

June 21, 2019

PML Ref.: 19CF004  
Report: 2

Peppermill Construction Limited  
c/o Mr. Barry Stern  
The Muzzo Group of Companies  
50 Confederation Parkway  
Concord, Ontario  
L4K 4T8

Dear Mr. Stern

**Slope Assessment – Block 51**  
**Proposed Peaks Meadows Subdivision – Block 46**  
**Town of The Blue Mountains, Ontario**

Peto MacCallum Ltd. (PML) is pleased to present the results of the slope assessment completed on Block 51 for the above noted project site. Authorization for the work was provided by Mr. B. Stern, in the signed Engineering Services Agreement, dated March 12, 2019.

Block 46 on the south side of the existing Dorothy Drive is to be developed with 16 residential lots. Full-depth basements are anticipated for the lots.

Reference is made to Report 1, dated June 21, 2019, where geotechnical investigation and recommendations were provided for the Peaks Meadows Subdivision proposed on Block 46.

As part of the geotechnical assignment for this project, a visual slope assessment of Block 51, the property directly south and up-slope of Block 46, was requested.

A site plan showing the Block 51 limits is shown on Drawing 2-1 in Appendix A.

**Scope**

The scope of work conducted by PML is as follows:

- Site visit to review existing conditions and conduct review of slope utilizing the MNR Technical Guide Slope Stability Rating Chart, Table 4.2;
- Review available on-line topographic data;
- Present results of site visit and review.

**Site Visit**

PML attended the site on May 23, 2019 to review the existing conditions of the slope on Block 51. A Slope Stability Rating Chart, Table 4.2, from the MNR Technical Guide, for the slope is attached in Appendix B. Based on the scoring system, the slope has a score of 16 to 28, considering the various soil units at the site. Based on the Technical Guide, a score of less than 25 indicates a low potential for slope stability issues and a score between 25 and 35 indicates slight potential for slope stability issues. The score typically falls within the lowest category (low potential for slope stability issues) and recommends a site inspection only, confirmation, and letter report. It is considered that this letter constitutes the report for the site.



The slope on Block 51 comprises the base of the Niagara Escarpment. The Escarpment rises up some 125 to 150 m above the subdivision (Block 46) and there are a few residential lots on the slope above Block 51. The scope of this visual slope assessment is confined to Block 51 which extends about 100 to 150 m south of Block 46.

The slope on Block 51 is typically about three horizontal to one vertical, (3H:1V) or flatter and rises up about 35 m above Block 46. A ditch was cut along the Block 46/Block 51 property line, about ten years ago, to capture seepage and surface water runoff.

Based on the geotechnical report the soil stratigraphy on Block 46 comprises clay/silty clay over sand/silty sand/sand and gravel over shale bedrock. The soil stratigraphy was extrapolated to Block 51 for this assessment.

Seepage from the slope face appears about midway down the slope within Block 51, with areas of overland drainage down the slope present. No active erosion is present on the slope, with the exception of very minor erosion at the base near the ditch along the south property line, in the form of a minor gully.

The slope is predominately covered with heavy shrubs and mature trees (well vegetated).

There is no watercourse on Block 51.

No signs of slope failure were present on Block 51 at the time of our site visit.

Photographs of Block 51 taken during the site visit are presented in Appendix C.

### **Topographic Information**

Grey County GIS mapping (on-line) was reviewed to confirm conditions documented during our site visit.

Within Block 51, the overall slope drops about 35 to 40 m and the slope inclination was about 5H:1V in the west, about 3.5H:1V in the central portion and about 4H:1V in the east.

No scarring or suspected slope failure areas were shown within Block 51 on the website aerial photographs (2006 to 2016). Block 51 is well vegetated in all aerial photographs on the website.

### **Preliminary Geotechnical Opinion**

Based on the information presented in this letter, there appears to be a low potential for slope stability issues within Block 51.



**Closure**

We trust this report is sufficient for your current requirements.

Sincerely

Peto MacCallum Ltd.



Geoffrey R. White, P.Eng.  
Associate  
Manager Geotechnical and Geoenvironmental Services

GRW;jlb/tc

Enclosure(s):

Appendix A - Site Plan  
Appendix B - Slope Stability Rating Chart  
Appendix C - Site Photographs

Distribution:

2 cc: Mr. B. Stern, The Muzzo Group of Companies (+email: BStern@muzzogroup.com)  
1 cc: Mr. B. Ellsworth, C.F. Crozier & Associates Consulting Engineers (+email: bellsworth@cfcrozier.ca)  
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## **APPENDIX A**

Site Plan





## **APPENDIX B**

### Slope Stability Rating Chart



TABLE 4.2 - SLOPE STABILITY RATING CHART <sup>(1)</sup>		
<b>Site Location:</b> Dorothy Drive, Block 51, Town of the Blue Mountains		<b>PML Ref:</b> 19CF004
<b>Inspection Date:</b> May 23, 2019		
<b>Inspected By:</b> Geoffrey White, P.Eng.		<b>Weather:</b> Overcast/rain, 18 C
<b>1. OVERALL SLOPE INCLINATION</b>		
<b>Degrees</b>	<b>horiz : vert.</b>	
a) 18 or less	3:1 or flatter	<u>0</u>
b) 18 – 26	2:1 to more than 3:1	6
c) more than 26	steeper than 2:1	16
<b>2. SOIL STRATIGRAPHY</b>		
a) Shale, Limestone, Granite (Bedrock)		<u>0</u>
b) Sand, Gravel		<u>6</u>
c) Glacial Till		9
d) Clay, Silt		<u>12</u>
e) Fill		16
f) Leda Clay		24
<b>3. SEEPAGE FROM SLOPE FACE</b>		
a) None or Near bottom only		0
b) Near mid-slope only		<u>6</u>
c) Near crest only, or From several levels		12
<b>4. SLOPE HEIGHT</b>		
a) 2 m or less		0
b) 2.1 to 5 m		2
c) 5.1 to 10 m		4
d) more than 10 m		<u>8</u>
<b>5. VEGETATION COVER ON SLOPE FACE</b>		
a) Well vegetated; heavy shrubs or forested with mature trees		<u>0</u>
b) Light vegetation; Mostly grass, weeds, occasional trees, shrubs		4
c) No vegetation, bare		8
<b>6. TABLE LAND DRAINAGE</b>		
a) Table land flat, no apparent drainage over slope		0
b) Minor drainage over slope, no active erosion		<u>2</u>
c) Drainage over slope, active erosion, gullies		4
<b>7. PROXIMITY OF WATERCOURSE TO SLOPE TOE</b>		
a) 15 metres or more from slope toe		<u>0</u>
b) Less than 15 meters from slope toe		6
<b>8. PREVIOUS LANDSLIDE ACTIVITY</b>		
a) No		<u>0</u>
b) Yes		6
<b>SLOPE INSTABILITY RATING</b>	<b>RATING VALUES INVESTIGATION TOTAL</b>	<b>TOTAL</b>
<b>1. Low potential</b>	< 24	Site inspection only, confirmation, report letter. <input checked="" type="checkbox"/>
<b>2. Slight potential</b>	25-35	Site inspection and surveying, preliminary study, detailed report. <input checked="" type="checkbox"/>
<b>3. Moderate potential</b>	> 35	Boreholes, piezometers, lab tests, surveying, detailed report.



## **APPENDIX C**

Site Photographs



Photograph 1: Ditch at the base of the slope.



Photograph 2: Ditch at the base of the slope.



Photograph 3: General slope conditions.



Photograph 4: General slope conditions.