

October 4, 2021

PML Ref.: 19KF007
Report: 4

Mr. Domenico De Palma
257090 Ontario Inc.
138 Kate Crescent
Maple, Ontario
L6A 3P9

Dear Mr. De Palma

Excess Soil Management – Source Site Review
White Rose Park Residential Subdivision, Phase 3
North of Bradley Street
Dundalk, Ontario

Peto MacCallum Ltd. (PML) has completed a review of chemical analysis results for excess soil proposed to be imported to the White Rose Park Subdivision, Phase 3, located north of Bradley Street in Dundalk, Ontario. Authorization to proceed with this assignment was provided by Mr. Vittorio De Palma of White Rose Park in an email dated September 30, 2021.

Methodology

PML reviewed the report(s) provided for the Source Site. A summary of the findings is provided in the following table:

Data	Notes/Comments
Source Site Location:	Southwest corner of Highway 7 and Interchange Way, Vaughan, Ontario
Source Site Data: Report(s) Title, Author and Date:	Document 1: GTR-00038035 Festival – Highway 7 and Interchange Way, Vaughan, Excess Soil Sampling Program for Importation to the Roads at Watersands Subdivision, City of Barrie and Town of Innisfil– Prepared by exp. dated June 21, 2021 (copy attached as Appendix A) Document 2: Phase I Environmental Site Assessment (ESA) by Golder Associates in August 2018 (Reviewed and referenced by exp. in Document 1, but copy not provided)
What is the Source Site history / use in the vicinity of Source Site?	It is understood that the Source Site is currently and historically undeveloped land. exp. reports that the Golder Phase I ESA did not identify any Areas of Potential Environmental Concern (APECs) on the Site.
Date that Samples were Obtained:	June 7, 2021
Source of the excess soil:	In situ soil to be excavated during excavations for construction at the Source Site.



Data	Notes/Comments
Contaminants of concern (COCs) identified in the Phase One ESA:	None
COCs tested in the soil samples:	12 Metals (including hydride forming metals) and inorganics (including EC/SAR); 12 Petroleum hydrocarbon (PHC) fractions F1 to F4; 12 Benzene, Toluene, Ethylbenzene, Xylene (BTEX) 12 Polycyclic aromatic hydrocarbons (PAHs)
Appropriate vapour screening conducted?	Yes (max. reported value 10 ppmv)
Samples specific to the excess soil approval:	Refer to Document 1 .
Sampling and testing frequency in accordance with O. Reg. 406/19 ¹	Yes (Refer to Note 1)
Estimated schedule for importation of material:	October 2021
Volume approved/represented by the analyses provided:	Refer to Drawing 1 attached
What is the soil type/description?	Brown Sandy Silt
Soil quality meets the applicable Table 2.1 residential/parkland/institutional Excess Soil Quality Standards (ESQS):	Yes, except for the following: 1. Several parameters have reported detection limits which are above the corresponding ESQS; 2. One sample (TH101-SS2) which has an exceedance of Sodium Adsorption Ratio (SAR)

Note:

1. Cognizant of the fact that there are no identified APECs on the site, the sampling frequency is considered reasonable.

Based on our review of the Source Site Information, the reported test results meet the applicable ESQSSs for residential/parkland/institutional property use in a potable ground water condition as presented in "Rules for Soil Management and Excess Soil Quality Standards", Appendix 1, Table 2.1 **except for the following:**

1. Several parameters have reported detection limits that are above the corresponding ESQSSs;
2. One sample (TH101-SS2) which has an exceedance of Sodium Adsorption Ratio (SAR)



Regarding Item 1, the parameters for which the laboratory analytical detection limit was above the corresponding ESQS, are not identified as Contaminants of Potential Concern (COPCs) for the Source Site; as such, it is unlikely that there are exceedances of these parameters.

Regarding Item 2, elevated SAR is typically attributed to the use and application of de-icing salts for the safety of vehicular or pedestrian traffic under conditions of snow or ice or both. Under O.Reg. 406/19, excess soil quality standards for chemicals (i.e. EC and SAR) in soil resulting solely from the use of a substance for the safety of vehicular or pedestrian traffic applied under conditions of snow or ice or both are deemed to be met if the following criteria are met:

If the soil is to be removed from the Source Site for off-site reuse, the following conditions must be met.

- i. The excess soil is finally placed at one of the following locations:
 - a) where it is reasonable to expect that the soil will be affected by the same chemicals (EC/SAR) as a result of continued application of a substance for the safety of vehicular or pedestrian traffic under conditions of snow or ice;
 - b) at an industrial or commercial property use and to which non-potable standards would be applicable; or
 - c) at least 1.5 metres below the surface of the soil.
- ii. The excess soil is not finally placed at any of the following locations:
 - a) within 30 metres of a waterbody;
 - b) within 100 metres of a potable water well or area with an intended property use that may require a potable water well; or,
 - c) a location that will be used for growing crops or pasturing livestock unless the excess soil is placed 1.5 metres or greater below the soil surface.
- iii. The project leader or operator of the Source Site Project Area has informed the Receiving Site owner or operator that the excess soil is from a location that may be expected to contain chemicals (EC and/or SAR) and, if sampling and analysis has been conducted in accordance with the regulation, the project leader or operator of the Project Area has provided relevant sampling results to the Receiving Site owner or operator, including the soil characterization report if prepared, and identified and communicated any potential risks to surface water and ground water to the receiving Site owner or operator.

