



Neptune Bulk Terminals Canada Ltd.
Jurgen Franke, Director, Engineering and Projects
1001 Low Level Road
North Vancouver, BC, Canada V7L 1A7

July 14, 2023

Vancouver Fraser Port Authority, Project and Environmental Review
Taisha Mitchell, RPBio, PAg, Environmental Specialist
100 The Pointe, 999 Canada Place
Vancouver, B.C. Canada V6C 3T4
taisha.mitchell@portvancouver.com

Re: Lynn Creek Estuary Offset Project – Request to Conduct Construction Outside of Vancouver Fraser Port Authority Standard Work Hours (PER 21-068)

Dear Taisha,

1 INTRODUCTION

Neptune Bulk Terminals (Canada) Ltd. (NBT) is undertaking end-of-life replacement for the B2 Shiploader Project (B2) Project and is considered maintenance works to facilitate ongoing operations. Fisheries and Oceans Canada – Fish and Fish Habitat Protection Program (DFO-FFHPP) has confirmed that a *Fisheries Act* Authorization (FAA) would be required due to the seabed impacts. The Application for Authorization (AFA) was submitted to DFO-FFHPP on 14 February 2023 (NBT, 2023a). The B2 Project is being reviewed as a Category C approval, and the FAA offset is included in its application. The offsetting for the B2 Project is located in the Lynn Creek Estuary (LCE), approximately 1 km east of NBT (49° 17.929'N, 123° 2.417'W, hereafter referred to as the LCE Offset Project). Construction of the LCE Offset Project is planned between January and February of 2024, within DFO's recommended least risk window (Area 28, Vancouver – Burrard Inlet: August 16 – February 28) (DFO, 2014), and to maximize day time high tides, since construction is tidally dependent. While most construction can occur during the Port Authority's standard work hours, a request for construction outside of these hours is required to confirm construction can be completed before the end of the DFO least-risk window (February 28).

This letter supports an application for authorization for the LCE Offset Project to conduct construction activities outside of the Port Authority's standard work hours. This application was informed through the Port Authority's guidance document titled 'Vancouver Fraser Port Authority – Construction Outside of Regular Work Hours' (Port Authority, 2023). Table 1-1 informs the information requirements for the application. This application has been submitted along with the B2 Preliminary Project Environmental Review (PER) Application and Response approval (PER 21-068) application.

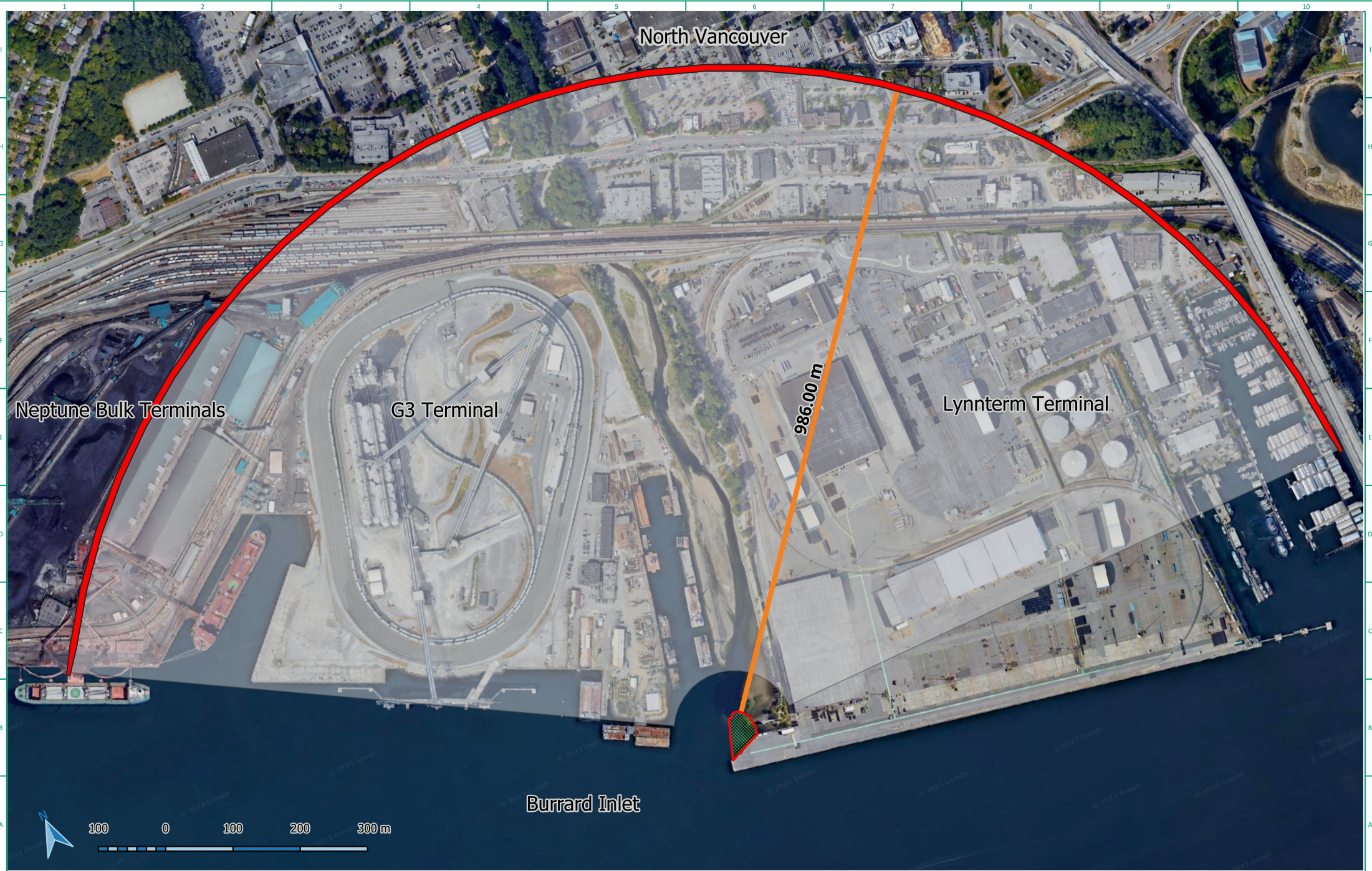
The construction activities proposed to be performed outside of standard working hours are not expected to generate significant noise. NBT is committed to conducting activities likely to generate noise within the Port Authority's standard work hours to minimize disturbance to nearby residents. NBT has an Environmental Complaint Procedure (NBT, 2022) to manage and address complaints received from the community. NBT will inform the Port Authority of complaints as they arise. NBT will also implement conditions related to construction outside of standard work hours as per the B2 Category C PER approval (PER 21-068). Section 6.3.1, Table 6-1 of the LCE CEMP (NBT, 2023b) contains a summary of compliance measures.

