



LEVELTON CONSULTANTS LTD.

Abbotsford Office
110-34077 Gladys Avenue
Abbotsford, BC V2S 2E8
T: 604.855.0206 F: 604.853.1186
abbotsford@levelton.com
www.levelton.com

Memorandum

To: Paul Slack, Operations Manager,
City of White Rock

Date: May 21, 2015

Re: Marine Drive East Side
Slope Assessment

From: Diljot Brar, EIT
Calum Buchan, P.Eng.

Project #: R714-0951-00

As requested, Levelton Consultants Ltd. (Levelton) has prepared this memorandum with our comments and recommendations based on our visual reconnaissance of the slope south of the Marine Drive Hump in White Rock, BC. Levelton was requested to review the slope with regards to the recent tree clearing and assess the possible impact to the slope stability and wood retaining walls from the clearing of the trees.

On 13 May 2015, Levelton visited the site with Paul Slack, Bob Ambardar, P.Eng. and Hiep Lo of the City of White Rock to conduct the visual review of the slope. At the time of visit, a contractor was clearing trees and brush from the west side of the slope and progressing to the east (Photograph 1). The native soils observed along the slope surface consisted of a stony glacio-marine material comprised of sandy silt and gravel. The sandy silt and gravel was observed in one particular area of cleared slope, the soils may vary along the slope. Levelton did not observe any signs of instability on the cleared slopes.

Conclusions and Recommendations

Based on our site assessment, Levelton provides the following conclusions and recommendations:

- To minimize the potential of slope erosion to the exposed soil areas on the cleared slopes should be hydro-seeded;
- A secondary assessment of the hydro-seeded slopes should be conducted in the winter months to review the effectiveness of the hydro-seeding, re-seeding could be required;
- Levelton is reviewing the trees east of the Eagle tree conservation area on May 22nd and will advise if any further tree removal is needed due to stability concerns;
- The tree located directly south of the deteriorating wood retaining wall across from 15191 Marine Drive should be removed prior to initiation of the retaining wall remedial works. The tree may cause complications with the installation of the micropiles;

- The cutting of the tree (Photograph 2) will not pose as a geotechnical hazard provided that the deteriorating wall is rehabilitated as per Levelton design drawings (R714-0951-00);
- We request that the brush around the deteriorating wood retaining walls is cleared prior to construction;
- Levelton is to conduct a detailed review of the wood retaining walls upon clearing of the brush and trees surrounding the walls.



Photograph 1. Cleared slope looking west

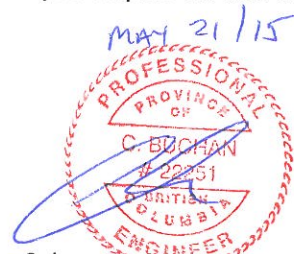


Photograph 2. Tree in front of wood retaining wall

We trust the information provided meets your immediate needs. Should you require further assistance, please contact us.

Levelton Consultants Ltd.

Per: Diljot Brar, EIT
Geotechnical Engineer



Per: Calum Buchan, P.Eng.
Senior Geotechnical Engineer