

Port Metro Vancouver / PER Guidelines

ENVIRONMENTAL NOISE ASSESSMENT

DOLLARTON WATERFRONT ESTATES & DEVELOPMENT INC.
PROPOSED TWO SLIP SHARED RECREATIONAL DOCK
BURRARD INLET, NORTH VANCOUVER, BRITISH COLUMBIA

Report Date: November 2, 2016
Report Number: 5706-R-02.1



PREPARED BY:

BALANCED

Balanced Environmental Services Inc.
120 Garden Ave., North Vancouver, B.C.
V7P 3H2

Tel. 604.988.3033
Fax. 604.983.3454
Web. www.balanced.ca

PREPARED FOR:

DOLLARTON WATERFRONT ESTATES & DEVELOPMENT INC.
3707 Dollarton Hwy,
North Vancouver, B.C.
V7G 1A1

Tel.: 604.987.8313
E-Mail: nebrahim2010@gmail.com

PROJECT OVERVIEW**PMV PER File No.** 11-101-1**Project:** Two slip shared recreational dock**Location:** PMV waterlot fronting upland property Lot 1, Block K, DL 230, Plan 7990, N.W.D.**Applicant:** Nick Ebrahim / Dollarton Waterfront Estates**Screening**

This report presents findings of an environmental noise assessment screening of the project by Balanced Environmental Services Inc. (Balanced) on behalf of the applicant.

The screening was carried out as laid out in the Port Metro Vancouver (PMV) Project & Environmental Review guidelines for environmental noise assessment. The total weighted project score is 30.2.

The guidelines state that a total weighted project score of 30 or greater warrants a full noise impact assessment of the project.

Mitigating factors

Balanced suggests that PMV consider the following mitigating factors when determining whether or not a full noise impact assessment will be required:

Question 2 – Noise levels

Balanced was conservative in identifying noise levels as “low” rather than “very low”. Project noise will be limited to intermittent work boat (small tug) engine noise, and intermittent pile driver vibratory hammer and crane noise. Vibratory hammer operation will be limited to the installation of 11 piles.

Question 5 – Hours/days of operation

The question considers the timing of the noise but not the duration. The project will only take four days in total. Pile installation (by vibratory hammer) will be limited to two days.

Question 6 – Proximity to noise-sensitive areas

The “noise sensitive areas” located within 125m of the project site are limited to 16 single family residences. Ten of those residences front on a busy arterial road, and are screened from the project site by large trees; normal road traffic will likely generate more noise than the project.

Question 9 – Population potentially exposed to project noise

The majority (~99%) of residences located within 500 m of the project site property line are separated from the site by a busy arterial road, and screened from the site by large trees; ~89% of the residences within 500m are also screened by topography, elevated 40-65m upslope of the project site.

SECTION 0 TABLE OF CONTENTS

SECTION 1 NOISE ASSESSMENT WORKSHEET 1

 1.1 Port Metro Vancouver | PER Guidelines – Environmental Noise Assessment
 Appendix I – Noise Assessment Screening Worksheet 1

SECTION 2 NOISE ASSESSMENT PROJECT SCORE 5

 2.1 Port Metro Vancouver | PER Guidelines – Environmental Noise Assessment
 Appendix II – Noise Assessment Project Score..... 5

SECTION 1 NOISE ASSESSMENT SCREENING WORKSHEET

**1.1 Port Metro Vancouver | PER Guidelines – Environmental Noise Assessment
Appendix I – Noise Assessment Screening Worksheet**

Question 1 – New Activity, Replacement or Expansion	5 points
Will the project involve only the replacement of existing equipment or activities or the expansion of a pre-existing facility or activity, or will it involve significant new noise sources or activities?	
<ul style="list-style-type: none"> • Replacement of Existing Equipment or Activities • Expansion of Existing Equipment or Activities • New Equipment or Activities 	Score 1 point Score 3 points Score 5 points

Question 2 – Noise Levels Expected on Project Site	2 points
Based on experience with similar operations at the current location or elsewhere, or on your best judgment, do you expect that noise levels within the project site will be:	
<ul style="list-style-type: none"> • Very Low • Low • Moderate • High • Very High 	Score 1 point Score 2 points Score 3 points Score 4 points Score 5 points

Question 3 - Presence of Undesirable Characteristics	0 points
Will any of the key activities/sources create ongoing noise which:	
1. is clearly tonal (hums, whirs, whines), 2. is impulsive or has very rapid onset (bumps, bangs, material handling impacts, rail car shunting, compressed air release etc.), or 3. contains strong low-frequency content (e.g. large diesel engines, large fans or air compressors).	
<ul style="list-style-type: none"> • No • Yes, noise will contain one such characteristic • Yes, noise will contain two or three such characteristics 	Score 0 points Score 3 points Score 5 points

Question 4 – Presence of High-Energy Impulsive Noise	0 points
Will any activities create ongoing noise which could be classified as “High-energy Impulsive”? Examples of such sources are limited in the port context but could include the industrial use of explosives or explosive circuit breakers.	
• No	Score 0 points
• Yes	Score 5 points