Table 1-1: Information Required for Extended Hours Construction Activities for the Lynn Creek Estuary Offset Project (PER 21-068)

ITEM NO	TASK	RESPONSE
1	Rationale for extended work hours request	The LCE Offset Project is expected to require two to three weeks of construction starting in January of 2024. LCE Offset Project construction will primarily occur within the Port Authority's standard work hours (Monday to Saturday, 7:00 am to 8:00 pm, none on Sundays/holidays). However, authorization for construction outside of the Port Authority's standard work hours throughout the duration of the LCE Offset Project construction will be required to complete construction activities during specific tide windows to facilitate site access for marine equipment and to minimize construction duration. The LCE Offset Project will be completed within the DFO least-risk window for the LCE Offset Project Area (Area 28, Vancouver – Burrard Inlet: August 16 – February 28). The LCE Offset Project construction is slated for January 2024 when there will be maximum workable daytime tide windows during the winter (see Appendix A, Figure A-1). The majority of the construction activities planned to be conducted outside of standard working hours are low sound producing.
2	Construction methodology as outlined in the Construction Environmental Management Plan Guideline This should include, but may not be limited to: <ul style="list-style-type: none"> Project components/tasks associated with the extended work hours request. Construction methods (e.g., equipment, number of personnel). 	Construction methodologies will be undertaken as described in Section 3.1 of the LCE Construction Environmental Management Plan (CEMP) (NBT, 2023b). LCE Offset Project construction activities are summarized as follows: <ul style="list-style-type: none"> Preparation of the rock reef location, including clearing of existing hard substrates. Placement of rock as per engineering design. The LCE Offset Project schedule has not been completed, and activities that will occur outside of the Port Authority's standard working hours are not confirmed. However, activities that could result in excessive noise will not occur outside of regular hours. Project-specific mitigations have been developed to outline noise management measures during construction activities completed outside of standard working hours and are included in the LCE CEMP (NBT, 2023b).
3	Description of potential offsite noise disturbances from the work: <ul style="list-style-type: none"> Types of noise. Location on site where noise will be generated. Proximity to residents and neighbours that may be affected. 	Types of Noise: Noise emitted from the proposed construction activities within the LCE Offset Project Area may vary, ranging from low frequency and clear tonal noise types (see Appendix B for the noise screening worksheet). Location where noise will be generated: Noise will be primarily generated from the LCE Offset Project footprint, as shown in Figure 1-1. Proximity to affected neighbours: The LCE Offset Project location is bounded by Vancouver Pile Driving to the west, Lynnterm Terminal to the east and Lynn Creek continues to the north as it crosses the railway and other commercial land-users (see Figure 1-1). Several intervening buildings, railways, and the grade-separated Low Level Road provide effective noise shielding or reflection between the construction activities and the nearest residential areas. The nearest residential receptors are located approximately 950 m to the northeast of the LCE Offset Project. No other sensitive receptors, such as schools or hospitals, are in the surrounding area. Noise impacts to the general community is not anticipated (see Section 4.5 of the LCE CEMP (NBT, 2023b).)
4	Dates and times or proposed work, or a range of dates and times.	Construction activities outside of Port Authority standard work hours will be required throughout the planned LCE Offset duration (two to three weeks in January 2024) to accommodate the available tide windows during this period (see Appendix A, Figure A-1). Construction will occur only when the tide height is at a minimum of 3.2 m and will be conducted with two 12-hour shifts over a 24-hour period should tide windows permit.
5	Map of proposed work area and surrounding properties that may be affected by project noise, generally within one (1) kilometre of the work site.	See Figure 1-1.
6	Site plan showing structures, buildings, and topography.	Refer to Drawing No Sheet No. 002: Site Plan (Appendix C, Drawing C-1), taken from the Lynn Creek Estuary Offsetting Basis of Design Report (NHC, 2023). No buildings are present at the LCE Offset Project. The topography at the LCE Offset Project Area is relatively flat.
7	Proposed mitigations that can be applied to minimize and prevent disturbances, such as limiting noise-generating activities to daytime hours, shrouding the work area, altering construction methods, or use of broadband back-up alarms.	<ol style="list-style-type: none"> Where possible and safe to execute, barge and piling equipment are to be placed to obstruct the dominant sound path between the source and the noise receptor. Lighting will be positioned away from residences, placed at low levels, and focused only on work areas, enabling the crews to perform work safely. The expected crew size will be limited to only the required personnel and is not expected to exceed the number of personnel present during daytime activities. NBT will circulate a construction notice to surrounding Residents (see draft notice in Appendix D), which will be distributed before construction on the timeline stipulated in the PER approval. All conditions issued in the PER 21-068 approval will be followed. The LCE CEMP (NBT, 2023b) will be updated after Port Authority approves this application to confirm which activities will be conducted outside of standard hours. Where possible and safe, diesel engines will be shut off when not in use, electrically powered equipment will be preferentially used, back-up alarm volumes will be lowered when appropriate and used in combination with strobe lights, and use of high-noise power tools will be avoided.



