



**PORT of
vancouver**

**Vancouver Fraser
Port Authority**

PROJECT AND ENVIRONMENTAL REVIEW REPORT
PER NO. 16-271
DERWENT WAY SOIL TRANSFER AND BARGE FACILITY

Prepared for: Director, Planning & Development

April 27, 2021

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 VANCOUVER FRASER PORT AUTHORITY PROJECT AND ENVIRONMENTAL REVIEW REPORT	
Vancouver Fraser Port Authority	
PER No.:	16-271
Tenant:	Summit Earthworks Inc.
Project:	Derwent Way Soil Transfer and Barge Facility
Project Location	Lot located to the east of Derwent way and south of Salter Street, New Westminster
VFPA SID No.:	NEW326
Land Use Designation:	Industrial
Applicant(s):	Summit Earthworks Inc.
Applicant Address:	109 - 32885 Mission Way, Mission
Category of Review:	C
Recommendation:	That PER No. 16-271 for Derwent Way Soil Transfer and Barge Facility be approved.

1 INTRODUCTION

The Vancouver Fraser Port Authority (the Port Authority), a federal port authority, manages lands under the purview of the *Canada Marine Act*, which imparts responsibilities for environmental protection. The Port Authority accordingly conducts project and environmental reviews of works and activities undertaken on these lands to ensure that the works and activities will not likely cause significant adverse environmental effects. This project and environmental review report documents the Port Authority's project and environmental review of PER No. 16-271: Derwent Way Soil Transfer and Barge Facility (the Project) proposed by Summit Earthworks Inc. (the Applicant).

This project and environmental review commenced in 2017 and was carried out to address the Port Authority's responsibilities under the *Canada Marine Act*, and to meet the requirements of the *Canadian Environmental Assessment Act, 2012* (CEAA 2012), which was the relevant legislation at the time of application. CEAA 2012 has subsequently been replaced by the *Impact Assessment Act* (IAA). However, as this review commenced under CEAA 2012, the transitional provisions of the IAA allow for the review to continue under CEAA 2012. The proposed Project is not a CEAA 2012 "designated project" and an environmental assessment as described in CEAA 2012 is not required. However, the Port Authority authorization is required for the proposed Project to proceed and in such circumstances, where applicable, Section 67 of CEAA 2012 requires federal authorities to assure themselves that projects will not likely cause significant adverse environmental effects. This review provides that assurance. In addition, the Port Authority considers other interests, impacts and mitigations through the project and environmental review.

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

This project and environmental review report is NOT a project authorization. It is a prerequisite to the issuance of a project permit (the Permit) and the conclusions described in this report require compliance with the conditions in the Permit.

2 PROJECT DESCRIPTION

Summit Earthworks Inc. proposes to develop a soil transfer and barge facility on the vacant lot located to the east of Derwent Way and south of Salter Street, New Westminster. The proposed project will facilitate the transfer of waste soil from development sites in the Metro Vancouver area to a remediation facility in Mission, BC. Soil will arrive at the transfer station via truck; it will then be temporarily stored in a contained storage area (with a total capacity of ~3,000 m³), before being transferred to a barge for transit along the Fraser River. In some instances, soil may also be transferred off site via truck. The facility will not accept hazardous soils, meaning that all soils that move through the facility will have contamination levels less than the BC Hazardous Waste Regulations criteria.

The waste soil will be temporarily stored in a storage area lined with a protective membrane and lock block wall to contain the soil. The storage area will have a roof structure covering the soil and the site will be adequately graded (min 1%) to ensure that any water run-off is collected in the swales around the perimeter of the storage site. Runoff from the roof structure will not come into contact with the stored material, and will infiltrate to the ground via separate underground infiltration trenches to the north and south of the waste storage area.

The material will be loaded to the barge via a hopper and a covered conveyor system. The conveyor will deposit the soil onto the barge using a telescopic spout and a wheel loader on the barge will displace the soil evenly across the barge deck. The total estimated volume of soil anticipated to be handled at the site is 6,000 m³ per month.

The site is bisected by a City of New Westminster dyke reserve. The dyke right of way will be traversed by trucks, but will remain unencumbered by structures.

Vehicle access to the site is proposed to be via an access road that connects to Salter Street to the north. Salter Street connects to Derwent Way. Operation of the facility would include up to 60 trucks arriving and departing daily. It is anticipated that one barge per week would be loaded with approximately 1,500 to 2,500 m³ of soil and that barges will not moor at the terminal for more than 48 hours at a time.

The facility is designed to contain soil stored on the site and reduce run-off and dispersion during transfer and barge loading. Containment curbs will be constructed around the soil storage area and the truck unloading area to contain any direct runoff. A wheel wash station will be installed for trucks leaving the site.

To mitigate spillage of soils during barge loading, the conveyor system will consist of a covered design with a spill tray and a dust suppression fogger system. The conveyor system will also have variable speeds and be combined with a telescopic loading spout to reduce the free-fall drop height to further mitigate the potential for dust to be generated during loading. Flat deck barges and material scows will be used for stability and the sides will be sealed for the containment of soil and any runoff water. Barges will be moored to four steel mooring dolphins and loading will not take place during extreme weather or river conditions, such as the annual spring freshet.

The Applicant also operates a gravel and equipment storage facility in close proximity to the site at 404a Salter Street. The gravel and equipment storage facility was initially proposed in 2018 and began operations in 2019. The two facilities have separate operations and purposes, and product will not be moved between the sites. The gravel and storage facility is not, and at no time has been, part of the Project scope for the proposed Derwent Way Soil Transfer and Barge Facility.

2.1 Proposed Upland Works

- Site clearing, stripping and grubbing;
- Ground densification, as necessary;
- Excavation below the covered soil storage area to a depth of approximately 1.5m;
- Construction of a lock block perimeter wall around the covered soil storage area measuring 2.25m above grade and 1.5m below grade;

- Construction of a 1,200 square metres lined and covered waste soil storage area designed to prevent infiltration into the underlying subgrade;
- Construction of a 0.3m high containment curb to the south and east of the truck unloading area and around the hopper to contain excess runoff;
- Construction of an ~2.5m noise barrier fence, tree barrier, and soil berm along the western boundary of the site;
- Grading and paving, including construction of an asphalt road and a compacted gravel area;
- Installation of a weigh scale measuring 18m x 3m, and a single-storey scale shack and scale house, each measuring 6m x 2.5m;
- Installation of a 2,500L fuel above-ground storage tank (AST) and concrete pad;
- Installation of a wheel wash station;
- Installation of a runoff water treatment facility and pump station measuring 8m x 3m and two (2) 19,000L water storage tanks;
- Installation of six (6) LED flood lights;
- Construction of four (4) vehicle parking spaces;
- Installation of a culvert;
- Installation of two (2) underground infiltration system trenches measuring 40m x 3m ;
- Installation of storm drains and catch basins;
- Installation of a concrete pad mounted hopper;
- Installation of an ~50m long covered barge loading conveyor and telescopic loading spout;

Ground densification work may be required, details of any necessary works will be identified following further geotechnical studies. Requirements regarding ground densification are identified in condition Nos. 26 and 27.

Site preparation will include the clearing, stripping and grubbing of the site area up to 10m from the high water mark. This area will then be excavated up to a depth of 1m and backfilled to grade with using suitable materials. Most trees within 10m of the high water mark will be retained. The areas where trees will be removed from the upland are indicated on the 'Site Clearing, Stripping and Grubbing Plan'. The existing stockpile and concrete debris will also be removed from the site.

2.2 Proposed In-Water Works

- Installation of a conveyor truss support comprised of two (2) ~0.3m diameter steel pipe piles each with one (1) ~0.25m diameter steel pile batter.
- Installation of four (4) mooring dolphins each comprised of a vertical ~0.9m diameter concrete filled steel pipe pile and two (2) ~0.6m diameter steel batter piles, mooring horns, and fenders.

Piles will be installed by vibratory hammer and no in-water works will take place during the fisheries sensitive period. The conveyor will be secured to the truss by steel pile cap with hinge assembly.

The construction works are proposed to take place approximately six months to complete and would take place during the Port Authority's standard work hours of Monday to Saturday 7:00 a.m. to 8:00 p.m. (excluding holidays). The proposed operating hours for the site are Monday to Saturday, 7 a.m. to 4.30 p.m. (excluding holidays).

The estimated Project cost is \$500,000.

3 VANCOUVER FRASER PORT AUTHORITY INTERNAL REVIEWS

The following the Port Authority departments have reviewed the application and have the following project considerations.

3.1 Planning

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

The site is situated in the Queensborough area of New Westminster, adjacent to the Fraser River to the south, Derwent Way (a designated truck route) and an SRY rail line to the west, Salter Street to the north and an access road to the east. The site is bisected by a City of New Westminster dyke reserve, and the area to the south of the dyke reserve is infill that was created in the 1980s. The site is currently undeveloped and vegetated, with a rip rap shoreline fronting the Fraser River.

The immediate surrounding area is dominated by industrial operations, which include mechanical contractors, trucking and freight services, gravel storage and a lumber transloading facility. The City of New Westminster has zoned the municipally regulated area to the north of the site as “M2 – Heavy Industrial Districts”, in support of “heavy industrial uses”. However, across Derwent Way to the west, and approximately 300m to the east are large residential communities. The residential areas of Queensborough and Port Royal (more recent redevelopments to the east) create a sharp contrast with these industrial uses. The consideration of community and stakeholder impacts of the project have been reviewed in detail in Section 4.

The industrial use proposed for the site is in keeping with the industrial setting and land use designation for the immediate area. The proposal also makes use of the existing transportation network and proposes to increase the transportation options for the site by adding marine infrastructure.

3.1.1 Land Use Designation

The Project area is designated as “Industrial” in the VFPA Land Use Plan (2020). The proposed use as a soil transfer and barge loading facility is consistent with the industrial designation. The Project is therefore compliant with the Land Use Plan.

3.1.2 Building Permit Requirements

The proposed construction of the soil storage area roof structure, loading conveyor and ancillary operational buildings will require review under the applicable National Building Code and National Fire Code of Canada. The Applicant will be required to obtain a Port Authority building permit before proceeding with construction of these works and cannot occupy the structures until they have obtained a the Port Authority occupancy permit. The Applicant will be able to submit a building permit application once the design for the roof structure has been finalized.

3.2 Engineering

The Project proposes to install and construct the following:

- A storm drain network, complete with a storm water collection sump, pumping station and treatment system.
- New culvert extending under Salter Street on City of New Westminster property.

The Project may also require ground stabilization works prior to the installation of structures.

Engineering has reviewed the application and will require the Applicant to ensure the following:

- Provide an updated geotechnical report and/or an additional geotechnical memo by a professional engineer licensed to practice in the Province of British Columbia, to the Port Authority's satisfaction, following further geotechnical investigations on site to determine whether ground stabilization is required.
- Provide details, including drawings, of any proposed ground stabilization works, as required, to the Port Authority's satisfaction.

- Provide signed and sealed drawings for proposed works approved for construction (including details of the roof structure and barge loading conveyor system) prior to construction.
- Provide record drawings of all installed structures and utilities following completion of the project (including the new culvert across Salter Street on City of New Westminster property).

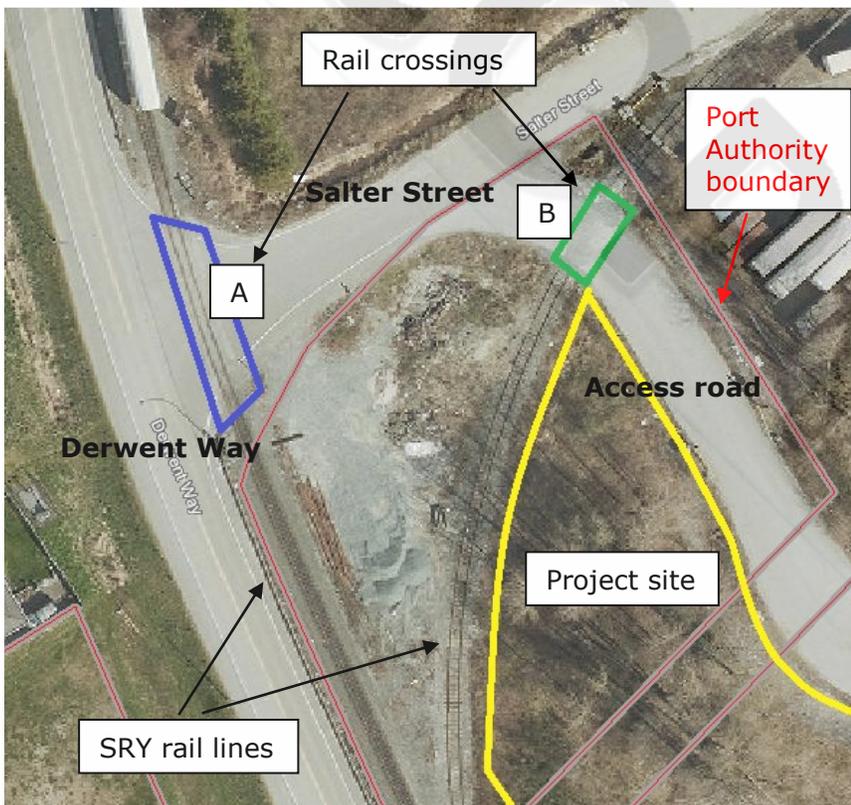
These are reflected in condition Nos. 18, 26, 27 and 73 in the Permit.

Engineering supports the recommendation to approve the Project subject to adherence to the listed project and environmental conditions in the Permit.

3.3 Transportation

The proposed Project involves waste soils being delivered to the site via truck. Access to the site for trucks will involve turning off the designated truck route of Derwent Way and crossing two rail crossings on Salter Street and an access road, before entering the site. Trucks must also leave the site via the same route. During operations the site is designed to accommodate a maximum of 60 trucks per day, though the applicant has indicated that this is more likely to be in the region of 20 to 30 trucks per day.

