Field Review Memo

SoilTech Consulting Ltd
1215 Babine Road
Prince George, BC V2N 6E1
250-301-5024
hans@soiltech.ca

To: **Megan Hickey, BPl, L&M Engineering Limited**
From: **Hans Jorgensen, P. Eng.**
Date: **September 29, 2021**
Project No.: **21-P-016**
Re: **Slope Review: Lot 1 District Lot 2424, Cariboo District, Plan 27163 (PID 006-595-456)**

1. Introduction

L&M Engineering Limited (L&M) submitted a rezoning application (No. RZ100710) for the above address. The City of Prince George identified an area on the property as containing significant slopes during their initial review of the application. L&M requested, on behalf of the owner, for SoilTech to review conditions in the area and to provide geotechnical comments and recommendations regarding any hazard the significant slope may present and mitigation options as they relate to the proposed rezoning from greenbelt to residential development.

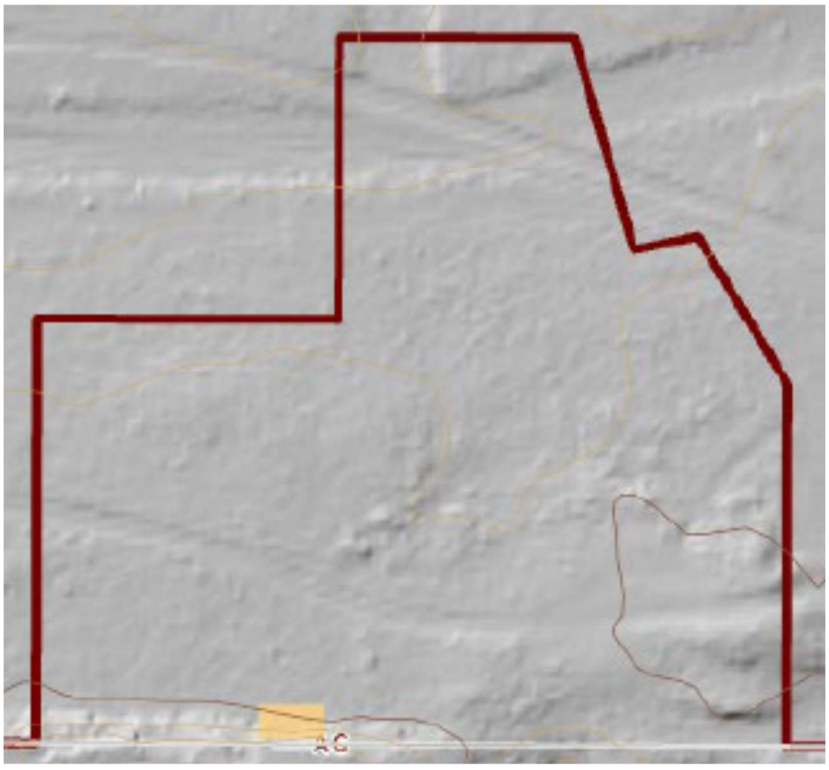


Figure 1. Significant slope area highlighted on PGMap Lidar (2014) imagery

2. Slope Conditions

L&M provided a drawing (Drawing No. SP their Project No. 1113-10) outlining the boundaries of the proposed lots and profiles of two sections of the slope taken from PGMap 2014 Lidar information. The drawing indicates the slope is located along the south boundary of several of the future lots. The slope profiles show the maximum slope grades to be approximately 40% and the hill to be about 30 m wide.

On September 27,2021 we visited the site to review the slope and soil conditions in the area. The slope has a maximum height of approximately 3 m and appears to be cut from previous earthworks on the property. It is well vegetated with immature trees as shown in Figure 2. We measured the steepest section of the slope to be between 40% and 65% with a handheld inclinometer. We reviewed soil conditions and collected soil samples from two hand dug test pits along the two slope profiles. We performed sieve analyses on the samples (laboratory reports attached). Soil conditions near the surface of the slope consisted of stiff silt, sandy to some some sand, and were consistent with soil throughout the subdivision. No tension cracks or signs indicating deep seated or surficial movement were observed during our review.

Figure 2. Looing southeast at a portion of the slope. Photographed September 27, 2021.

3. Discussion and Recommendations

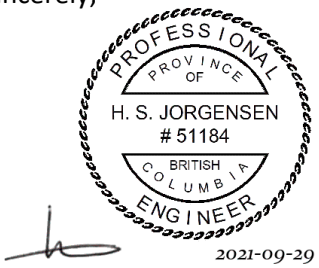
The slope shows no signs of surficial instability or movement. The existing slope angles are suitable for the given conditions and no remediation is necessary if left in their current state. If it is desirable to regrade the slopes or remove the vegetation, they should be regraded at 2 Horizontal to 1 Vertical (2H:1V).

4. Closure

The information discussed in this report is based on SoilTech's interpretation and understanding of current site conditions and the referenced documents. This memo has been completed for the exclusive use of the recipient and their agents. We take not responsibly for any damages suffered from any use or reliance of information contained within this report by third parties or for use other than the intended purpose.

If there are any questions or if additional information is required, please contact the undersigned.

Sincerely,



Hans Jorgensen, P. Eng.