ITEM NO	TASK	RESPONSE
		<p>8. Compliance with the noise mitigation measures described in Section 6.3.1, Table 6-1 of the LCE CEMP (NBT, 2023b).</p> <p>9. Equipment will be properly maintained and fitted with exhaust and muffler systems.</p> <p>10. Engines will be turned off when not in use or reduced to idle.</p> <p>11. NBT will monitor noise complaints to confirm if they are due to the LCE Offset Project construction. Complaints will be managed as per the NBT Environmental Complaint Procedure (NBT, 2022).</p>
8	A completed screening level worksheet (Appendix I).	See Appendix B.
9	Contact information for the applicant and/or contractor if VFPA receives a noise complaint.	<p>Jurgen Franke, P.Eng. Director, Engineering and Environment Neptune Bulk Terminals Phone: 778-838-7581 jfranke@nepturterminals.com</p> <p>Security out of hours contact: Phone: 604-985-7461, Ext: 0</p>
10	Draft Construction Notification (for notice content, see External Guidelines for Public Consultation Section 7.1).	See Appendix D



- LEGEND**
- ▬ 1000 m Boundary
 - ▬ Nearest Residential Neighbour
 - LCE Project Offset Footprint

SOURCES / NOTE:
 NAD1983 CORS96 UTM 10N
 Scale 1:10000
 Units: meters
 Static (relies on a datum which is plate-fixed)
 Celestial body: Earth
 Method: Universal Transverse Mercator (UTM)

PROJECT: Neptune Terminals B2D2
SYSTEM:
ASSET:
DISCIPLINE: Regulatory

REV	YYYY-MM-DD	DESCRIPTION	DRAWN	APPROVED	VENDOR
A	2023-02-24	LCE Distance to nearest neighbour	C. Knight		

ISSUES / REVISIONS

DYNAMIC OCEAN CONSULTING LTD.

Neptune TERMINALS

THIS DRAWING IS THE PROPERTY OF NEPTUNE BULK TERMINALS (CANADA) LTD. NEITHER THIS DRAWING NOR ANY PORTION THEREOF SHALL BE REPRODUCED WITHOUT WRITTEN PERMISSION FROM NEPTUNE BULK TERMINALS (CANADA) LTD.

TITLE: LCE Offset Project: Distance to Nearest Neighbour and One Kilometre Radius

Figure 1-1

SCALE: As Shown **SHEET** 1 OF 1 **DRAWING NO.** 20230208-004 **REV:** A



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2 CLOSURE

We appreciate your time in reviewing this letter. Please reach out to Victoria with any further questions.

Sincerely,

A handwritten signature in black ink, appearing to read "Victoria Burdett-Coutts".

Victoria Burdett-Coutts
Senior Regulatory Professional
Neptune Bulk Terminals (CANADA) Ltd.
c. 778-839-2372
vburdett-coutts@neptuneterminals.com



3 REFERENCES

- DFO. (2014). British Columbia Marine/Estuarine Timing Windows for the Protection of Fish and Fish Habitat - South Coast and Lower Fraser Areas Available at: <https://www.dfo-mpo.gc.ca/pnw-ppe/timing-periodes/bc-s-eng.html#area-28> Accessed: July 2023.
- NBT. (2022). Environmental Complaint Procedure. Doc No: PRO-NBT-191029. January 21, 2022. Rev. 2.
- NBT. (2023a). Berth 2 Shiploader Replacement Project Application for Authorization Supplemental Report. Doc No: REP-B2D2-0001. July 14, 2023. Rev3.
- NBT. (2023b). Lynn Creek Estuary Construction Environmental Management Plan. B2D2 Project. Doc No: PLAN-B2D2-0010. July 14, 2023. Rev3.
- NHC. (2023). Lynn Creek Estuary Offsetting Basis of Design Report. February 14, 2023. Rev2.
- Port Authority. (2023). Project and Environmental Review Guideline - Construction Outside of Regular Work Hours. March 2023. Available at: <https://www.portvancouver.com/wp-content/uploads/2023/03/2023-03-09-PER-Guideline-Construction-Outside-Regular-Work-Hours.pdf>. Accessed: March 2023.



