

to:	Richcraft Group of Companies - Mr. Patrick Gaudreault - pgaudreault@richcraft.com
re:	Environmental Remedial Action Plan Proposed Commercial Development - Trail's Edge - Phase 4 (South), Part of 2284 Mer Bleue Road, Ottawa, Ontario
date:	June 22, 2021
file:	PE4999-RAP.02
from:	Nick Sullivan

Further to your request and authorization, Paterson Group (Paterson) has prepared a remedial action plan for the proposed commercial development at the aforementioned property (the subject site).

The subject site is located on the west side of Mer Bleue Road, south of Brian Coburn Boulevard, in the City of Ottawa, Ontario. The subject site is currently occupied with an abandoned metal workshop building and storage shed, whereas the remainder of the subject site consists primarily of vacant grassland.

Environmental Site Conditions

In August 2020, Paterson completed a Phase I - Environmental Site Assessment (Phase I ESA) Update for the subject site. According to the historical information reviewed, the subject site was first developed with a metal workshop building sometime in the late-1980's. Fill material of unknown quality was also suspected to have been placed on the subject site within the vicinity of the metal workshop building. These two activities were considered to represent on-site PCAs, resulting in APECs with respect to the subject site.

The neighbouring properties have historically consisted of residential and commercial lands. No environmental concerns were identified with respect to the neighbouring properties.

In September, October, and November 2020, a Phase II ESA was conducted for the subject site to address the two aforementioned PCAs considered to result in APECs with respect to the subject site. The subsurface investigation consisted of drilling three boreholes throughout the subject site, all of which were equipped with groundwater monitoring wells, in addition to the excavation of five test pits.

A select number of soil samples were submitted for laboratory analysis of BTEX, PHCs, PAHs, and/or metal parameters. Based on the analytical test results, the concentration of PAHs identified within the surficial layer of fill material were in excess of the appropriate MECP Table 2 commercial site condition standards selected for the subject site.

Groundwater samples were also recovered from the monitoring wells installed on-site and submitted for laboratory analysis of VOCs and PHC parameters. Based on the analytical results, no contaminated groundwater was identified on the subject site.

Based on the findings of the Phase II ESA, contaminated fill material was identified within the southwestern portion of the subject site, located at the rear of the metal workshop building, requiring some remedial work. The thickness of the fill material in this area extends to a depth of approximately 0.54 m below the existing ground surface. This impacted fill material should be remediated by means of removal from the subject site and disposed at an approved waste disposal facility.

Please refer to the following section for further details on the recommended plan for site remediation.

Remedial Action Plan/Soil Quality Assessment

The suggested action plan consists of a generic approach, where the excavation and removal of site soils will be undertaken. The suggested action plan is as follows:

- All impacted soils will be removed from the subject site prior to any future site development activities.
- Paterson personnel will be present on-site to monitor the excavation and removal of any impacted soils.
- Excavated soils will be screened using visual and olfactory observations as well as a portable soil vapour analyser. Field observations will be used in combination with the collection and analytical testing of confirmatory base samples for Polycyclic Aromatic Hydrocarbons (PAHs) parameters.
- Any impacted soils identified will be placed in trucks and hauled to an approved waste disposal facility. A toxicity characteristic leaching procedure (TCLP) sample will be obtained and submitted for laboratory analysis prior to the transportation of any impacted soils to a licensed waste disposal site.
- Given the surficial nature of the impacted fill, no fill material is expected to be required to be imported for backfilling purposes. The limits of the final excavation should be graded to a safe condition using the surrounding fill material.
- Based on the findings of the Phase II ESA, the groundwater beneath the Phase II property is not contaminated. Groundwater is not expected to be encountered during the remedial program.

- Upon completion of the remedial program, a summary report will be prepared including our observations, findings, and analytical test results. This remediation report will be incorporated into our Phase II ESA for submission to the city.

Quantities and Cost Estimate

Estimated quantities are as follows:

- Contaminated Soil to be Excavated 50 m³
- Disposal of impacted soil at an approved waste disposal facility 100 mt
- Groundwater management and treatment Not Required
- Backfill material. Not Required

We trust that this information satisfies your requirements.

Best Regards,

Paterson Group Inc



Nick Sullivan, B.Sc.



Mark D'Arcy, P.Eng.

Attachments

- Table 1 - Generic Approach for Remediation
- Soil Profile and Test Data Sheet - Test Pit #14
- Drawing PE4999-3 - Test Hole Location Plan

Table 1 Generic Approach for Subject Site Part of 2284 Mer Bleue Road, Ottawa, Ontario		
Item and Estimated Quantity	Unit Rate	Estimated Cost
Remediation Contractor Estimated Incremental Costs		
Site preparation prior to commencing excavation operation including required safety signs and mobilization as well as cleaning and maintenance of roadway due to construction activities when removing contaminated soil.	Lump Sum	
Removal of Impacted Soil Treatment		
Excavation of soil (approximately 50 m ³)	\$ _____ / m ³	
Transportation and tipping fees for impacted soil at approved waste disposal facility (approximately 50 m ³ or 100 mt)	\$ _____ / mt	
Contractor Sub-Total (excluding applicable taxes)		

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SOIL PROFILE AND TEST DATA

Phase II - Environmental Site Assessment
Trail's Edge: Phase 4 (South)
Ottawa, Ontario