The image below shows the Project site in relation to the adjacent roads and rail crossings. Rail crossing “A” at the Salter Street/ Derwent Way intersection is within the jurisdiction of the City of New Westminster, while rail crossing “B” is within the jurisdiction of the Port Authority. Rail crossing “A” services rail traffic accessing Annacis Island. This crossing is active at night in order to help minimize rail crossing conflicts at other locations for trains servicing Annacis Island. Rail crossing “B” is not active, and may be removed in the near future.



The Applicant has provided a Traffic Impact Study in support of their Project, which reviews the existing and proposed traffic at the site and the surrounding intersections of Derwent Way/ Ewen Avenue, Derwent Way/ Salter Street, Derwent Way/ South Dyke Road and Derwent Way/ Annacis Parkway. The study concludes that site traffic will have minimal impact on the overall performance of the intersections and recommends that signage, pavement markings and concrete barriers should be put in place on and off-site to help safely direct the flow of

traffic. Additional recommendations include all staging to take place on-site during construction, replacement of a missing rail stop bar, and trimming of overgrown shrubs to improve visibility.

An additional memo in support of the Traffic Impact Study has been provided to consider whether a southbound left-turn lane at the Derwent Way/Salter Street intersection is necessary. The review concludes that all site traffic should enter or exit the site from the south via Annacis Island, and that if traffic follows this route there will be no impact or requirement for a southbound left-turn lane from Derwent Way.

A further memo in support of the Traffic Impact Study has been provided to consider potential queues for a northbound right-turn movement at the Derwent Way/Salter Street intersection and review the frequency of train crossings on the SRY line. The memo describes several measures that will be implemented to avoid trucks queueing both on Derwent Way and on the Derwent Way/Salter Street rail crossing. These measures include the creation of a traffic management plan to manage truck movements during site operations to include a 14 minute detour route for trucks along designated truck routes, should a rail crossing event be taking place when they are trying to enter the site. The memo also notes that train crossing peak hours are from 8 p.m. to 2 a.m., which is outside the hours of operation for the Project site of Monday to Saturday, 7 a.m. to 4.30 p.m. In light of this the review concludes that a traffic management plan and additional signage should provide the necessary information required for managing the trucks entering and exiting the site.

In line with the recommendations of the memo, a Site Access Route Plan and Traffic Route Plan Map, including signage and instructions for accessing the site, have been provided. The Applicant has noted that they have no means of enforcing truck routing or movements once outside the site. However, it is proposed that these two documents are used in the screening and approval process of haulers, in addition to the placement of site specific signage directing trucks to use recommended routes. Compliance with the mitigations in these documents will also be a condition of any lease agreement issued.

The Project was also referred to the City of New Westminster, the Ministry of Transportation and Infrastructure (MoTI) and SRY; comments received are detailed in section 4.1 and 4.2.1 below.

Transportation has reviewed the application and requires the Permit Holder to ensure the following:

- The Permit Holder shall provide a construction parking and traffic management plan to the satisfaction of the Port Authority, and carry out construction in accordance with the approved plan.
- The Permit Holder shall provide a survey monitoring plan to the satisfaction of the Port Authority, to monitor settlement of the SRY Rail line, and carry out monitoring in accordance with the approved plan. (See section 4.2.1 for discussion)
- The Permit Holder shall carry out operations in accordance with the approved Site Access Route Plan and Traffic Route Plan Map.

These are reflected in condition Nos. 21, 29 and 70 in the Permit.

Transportation supports the recommendation to approve the Project subject to adherence to the listed project and environmental conditions in the Permit.

3.4 Marine Operations

The proposed Project involves the installation of an ~50m long covered conveyor system, supported by piles, which would extend over the Fraser River, and the installation of four mooring dolphins and two additional piles to facilitate barge mooring at the site.

The Applicant has provided marine operations information and mitigations in a Marine Terminal Operations memo. The facility is anticipated to receive and load up to four dry goods barges (scows) per month that will travel along the Fraser River to Mission, where the waste soil will be off-loaded to a remediation facility. The barges will be moored at the facility using the mooring dolphins and will be loaded with waste soil using the covered conveyor system in a process that takes approximately 10 – 12 hours. The barges will typically be moored for no longer than 48 hours. Local, licensed tug haulers will transport the barges in and out of the facility in accordance with

marine transport rules and regulations. Barges will not access the berth during extreme weather or river conditions, such as the annual freshet in the Fraser River.

The Project was also referred to the Greater Vancouver Water District (GVWD) (operating as Metro Vancouver) in relation to proximity to the Annacis Main No. 2 water main; comments received are detailed in section 4.2 below.

Marine Operations has reviewed the application and requires the Permit Holder to ensure the following:

- The Permit Holder shall inform the Harbour Master 2 days before commencing construction for in water related activities.
- The Permit Holder shall provide a Marine Construction Staging Plan to the satisfaction of the Port Authority, and carry out construction in accordance with the approved plan (See section 4.2 for discussion)
- The Permit Holder shall contact the Coast Guard for issuance of a NavWarn for in-water works.
- The Permit Holder shall maintain good practices in accordance with rules and regulations during vessel related activities.
- The Permit Holder shall provide record drawings of all newly constructed marine works to the Canadian Hydrographic Service (CHS).

These are reflected in condition Nos. 17, 24, 25, 62 and 74 in the Permit.

Marine Operations supports the recommendation to approve the Project subject to adherence to the listed project and environmental conditions in the Permit.

4 STAKEHOLDER CONSULTATION

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

4.1 Municipal Consultation

The proposed Project was assessed by the Port Authority to have potential impacts to municipal interests. An initial referral letter was sent to the City of New Westminster on January 13, 2017, notifying them of the proposed Project. Subsequent correspondence took place via email and letter. Letters were sent to the City on: January 11, 2018; March 25, 2019; November 9, 2020; February 4, 2021 and March 3, 2021, in response to issues raised and to outline amendments to the scope of works. The Project was further discussed with the City of New Westminster at meetings, attended by the applicant and the Port Authority, on March 2, 2017 and April 12, 2019. The Applicant also presented the Project and answered questions at a Council meeting on September 30, 2019.

During the course of this review, there have been several requests for information to be provided to the City of New Westminster. The following table summarizes the topics raised, and the Port Authority's responses.

Issue	Mitigations and Permit Conditions	Rationale / Comment
STORMWATER		
Provide an updated Stormwater Pollution Prevention Plan (SPPP)	<i>Not applicable</i>	SPPP sent to the City on Jan 11, 2018. The latest version is available on the port authority website.

DETAILED SITE DRAWINGS		
<p>Provide the following detailed drawings:</p> <ul style="list-style-type: none"> Planting proposed for the berms and foreshore Location of the weigh scale (to demonstrate that it has been designed to prevent trucks from queuing onto the roadway.) 	<p><i>Not applicable</i></p>	<ul style="list-style-type: none"> Drawing package sent to the City on Jan 11, 2018. The latest version is available on the port authority website. The project summary and the biophysical assessment and vegetation plan provide further details of the proposed planting The Traffic Impact Study advises that there is sufficient on-site capacity to allow internal queueing for four vehicles.
DUST		
<p>Provide detailed dust suppression measures to help mitigate off-site impacts.</p>	<p>Mitigations include:</p> <ul style="list-style-type: none"> Below grade, covered storage area Perimeter tree wall Wheel and truck bed wash Misting spray nozzles on the conveyor hopper Routine air quality monitoring on a regular basis Covered, variable speed loading conveyor Telescopic loading spout to reduce drop height onto barge No barge loading during periods of high winds Ability to cover soil on barge with a polyethylene liner in the event of sudden precipitation or strong winds. <p>Condition No. 60 requires that air emissions, including dust are minimized during construction and provide a link to industry best practice guidance.</p> <p>Condition Nos. 65 and 69 require that the Permit Holder carry out the Project and site operations in accordance with an approved air emissions management plan and an air emissions sampling plan.</p>	<ul style="list-style-type: none"> Construction and Environmental Management Plan (CEMP) and Environmental Air Assessment (EAA) sent to the City on Jan 11, 2018. The latest versions are available on the port authority website. This question is also addressed in detail in the public engagement summary and considerations report
CONSTRUCTION AND OPERATIONS		

<p>Provide further information in relation to noise control, run-off control, facilities for employees, habitat restoration, and landscaping / screening and light intrusion.</p> <p>(NOTE: Run-off control provisions are detailed under the site servicing section below)</p>	<p>Mitigations include:</p> <ul style="list-style-type: none"> • Noise control <ul style="list-style-type: none"> ○ Lock block walls ○ Noise barrier fence ○ Tree barrier (also for visual screening) ○ Soil berm ○ Tree planting • Light intrusion <ul style="list-style-type: none"> ○ Keep lights as low as practical ○ Direct light down onto the site ○ Follow the port authority lighting guidelines 	<ul style="list-style-type: none"> • Drawing package sent to the City on Jan 11, 2018. The latest version is available on the port authority website. • A habitat assessment is included in the Biophysical and Vegetation Assessment • A 3m wide tree planting zone is proposed along the western boundary of the site for visual screening and noise attenuation. • LED lights are proposed to be installed at up to 9m in height. The intent is to keep the lights as low as possible for operations to reduce light pollution to adjacent properties. Light pole locations are indicated on the site plan.
<p>Provide specifications on the wheel wash facility</p>	<p><i>Not applicable</i></p>	<p>The wheel wash specifications are as follows:</p> <ul style="list-style-type: none"> • Automatic tire washer, cleaning for two full tire rotations with a 6 m long deck • 50 HP Pump system delivering 45 L/s recycled water flow rate • Float controlled 22,000 L water holding tank • Sensor start wash initiation • Dimensions are 6 m long and 3.5 m wide.
<p>MARINE STRUCTURES</p>		
<p>Provide information on how the barge ramp will be sealed during freshet.</p>	<p><i>Not applicable</i></p>	<p>The barge ramp originally proposed has been removed from the scope of works in the 2018 revision, and replaced with a covered conveyor.</p>
<p>SITE SERVICING</p>		
<p>The dyke should be built to the minimum elevation of 4.5 m GSC, in accordance with the City's Flood Management Strategy</p>	<p><i>Not applicable</i></p>	<p>The dyke right of way is outside the port authority jurisdiction. However, the site profile and grading plan shows the finished grade adjacent to this area as at the desired geodetic elevation of 4.5m.</p>
<p>The design and construction of the dyke and proposed materials to be used should be reviewed and subject to the approvals of the City and Inspector of Dykes</p>	<p><i>Not applicable</i></p>	<p>Not applicable as the dyke right of way is not proposed to be modified, is outside federal jurisdiction, and is already at the desired geodetic elevation of 4.5m</p>
<p>No structures and/or materials shall be</p>	<p>Condition No. 6 requires that the Permit Holder carry out the Project</p>	<ul style="list-style-type: none"> • The latest drawing package (July 2019) includes a revised site plan.

deposited on the dyke right of way	in accordance with the approved plans and drawings.	<ul style="list-style-type: none"> The site plan has been reconfigured and structures and/or materials have been relocated to ensure that the dyke ROW remains unencumbered.
Site run off shall be contained and treated to levels acceptable to federal and provincial regulations prior to discharge.	Condition Nos. 37 and 66 require that the Permit Holder manage stormwater and surface runoff appropriately.	<ul style="list-style-type: none"> Site run off will be collected in a collection sump, then pumped to a water storage tank and treatment system, prior to being discharged to the designed infiltration gallery. There will be no direct discharge to the Fraser River. Applicable regulations and measures for compliance are detailed in the SPPP and the Contingency Spill Response Plan.
Construction and operational activities shall prevent the spread of invasive plant species	Condition No. 33 requires that the Permit Holder carry out the project in accordance with the approved CEMP and the Vegetation Plan.	The CEMP and the Biophysical and Vegetation Assessment include requirements for the responsible management of invasive species.
Existing riparian areas should be protected	Condition No. 37 requires that the Permit Holder carry out the Project in accordance with the approved CEMP and the Vegetation Plan.	<ul style="list-style-type: none"> The landscaping plan identifies areas along the embankment and within 10m of the high-water mark for the protection of existing trees. Trees within the footprint of the conveyor and hopper will need to be removed (approx. 2-3m strip). This is a smaller area than the barge ramp previously proposed. The CEMP includes requirements for the protection of existing riparian areas. The Biophysical and Vegetation Assessment includes detail related to the impacts to vegetation anticipated.
TRANSPORTATION		
A southbound left-turn lane that can accommodate at least one large truck should be provided to avoid obstructing southbound traffic along Derwent Way when a train is crossing.	Condition No. 70 requires that the Permit Holder carry out operations in accordance with the approved Site Access Route Plan and Traffic Route Plan Map.	<ul style="list-style-type: none"> An additional traffic impact assessment was carried out in response to the City's comments. The results of the assessment are provided in the Traffic Impact Memo The assessment determined that a left turn lane was not required if traffic is routed to / from the south, as proposed. Haulers to be routed via Annacis Island industrial area to access and exit the facility.
Confirm the type, number and weights of all existing and proposed vehicle travel for all Port of Vancouver sites requiring access from the Derwent Way/	<i>Not applicable</i>	The project site will have a maximum of 60 truck and transfer vehicles approximately, 17.7 metres in length with a loaded GVW of 56,000 lbs., per day (120 two-way trips) arriving and departing at random times during the operational hours of 7 a.m. to 4.30 p.m., Monday to Saturday.