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APPENDIX A: TIDE FIGURE

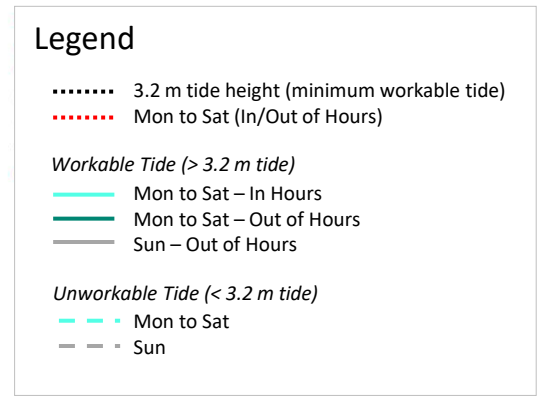
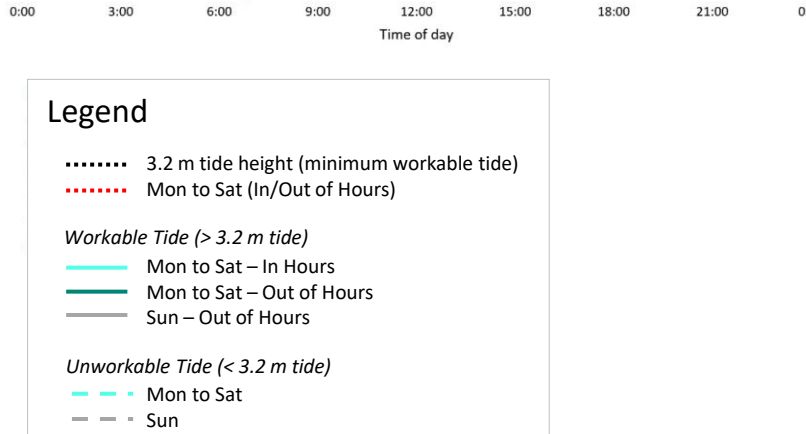
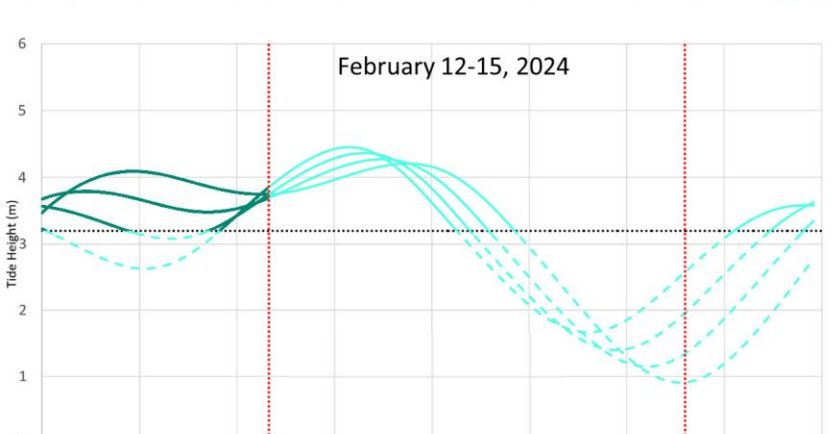
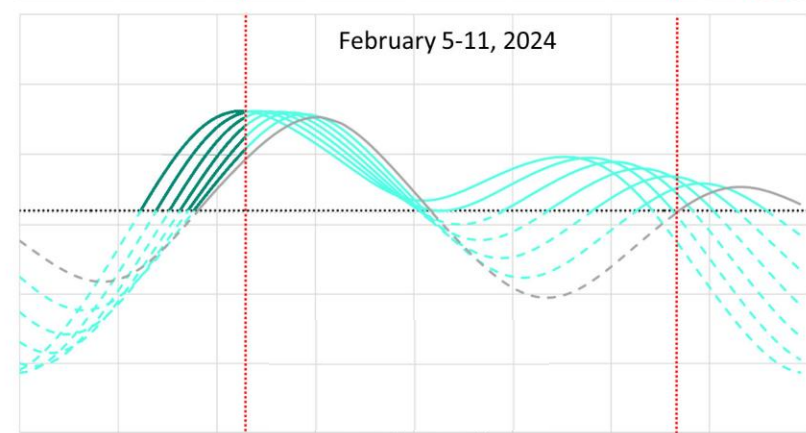