DATUM Geodetic


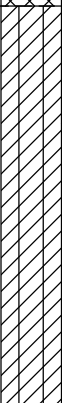
REMARKS

BORINGS BY Backhoe

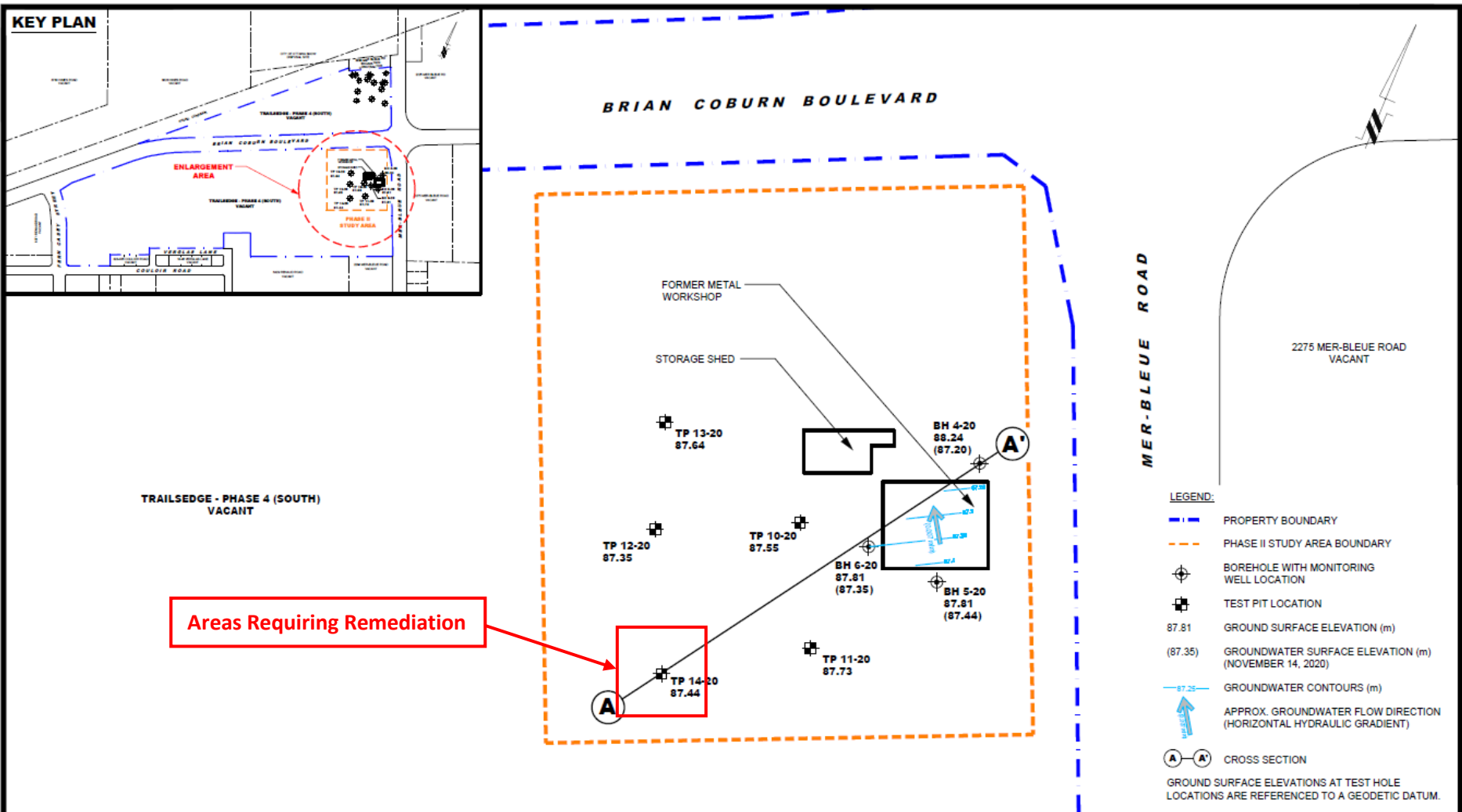
DATE October 19, 2020

FILE NO. **PE4999**

HOLE NO. **TP14**

SOIL DESCRIPTION	STRATA PLOT	SAMPLE				DEPTH (m)	ELEV. (m)	Photo Ionization Detector				Monitoring Well Construction		
		TYPE	NUMBER	RECOVERY %	N VALUE or RQD			● Volatile Organic Rdg. (ppm)	○ Lower Explosive Limit %	20	40		60	80
GROUND SURFACE						0	87.44							
FILL: Brown/black silty sand, some clay and gravel, trace cobbles		G	1					●						
	0.54													
Brown SILTY CLAY		G	2					●						
	1.42					1	86.44							
End of Test Pit														

100 200 300 400 500
RKI Eagle Rdg. (ppm)
▲ Full Gas Resp. △ Methane Elim.



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NO.	REVISIONS	DATE	INITIAL

OTTAWA,
Title:

TEST HOLE LOCATION PLAN

ONTARIO

RICHCRAFT HOMES LTD.
PHASE II - ENVIRONMENTAL SITE ASSESSMENT
TRAIL'S EDGE - PHASE 4 (SOUTH)
SOUTHERN PARCEL (COMMERCIAL ZONE)

Scale:	1:1000	Date:	12/2020
Drawn by:	YA	Report No.:	PE4999-1
Checked by:	NS	Dwg. No.:	PE4999-3
Approved by:	MSD	Revision No.:	

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