<p>Salter Street intersection, and include this data in an updated Transportation Study.</p>		
<p>All Derwent Way and Salter Street design work completed thus far for whistle cessation is assuming a maximum truck size to be WB20. Please confirm and update in the Transportation Study</p>	<p><i>Not applicable</i></p>	<p>The traffic patterns and accessibility for the site are being designed for a dump truck & trailer combination, not a WB20 with trailer.</p>
<p>Provide confirmation in the Transportation Study regarding queuing capacity for trucks; all staging must occur on-site, and the Study needs to show analysis that confirms there is no potential for vehicles queuing onto Salter Street from the site.</p>	<p>Mitigations include:</p> <ul style="list-style-type: none"> • Haulers to be routed via Annacis Island industrial area to access and exit the facility • Signage to be in place during operating hours to direct traffic flow to the facility. • Haulers and/or specific drivers may be banned from the facility if they choose to ignore preferred access routes. • The applicant has proposed to form a community liaison group to help monitor congestion adjacent to the site during construction and operation. <p>Condition No. 70 requires that the Permit Holder carry out operations in accordance with the approved Site Access Route Plan and Traffic Route Plan Map.</p>	<ul style="list-style-type: none"> • There is sufficient on-site capacity to allow internal queues of four vehicles • All staging will occur on-site • Queuing mitigations provided to stop trucks from queuing on Derwent Way. • This question is also addressed in detail in the public engagement summary and considerations report
<p>Provide further information regarding how they will enforce or compel the development's heavy vehicles to travel to and from the south. A traffic management plan and/or agreement with the City to put in place a modified Derwent Way and Salter Street intersection layout that would physically</p>	<p>Condition No. 70 requires that the Permit Holder carry out operations in accordance with the approved Site Access Route Plan and Traffic Route Plan Map.</p>	<p>As detailed in the technical memo dated January 25, 2021, the Applicant has prepared a Site Access Route Plan and Traffic Route Plan Map in respect to traffic management during operations that includes:</p> <ul style="list-style-type: none"> • Proposed signage (no southbound left-turn movements to the site, no queueing along Derwent Way) • Travel routes (all vehicles to arrive from the south) • Detour routes in an event of a train crossing, including a map • Train crossing schedules (as available)

<p>restrict trucks from travelling to and from the north, should be provided.</p>		
<p>Provide analysis findings on the delays and queuing impacts at the Derwent Way and Salter Street intersection during a train crossing event, with respect to the need for an exclusive southbound left-turn lane (and/or a northbound right-turn lane with adequate measures for heavy vehicle enforcement coming from and going to the south).</p>	<p><i>Not applicable</i></p>	<ul style="list-style-type: none"> • SRY has indicated that the train crossing peak hours are from 8 p.m. to 2 a.m., which falls outside the proposed site operating hours of Monday to Saturday, 7 a.m. to 4.30 p.m. • 8 to 10 train crossings are scheduled a day; therefore, there will be limited occurrences where trucks are unable to access the site due to train crossings. • In the event of a train crossing, vehicles will be instructed to drive north to loop back to the site via the detour route provided in the Traffic Management Plan. This will be enforced with signs.
<p>Provide assurance that the messaging to the heavy truck drivers to follow the proposed actions and plans will be continually provided during the lifetime of the soil transfer and barge facility.</p>	<p>Condition No. 70 requires that the Permit Holder carry out operations in accordance with the approved Site Access Route Plan and Traffic Route Plan Map.</p>	<ul style="list-style-type: none"> • The requirement to provide continued messaging to the heavy truck drivers will be a condition of the lease, as well as a condition of the permit.
<p>TREES</p>		
<p>Consider a comprehensive tree planting replacement program for the significant number of trees being removed from the site. (See City of New Westminster Urban Forest Management Strategy bylaw)</p>	<p>Condition No. 37 requires that the Permit Holder carry out the Project in accordance with the approved Vegetation Plan.</p>	<ul style="list-style-type: none"> • Municipal strategies, design guidelines, bylaws and other related documents do not apply to land and waters under Federal jurisdiction. • The port authority has reviewed the contents of the City of New Westminster’s Urban Forest Management Strategy and is considering the principles in it as part of our review. • A biophysical assessment was carried out for the site to assess the types of trees present and form a vegetation plan. • Tree planting is proposed as part of this application, as detailed in the landscaping plan. • The majority of trees with the riparian area will be retained. A thin strip of approximately 2-3 m will be removed to accommodate the conveyor structure.

PLANNING		
<p>The City encourages the Port to take into consideration the City's design guidelines for the Queensborough Heavy Industrial Development Permit Area No. 1, within which the subject site is situated.</p>	<p>Mitigations include:</p> <ul style="list-style-type: none"> • A 3m wide tree-planting zone will provide visual screening on the western boundary. • The containment area is partially below grade. • The design of the roof structure for the containment area will be subject to a Building Permit. 	<ul style="list-style-type: none"> • Municipal strategies, design guidelines, bylaws and other related documents do not apply to land and waters under Federal jurisdiction. • The Port Authority note that some areas within Federal jurisdiction appear to be incorrectly identified in the Development Permit areas. • The Port Authority note the contents of the Queensborough Heavy Industrial Development Permit design guidelines and is considering some of the principles in it as part of our review. • Aesthetic considerations are also discussed in the public engagement summary and considerations report.

4.2 Adjacent Tenant Consultation

The proposed Project was assessed by the Port Authority to have potential impacts to adjacent Port Authority tenant operations. Referral letters were sent to the following Port Authority tenants on November 18, 2020 in regard to the potential for upcoming construction works:

- Coastland Wood
- Ministry of Transportation and Infrastructure (MoTI)
- Greater Vancouver Water District (GVWD) (operating as Metro Vancouver)
- Ron Francis Marine Ltd.
- CIPA Lumber Co. Ltd.

The Port Authority did not receive any comments from Coastland Wood or CIPA Lumber Co. Ltd.

Ron Francis Marine Ltd., a nearby tenant, responded on November 20, 2020 to request further information. A conference call took place with the tenant on November 24, 2020 and further information was provided in relation to the number of trucks, odour, noise and land use. The tenant's comments were not in relation to the impact on the tenant's marina operations; as such, their comments have been captured as part of public engagement, as discussed in Section 5.

The GVWD responded with comments on the proposed Project noting that GVWD's 914 mm diameter Annacis Main No. 2 at Derwent Way Bridge is downstream of the site. GVWD advised that they do not object to the proposed Project, subject to certain conditions being met.

Below is a table summarizing the comments received from GVWD and how they were considered as part of the project and environmental review.

Issue	Mitigations and Permit Conditions	Rationale
<p>Please provide the contractor's marine staging plan when available for GVWD review prior to construction. In order to ensure that barges and other</p>	<p>Condition No. 24 requires that the Permit Holder provide a marine staging plan to the satisfaction of the Port Authority and GVWD and carry</p>	<p>The applicant will be required to submit a marine staging plan prior to construction for review and approval.</p>

marine equipment do not anchor or spud within 10 m of the water main, the Annacis Main No. 2 alignment must be shown on the staging plan. Depending on the proximity of the equipment staging to the water main, an inspector may be required to be stationed aboard the barge during the work.	out the Project in accordance with the approved plan.	
If there are any changes to the submission drawings or construction methods, please submit a revised proposal to MV for review and consent, prior to construction.	<i>Not applicable</i>	Noted – There have been no further amendments to the submission drawings or construction methods since the application was referred to Metro Vancouver.
The proponent shall be liable for any damages incurred as a result of the proposed work.	<i>Not applicable</i>	Comments acknowledged by applicant.

MoTI responded with concerns that the proposed Project may impact the Annacis Island Swing Bridge. MoTI advised that they do not object to the proposed Project, subject to certain conditions being met.

Below is a table summarizing the comments received from MoTI and how they were considered as part of the project and environmental review.

Issue	Mitigations and Permit Conditions	Rationale
A preload drawing (which was not included in initial submissions) and an associated memo to address the anticipated settlement should be submitted to MoTI for review when available, and <u>prior to the preload construction.</u>	<p>Condition No. 26 requires that the Permit Holder submit an updated geotechnical report and/or an additional geotechnical memo by a professional engineer licensed to practice in the Province of British Columbia, to the Port Authority's satisfaction, following further geotechnical investigations on site to determine whether ground stabilization is required.</p> <p>Condition No. 27 requires that the Permit Holder submit details, including drawings of any proposed ground stabilization works.</p>	<p>Prior to construction, the applicant will be required to submit an updated geotechnical report and/or an additional geotechnical memo following further geotechnical drilling investigations on site to determine whether ground stabilization is required. Preload may or may not be required, depending upon the results of this investigation.</p> <p>Should ground stabilization be required, the applicant will be required to submit details of the proposed works and activities. Including updated drawings, and an updated CEMP.</p> <p>The Port Authority will consult with MoTI on any proposals for ground stabilization.</p>

<p>The monitoring plan should be extended to the Channel Swing Bridge, documenting:</p> <ul style="list-style-type: none"> the settlement during preload vibration during pile driving 	<p>Condition No. 29 requires that the Permit Holder provide a survey monitoring plan to the satisfaction of the Port Authority, and carry out monitoring in accordance with the approved plan. The survey plan shall monitor settlement and vibration in relation to the SRY rail line and adjacent ground surface, and the Annacis Island Swing Bridge.</p>	<p>A monitoring plan will be required to monitor the Annacis Island Swing Bridge during construction further to additional geotechnical investigations.</p> <p>The Port Authority will consult with MoTI on the survey monitoring plan.</p>
<p>A detailed monitoring plan (with caution and alarm values) should be submitted for review prior to construction.</p>	<p>The survey monitoring plan shall provide details of monitoring locations and “caution” and “alarm” values.</p>	<p>The applicant will be required to consider the monitoring requirements in relation to impacts to the bridge infrastructure in an updated geotechnical report and/or an additional geotechnical memo following further geotechnical drilling investigations on site.</p>
<p>Monitoring data should be submitted if the caution level is approached.</p>	<p>The survey monitoring plan shall provide details of reporting procedures.</p>	<p>The submission of data will be a requirement of the survey monitoring plan.</p>

4.2.1 Southern Railway of British Columbia (SRY)

The proposed Project was assessed by the Port Authority to have potential impacts to SRY. An initial referral letter was sent to SRY on January 13, 2017 notifying them of the proposed Project.

Southern Railway of BC responded with comments on the proposed Project on February 8th, 2017 and May 12, 2017. Subsequent correspondence took place via email and letter. Letters were sent to SRY on: January 11, 2018, March 25, 2019 and November 9, 2020, and in response to issues raised and to outline amendments to the scope of works.

Below is a table summarizing the comments received and how they were considered as part of the project and environmental review.

Issue	Mitigations and Permit Conditions	Rationale
<p>Lulu Island has extremely poor soil conditions. At a similar development north of the proposed site, a surcharge from a preload surged the soil under SRY track and significantly disrupted railway operations. As such, SRY required the following:</p> <ul style="list-style-type: none"> The geotechnical engineering firm to provide advice as to the impact that the preload and soil 	<p>Condition No. 29 requires that the Permit Holder provide a survey monitoring plan to the satisfaction of the Port Authority, and carry out monitoring in accordance with the approved plan.</p>	<ul style="list-style-type: none"> Tetra Tech completed an assessment of the potential settlement to the SRY rail line, which could be up to 50mm. Tetra Tech recommended that a survey monitoring plan be put in place to monitor the settlement of the SRY rail line and adjacent ground surface. The monitoring will include survey points on both rail lines as well as survey monitoring points embedded in the ground

Issue	Mitigations and Permit Conditions	Rationale
<p>containment may have on the railway property.</p> <ul style="list-style-type: none"> A geotechnical monitoring program should be developed to assess the rail alignment periodically during pre-load. 		<p>at 5 m to 10 m intervals perpendicular and parallel to the rail line. The Permit Holder will develop the details of the monitoring locations and frequency with SRY.</p> <ul style="list-style-type: none"> The monitoring is proposed to be completed on a bi-weekly basis to establish initial settlement rates and may be extended to a monthly or bi-monthly basis depending on the initial results. If the settlement of the SRY line approaches the tolerable limits, SRY will be contacted and necessary coordination will be made to level the rail line by the Permit Holder Preloading may not be required at this site The Port Authority will consult with SRY on the survey monitoring plan.
<p>The rail crossings at Hudson Avenue and Southwest Marine Drive, and 41st Avenue and West Boulevard are referenced in the Traffic Impact Study (Rev. 3). Both of these are deactivated and underutilized rail lines.</p>	<p><i>Not applicable</i></p>	<p>References to these rail crossings Have been removed in the revised Traffic Impact Study.</p>
<p>This is a busy, active railway corridor and there is potential for trucks to queue on Derwent Way before entering the site. This could be because they are waiting to enter the site or because they are waiting for slow moving trains at the rail crossings. This may impact neighbourhood traffic.</p>	<p>Mitigations include:</p> <ul style="list-style-type: none"> Haulers to be routed via Annacis Island industrial area to access and exit the facility Signage to be in place during operating hours to direct traffic flow to the facility. Haulers and/or specific drivers may be banned from the facility if they choose to ignore preferred access routes. A community liaison committee to be formed to help monitor congestion adjacent to the site during construction and operation. A Site Access Route Plan and Traffic Route Plan Map that includes signage, travel routes, 	<ul style="list-style-type: none"> Tetra Tech has carried out a Traffic Impact Study of the proposed impact of the operations on the surrounding area. The Port Authority defer to the results of this in relation to the proposed impacts. Tetra Tech advises that the development is anticipated to generate 19 trips in both the a.m. and p.m. peak hours (approximately one vehicle every three minutes) with a maximum of 60 per day, and that queuing and delays at the intersection of Derwent Way/Salter Street are anticipated to be minimal. An additional traffic impact assessment was provided by

Issue	Mitigations and Permit Conditions	Rationale
	<p>detour routes and train crossing schedules.</p> <p>Condition No. 70 requires that the Permit Holder carry out operations in accordance with the approved Site Access Route Plan and Traffic Route Plan Map.</p>	<p>Tetra Tech in 2019 to assess whether a left turn lane was necessary. The assessment determined that a left turn lane was not required if traffic is routed to / from the south, as proposed.</p> <ul style="list-style-type: none"> • A further assessment was provided in January 2021, which considered queuing impacts and how they could be addressed in a site operations traffic management plan.
<p>Trucks on Salter St waiting for traffic to clear will likely be queueing onto the tracks with no escape route should a train arrive unexpectedly. SRY advised that this should be mitigated by a railway signal system interconnected by traffic signals.</p>	<p>Mitigations include:</p> <ul style="list-style-type: none"> • Materials kept clear of the rail line. • The noise barrier revised in order that it does not extend the full length of the property and does not, therefore, negatively impact railway sightline requirements. • A Site Access Route Plan and Traffic Route Plan Map that includes signage, travel routes, detour routes and train crossing schedules. <p>Condition No. 70 requires that the Permit Holder carry out operations in accordance with the approved Site Access Route Plan and Traffic Route Plan Map.</p>	<ul style="list-style-type: none"> • The Applicant has made amendments to the Project to improve railway sightlines within the site. Improvements to the rail crossings lie outside of the Applicant’s proposed lease area. • Tetra Tech advised that, as noted in the traffic impact study, if queuing is identified as an issue, signals are recommended at the tracks. This should be confirmed with rail counts/warrants. Signs should be installed to instruct to not stop on tracks to further improve safety. Existing vegetation should be removed to improve sightlines. • There are two rail crossings within the immediate vicinity of the site. • The rail crossing at Derwent Way and Salter Street is within the City of New Westminister’s jurisdiction. This rail crossing is currently being reviewed for upgrades as part of the proposed ‘Train Whistle Cessation’ project, which is being led by the municipality and SRY. • The second rail crossing at the entrance to the Salter Street access road is within the port authority jurisdiction. The port authority are responsible for ensuring that the signage is in place warning trucks not to stop

Issue	Mitigations and Permit Conditions	Rationale
		on the tracks. However, this crossing is not active, and there are plans for its removal.