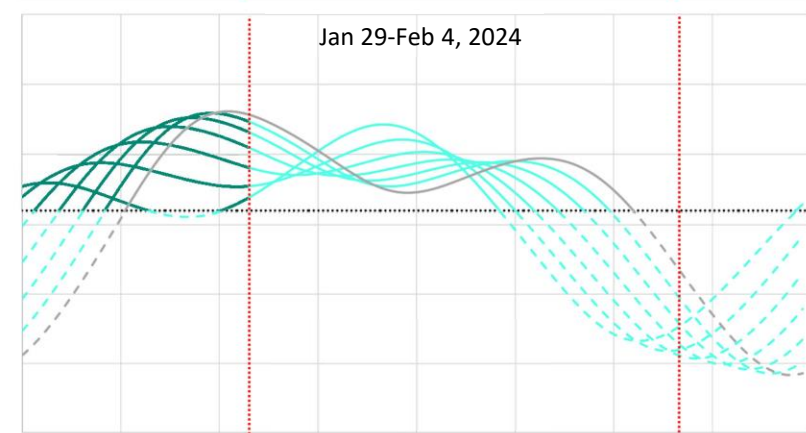
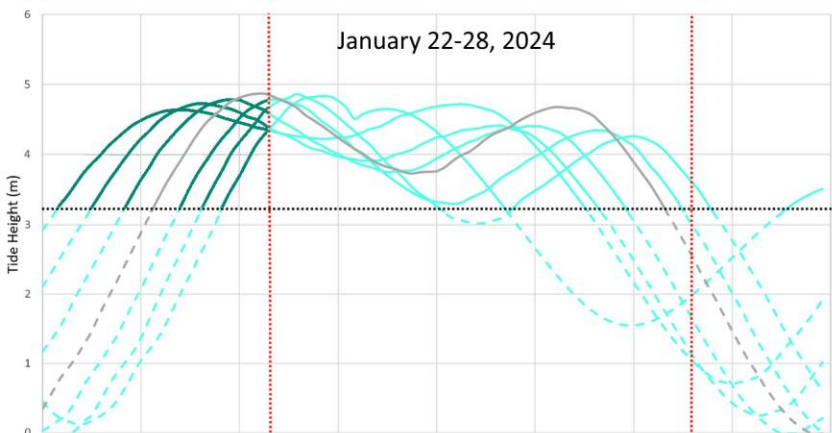
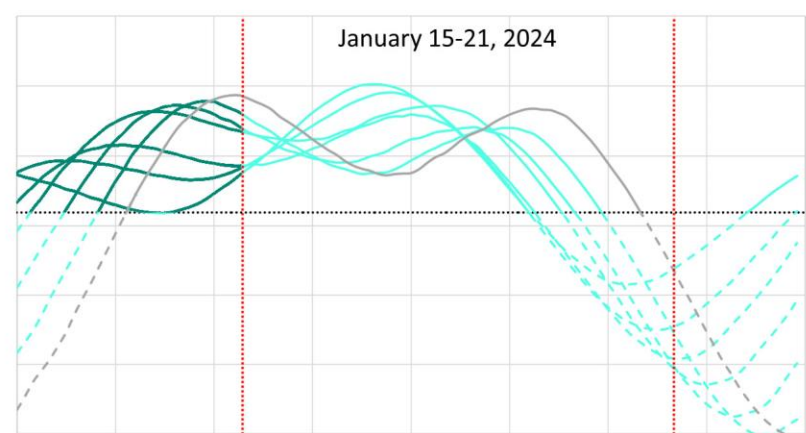
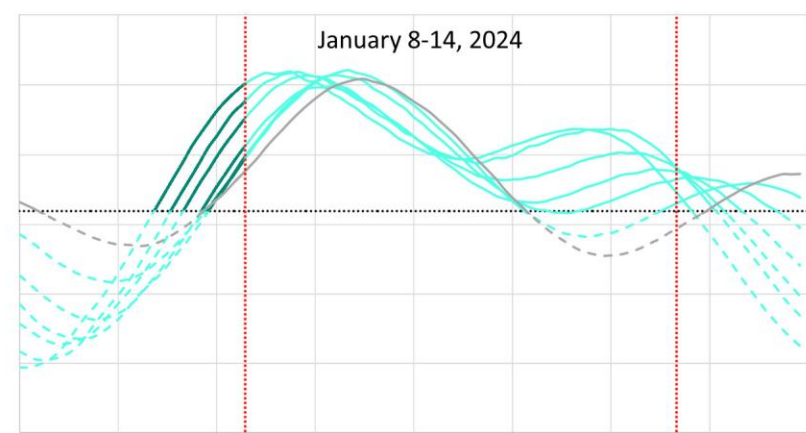
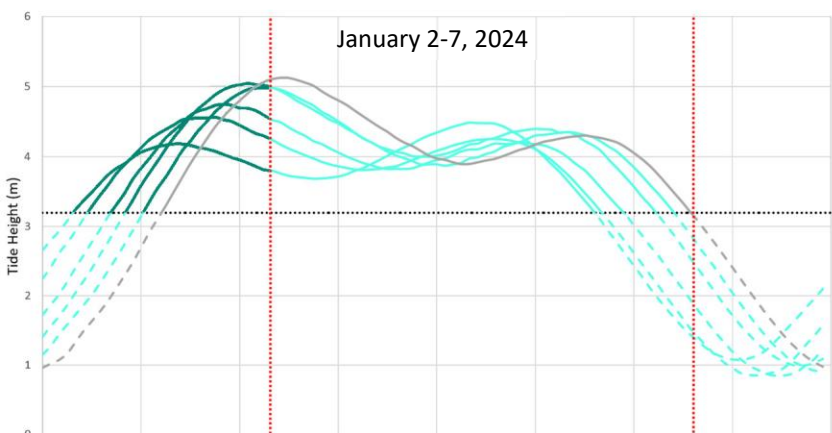