As per the regulation, the SAR impacted material is not suitable for reuse at White Rose Residential Subdivision, Phase 3 except if it is placed as subsurface fill (below 1.5 m depth) or is placed within the limits of roadway areas which will be subjected to ongoing application of de-icing salts.

Based on the test results provided, an area of approximately 12,290 m² between 0.0 to 3.0 m depth in the south area of the site as shown on the attached Source Site Plan, Drawing 1, is suitable for importation to the White Rose Residential Subdivision, Phase 3 for use as general fill, subject to geotechnical suitability.



An approximate area of 8,850 m² in the north area of the site as shown on the attached source Site Plan, Drawing 1, is indicated to be impacted or potentially impacted with salt (EC and/or SAR) and is not suitable for importation to the White Rose Residential Subdivision, Phase 3, except where it can be placed in roadways and/or as subsurface fill, and subject to the placement restrictions outlined in O.Reg. 406/19 as previously discussed. Additional sampling and analytical testing at the Source Site can be undertaken by the Source Site QP to further delineate the extent of the SAR impacts and to refine the quantity estimates.

It should be noted that the soil conditions between and beyond the sampled locations at the Source Site may differ from those encountered during the sampling. PML should be contacted if impacted soil conditions become apparent during excavation and evaluate whether modifications to the conclusions documented in this report are necessary.

PML recommends the excavated material be carefully examined during excavation under the supervision of the Source Site Qualified Professional (QP) to confirm the soil quality meets the findings of this soil sampling and chemical testing report. It is recommended that a tracking system be in place to document the transport of excess soil from the Source Site to the Reuse Site.

It is recommended that the audit sampling of all imported excess soil be carried out to verify that the environmental quality of the excess soil meets the applicable ESQs. Sampling and analytical testing should be at a minimum frequency of 1 sample for 2,000 m³.

This report is subject to the Statement of Limitations that is included with this report (Appendix B) and which must be read in conjunction with the report.

We trust the information presented in this report is sufficient for your present purposes. If you have any questions, please do not hesitate to contact our office.

Sincerely

Peto MacCallum Ltd.

A handwritten signature in blue ink, appearing to read 'SAG', is located below the name Scott Jeffrey.

Scott Jeffrey, P.Eng., QP_{ESA}, LEED_{GA}
Senior Associate
Regional Manager, Geotechnical and Geoenvironmental Services

SJ:ld

Enclosure(s):

Drawing 1 – Source Site Plan Southwest Corner of Highway 7 and Interchange Way, Vaughan, Ontario
Appendix A – Source Site Data
Appendix B – Statement of Limitations

Distribution (via email):

1 cc: Domenico De Palma, 257090 Ontario Inc. (dd@whiterosepark.com)
1 cc: Vittorio De Palma, 257090 Ontario Inc. (victor@whiterosepark.com)

T 2.1 RPI EXCEEDANCE SUMMARY:
TH101-SS2 (2.0 MBGS)

PARAMETER	ESQS	RESULT
SAR	5.0	6.7

TP101

TP104

TP105

TP102

TP107

TP106

TP103

Commerce St

Interchange Way

Site Plan

KEY PLAN
VAUGHAN, ONTARIO

LEGEND:

- TEST PIT LOCATION (EXP SERVICES INC.)
- APPROXIMATE SITE BOUNDARY

SOURCE OF EXCESS SOIL:

- APPROXIMATE EXCAVATION AREA LIMITS APPROVED FOR IMPORTATION TO WHITE ROSE RESIDENTIAL SUBDIVISION, PHASE 3, FROM DEPTHS 0 TO 3.0 m (APPROXIMATELY 12920 m²)
- APPROXIMATE AREA NOT SUITABLE FOR IMPORTATION TO WHITE ROSE RESIDENTIAL SUBDIVISION, PHASE 3, EXCEPT FOR USE WITHIN ROADWAYS OR AS SUBSURFACE FILL BELOW 1.5 M DEPTH (APPROXIMATELY 8850 m²)

REFERENCE:

PLAN PRODUCED FROM EXCESS SOIL SAMPLING PROGRAM FOR IMPORTATION TO THE ROADS AT WATERSANDS SUBDIVISION, CITY OF BARRIE AND TOWN OF INNISFIL - TEST PIT LOCATION PLAN, PREPARED BY EXP SERVICES INC., DRAWING NO. 1, DATED 06/2021.



EXCESS SOIL MANAGEMENT - SOURCE SITE REVIEW
WHITE ROSE PARK SUBDIVISION
DUNDALK, ONTARIO

SOURCE SITE PLAN: SOUTHWEST CORNER OF HIGHWAY 7
AND INTERCHANGE WAY, VAUGHAN, ONTARIO

PML Peto MacCallum Ltd.
CONSULTING ENGINEERS

DRAWN	FH	DATE	SCALE	PML REF.	DRAWING NO.
CHECKED	SJ	OCT 2021	AS SHOWN	19KF007	1
APPROVED	SJ				