5 PUBLIC ENGAGEMENT

The objective of public engagement as part of the permit review is to solicit feedback from the public on the proposed project, the completed technical studies, and proposed mitigations during construction and operation.

The Port Authority initially required the Applicant to conduct public engagement activities with a 15 business day public engagement period. The Port Authority reviewed the record of public engagement, including all comments received and the Applicant's response to comments, and identified the need for a second period of public engagement. The second round of public engagement was also required due to the changes to project design as the application evolved.

In response to requests from Queensborough residents and elected officials to have open group discussions about the Project, where commentary and feedback were transparent to all, the Applicant was required to hold a facilitated in-person public engagement event as part of a second engagement period.

The Applicant planned and advertised for two facilitated evenings of small group, in-person engagements at the Queensborough Community Centre on March 31 and April 2, 2020. A public notice was sent to nearby residences and businesses within the same distribution area as the previous notice mail-out, and the website was updated. However, due to the onset of the COVID-19 pandemic and government restrictions on in-person gatherings, the planned in-person sessions were cancelled.

In April 2020, the Port Authority released the "Public engagement guidelines update in light of COVID-19", and asked the Applicant to conduct digital public engagement activities in lieu of in-person sessions. The guidelines are available on our website: www.portvancouver.com/permitting-and-reviews/per/project-and-environment-review-applicant/guidelines/.

The Applicant carried out additional public engagement under the new guidelines, which included a 25 business day public engagement period and two facilitated digital public engagement sessions. The Port Authority reviewed the record of public engagement, including all comments received and the Applicant's response to comments, in determining mitigation requirements and in making a decision on the proposed Project.

5.1 Summary of Public Engagement

A description of the Project and proposed works, and all supporting materials were posted to the Port Authority's website on December 15, 2016 for public review and comment. Details of the Applicant's plans to send a notification letter to the surrounding community were posted on the Port Authority's website.

The first public engagement period was held from May 12 to June 2, 2017 (15 business days) and included the following activities:

- Public notice mailed to 2,316 residents and businesses within an approximate 0.6 kilometre radius of the proposed facility (May 12, 2017)
- Website update including a link to the public notice (live from May 12 to June 2, 2017)

The public notice contained information about the proposed Project, details about construction activities, mitigations and facility operations, a project location map, and an invitation for comments and questions. The notice also contained a link to the web-version of the notice, to encourage the public to view the notice online and visit the Applicant's project website. The public was able to provide feedback via email and telephone.

During the first public engagement period, public participation was as follows:

- 57 comments via emails and 3 phone calls from the public
- 8 comments via emails and 1 phone call from the public, sent directly to the Port Authority

Comments from the public and elected officials during this first public engagement period were mainly related to potential effects of the facility once operational, including increased traffic on roadways, and environmental and health effects of dust and waste soil. There were also concerns about possible impacts during construction activities, e.g., noise, and concerns about the adequacy of the public engagement process.

Following the engagement period, the Applicant created a summary document outlining the public engagement process, comments received, and the Applicant's formal responses. However, due to changes to the project scope being worked through and various continuity updates to submission documents, the Engagement Summary and Considerations Report was not finalized until 2019. The Port Authority reviewed the document dated April 25, 2019 and found it to be acceptable. The report was posted on the Port Authority and the Applicant's websites in August 2019.

The second public engagement period was held from May 29 to July 6, 2020 (25 business days) and included the following activities:

- Public notice mailed to 2,316 residents and businesses within an approximate 0.6 kilometre radius of the proposed facility (June 1 to June 5, 2020)
- Personal invitations to the president of the Queensborough Residents Association, City of New Westminster officials, the Member of Parliament (MP) for New Westminster-Burnaby and the Member of the Legislative Assembly (MLA) for Richmond-Queensborough (June 1, 2020)
- Print advertisement on the New Westminster Record newspaper (June 4, 2020)
- Website updates including project information, engagement materials, and links to the digital public engagement sessions registration page, to the online survey, and to recordings of the sessions (May 29, June 26, July 7 and July 13, 2020)
- Two digital public engagement sessions (June 23 and June 25, 2020)
- Online survey (live from May 29 to July 6, 2020)
- Thank you emails to digital public engagement session attendees (June 30, 2020)

The public notice contained information about the proposed Project, design features to mitigate potential impacts of the facility during operations, the anticipated construction schedule, details about operations, a project location map, and an invitation for comments and questions. The notice also contained a link to a dedicated project website which in turn included a link to the digital public engagement sessions registration page, and a link to the online survey. The public was able to provide feedback via the online survey, email, mail and during the digital public engagement sessions.

The digital public engagement sessions were held online, through Zoom, on June 23 and June 25, 2020. The sessions consisted of two different topic areas: Part A - construction and operations concerns (facility design, traffic, noise and aesthetics), and Part B - environment concerns (soil, air quality, habitat and water quality). Each session provided information about the project scope, design, technical and environmental assessments, construction activities and construction management, and ways to provide input. The sessions also provided an overview of the changes that were made to the design of the facility since the first period of public engagement. A facilitator led a questions and answers session at the end of each session, and participants were polled about their level of satisfaction with online engagement, and the use of Zoom. The Applicant had Project representatives and technical consultants available to answer questions from the public. Port Authority employees were also present to answer process related questions, and representatives of the Queensborough Residents Association were also in attendance.

During the second public engagement period, public participation was as follows:

- 31 digital public engagement sessions attendees

- 32 partially completed online survey responses
- 7 comments via emails and letters from the public
- 3 comments via emails and letters from the public directly sent to the Port Authority (one of which was also addressed to the Applicant and included in the line above)

Comments from the public were mainly related to operational concerns, such as increased traffic and safety, impacts on air quality and the environment, impacts of soil and noise emissions on human health, as well as questions and concerns about the Applicant’s approach to public engagement, and the Port Authority’s decision-making process.

In addition to these comments, other concerns outside of the scope of the proposed Project were raised, including questions about land use designations, enforcement of truck routes off-site, the Applicant’s separate and existing gravel and storage facility, and interest in whether the Port Authority would consider supporting community projects or amenities in the Queensborough community.

The Applicant provided a summary of the public engagement process, comments received, and the Applicant’s formal responses in an Engagement Summary and Considerations Report dated October 9, 2020. The Port Authority reviewed the document and found it to be acceptable. The report was posted on the Port Authority and the Applicant’s websites on October 16, 2020.

Below is a table summarizing issues the public and elected officials raised during both public engagement periods, and how the Port Authority considered public input. The Port Authority also considered public input received outside of the public engagement periods, and summarized issues raised as part of this table.

Materials submitted by the Applicant during the application review phase, and referenced in the following table, are available on the port authority project website: www.portvancouver.com/derwentway.

Issue	Mitigations and Permit Conditions	Rationale
Theme: air quality		
Management of dust, monitoring of air emission levels, and effects of dust emissions on air quality and on human health (particularly on sensitive receptors such as nearby schools and the community centre) during construction and operation.	Condition No. 60 requires dust and air emissions associated with construction and operation are minimized. Condition No. 65 requires the Permit Holder provides an Air Emissions Management Plan to the Port Authority’s satisfaction. If a permit is issued, the Permit Holder shall carry out the Project and site operations in accordance with this plan. Condition No. 69 requires the Permit Holder conducts air emissions sampling upon completion of the Project, and that a plan is submitted prior to the monitoring period.	To assess potential air emissions associated with the Project, the Applicant conducted an Environmental Air Assessment (2018), available on our website. To mitigate potential effects on air quality, the Applicant included design features, e.g., fence and barrier trees along the property’s western boundary, and outlined additional measures in the Construction Environmental Management Plan (CEPM) (2019), e.g., covering trucks with load bed covers. If a permit is issued, the Permit Holder shall conduct periodic air sampling once the facility is operational to ensure Metro Vancouver ambient air quality objectives are not exceeded. Monitoring would be undertaken by qualified environmental professionals, during periods of activity, and results would be reported to the Port Authority. If a permit is issued, the Permit Holder will explore the development of a community liaison committee to monitor air quality concerns.

Issue	Mitigations and Permit Conditions	Rationale
Dust from soils being transported through the neighbourhood.	None required.	<p>The Applicant indicated trucks would be limited to designated truck routes, and would be covered to prevent soil release during transport.</p> <p>During the second public engagement period the Applicant was questioned on measures to ensure trucks did not deviate from truck routes. The Applicant outlined some measures, e.g., notification to haulers regarding site access requirements during the pre-approval process.</p>
Lack of fugitive dust mitigation on the east property boundary near residential area.	<p>Condition No. 60 requires dust and air emissions associated with construction are minimized.</p> <p>Condition No. 65 requires the Permit Holder to provide an Air Emissions Management Plan to the Port Authority's satisfaction. If a permit is issued, the Permit Holder shall carry out the Project and site operations in accordance with this plan.</p> <p>Condition No. 69 requires the Permit Holder conducts air emissions sampling upon completion of the Project, and that a plan is submitted prior to the monitoring period.</p>	<p>With mitigation in place, fugitive dust is not anticipated to travel the distance between the proposed facility and residential areas on the east boundary (280 metres). Dust control measures, e.g., the facility's roof covering, planted trees, and wheel wash are expected to help prevent fugitive dust.</p>
Truck idling during construction and operation.	None required.	<p>The Applicant confirmed idling would not take place while trucks were not in operation. Any complaints would be monitored through a future community liaison committee.</p>
Validity of the Environmental Air Assessment results.	<p>Condition No. 69 requires the Permit Holder to conduct air emissions sampling upon completion of the Project, and that a plan is submitted prior to the monitoring period.</p>	<p>During the second public engagement period, there were concerns the background air quality data used in the Environmental Air Assessment was not representative of the residential areas surrounding the site. The Applicant followed up to confirm the study used local ambient air quality inferred from Metro Vancouver monitoring stations near the site.</p>
Impact of the facility on greenhouse gases (GHGs).	None required.	<p>The Applicant explained the central location of the proposed facility is expected to decrease the distance trucks travel and would help lower GHGs.</p>
Risk of diesel storage/use on site.	<p>Oil or fuel spill analysis and mitigation is provided in the Contingency and Spill Response Plan. Mitigations include paving in high traffic areas to prevent infiltration of spills, containment curbs and emergency spill kits. The above ground storage tank will be double-walled, vacuum-monitored and placed on a concrete pad. The Plan also provides details of</p>	<p>The Applicant explained the facility includes an above ground storage tank, contained within a concrete berm and shielded by bollards, for fueling on-site diesel equipment.</p>

Issue	Mitigations and Permit Conditions	Rationale
	<p>the process of excavation and testing of soils, should a spill happen.</p> <p>Condition No. 33 requires that a spill prevention, containment and clean-up plan for hydrocarbon products (including fuel, oil and hydraulic fluid) and any other deleterious substances be in place prior to any works or activities commencing on site.</p> <p>Condition No. 59 requires that storage tank removal, installation and operation shall meet the requirements of the Petroleum Products and Allied Petroleum Products Storage Tank Systems Regulations and the CCME Environmental Code of Practice for Aboveground and Underground Storage Tank Systems Containing Petroleum and Allied Petroleum Products.</p>	
<p>Dust management during barge loading and transportation.</p>	<p>Condition No. 60 requires dust and air emissions associated with construction are minimized.</p> <p>Condition No. 65 requires the Permit Holder to provide an Air Emissions Management Plan to the Port Authority's satisfaction. If a permit is issued, the Permit Holder shall carry out the Project and site operations in accordance with this plan.</p> <p>Condition No. 69 requires the Permit Holder conducts air emissions sampling upon completion of the Project, and that a plan is submitted prior to the monitoring period.</p>	<p>The Applicant outlined dust mitigation measures before loading of soil, e.g., soil would be moistened both before being loaded on the barge, and during loading, e.g., a dust suppression spray fogger system would be employed during loading to reduce the likelihood of dust production and windborne soil loss.</p>
<p>Theme: soil quality, storage and transportation</p>		
<p>Treatment or processing of soil and disposal at sea (at the Point Grey Disposal site).</p>	<p>None required.</p>	<p>The Applicant and the Port Authority confirmed the Project is not for a soils decontamination facility, that no remedial works would be carried out on site, and that the proposal is not for disposal at sea. The Project aims to facilitate the transfer of waste soil from development sites in Metro Vancouver to an existing disposal facility in Mission.</p>
<p>Possible effects of long-term exposure to contaminated soil on human health.</p>	<p>Condition No. 60 requires dust and air emissions associated with construction are minimized.</p> <p>Condition No. 65 requires the Permit Holder to provide an Air Emissions Management Plan to the Port</p>	<p>The Applicant explained soil would come from development sites across Metro Vancouver, and indicated that soils considered hazardous under provincial regulation would not be accepted.</p> <p>If a permit is issued, only soils that have been demonstrated to meet the criteria of the BC</p>