Question 5 – Hours/Days of Operation	1 point
Will the normal operating schedule be:	
• Day Shift only (5 days/week)	Score 1 point
• Day Shift only (7 days per week)	Score 2 points
• Day & Evening Shifts (5 days/week)	Score 2 points
• Day & Evening Shifts (7 days/week)	Score 3 points
• 24-hours per day (5 days /week)	Score 4 points
• 24-hours per day (7 days per week)	Score 5 points

Question 6 – Proximity to Noise-Sensitive Areas	4 points
How far is the nearest noise-sensitive land use (residences, schools, hospitals, passive parks etc.) from the property line of the project site?	
• More than 1,000 m	Score 0 points
• 500 to 1,000 m	Score 1 point
• 250 to 500 m	Score 2 points
• 125 to 250 m	Score 3 points
• 60 to 125 m	Score 4 points
• less than 60 m	Score 5 points

Question 7 – Presence of Noise Shielding or Reflection	2 points
<p>Will buildings, structures and/or landforms partially or totally screen (that is, interrupt the line of sight and direct hearing) project noise sources from nearby noise receptors? Here consideration should be given to the relative elevations of the noise sources, the noise receivers (ground and upper floors) and the intervening buildings and/or landforms. Noise shielding effects are maximized when intervening buildings and/or landforms are higher and wider than both the noise source area and the noise receiver area. Alternatively, the project may involve construction of a building or other structure that, while not necessarily a significant source of noise itself, reflects noise from other sources towards adjacent noise-sensitive areas. This other noise may originate from project operations or from sources not related to the project, such as other port operations or transportation facilities related sources.</p>	
<ul style="list-style-type: none"> • Substantial, continuous noise shielding 	Score 0 points
<ul style="list-style-type: none"> • Substantial, but not total, screening 	Score 1 point
<ul style="list-style-type: none"> • Intermittent shielding, e.g., row of smaller, non-adjoining buildings 	Score 2 points
<ul style="list-style-type: none"> • Scattered shielding by objects, machinery, stockpiles 	Score 3 points
<ul style="list-style-type: none"> • No shielding potential 	Score 4 points
<ul style="list-style-type: none"> • No noise shielding and will reflect noise towards sensitive areas 	Score 5 points

Question 8 – Baseline Noise Environment	2 points
<p>How would you rate the baseline (pre-project) noise environment within the noise sensitive area nearest the project site?</p>	
<ul style="list-style-type: none"> • Very noisy (near busy highway, busy port, airport, heavy industry) 	Score 1 point
<ul style="list-style-type: none"> • Noisy (near busy arterial road, light industrial area, urban core) 	Score 2 points
<ul style="list-style-type: none"> • Moderately noise (near collector road, suburban residential) 	Score 3 points
<ul style="list-style-type: none"> • Quiet (suburban residential away from collector roads) 	Score 4 points
<ul style="list-style-type: none"> • Very Quiet (rural residential, well away from industry or main roads) 	Score 5 points

Question 9 – Population Potentially Exposed to Project Noise	5 points
Approximately how many residences or other noise sensitive land uses are located within 500 m of the project site’s property line?	
<ul style="list-style-type: none"> • 5 or less • 5 to 15 • 16 to 40 • 41 to 100 • more than 100 	<p>Score 1 point</p> <p>Score 2 points</p> <p>Score 3 points</p> <p>Score 4 points</p> <p>Score 5 points</p>

Question 10 – Level of Community Concern about Noise	1 point
What level of concern (e.g., complaint history) currently exists among residents/users of adjacent noise sensitive lands regarding noise emissions from PMV lands in general and your project site in particular?	
<ul style="list-style-type: none"> • No history of concern or complaints • Minor concerns have been expressed • Unknown • Moderate level of concern, some complaints • High level of concern/organized complaints 	<p>Score 1 point</p> <p>Score 2 points</p> <p>Score 3 points</p> <p>Score 4 points</p> <p>Score 5 points</p>

SECTION 2 NOISE ASSESSMENT PROJECT SCORE

2.1 Port Metro Vancouver | PER Guidelines – Environmental Noise Assessment
Appendix II – Noise Assessment Project Score

No.	Attribute of Project or Project Setting (Appendix I)	Questionnaire Score (Appendix I)	Importance Weighting	Weighted Score
1	New activity, replacement or expansion	5	1.2	6.0
2	Noise levels expected on project site	2	1.8	3.6
3	Presence of undesirable characteristics	0	1.6	0
4	Presence of high energy impulsiveness noise	0	1.6	0
5	Hours/days of operation	1	1.2	1.2
6	Proximity to noise sensitive areas	4	1.6	6.4
7	Presence of noise shielding or reflection	2	1.8	3.6
8	Baseline noise environment	2	1.6	3.2
9	Population potentially exposed to project noise	5	1.0	5.0
10	Level of community concern about noise	1	1.2	1.2
Total Weighted Project Score				30.2