



SEASPAN VANCOUVER DRYDOCK WATER LOT PROJECT

Public Engagement Consideration Report
Mitigation Table

February 22, 2023



MITIGATION TABLE

Outlined below is a summary of Seaspan's proposed project mitigations for the proposed Water Lot project. The table details what was proposed within Seaspan's original Project and Environmental Review (PER) application, the revised and new mitigations that were developed following the 2021 public engagement activities, and the revised and new mitigations that were developed following the 2022 supplemental public engagement activities. As with the accompanying Consideration Report, mitigations have been grouped by topic theme.

In some cases, both in Seaspan's original PER application (column one) as well as with the 2021 proposed mitigations (column two), Seaspan did not propose specific mitigations, based on the pre-application technical studies and assessments. In these cases, no mitigations are listed in the table. Following each public engagement period, Seaspan reassessed the ability and need to include further mitigations and, where possible, proposed additional mitigations to address the feedback provided.

New mitigations added following the 2021 public engagement were including within the 2022 community survey; however, mitigations developed following the 2022 engagement activities were not included in the community survey, which occurred prior to the mitigation being developed.

Table Notations:

No Further Revisions: There were no changes to a proposed mitigation following the public engagement activities.

Revised / Further Revised: Based on the feedback provided by the community both in 2021 and 2022, Seaspan amended several of the proposed project mitigations.

Underway / Implemented: To demonstrate Seaspan's commitment to improved community collaboration and engagement, Seaspan has proactively initiated and / or implemented some proposed mitigations in advance of a permit decision and commits to continuing these actions regardless of the permit application outcome.

Community Working Group*: Several proposed mitigations reference a community working group, which is detailed within the Community and Communications section on page 11.

PER Application Proposed Mitigations	2021 Revised & New Proposed Mitigations	2022 Revised & New Proposed Mitigations
DRYDOCK SITING, VIEWS, SHADING AND OVERALL SITE		
<p>Given the proximity of the new proposed drydocks and work pontoon to nearby residences, shift the existing Careen drydock 40 metres south, away from the shoreline and align the new drydocks and work pontoon with the adjusted Careen positioning to reduce the potential for operational impacts.</p>	<p>This mitigation has no further revisions.</p>	<p>This mitigation is implemented.</p>
	<p>Engage with the City of North Vancouver and the local community, including Indigenous communities, to select the preferred colour(s) to best integrate the drydocks into the neighbourhood viewscape.</p>	<p>This mitigation has no further revisions.</p>
		<p>Explore landscaping initiatives with the proposed community working group* to improve the appearance of the Vancouver Drydock site perimeter, specifically for the portion of the Spirit Trail adjacent to the playground and in closest proximity to the Vancouver Drydock site. This could include planting vegetation to provide a visual screen.</p>
		<p>Work with the proposed community working group* to seek additional opportunities for community dialogue related to the overall site conditions and beautification efforts.</p>

PER Application Proposed Mitigations	2021 Revised & New Proposed Mitigations	2022 Revised & New Proposed Mitigations
NOISE		
Complete a post-project noise assessment to verify the permit application model predictions and to identify additional noise-reduction measures.	(Revised) Complete a post-project noise assessment to verify the permit application model predictions and to identify additional noise-reduction measures. Post the results on Seaspan's project website.	(Further Revised) Complete a post-project noise assessment to verify the permit application model predictions and to identify additional noise-reduction measures. Collaborate with the community working group* to identify the location for the measuring devices that will be placed in the community and post the results on Seaspan's website.
	In spring 2022, Seaspan conducted a trial of noise-reducing barrier panels around the ultra-high pressure (UHP) pumps. While the panels were effective in containing equipment noise, they were too heavy to mount onto the drydocks or lifts. As a result, Seaspan continues to use the panels primarily when working on barge or ship decks.	This mitigation is implemented . Continue to use the panels where technically feasible – primarily when working on barge or ship decks.
	Trial the use of noise-reducing curtains that are mounted on the drydocks. Acoustical consultants will establish baseline measurements at Vancouver Drydock and in the adjacent community to determine the effectiveness of the curtains.	(Revised) Trial the use of noise-reducing curtains that are mounted on the drydocks. Acoustical consultants will establish baseline measurements at Vancouver Drydock and in the adjacent community to determine the effectiveness of the curtains. Seaspan will collaborate with the community working group* to identify where the measuring devices will be placed during the noise curtain trial.