Issue	Mitigations and Permit Conditions	Rationale
	<p>Authority's satisfaction. If a permit is issued, the Permit Holder shall carry out the Project and site operations in accordance with this plan.</p> <p>Condition No. 69 requires the Permit Holder conducts air emissions sampling and that a plan is submitted prior to the monitoring period.</p>	<p>Contaminated Sites Regulation would be accepted at the facility. The Applicant would conduct periodic air quality monitoring to ensure that local air quality is within BC air quality objectives.</p> <p>The Applicant also included design aspects to mitigate possible fugitive dust from the site, e.g., below grade covered soil stockpile, and water spraying of soil stockpiles.</p>
Odour emanating from the contaminated soils.	None required.	<p>The Applicant indicated compost, wood waste or organic matter would not be accepted, therefore odour is not anticipated. Soils would also be placed within a covered, below grade storage area. However, the Applicant is committed to discuss concerns related to odours, should they arise, with a future community liaison committee, if a permit is issued.</p>
Assurances that soil will be tested for hazardous levels, wood wastes and contaminants.	None required.	<p>The Applicant confirmed a qualified environmental professional would review source site and soil data as part of the pre-approval screening process. The facility would only accept industrial and commercial soils as outlined in the BC Contaminated Sites Regulations.</p>
Soil residue on local roadways.	None required.	<p>To remove excess soils when leaving the site, truck wheels will be washed. The Applicant would monitor the access roads and use a street sweeper to clean up any accumulation of soils.</p>
Applicant's decision to transfer soils via barge instead of trucking directly to Mission.	None required.	<p>The Applicant explained trucks currently have a three hour round trip to Mission and that the proposed facility would allow for the handling of the soil closer to the source sites, which would help reduce GHG emissions, and reduce transport costs.</p>
Containment of soil and liner integrity, i.e., the liner's capacity to resist anticipated differential settlement indicated in the geotechnical report.	None required.	<p>The Applicant explained the soil would be placed into a below-grade holding area with an impermeable liner and containment walls. The design includes a cover to divert or capture any precipitation for on-site treatment prior to discharge.</p> <p>The Applicant added that preliminary liner design has been completed, and that the geomembrane within the liner can be designed to withstand much larger loads and differential settlements than would be observed at the facility.</p>

Issue	Mitigations and Permit Conditions	Rationale
Barge loading process and transportation.	None required.	The Applicant indicated it would use licensed marine contractors who have suitable dry goods barges, follow marine transport guidelines and have independent spill response plans. Loading would only occur once there is enough soil to fill a barge, involving three to four barges per month. Loading would take seven to eight hours and involve the use of a conveyor belt to transfer the soils to the barge deck via a telescopic spout.
Contaminated soil spill response.	None required.	<p>The Applicant developed a Contingency and Spill Response Plan (2019) to address spill response procedures, and outline industry best practices. A memo (2018) outlines barge loading and design considerations to prevent spillage of the waste soil into the Fraser River, e.g., covered barge loading conveyor, and spill collection trays. Both documents are available on our website.</p> <p>If a spill were to occur into the water, the Applicant explained Summit Earthworks Inc. would contain the area, remediate the spill, and report it to the BC Emergency Management program and the Port Authority. The Applicant has also committed to not loading the barge during extreme weather or river conditions, such as the annual spring freshet in the Fraser River.</p>
Theme: traffic		
Increase in traffic volume during operations, specifically in the overall number of trucks, and incremental impacts on current traffic congestion and related issues, e.g., reduced safety, noise, roads' wear and tear, idling.	Condition No. 70 requires that the Permit Holder carry out operations in accordance with the approved Site Access Route Plan and Traffic Route Plan Map.	<p>The public shared concerns about routing the trucks through the Queensborough Bridge, particularly during rush hour. Following feedback during the first public engagement period, the Applicant changed the design to route trucks via Annacis Island to prevent vehicles from driving through residential areas.</p> <p>A traffic impact study (TIS) for the 2018 and 2038 horizon years, available on our website, estimated a background traffic growth of 2% annually. In response to concerns that the TIS was out of date, the Applicant explained the TIS took the traffic data from 2016 and 2017 and forecast it to 2018 and 2038. The Applicant explained a maximum of 60 trucks per day would be accepted, and that typical volume would be 20 to 30 trucks per day. The Applicant committed to monitoring actual truck numbers during operations with the help of a future community liaison committee, if a permit is issued. The site is being designed for a dump truck and trailer combination.</p> <p>The Applicant also committed to implementing operational controls, e.g., notification of site</p>

Issue	Mitigations and Permit Conditions	Rationale
		access routes during the pre-approval process for haulers, and signage during operating hours to direct traffic flow.
<p>Risks and impacts of non-compliant haulers during operations, e.g., trucks travelling through residential streets, risk of collisions with trains at the Salter Street rail crossing, queuing while waiting to enter the site.</p>	<p>Condition No. 70 requires that the Permit Holder carry out operations in accordance with the approved Site Access Route Plan and Traffic Route Plan Map.</p>	<p>The Applicant indicated trucks would travel along designated truck routes, through Annacis Island, and access and exit the facility via Salter Street. There will be no southbound left-turns from Derwent Way nor westbound right-turns from Salter Street in order to route all site traffic through industrial zones. Trucks will not be permitted to stop on the railway tracks, and no staging would be allowed on adjacent roadways. The Applicant confirmed there is sufficient space on-site to allow internal queues of four vehicles.</p> <p>In response to questions about enforcement of truck routes off-site, the Applicant and the Port Authority explained off-site traffic is under the responsibility of various authorities and jurisdictions. While on-site and off-site truck traffic are connected, the Applicant has limited control and responsibility over what happens outside of the property.</p> <p>The Port Authority indicated conversations had taken place with City of New Westminister staff about minimizing traffic impacts on the roadways outside of the Port Authority jurisdiction. Further to discussions with the City, the Applicant provided a traffic memo in 2019, available on our website, which concluded the site will not trigger the need for a southbound left-hand turn lane from Derwent Way onto Salter Street. A subsequent traffic memo in 2021, available on our website, confirmed there would be limited occurrences where trucks are unable to access the site due to train crossings, especially as the rail crossing is primarily active at night, when the site is not operating.</p> <p>The Applicant outlined measures to encourage the use of designated truck routes, e.g., banning non-compliant haulers, and added it would continue communication with the municipality's traffic enforcement officials to help monitor compliance with preferred truck routes.</p>
<p>Monitoring of daily limit of trucks at the facility.</p>	<p>None required.</p>	<p>The Applicant indicated the proposed facility would have a truck manifest, and that all loads would be pre-approved based on the daily volume limits. Design does not accommodate more than 60 trucks per day.</p>
<p>Possible increase in marine traffic</p>	<p>None required.</p>	<p>Practices and procedures at the Port of Vancouver, pursuant to the <i>Canada Marine Act</i>,</p>

Issue	Mitigations and Permit Conditions	Rationale
<p>and disruptions to other Fraser River users such as kayakers, the nearby marina operator, float home residents, and smaller river vessels.</p>		<p>are designed to promote safe and efficient navigation within the local waters of the port. These apply to all vessels in the port, including pleasure craft, recreational vessels, and other users of the port, e.g., tenants. The Port Authority regularly reminds boaters to stay safe, keep clear of port operations and commercial activity areas, including the Fraser River, and reference the safe boating guide.</p> <p>Float homes are located west of Derwent Way and are not anticipated to be impacted by the Project. Any new barges would keep to existing navigational channels and are expected to follow safe boating procedures.</p>
<p>Theme: noise</p>		
<p>Cumulative impacts of noise from operations at the new facility, in addition to existing noise levels, e.g. trains, vehicle traffic.</p>	<p>Condition No. 68 requires the Permit Holder to submit a noise monitoring plan upon completion of the Project, and conduct monitoring to assess the noise levels within the surrounding community and determine the relative contribution from the facility.</p> <p>Condition No. 71 requires the Permit Holder to adhere to specifications for the noise barrier along the western edge of the facility are met.</p>	<p>The Applicant outlined design features to reduce noise levels during operation, e.g., sound barrier along the western boundary of the property, and restrictions on unnecessary engine idling.</p> <p>The Applicant completed a TIS which concluded that the expected numbers of trucks per day, including during peak hours, would not significantly increase noise over current levels.</p> <p>The Applicant would discuss potential noise issues with the community as part of a future liaison committee, if a permit is issued.</p> <p>The Applicant's Noise Assessment Screening Worksheet (2017), available on our website, includes information on anticipated noise.</p>
<p>Concerns about possible noise from vibrations and machinery on site, during construction and operation.</p>	<p>Condition No. 37 requires the permit holder to complete the Project in accordance with the CEMP. The CEMP details noise mitigation measures.</p> <p>Condition Nos. 19 and 20 relate to construction communication. The Permit Holder is required to inform the community of anticipated construction impacts and mitigations, including noise.</p> <p>Condition No. 32 relates to construction hours. The Permit Holder will adhere to the Port Authority's standard construction hours: Monday to Saturday, 7:00 am to 8:00 pm. No work will be permitted on Sundays or on statutory holidays.</p> <p>Condition No. 68 requires the Permit Holder submit a noise monitoring plan</p>	<p>The Applicant's geotechnical report, available on our website, concluded that the soils underneath the site are predominantly consolidated soils, and that no noticeable noise or vibrations are anticipated from soil being deposited within the storage area.</p> <p>The Applicant would undertake subsurface consolidation during site preparation, and implement mitigations, e.g., the soil storage would be covered, machinery on site would be minimized, and a sound barrier would be installed along the western boundary.</p> <p>If a permit is issued, the Permit Holder would monitor potential noise with the help of a future community liaison committee.</p>

Issue	Mitigations and Permit Conditions	Rationale
	<p>upon completion of the Project, and conduct monitoring to assess the noise levels within the surrounding community and determine the relative contribution from the facility.</p> <p>Condition No. 71 requires the Permit Holder adhere to specifications for the noise barrier along the western edge of the facility are met.</p>	
Theme: public engagement and Indigenous and stakeholder consultation		
<p>Adequacy of the Applicant's public engagement approach and future commitment to ongoing communication.</p>	<p>Condition No. 19 requires that the Permit Holder submit a draft construction communications plan, and draft operations communication plan, detailing how the community will be informed and updated prior to and during construction, as well as throughout operations, along with a draft construction notification, and construction sign.</p> <p>Condition No. 20 requires that the Permit Holder distributes an approved construction notification 10 business days prior to the start of construction, and install the approved construction sign within the same timeline.</p> <p>Condition No. 34 requires that the Permit Holder notifies the port authority of complaints received during construction and throughout operations, indicating how the Permit Holder has responded to such complaints.</p>	<p>While there were some comments commending the Applicant's public engagement efforts, there were significant concerns that the first public engagement period did not provide sufficient time (15 business days) nor notice (via mail-out) for public input. The public asked for a widely advertised public meeting, conducive to dialogue, and that the Port Authority's decision maker be in attendance. In response, the Port Authority required the Applicant to conduct a second public engagement period.</p> <p>The Applicant planned two in-person sessions for late March 2020 and a public notice was distributed. Members of the public questioned the safety of the meeting given the onset of the COVID-19 pandemic, and some asked for broader engagement. By the time the Applicant and the Port Authority had deemed it necessary to cancel the sessions (March 13, 2020), the notices were already in circulation. The Applicant took down their registration page and posted a note on their website. The Port Authority posted a note on March 16, 2020.</p> <p>The Port Authority reiterated that a meaningful engagement process needed to precede permit decision. The Applicant was asked to update and adapt the public engagement plan to a digital format, and outline notification methods and engagement opportunities. The second engagement period was held between May 29 and July 7, 2020, during which the Applicant held two digital public engagement sessions.</p> <p>There were some concerns about notification and timeline for input (extended to 25 business days). The Port Authority explained public engagement requirements for Applicants undergoing a category C PER review, and reminded the public that audio recordings of the sessions, an online survey, and a summary and considerations report would be available on the Applicant's website.</p>

Issue	Mitigations and Permit Conditions	Rationale
		The Applicant has indicated their commitment to explore the development of a community liaison committee to discuss public concerns during construction and operation, if a permit is issued.
Consultation with the City of New Westminster	None required.	The Port Authority explained that formal engagement activities with stakeholder groups, including the City of New Westminster, are part of the PER process. City staff interested in reviewing public feedback received during the public engagement periods were encouraged to review the summary of public engagement and considerations reports.
Consultation with Indigenous groups	None required.	During the second public engagement period there was a question about which Indigenous groups had been consulted. The Port Authority followed up to confirm that consultation with Indigenous groups that have asserted or treaty rights in the application area is part of the PER process.
Theme: miscellaneous topics		
Aesthetics of the proposed facility.	None required.	The Applicant indicated the facility would be covered and be placed below grade. Visual buffers on the western perimeter of the site would include soil berms, lock block walls and fence, shrubs, and trees.
Short and long-term environmental impacts and/or benefits of the proposed facility.	Condition No. 37 requires the permit holder to complete the Project in accordance with the CEMP.	The Applicant outlined the guidelines under which environmental impacts from the facility would be regulated, and explained how the facility would help deal with illegal dumping.
Impacts to the dyke reserve and infrastructure on riparian area.	None required.	The design for the facility was modified on July 18, 2019 to ensure that no infrastructure is on the dyke. The Applicant confirmed there would be minimal work or impact on the riparian area.
Possible effects on wildlife and wildlife habitat during construction and operations, including concerns about the loss of Fraser River wetlands, and risk of invasive species.	<p>Condition No. 37 requires the permit holder to complete the Project in accordance with the CEMP and the Vegetation Plan. The CEMP details additional measures for wildlife and vegetation protection management, as well as best management practices. Subsequent updates to the CEMP must be approved by the Port Authority.</p> <p>Condition No. 63 requires the Permit Holder engages a qualified environmental professional to monitor the Project when works are underway.</p>	<p>The Applicant completed studies and plans, available on our website, that include measures for wildlife and vegetation protection during construction. These include a Biophysical Assessment and Vegetation Plan (2019), a CEMP (2019); including management plans for in-water construction, a Stormwater Pollution Prevention Plan (2019), and a Contingency and Spill Response Plan (2019).</p> <p>The Applicant has also implemented changes to have a lower impact facility design, such as using a conveyor as opposed to a barge dock and loading ramp. The Applicant explained that any invasive species would be handled in accordance with provincial best practices.</p>