Figure A-1
Lynn Creek Estuary Offset Project Working Tides



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APPENDIX B: NOISE SCREENING WORKSHEET



Table B-1: NOISE SCREENING WORKSHEET

Question 1 – Noise levels expected on project site	
Based on experience with similar construction operations, or on your best judgment, do you expect that noise levels within the project site will be:	
Very Low	<input type="checkbox"/>
Low	<input checked="" type="checkbox"/>
Moderate	<input type="checkbox"/>
High	<input type="checkbox"/>
Very High	<input type="checkbox"/>
Question 2 - Presence of undesirable characteristics	
Will any of the key activities create ongoing noise which (indicate all that apply):	
Are clearly tonal (hums, whirs, whines)	<input checked="" type="checkbox"/>
Are impulsive or have very rapid onset (bumps, bangs, material handling impacts, rail car shunting, compressed air release etc.)	<input checked="" type="checkbox"/>
Contains strong low-frequency content (e.g., large diesel engines, large fans or air compressors)	<input checked="" type="checkbox"/>
Question 3 – Presence of high-energy impulsive noise	
Will any activities create noise which could be classified as “High-energy Impulsive”? Examples could include the industrial use of explosives, explosive circuit breakers, or pile driving.	
No	<input checked="" type="checkbox"/>
Yes	<input type="checkbox"/>
Question 4 – Hours/days of operation	
Will the extended hours schedule be (check all that apply):	
Evening Shift [8 p.m. to 10 p.m.; weekdays]	<input checked="" type="checkbox"/>
Evening Shift [8 p.m. to 10 p.m.; weekend]	<input checked="" type="checkbox"/>
Night Shift [10 p.m. to 7 a.m.; weekdays]	<input checked="" type="checkbox"/>
Night Shift [10 p.m. to 7 a.m.; weekend]	<input checked="" type="checkbox"/>



Question 5 – Proximity to noise-sensitive areas	
How far is the nearest noise-sensitive land use (residences, schools, hospitals, parks etc.) from the property line of the project site?	
More than 1,000 m	<input type="checkbox"/>
500 to 1,000 m	<input checked="" type="checkbox"/>
250 to 500 m	<input type="checkbox"/>
125 to 250 m	<input type="checkbox"/>
less than 125 m	<input type="checkbox"/>
Question 6 – Presence of noise shielding or reflection	
Will buildings, structures, vegetation and/or landforms partially or totally screen construction noise sources from nearby noise receptors (that is, interrupt the line of sight and direct hearing)? Here consideration should be given to the relative elevations of the noise sources, the noise receptors (ground floors vs. upper floors) and the intervening buildings and/or landforms.	
Substantial, continuous noise shielding	<input type="checkbox"/>
Substantial, but not total, screening	<input checked="" type="checkbox"/>
Intermittent shielding, e.g., row of smaller, non-adjoining buildings	<input type="checkbox"/>
Scattered shielding by objects, machinery, stockpiles	<input type="checkbox"/>
No shielding potential	<input type="checkbox"/>
Question 7 – Existing noise environment	
How would you rate the existing noise environment in the vicinity of the project site?	
Very noisy (near busy highway, busy port, airport, heavy industry)	<input checked="" type="checkbox"/>
Noisy (near busy arterial road, light industrial area, urban core)	<input type="checkbox"/>
Moderately noisy (near collector road, suburban residential)	<input type="checkbox"/>
Quiet (suburban residential away from collector roads)	<input type="checkbox"/>
Very quiet (rural residential, well away from industry or main roads)	<input type="checkbox"/>
Question 8 – Population potentially exposed to project noise	
Approximately how many residences are located within 500 m of the project site?	
5 or less	<input checked="" type="checkbox"/>
5 to 15	<input type="checkbox"/>
16 to 40	<input type="checkbox"/>
41 to 100	<input checked="" type="checkbox"/>
more than 100	<input type="checkbox"/>

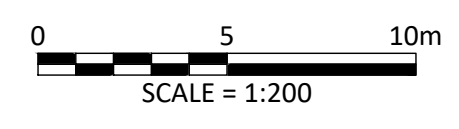
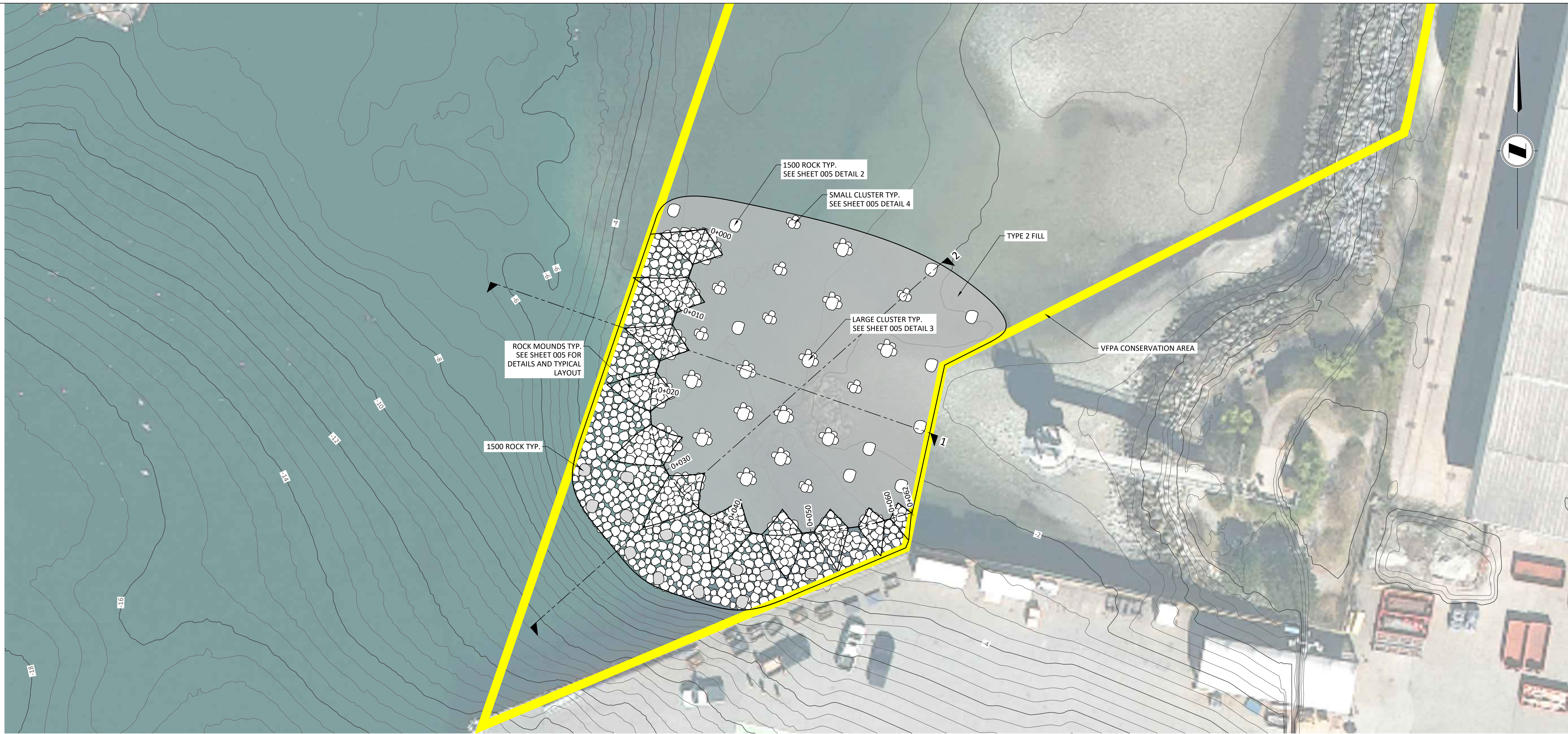