PER Application Proposed Mitigations	2021 Revised & New Proposed Mitigations	2022 Revised & New Proposed Mitigations
	Increase awareness of the port authority's ongoing noise monitoring by creating a direct link to the data on the Seaspan website.	This mitigation has no further revisions .
		Use lower-noise generating UHP crawler equipment, wherever technically feasible. UHP crawler machines suction to vessel hulls and simultaneously clean the hulls and collect debris. As they are vacuum sealed to the side of a ship, there is less noise compared to manual hull cleaning equipment.
		Notify the community in advance, where possible, when potential high noise-generating work is anticipated outside of the regular working hours of 7:00am to 11:00pm. Notification will be sent to the Drydock email distribution list.
		Recognizing the importance of outdoor summer activities in the Shipyards District, during evening operations, cease high-noise-generating UHP activities from 7:00pm to 7:00am on the Friday, Saturday and Sunday evenings of the July, August and September long weekends.
		Work with the proposed community working group* to seek additional opportunity for community dialogue related to noise from operations.

PER Application Proposed Mitigations	2021 Revised & New Proposed Mitigations	2022 Revised & New Proposed Mitigations
AIR QUALITY		
	In addition to the Metro Vancouver regulatory reporting, Seaspan will publish a quarterly summary of the ongoing particulate emissions on the Seaspan website.	This mitigation has no further revisions .
	Continue 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.	This mitigation is implemented . Seaspan regularly connected with suppliers and partners on new technologies that could be implemented at Vancouver Drydock.
	Install a solvent recycling system to reduce the volume of new paint thinner consumed and waste generated and disposed.	This mitigation is underway . The system has been ordered and is scheduled to be operational by end Q1 2023.
		Work with the proposed community working group* to identify an 'in-community' location to conduct particulate sampling every six months for two years, with results of the sampling to be published on Seaspan's website. The purpose of the dust sampling will be to validate the composition and potential dust sources of gathered samples. At the conclusion of the two years of monitoring, Seaspan will work with an independent subject-matter expert to determine what, if any, additional actions may be helpful and will notify the community working group* of any operational changes.

PER Application Proposed Mitigations	2021 Revised & New Proposed Mitigations	2022 Revised & New Proposed Mitigations
		Work with the proposed community working group* to seek additional opportunities for community dialogue related to air quality.
LAND USE AND ZONING		
This feedback is the responsibility of Seaspan's regulators. As a result, Seaspan has not proposed any mitigations.		
PUBLIC ENGAGEMENT PROCESS AND REGULATORY OVERSIGHT		
This feedback is the responsibility of Seaspan's regulators. As a result, Seaspan has not proposed any mitigations.		
MARINE HABITAT, SPILL PREVENTION AND EMERGENCY RESPONSE		
The proposed new drydocks would be connected to the existing wastewater treatment system. The water would be treated according to existing practices under Seaspan's Environmental Management System (EMS).	This mitigation has no further revisions.	This mitigation has no further revisions.
Update the Fire and Emergency Response Plan to include all components of the proposed project.	This mitigation has no further revisions.	This mitigation has no further revisions.
	Enhance safe navigation and further reinforce safe on-water operations and environmental protection by providing vessel owner representative(s) with a link to port authority's Port Information Guide .	This mitigation is implemented. Seaspan provides the port authority's information guide to all vessel owner representatives.

PER Application Proposed Mitigations	2021 Revised & New Proposed Mitigations	2022 Revised & New Proposed Mitigations
		<p>Work with local marine-focused non-profit organizations to install four herring net panels on the existing service pier to support the herring population. These panels are a suitable structure for herring spawning and are also attractive for juvenile Dungeness crab. Panels would be installed and removed annually. Following the first season, Seaspan would assess the location of the panels and adjust, as necessary. After three years, should no evidence of herring spawning be present, Seaspan would work with the local non-profit organization to find another suitable location.</p>
LIGHTING		
<p>The lighting used to illuminate the work pontoon would be dark-sky-friendly, which is specifically designed to eliminate light outside of the required circulation and work areas.</p>	<p>This mitigation has no further revisions.</p>	<p>This mitigation has no further revisions.</p>
<p>Seaspan would assess the use of shielding on the drydocks to limit light throw towards the residential areas.</p>	<p>(Revised) A house-side shield would be added to the work pontoon main light fixtures. With this shield added, the lighting level is reduced to zero at 11m/35ft from the work pontoon (as opposed to 28m/92ft without a shield).</p>	<p>This mitigation has no further revisions.</p>