Issue	Mitigations and Permit Conditions	Rationale
		<p>If a permit is issued, the Permit Holder will plant trees adjacent to the barge conveyor to offset tree and vegetation removal during site preparation. During short-term pile installation for the barge conveyor, the Permit Holder will conduct activities within the least risk window for the Fraser River Estuary, and will follow best practices for pile driving.</p> <p>The Applicant will also conduct a pre-clearance survey 72 hours prior to vegetation clearing, and avoid soil clearing during bird nesting season.</p>
<p>Misalignment of the Project with the needs of the growing residential Queensborough community.</p>	<p>None required.</p>	<p>The public shared concerns about the proximity between growing residential communities in Queensborough and the proposed project site. In particular, some residents mentioned developers were marketing the area to include light industrial uses and forthcoming amenities.</p> <p>The Port Authority explained municipal governments are responsible for managing and zoning their lands, and that much of the land intended for industrial activities is being converted to other uses, such as residential and commercial.</p> <p>The site for the proposed facility is designated for industrial use under the Port Authority land use plan.</p> <p>The Applicant expressed their commitment to explore the development of a community liaison committee to discuss public concerns during construction and operation, if a permit is issued.</p>
<p>Confusion over the scope and location of the Project</p>	<p>None required.</p>	<p>Between 2018 and 2019, there was some confusion over whether the gravel and equipment storage facility at 404a Salter Street was part of the proposed Project scope. Site preparation works once the lease was approved alarmed nearby residents at 320 Salter Street and the Port Royal community. In spring 2019, a community-led petition and online survey showed opposition to the Project, but was centered on the gravel and storage facility.</p> <p>The Applicant and the Port Authority clarified the gravel and storage facility was not part of the Project scope, and that a separate public engagement period and consultation summary report were undertaken. This facility is already in service and operates independently from the Project. Project-specific concerns raised in the community-led online survey were addressed in the second public engagement period for the Project.</p>

Issue	Mitigations and Permit Conditions	Rationale
<p>Port Authority support for projects or amenities in Queensborough, e.g., a facility design that enables access near the water, and a new walkway and park in the south bank on the North Arm of the Fraser River.</p>	<p>None required.</p>	<p>The Port Authority explained the site for the proposed facility has an industrial Port Authority land use designation. Recreational uses at this site, e.g., public access to the water, do not conform to the industrial designation.</p> <p>The Port Authority also provided more information about the Port Authority Community Investment program application process and criteria, available online.</p> <p>In response to questions about new walkways and parks along dyke right of ways on the south bank on the North Arm of the Fraser River, the Port Authority explained the municipality is the dyking authority. Any development would require ensuring the dykes are unencumbered, but would be at the discretion of the City of New Westminster.</p>
<p>Subjectivity of the Port Authority review process when defining what constitutes 'significant impacts'.</p>	<p>None required.</p>	<p>The Port Authority followed up to explain the definition of environmental effects taken into account is outlined in section 5 of <i>Canadian Environmental Assessment Act</i> (CEAA): https://laws-lois.justice.gc.ca/eng/acts/c-15.21/page-2.html.</p> <p>As the review for this Project commenced prior to the <i>Impact Assessment Act</i> coming into force in August 2019, the review is being considered under CEAA.</p>
<p>Possible conflict of interest between the Port Authority and the Applicant, and between the Port Authority and the City of New Westminster</p>	<p>None required.</p>	<p>There were concerns with respect to the Port Authority receiving revenue from leasing the land for the proposed facility, and with the municipality and the Port Authority having a financial relationship due to some municipal infrastructure being within the Port Authority right of way –making residents feel they have no say in the process, and that the City may not be free to advocate on behalf of residents.</p> <p>We use our PER process to fulfill our federal responsibilities under the <i>Canada Marine Act</i> and relevant legislation, and to review all potential effects on federal land and waters, and neighbouring communities before determining if a project should proceed.</p> <p>Any proposed project on lands or waters within the Port Authority's jurisdiction cannot begin work unless a permit has been issued. Before making a decision, the Port Authority takes into consideration the input from the public, Indigenous groups, and stakeholders, and the Applicant's considerations based on that input.</p>

Issue	Mitigations and Permit Conditions	Rationale
		More information on the PER process is available on our website: www.portvancouver.com/permitting-and-reviews/per/ .

The Port Authority has reviewed the record of public engagement, and provided that the mitigation measures and conditions outlined in the table above are included in the Permit, is of the view that the Project has adequately addressed the concerns raised during public engagement.

The proposed Project was assessed by the Port Authority to have potential impacts to community interests in the surrounding area during construction and upon completion. These include potential impacts such as noise, traffic and dust.

As a result, the Permit Holder is required to send a construction notification to adjacent residents and businesses in New Westminster and Delta, as shown in the map below. The notification area is within approximately 1 kilometre from the project site. The construction notification shall be distributed by the Permit Holder at least 10 business days prior to the start of the works. The construction notification will be posted on the Port Authority and the Permit Holder websites. The Permit Holder is also required to install construction signage in a mutually agreed location at least 10 business days prior to the start of works. These requirements are set out in condition Nos. 19 and 20 in the project permit.

Map of notification area:



6 INDIGENOUS CONSULTATION

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

The following Indigenous groups were consulted:

- Cowichan Tribes;
- Halalt First Nation;
- Katzie First Nation
- Kwantlen First Nation;
- Kwikwetlem First Nation;
- Lake Cowichan First Nation;
- Lyackson First Nation;
- Musqueam Indian Band;
- Penelakut Tribes;
- Semiahmoo First Nation
- Squamish Nation;
- Tsawwassen First Nation;
- Tseil-Waututh Nation; and,
- Sto:lo Nations, via People of the River Referrals Office (PRRO).

Through the PRRO, Matsqui First Nation was also consulted.

The following consultation activities were conducted:

- On January 22, 2018, the port authority sent a referral letter to Indigenous groups. The correspondence included access to management plans, site plans, maps, an Archaeological Overview Assessment and other materials submitted as part of the project permit application. All project information was available for download on the port authority website.
- On June 5, 2018, the port authority emailed Indigenous groups to advise that the proposed project had been placed on hold.
- On June 5, 2020, the port authority contacted Indigenous groups regarding the proposed project application. The port authority noted that the application had been on and off hold several times and summarized consultation activities to date. Project updates were also shared and the port authority requested any additional questions or comments be provided by July 15, 2020. The port authority offered to meet virtually with Indigenous groups to discuss the proposed project.

During the technical review period, the port authority received comments, concerns, and interests regarding the proposed project. Below is a table summarizing key comments and concerns received from Indigenous groups and how they were considered as part of the Project and Environmental Review.

Issue	Mitigations and Permit Conditions	Rationale
Concern regarding potential impacts to archaeological resources.	The proposed project is not expected to adversely impact archaeological resources.	The site is subject to historic fill dating between 1974 and 1979. The fill appears to be comprised of sand material, possibly sourced from dredging of the Fraser River. The soil conditions in the general area of the project site are anticipated to consist of Fraser River Sediments comprised of overbank silty to silty clay loam normally up to 2 m thick overlying deltaic channel fill consisting of sandy to

		silt loam, underlain by 10 m to 40 m thick interbedded fine to medium sand and minor silt beds. This stratigraphy does not include the fill material placed in the recent decades near the shoreline.
Concern regarding lack of noise assessment, light assessment and traffic assessment.	<p>Condition No. 68 will require the Permit Holder submit a noise monitoring plan, for approval by the port authority, to assess the impact to noise levels within the surrounding community.</p> <p>Condition No. 71 requires the Permit Holder adhere to specifications for the noise barrier along the western edge of the facility are met.</p>	The lights installed as part of the Project will be energy efficient LED flood lights, focused to illuminate the working area and minimize stray light. Lights will be directed away from the water and kept as low as possible to reduce light pollution to adjacent properties, as shown on the Site Plan, drawing No. 03082-04. Vegetation along the shoreline will be retained, where possible, and will further reduce light impacts to the River.
<p>Concern regarding impacts to Sturgeon.</p> <p>Recommend a Sturgeon presence-absence study using an instant imaging system such as side-scanning sonar with and without pile driving noise (or other potentially harmful noise sources during construction).</p>	<p>Condition No. 37 requires the Permit Holder to complete the Project in accordance with the CEMP. The CEMP describes mitigation measures to reduce impact to fish.</p> <p>Condition No. 63 will also require the Permit Holder to engage a qualified environmental professional to monitor that the works are carried out in compliance with the Permit.</p>	<p>Proposed mitigations, described in Section 3.1 of the CEMP, include:</p> <ul style="list-style-type: none"> • No in-water works will take place outside of the recommended least risk window, as defined by DFO • Piles will be driven using vibratory techniques. <p>Bubble curtains will be implemented, where required, to reduce impact pressure.</p> <p>Given the scope of in-water works and with mitigation in place, the project is not expected to adversely impact sturgeon through underwater noise or direct physical effects.</p>
Planting guides should be done in conjunction with First Nations, and criteria should include cultural values. Also, native plant species should be selected for planting; and Invasive Species Assessment requires a long term monitoring plan.	<p>Condition No. 37 requires the Permit Holder to complete the Project in accordance with the CEMP. The CEMP outlines a Vegetation Management Plan.</p> <p>Condition No. 49 requires the Permit Holder to manage invasive plants in a manner that prevents spread.</p> <p>Condition No. 67 will require the Permit Holder to conduct an annual assessment of planted vegetation to ensure sufficient survival rate.</p>	The Applicant's revised replanting plan outlines the use of only native species with the exception of the use of Swedish columnar aspen. The applicant proposes to plant Swedish columnar aspen along the western edge of the property to act as a landscape and noise barrier. This species is not considered native, however is same genus as black cottonwood already growing at the site. Although Swedish columnar aspen is not native, it is considered a non-aggressive species. The applicant will be required to manage invasive species appropriately.
Eulachon, sturgeon (including white sturgeon) and other fish as well, are important to	Condition No. 37 requires the Permit Holder to complete the Project in accordance with the CEMP. The	The port authority understands that fish species such as eulachon and sturgeon are important to Indigenous groups. No in-water works will take place outside of

<p>Indigenous groups.</p>	<p>CEMP describes mitigation measures to reduce impact to fish.</p> <p>Condition No. 39 requires the Permit Holder not to conduct work within the fisheries sensitive period.</p> <p>Condition No. 42 will require the Permit Holder to cease work should fish or fish habitat be harmed.</p> <p>Condition No. 63 will require the Permit Holder to engage a qualified environmental professional to monitor that the works are carried out in compliance with the Permit.</p>	<p>the recommended least risk window, as defined by DFO.</p>
<p>Recommendation for environmental monitoring.</p>	<p>Condition No. 63 will require the Permit Holder to engage a qualified environmental professional to monitor that the works are carried out in compliance with the Permit.</p>	<p>The port authority will require an environmental monitor be present for the project.</p>

The Port Authority has made a meaningful effort to consult with all potentially affected Indigenous groups. Based on the record of consultation, the Port Authority is of the view that the duty to consult has been met.

7 ENVIRONMENTAL REVIEW

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

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

7.1 Scope of Environmental Review

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

The temporal scope of the review includes Project construction, and operations up to the anticipated average annual facility throughput of about 213,000 tonnes of soil per year.

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

The environmental components assessed by the Port Authority are presented in Section 7.2 and include the environmental effects listed in section 5(1) and 5(2) of CEEA 2012. Section 7.2 summarizes the results of the environmental review.

7.2 Summary of Follow-up and Monitoring Programs

Follow-up programs will be completed by Summit Earthworks Inc. to confirm the effectiveness of the environmental mitigation measures during operations. These include follow-up programs for:

- Noise monitoring
- Air Emissions Management Plan
- Stormwater monitoring

To confirm the effectiveness of the noise mitigation measures, the Port Authority requires that post operation noise monitoring is conducted to quantify noise levels within the surrounding community. This is described in condition No. 68 in the Permit.

An air emission management plan is required by the Applicant to assist with the management of emissions to the air associated with operations occurring on Port lands and waters. This is described in condition No. 65 in the Permit.

An annual assessment of planted vegetation is required post planting to ensure that planted vegetation meets survival thresholds. This is described in condition No. 67 in the Permit.

Weekly onsite stormwater inspections will be conducted and documented by the Applicant and will include inspection of stormwater infrastructure, implementation of BMPs and water quality of treated discharge water. Stormwater collected in storage and treatment tanks will be monitored and tested prior to discharge into the infiltration gallery. Analytical tests will be based on specific soil characteristics of stored soil and may typically include heavy metals, hydrocarbons and pH. Stormwater inspection documentation and analytical data will be provided to the Port Authority for the first year of operations. This is described in condition No. 66 in the Permit.