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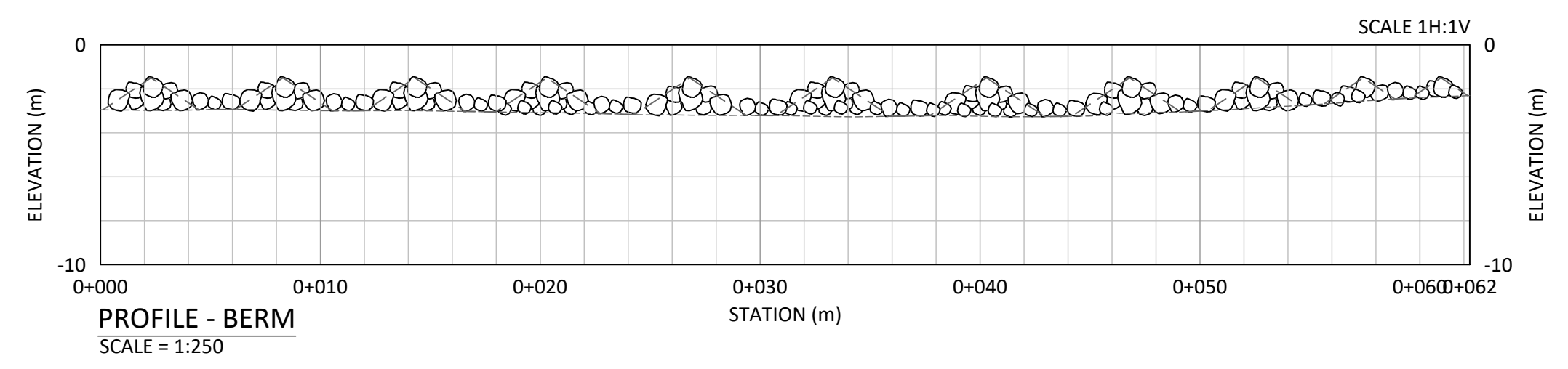
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APPENDIX C: NHC GENERAL ARRANGEMENT

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PLAN VIEW
1:250



PROFILE - BERM
SCALE = 1:250

CLIENT:

Neptune
TERMINALS
NEPTUNE TERMINALS
SUITE 100 - 340 BROOKSBANK AVE
NORTH VANCOUVER, BC
V7J 2C1

REV.	DATE	DESCRIPTION
0	13 01 2023	ISSUED FOR PERMITTING



SEAL:

**LOWER LYNN CREEK HABITAT OFFSETTING
ROCKY REEF CONCEPTUAL DESIGN**

PLAN AND PROFILE

Drawing C-1

DESIGNED: GMG	SHEET ID: 3007864-2332-IFP-NEPTUNE LOWER LYNN-R1F-003 R0	SHEET No:
DRAFTED: CZZ	STATUS: ISSUED FOR PERMITTING	003
CHECKED: BMC	SCALE: AS SHOWN WHEN PLOTTED D SIZE	
APPROVED: ----	DATE: 13 JUL 2023	REV No: R0

SUPERSEDES ALL REVISIONS WITH NUMBER PRECEDING



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APPENDIX D: COMMUNITY NOTICE OF CONSTRUCTION



NOTICE OF EXTENDED HOURS CONSTRUCTION - NEPTUNE TERMINALS

Neptune Bulk Terminals (NBT) has received approval from the Vancouver Fraser Port Authority (the Port Authority) to carry out extended hours construction on the following project:

LYNN CREEK ESTUARY OFFSET PROJECT (PER 21-068)

NBT expects the Lynn Creek Estuary Offset Project (LCE Offset Project) to require two to three weeks of construction beginning in January 2024. The majority of the LCE Offset Project will be undertaken with a 12-hours a day 6 days a week schedule and within regular construction hours (i.e., Monday to Saturday, 7 am – 8 pm). However, some construction activities may be required outside of standard work hours as construction is tidally dependent. As such, NBT will add Sunday, and night shifts to conduct work 24 hours a day, 7 days a week (excluding statutory holidays) to accommodate favourable tide windows to complete the work. NBT will post updates as required on NBT's website: www.neptuneterminals.com.