PER Application Proposed Mitigations	2021 Revised & New Proposed Mitigations	2022 Revised & New Proposed Mitigations
	The height of the proposed work pontoon poles would be reduced from 10.7m (35ft) to 7.5m (25ft) to minimize the visual impact of the lighting installation.	This mitigation has no further revisions .
	As per International Dark-Sky Association recommendations, to minimize blue light emissions, the colour temperature of the light fixtures would be reduced from 4000degK (cool white) to 3000degK (warm white).	This mitigation has no further revisions .
	While existing operations are outside the of the scope of this PER application, Seaspan would replace existing light poles and building mounted lights with dark-sky-friendly lighting (as described above), incorporating house-side shields, where appropriate.	This mitigation is underway . Seaspan is retrofitting existing operational lighting to be dark-sky-friendly.
		Work with the proposed community working group* to seek additional opportunities for community dialogue related to lighting at the site.
CONSTRUCTION		
Noise would be minimized by muffling engines, timing operations within daylight hours, and adopting quieter installation techniques for pile driving wherever possible, installing bubble curtains, and using “soft start” procedures.	This mitigation has no further revisions .	This mitigation has no further revisions .

PER Application Proposed Mitigations	2021 Revised & New Proposed Mitigations	2022 Revised & New Proposed Mitigations
		Engage a specialist vibration consultant to instrument and monitor the vibrations adjacent to the foundation of the nearest building to ensure vibrations remain within safe levels.
		Work with the proposed community working group* to seek additional opportunities for community dialogue related to construction activities.
COMMUNITY AND COMMUNICATIONS		
	Maintain the PER application dedicated phone line and email as a dedicated channel for community inquiries and feedback (community@seaspan.com) and 778-729-0288) to provide a means for ongoing communication.	This mitigation is implemented . The email and phone line remain available for ongoing community inquiries and feedback.
	Compile and publicly share a quarterly report on community complaints and Seaspan's responses on the Seaspan website.	This mitigation has no further revisions .
	Increase frequency of the 'Seaspan News' e-newsletter to quarterly to share stories and information about its businesses, career opportunities and community initiatives. While the newsletter has been published periodically, increase the frequency to quarterly. Community members will be encouraged to sign-up for the e-newsletter on the Seaspan website.	This mitigation has no further revisions .

PER Application Proposed Mitigations	2021 Revised & New Proposed Mitigations	2022 Revised & New Proposed Mitigations
		<p>Establish a community working group, with the goal to share information about operations, receive feedback, and foster ongoing dialogue. The terms of reference will be developed in consultation with a qualified IAP2 facilitator. The minutes of the meetings will be available on Seaspan's website.</p>
		<p>Explore opportunities to work with partners to create educational material on its operations to increase awareness with children and youth about the industry, range of careers available and how the industry is working to minimize impacts on the environment.</p>
		<p>Explore collaborating with stakeholders to develop an information area/board in the Shipyards District, which would have some space devoted to providing updates on projects at Vancouver Drydock. Any structure placed within the City of North Vancouver jurisdiction would be conditional on support from the municipality.</p>
		<p>While Seaspan currently hosts tours on request for school and community groups, expand the community tour program to include the public with a published tour schedule on the Seaspan website.</p>

PER Application Proposed Mitigations	2021 Revised & New Proposed Mitigations	2022 Revised & New Proposed Mitigations
		<p>In addition to Seaspan’s ongoing contributions to various community projects and initiatives on the North Shore and elsewhere, commit an incremental \$75,000 towards a community amenity within City of North Vancouver. Seaspan would collaborate with the municipality to identify the amenity project and location.</p>
<p>TRAFFIC</p>		
	<p>Collaborate with the City of North Vancouver on municipal traffic studies.</p>	<p>(Revised) Share the traffic study with the City of North Vancouver and collaborate with the City of North Vancouver to assist with ongoing City traffic planning efforts.</p>