7.3 Environmental Effects Summary

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

Environmental Component	Potential Adverse Effects?		Overview of Potential Adverse Effects, Mitigation Measures, and Residual Adverse Effects	Significant Residual Adverse Effects?	
	Yes	No		Yes	No
Air quality Assessed as required under subsection 5(1) and 5(2) of CEEA 2012	<input checked="" type="checkbox"/>	<input type="checkbox"/>	There is potential for adverse effects on air quality during construction and operations. An air quality assessment was conducted to estimate air pollutant emissions associated with the operation, including marine emissions, waste soil handling and wind erosion from the soil stockpiles. The project may result in emissions of particulate matter, volatile organic compounds, sulfur dioxide, nitrous oxide, and carbon monoxide. Design measures have been implemented to mitigate air emissions during operations, specifically, to reduce fugitive dust from wind erosion and entrainment of particulate matter into the air from the soil stockpiles. The soil will be stockpiled in a below-grade storage area, surrounded by lock block walls, and a roof. The vegetative barrier along the property boundary will also mitigate fugitive dust	<input type="checkbox"/>	<input checked="" type="checkbox"/>

			<p>from moving offsite. During construction activities excavated soils will be covered with a polyethylene sheet to reduce fugitive dust transfer.</p> <p>There is potential for air emissions (i.e., greenhouse gas and particulate matter) during construction from vehicle operation and soil transfer work. Mitigation measures to reduce the potential for adverse effects will be implemented as detailed in the CEMP. This includes an idling reduction strategy, and dust management strategy (e.g., covering haul trucks prior to leaving site, sweeping or washing vehicles before leaving site using a wheel wash, and watering bare soil if there is insufficient rain for seven days). In addition, an Air Emissions Management Plan addressing operations shall be prepared by the Applicant. These mitigation measures are reflected in condition Nos. 37, 60, 61, 64, 65 and 69 in the Permit.</p> <p>With mitigation in place, residual adverse effects on air quality are expected to be not significant.</p>		
Lighting	■	□	<p>There will be exterior lights installed as part of the project. The lights will be energy efficient LED flood lights, focused to illuminate the working area and minimize stray light.</p> <p>Residual adverse effects due to lighting are expected to be not significant.</p>	□	■
Noise Assessed as required under subsection 5(1) and 5(2) of CEAA 2012	■	□	<p>There is potential for adverse effects on noise during construction and operations. Operational noise is anticipated from loading/unloading soil via truck and using other equipment on site.</p> <p>The soil transfer facility has been designed to minimize noise impacts on the community. A 2.5 m high noise barrier wall will be installed on the southwest property boundary. The noise barrier wall will extend approximately 70 m from the south corner of the property, but will not extend the full length of the property due to railway sight line requirements. Trees will be planted in a 3.0 m wide zone directly along the noise barrier wall to provide a secondary noise barrier. In addition, the soil storage area will be 1.5 m below grade, with lock block walls that extend from the bottom to 2.25 m above the existing grade which will provide a noise barrier. The storage area will be covered with a pre-manufactured roof structure supported on the lock block wall to further minimize noise. The noise barrier wall and contained soil storage area were designed to mitigate operational noise on the site.</p> <p>During construction activities, the CEMP identifies measures to mitigate construction related noise</p>	□	■

		<p>(e.g., using well maintained equipment). Project work hours are planned to be between 7:00 am and 8:00 pm. In addition, adjacent residents will be kept informed of any particularly noisy periods during construction and advised of mitigations, and a public relations contact will be available to respond and address concerns at all times.</p> <p>These mitigation measures are reflected in condition Nos. 32, 37, 64, 68 and 71 in the Permit.</p> <p>With the implementation of mitigation measures, the residual adverse effect from noise is expected to be not significant.</p>		
<p>Soils</p>	<p>■</p>	<p>□</p> <p>The waste soil that will be transferred through this site will exceed industrial land use standards, and will be below hazardous waste standards. All applicable contaminated sites regulations will be adhered to during operations.</p> <p>Through operational activity, there is potential for adverse effects on soil quality at the site from the temporary storage and transfer of contaminated soil. The project has been designed to mitigate effects on soil quality through the installation of a geomembrane liner underneath 100 mm thick asphalt upon which the waste soil will be stored. The geomembrane liner will extend under the full width of the storage access road containing the wheel wash station and up through the lock block retaining wall. Monitoring wells will be installed around the waste soil storage area and periodically sampled to ensure integrity of the liner. Key mitigation measures identified in the Contingency and Spill Response Plan will be implemented during operations.</p> <p>There is potential adverse effects to soils onsite during operations through infiltration of stormwater. The site has been designed to mitigate the effects of stormwater that has come in contact with waste soils stored onsite. The site will be paved along the access corridor, soil storage area and wheel wash area and the soil storage area will be covered. Stormwater from the site will be directed from paved areas through storm drains, sump systems and swales into two 5,000 gallon storage tanks designed for a 1-in-25 year storm event with additional capacity for wheel washing. Stormwater will be directed from storage tanks into the onsite treatment system which includes solids settling, polymer-based flocculent injection, sand filtration and a granular activated carbon filter. Effluent water will be tested prior to discharge into the infiltration gallery. The infiltration gallery (approximately 4.5 m x 47 m) consists of perforated PVC pipes</p>	<p>□</p>	<p>■</p>

			<p>embedded in 50 mm drain rock to distribute the flow of treated stormwater and allow it to percolate into native soils, along the northern and southern edges of the waste soil storage area. Mitigation measures to reduce the potential for adverse effects to soils will be implemented as detailed in the Construction Environmental Management Plan, and the Stormwater Pollution Prevention Plan.</p> <p>During construction of the facility, if soils suspected to be contaminated are encountered, they will be temporarily stockpiled, covered with a polyethylene sheet and sampled. If contamination is present, soil will be disposed of at an appropriate disposal facility. Key mitigation measures identified in the CEMP will be implemented to reduce potential adverse effects when handling excavated soil.</p> <p>These mitigation measures are reflected in condition Nos. 37, 53, 54, and 56 in the Permit.</p> <p>With mitigation in place, residual adverse effects on soils are expected to be not significant.</p>		
<p>Sediments</p> <p>Assessed as required under subsection 5(1) and 5(2) of CEEA 2012</p>	■	□	<p>The project has the potential to adversely affect sediments as there is potential of soil being spilled during the barge transfer operation.</p> <p>Sediment quality issues will be mitigated as for “surface water and water bodies”, described below.</p>	□	■
<p>Groundwater</p>	□	■	<p>During operations, there is potential for adverse effects on groundwater quality through the handling of waste soils and the infiltration of stormwater.</p> <p>The soil storage area will be lined with a geomembrane that will extend under the full width of the storage excess road containing the wheel wash station and up through the lock block retaining wall. Monitoring wells will be installed around the soil storage area and periodically sampled to ensure integrity of the liner.</p> <p>The site will be paved along the access corridor, soil storage area and wheel wash area. Stormwater from the site will be directed from paved areas through storm drains, sump systems and swales into two 5,000 gallon storage tanks designed for a 1-in-25 year storm event with additional capacity for wheel washing. Stormwater will be directed from storage tanks into the onsite treatment system which includes solids settling, polymer-based flocculent injection, sand filtration and a granular activated carbon filter. Effluent water will be tested prior to discharge into the infiltration gallery. The infiltration gallery (approximately 4.5 m x 47 m) consists of perforated PVC pipes embedded in 50 mm drain rock to distribute the flow of treated</p>	□	■

		<p>stormwater and allow it to percolate into native soils.</p> <p>During construction of the facility, there is the low likelihood of adverse effects on groundwater quality during soil excavation as groundwater was encountered between 5 and 6 meters below grade, and the maximum anticipated depth of excavation is approximately 2.5 meters. The construction works are not anticipated to encounter groundwater. Should groundwater being encountered, no dewatering can occur without prior to approval from the Port Authority.</p> <p>With mitigation measures in place, residual adverse effects on groundwater quality are expected to be not significant.</p>		
<p>Surface water and water bodies</p> <p>Assessed as required under subsection 5(1) and 5(2) of CEAA 2012</p>	<p>■</p>	<p>□</p> <p>There is potential for adverse effects to surface water from runoff of stormwater and wheel wash wastewater, and potential spillage of waste soil into the Fraser River.</p> <p>The Project has been designed to mitigate potential adverse effects from stormwater that has come in contact with waste soils stored at the site. As described in the Stormwater Pollution Prevention Plan, stormwater from the waste soils storage area, truck unloading, barge ramp and truck wheel wash will be collected by installed catch basins, sumps and swales and directed to two 5,000 gallon holding tanks. Stormwater will then be treated by an onsite treatment system, tested to ensure applicable water quality parameters are achieved (e.g., contaminants of concern, TSS and pH), and discharged to the designed infiltration gallery. There will be no direct discharge to the Fraser River. Additional environmental mitigation measures are identified in the Contingency Spill Response Plan and the Stormwater Pollution Prevention Plan.</p> <p>During construction, mitigation measures listed in the CEMP will be implemented to reduce potential adverse effects on surface water. Key mitigation measures for stormwater runoff include: installing sediment and erosion control measures (e.g., silt fencing), covering soil stockpiles at the end of each day and/or during periods of heavy rain, using low toxicity antifreeze/coolants on land-based equipment, and sampling stormwater runoff for turbidity and pH prior to discharge.</p> <p>During barge loading at the berth and transfer of waste soils from New Westminster to Mission, there may be a residual effect on surface water. During barge loading operations a telescoping loading spout will be in-place at the head of the conveyor to</p>	<p>□</p>	<p>■</p>

		<p>direct soils onto the barge at minimal height. The conveyor system consists of a stainless steel cover and spill tray to prevent spillage of soils during conveyor movement. Conveyor systems and spill trays will be cleaned and maintained on a regular schedule. The conveyor system and spill tray will be cleaned by vacuum and cleaning jets with a collection tank installed to collect cleaning water. Barges will have solid hull construction and will be side sealed for containment of soil and run-off water that may be generated during rainfall while soil is transferred by barge. Typical side sealing consists of the use of bin walls or using geo-membrane lined concrete block perimeters. A sump pump will be available on the barge to remove any water accumulation, and water will be treated at an upland facility. Barges will not be loaded or transit during extreme weather or river conditions, such as the annual spring freshet in the Fraser River.</p> <p>These mitigation measures are reflected in condition Nos. 37, 38, and 50 in the Permit.</p> <p>With mitigation measures in place, residual adverse effects on surface water bodies (i.e., Fraser River) are expected to be not significant.</p>		
<p>Species/habitat with special status</p>	<p><input type="checkbox"/></p>	<p><input checked="" type="checkbox"/></p> <p>The project is not expected to affect species, or habitats, with special status.</p> <p>There have been documented occurrences of white sturgeon downstream of the proposed barge ramp. White sturgeon has been categorized as threatened by the Committee on the Status of Endangered Wildlife in Canada (COSEWIC).</p> <p>With mitigation measures in place for surface water and sediment, there is no anticipated residual effect on species with special status.</p>	<p><input type="checkbox"/></p>	<p><input checked="" type="checkbox"/></p>
<p>Terrestrial resources (e.g., vegetation, wildlife, etc.)</p> <p>Assessed as required under subsection 5(1) and 5(2) of CEAA 2012</p> <p>Assessed under section 79 of the Species at Risk Act, as applicable</p>	<p><input checked="" type="checkbox"/></p>	<p><input type="checkbox"/></p> <p>The project will result in the permanent removal of vegetation, including approximately 90 mature trees and understory vegetation. The existing vegetation includes: red alder, pacific ninebark, willow species, black cottonwood, big leaf maple, sword fern, hawthorn, horsetail, snowberry and fireweed. There are some invasive species on site, including scotch broom and blackberry.</p> <p>Mitigation measures will be implemented to reduce potential adverse effects, including retaining trees within 10 meters of the Fraser River (except in the footprint of the barge ramp), and re-planting the eastern side of the site with approximately 50 Swedish columnar aspen and several native shrubs (baldhip rose, black hawthorn, common snowberry, hardhack, oceanspray, pacific ninebark, red</p>	<p><input type="checkbox"/></p>	<p><input checked="" type="checkbox"/></p>

			<p>elderberry, red-osier dogwood, Saskatoon and sword fern).</p> <p>Disturbed and exposed soil could promote the spread of invasive plants. Mitigation measures to reduce potential adverse effects include: revegetating exposed soil with fast, growing native species, adhering to the species-specific control measures identified, monitoring monthly for invasive species, verifying fill material is not contaminated with invasive seeds, and appropriately disposing of existing invasive species. With mitigation in place, residual adverse effects on vegetation is not expected to be significant.</p> <p>There is potential for birds to nest in the vegetation being removed. During the biophysical assessment, no nesting birds were detected. Mitigation measures will be implemented to reduce potential adverse effects on wildlife. To reduce the risk of Project-related harm to birds and/or their nests and eggs, vegetation clearing will be avoided between April 1 and July 31 during the bird nesting season. If vegetation is cleared during the aforementioned timeframe, a Qualified Environmental Professional will complete a pre-clearance nest survey within one week of the vegetation clearing.</p> <p>These mitigation measures are reflected in condition Nos. 23, 33, 37, 48, 49, 60 and 67 in the Permit.</p> <p>With mitigation in place, residual adverse effects on terrestrial resources is not expected to be significant.</p>		
Wetlands	<input type="checkbox"/>	<input checked="" type="checkbox"/>	The Project is not expected to affect wetland resources because there are no wetlands located near the vicinity of the Project.	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<p>Aquatic resources (e.g., aquatic plants, fish and fish habitat, waterbirds, marine mammals, etc.)</p> <p>Assessed as required under subsection 5(1) of CEAA 2012</p> <p>Assessed under section 79 of the Species at Risk Act, as applicable</p>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<p>There is potential for adverse effects on aquatic resources from in-water works and barge loading activities. Fish, invertebrates, plants, waterbirds, and marine mammals use the marine habitats near the Project site.</p> <p>As part of the project, in-water works will include installation of four barge mooring dolphins each comprised of a vertical 914 mm steel pipe pile and two 610 mm steel batter piles. A conveyor truss support will be installed and consist of two 306 mm diameter steel pipe piles each with one 254 mm diameter steel pile batter. All piles will be driven by vibratory hammer to minimize impact noise to aquatic animals. Mitigation measures to reduce potential adverse effects on aquatic resources are identified in the CEMP and include driving piles by vibratory hammer to minimize impact noise to</p>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

			<p>aquatic animals, and conducting pile driving in the least risk to fish window.</p> <p>Potential for adverse effects to aquatic resources from barge loading activities are assessed as under “surface water and water bodies”, described above.</p> <p>The existing shoreline has been assessed as low productivity habitat and has minimal vegetation, limited to sedge, rush and reed canary grass. An existing upland ditch will be in-filled during the work. The biophysical assessment identified the ditch to be dry and not aquatic habitat.</p> <p>These mitigation measures are reflected in condition Nos. 37, 38, 39, 40 and 41 in the Permit.</p> <p>With mitigation in place, residual adverse effects on aquatic resources is not expected to be significant.</p>		
<p>Archaeological, physical, and cultural heritage resources</p> <p>Assessed as required under subsection 5(1) and 5(2) of CEAA 2012</p>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<p>The proposed works are not anticipated to affect archaeological, physical, and cultural heritage resources.</p>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<p>Health and socio-economic conditions</p> <p>Assessed as required under subsection 5(1) and 5(2) of CEAA 2012</p>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<p>Based on the low magnitude of residual effects on air and noise, the Project is not expected to cause adverse effects on health of people, including Indigenous People.</p> <p>During the public and Indigenous consultation process we received some feedback and comments related to air quality, noise, and human health concerns. A detailed summary of issued raised during consultation is provided in Section 5 and 6.</p>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<p>Accidents and malfunctions</p> <p>Assessed as required by the <i>Canada Marine Act</i></p>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<p>There is potential for adverse effects on surface water, aquatic resources, soils, and groundwater from spills or accidental equipment leaks or malfunctions. Mitigation measures will be in place to reduce potential for adverse, project-related effects due to accidents, by implementing the measures outlined in the Spill Contingency Plan (for operational activity) and the CEMP (for construction-related activity). These mitigation measures are reflected in condition Nos. 33 and 37 in the Permit.</p> <p>With mitigation in place, the residual adverse effect, if it occurs, is expected to be not significant.</p>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Residual adverse effects (i.e., effects that remain with mitigation in place) were identified for the following environmental components: air quality, noise, light, soil, groundwater, surface water and water bodies, terrestrial resources and aquatic resources.

