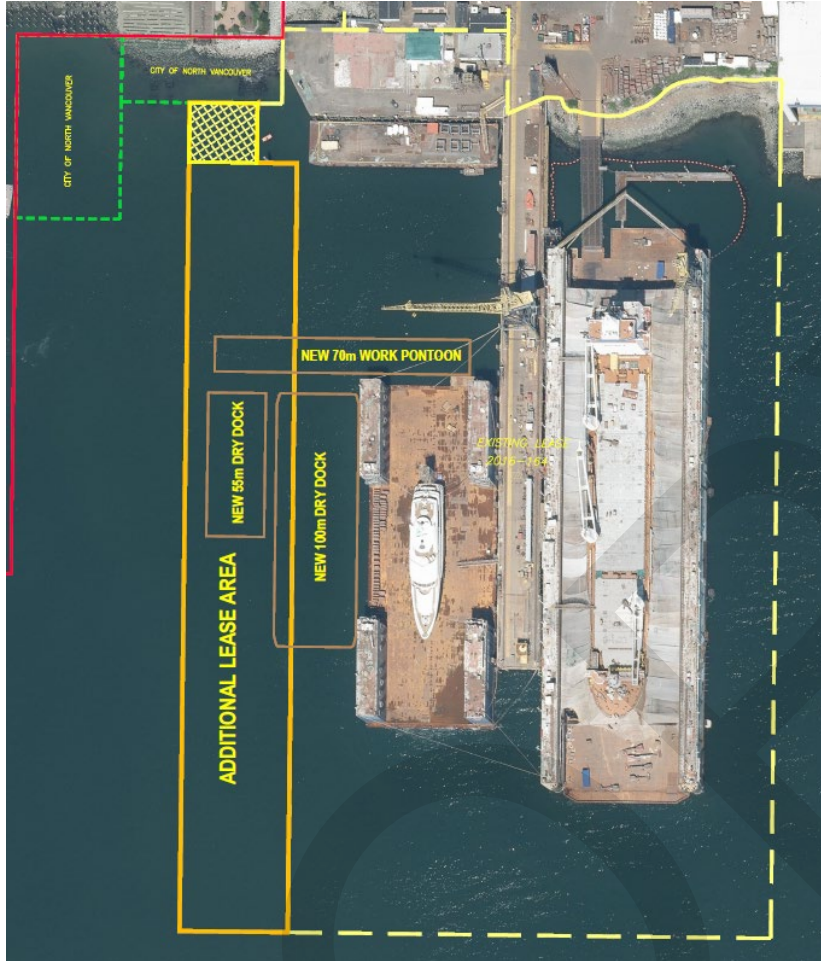


Figure A-1: Location plan



**Figure A-2: Additional lease area.**

Note: The yellow hatched area will be for navigation purposes only. No moorage or installation of any improvements will be allowed in this area.