Enclosures:
Sieve Analysis Reports 1 and 2 (2 pages)

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Sieve Analysis

Reference ASTM C117 and C136

Project Details

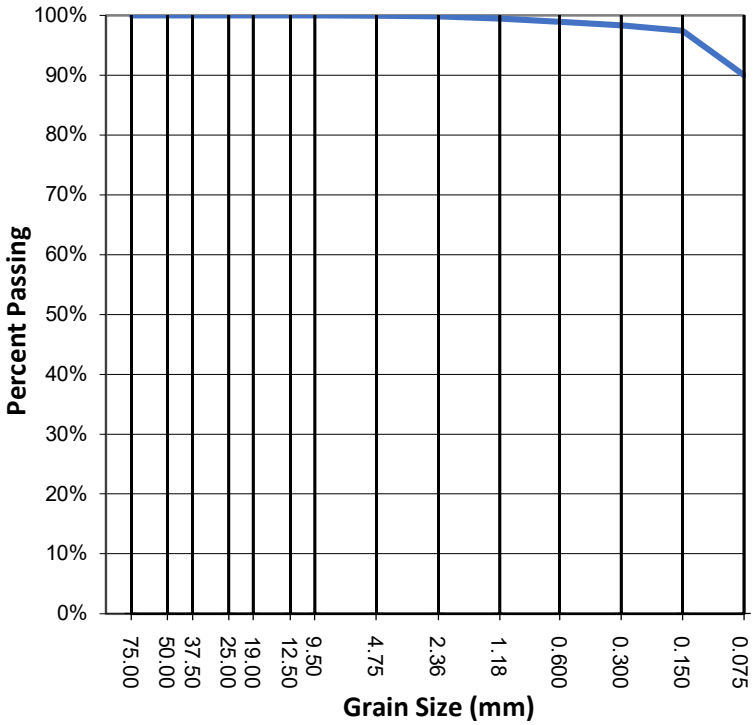
Client	116835 BC Ltd.	**Project No.**	21-P-016
Project	Phase 2 Martin Road	**Sieve Report No.**	1

Sample Details

Supplier	Existing	**Sampling Date**	September 27, 2021
Source	Slope Profile B	**Date Received**	September 27, 2021
Location	Mid Slope	**Date Tested**	September 29, 2021
Description	Silt	**Sampled By**	HJ
Specification		**Tested By**	CM

Sieve Size (mm)	Percent Passing	Specifications	
		Min	Max
75.0	100.0%		
50.0	100.0%		
37.5	100.0%		
25.0	100.0%		
19.0	100.0%		
12.5	100.0%		
9.5	100.0%		
4.75	99.9%		
2.36	99.8%		
1.18	99.4%		
0.600	99.0%		
0.300	98.4%		
0.150	97.5%		
0.075	90.0%		

Moisture Content 8.2%



Comments

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Project Details

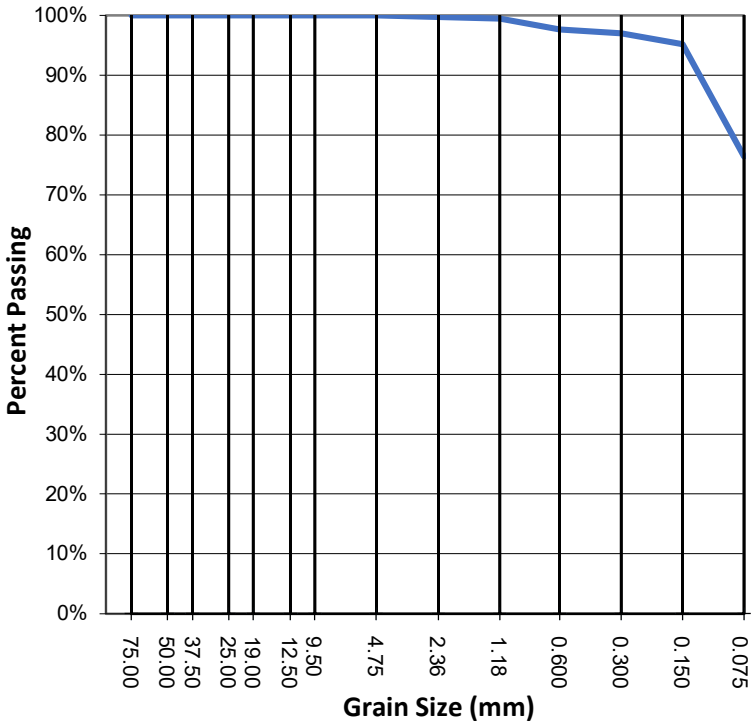
Client	116835 BC Ltd.	**Project No.**	21-P-016
Project	Phase 2 Martin Road	**Sieve Report No.**	1

Sample Details

Supplier	Existing	**Sampling Date**	September 27, 2021
Source	Slope Profile A	**Date Received**	September 27, 2021
Location	Toe of Slope	**Date Tested**	September 29, 2021
Description	Silt	**Sampled By**	HJ
Specification		**Tested By**	CM

Sieve Size (mm)	Percent Passing	Specifications	
		Min	Max
75.0	100.0%		
50.0	100.0%		
37.5	100.0%		
25.0	100.0%		
19.0	100.0%		
12.5	100.0%		
9.5	100.0%		
4.75	100.0%		
2.36	99.7%		
1.18	99.4%		
0.600	97.7%		
0.300	97.0%		
0.150	95.2%		
0.075	76.4%		

Moisture Content 9.6%



Comments