Overall, the residual adverse effects of the project on these environmental components are characterized as:

- Medium in magnitude due to impacts on air, noise and surface water during operations. The highest magnitude effect will be from increases to air emissions and noise generated during operation and from generation and management of stormwater and soils onsite.
- Local in geographic extent because adverse environmental effects will be limited to the Project site, however some regional effects may occur during barge transport of soil from New Westminster to Mission.
- Long-term in duration because the Project will likely be in operation for multiple years and would result in ongoing operation effects on air quality, noise, light, soil, groundwater, surface water, terrestrial resources and aquatic resources.
- Continuous in frequency during construction and operations because air, noise and stormwater emissions will occur throughout the life of the project.
- Reversible because residual adverse effects of the Project would be reversible once the Project is decommissioned.

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

7.4 Environmental Review Decision

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

LISA MCCUAIG
MANAGER, ENVIRONMENTAL PROGRAMS

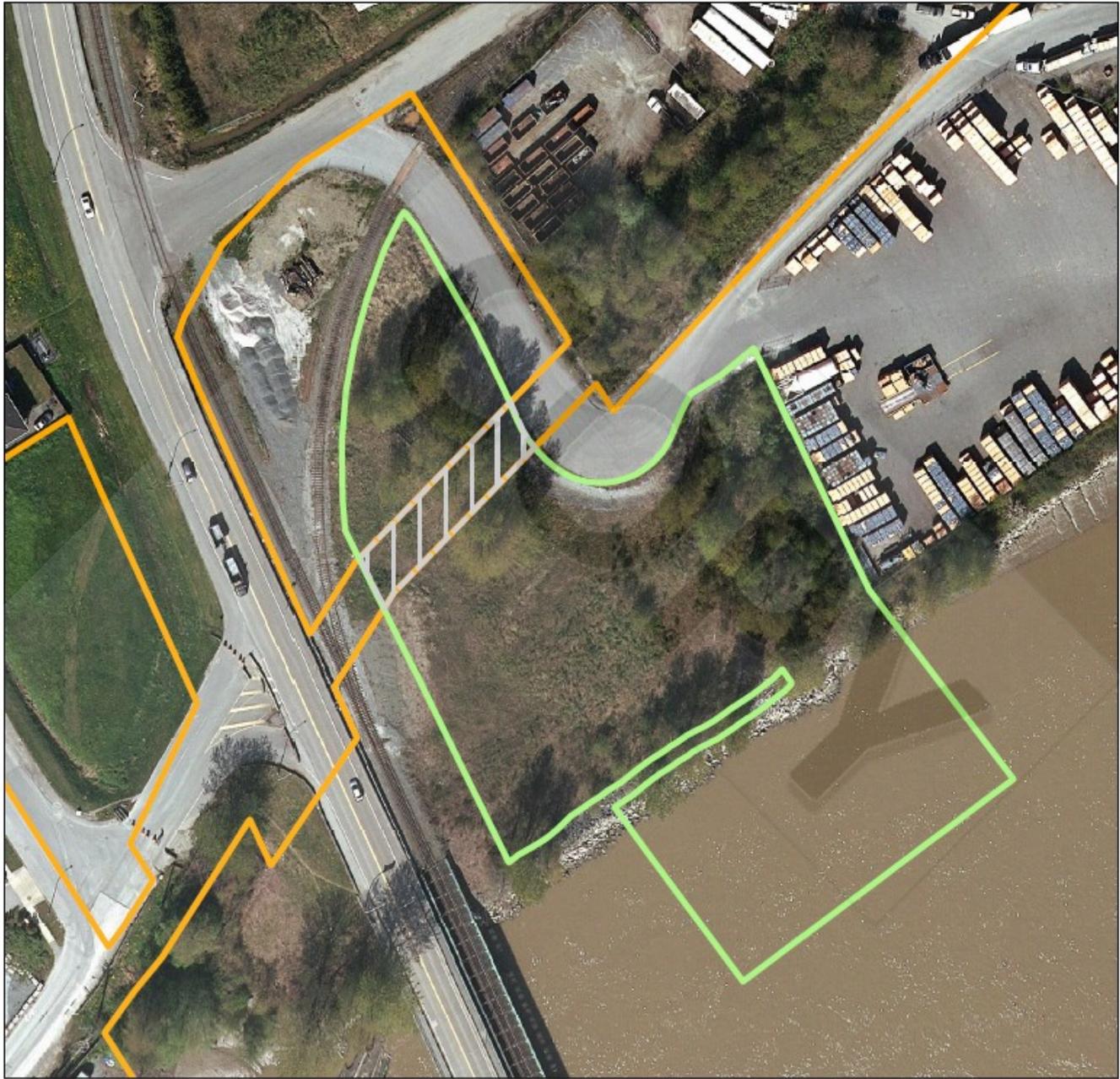
April 28, 2021
DATE OF DECISION

8 Conclusion

In completing the project and environmental review, the Port Authority concludes that with the implementation of proposed mitigation measures and conditions described in the Permit, the Project has appropriately addressed all identified concerns.

It is the recommendation of staff that this application be approved subject to conformance with the project and environmental conditions listed in project permit **PER No. 16-271**.



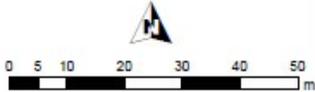


Derwent Way Soil Transfer and Barge Facility

PER #16-271

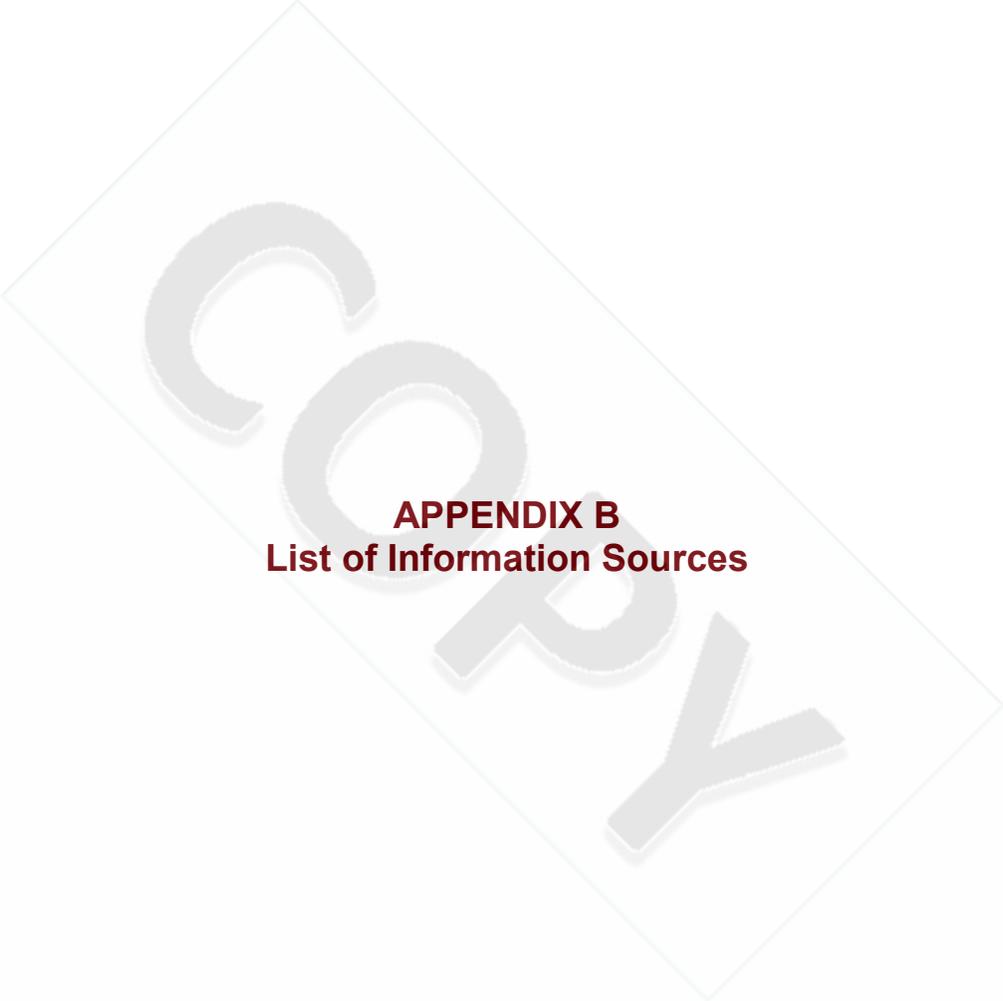
Project Location:
400 Salter St
New Westminster, BC

-  Project Location
-  Dyke Reserve Overlap
-  VFPA Boundary



 **PORT of vancouver**
 VFPA Spatial Data Group
 December 15, 2016
 PLAN # G2016-143

Any areas marked "proposed" represent approximate locations.



APPENDIX B
List of Information Sources

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

- Application form and materials submitted by the Applicant on October 14, 2016 and resubmitted on July 6, 2018.
- All Project correspondence from October 14, 2016 to April 23, 2021
- All plans and drawings labelled PER No.16-271-A to J
- **Project Description:**
 - “Summary of Project”, December 18, 2019, Summit Earthworks Inc.
 - Tech Memo “Marine Terminal Operations”, July 24, 2018, McElhanney
- **Drawings:**
 - “Drawing package”, July 18, 2019, Tetra Tech
 - “Derwent Way Railway Storm Runoff Drainage Plan & Culvert Profile - Drawing No. 18-12943-01”, March 16, 2018, Keystone Environmental
 - “Operational Loading – General Arrangement – Project No. 2211-70549-00 Rev. PA”, July 26, 2018, McElhanney
- **Studies and Reports:**
 - Traffic
 - “Traffic Impact Study – Revision 10”, December 5, 2019, Tetra Tech
 - Tech Memo “001 – Derwent Way/Salter Street Southbound Left-turn Assessment”, October 11, 2019, Tetra Tech
 - Tech Memo “001 – Derwent Way/ Salter street Northbound Right-turn”, January 25, 2021, Tetra Tech
 - “Traffic Route Plan Map”, January 22, 2021, 360 Traffic Solutions
 - “Site Access Route Plan”, February 19, 2021, Summit Earthworks Inc.
 - Noise and Air Quality
 - “Noise Assessment”, April 12, 2017, Tetra Tech
 - Tech Memo “002 – Changes to Air and Noise Assessments due to Site Plan Modifications, Rev. 02”, December 17, 2019
 - Tech Memo “003 – Responses to Port of Vancouver Memorandum Environmental Air Assessment Memo – Aug 29, 2017, Rev. 02”, December 17, 2019
 - Environmental and Geotechnical
 - “Environmental Air Assessment – Revision 3”, May 29, 2018, Tetra Tech
 - “Biophysical Assessment and Vegetation Plan – Revision 4”, July 18, 2019, Tetra Tech
 - “Construction Environmental Management Plan – Revision 6”, July 18, 2019, Keystone Environmental
 - “Contingency and Spill Response Plan – Revision 6”, July 29, 2019, Keystone Environmental
 - “Stormwater Pollution Prevention Plan – Revision 11”, July 29, 2019, Keystone Environmental
 - “Geotechnical Report – Revision 5” July 17, 2019, Tetra Tech
 - Tech Memo “001 – Environmental Soil Sampling in Conjunction with Geotechnical Investigation”, July 19, 2016, Tetra Tech
 - Tech Memo “001_Rev1 - Derwent Way Transfer Station – Response to Geotechnical Comments” August 22, 2018, Tetra Tech
 - Archaeological
 - “Archeological Overview Assessment – Rev. 5”, August 27, 2018, Tetra Tech
- **Public Engagement:**
 - “Public Consultation Summary and Consideration Report” April 25, 2019, Summit Earthworks Inc.
 - “Public Engagement Summary and Considerations Report”, October 9, 2020, Summit Earthworks Inc.

- **Additional Documents:**

- Extract on concrete handling, July 30, 2018, FRPD Handbook
- “DFO Best Management Practices for Pile Driving and Related Operations”, July 30, 2018. Fisheries and Oceans Canada
- Extract on structural concrete, July 30, 2018, Construction Drilling Inc.

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