NBT has received permission from the Port Authority to allow for the activities listed below to be completed outside of Port Authority standard working hours, including:

- Preparation of the rock reef location, including clearing of existing hard substrates.
- Placement of rock as per engineering design.

Extended hours construction is required to complete critical work during specific tide windows while completing the LCE Offset Project within the DFO least-risk window for the LCE area (Area 28, Vancouver – Burrard Inlet: August 16 – February 28).

NBT will limit construction activities performed outside of regular working hours to those NBT anticipates will have low impacts on the surrounding community. Furthermore, mitigation measures to manage construction noise outside of standard working hours have been developed in the LCE Offset Project Construction Environmental Management Plan (CEMP).

The crew size will be limited to only the required personnel and will not exceed the number of personnel present during daytime activities as much as practical.

Noise will primarily be generated from the LCE Offset Project Construction Work Area, as shown in Figure A.

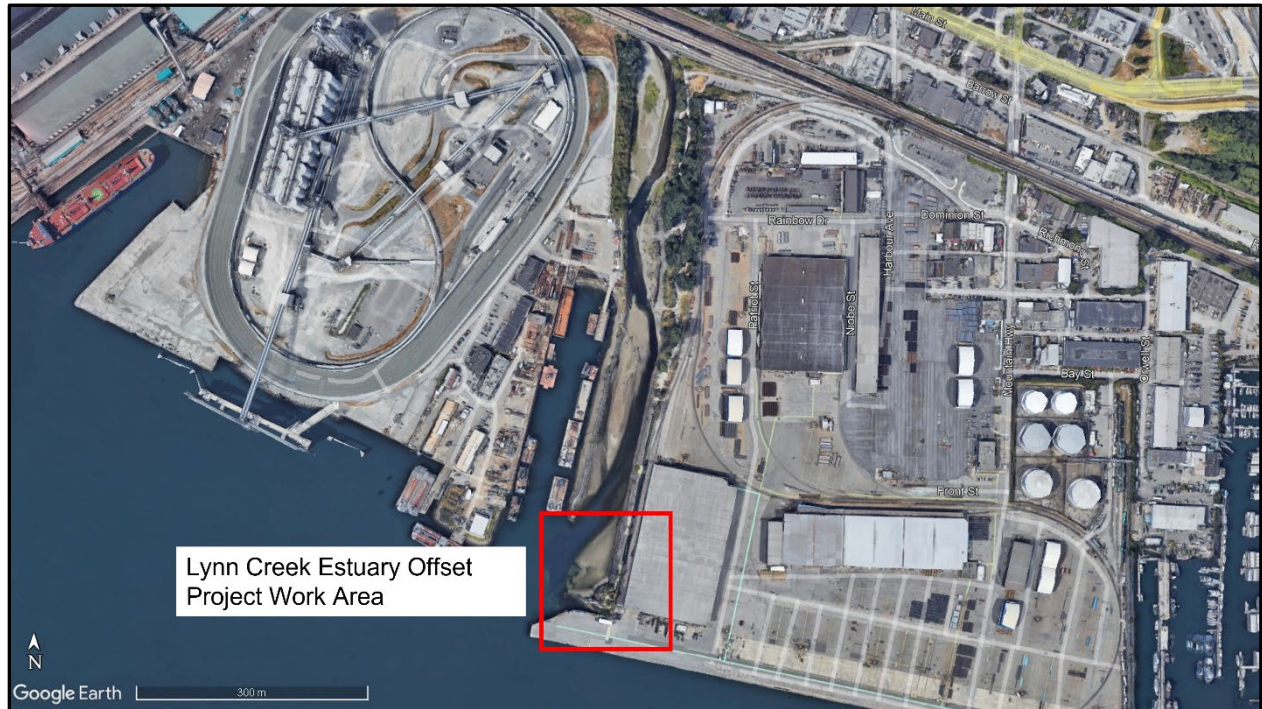


Figure A: Site Location Map Showing Lynn Creek Estuary Offset Project Work Area

If any construction activity is anticipated to have a significant impact outside the project site, NBT will issue a separate notice.

NBT values its relationship with its neighbours, and will take special care and use the following construction methods to minimize the impact of evening work on the community, particularly related to noise and light:

- Turning off diesel engines and using electric power whenever possible.
- Using strobe lights and lower volume back-up alarms on construction vehicles when appropriate.
- Construction personnel will focus lights only on work areas, enabling crews to perform work safely. Lights will be positioned close to the ground and directed down and away from residential areas.
- Avoiding the use of high-noise power tools.

NBT will closely monitor noise levels during this period to ensure construction activity does not result in a noticeable increase to average existing noise levels.

To be added to the email distribution list for ongoing NBT construction notices, please email us at community_questions@neptuneterminals.com.

For questions about the extended hours authorization for the proposed construction activities, please contact the Port Authority's Community feedback line at 604-665-9004 or community.feedback@portvancouver.com.