

to:	Dolyn Construction Ltd. - Mr. Doug Burnside - doug@dolyn.com
re:	Environmental Remedial Action Plan Proposed Residential Building, 326 & 330 Wilbrod Street, Ottawa, Ontario
date:	June 22, 2022
file:	PE5378-RAP.01
from:	Nick Sullivan & Mark D'Arcy

Further to your request and authorization, Paterson Group (Paterson) has prepared a remedial action plan for the proposed residential development at the aforementioned property (henceforth referred to as the subject site). The subject site is located on the south side of Wilbrod Street, between Friel Street and Chapel Street, in the City of Ottawa, Ontario.

Environmental Site Conditions

In March 2022, Paterson completed a Phase I - Environmental Site Assessment (Phase I ESA) for the subject site. According to the historical research, the subject site was first developed sometime prior to 1878 with a residential dwelling (330 Wilbrod Street). A second residential dwelling was later constructed on the subject site sometime in the 1940's (326 Wilbrod Street). No environmental concerns were identified with respect to the historical use of the subject site.

The neighbouring lands in the vicinity of the subject site have historically been developed predominantly for residential purposes, with some occasional institutional and commercial land uses. Records of an above ground fuel storage tank were identified for the adjacent property to the south (353 Friel Street), which was considered to represent an APEC on the subject site.

At the time of the initial site inspection, a pad-mounted transformer was identified within the backyard of 330 Wilbrod Street, which was considered to represent an APEC on the subject site. It should be noted that the aforementioned residential dwellings were demolished in January 2022, and the excavations backfilled with fill material, which was considered to represent an APEC on the subject site. Lastly, the historical application of road salt for de-icing purposes during snow and ice conditions on the former parking lot in the northern portion of the site was considered to represent an APEC on the subject site.

The neighbouring lands within the vicinity of the subject site consist mainly of residential properties, with occasional institutional and commercial land uses. No environmental concerns were identified with respect to the neighbouring lands.

In February 2022, a Phase II - Environmental Site Assessment was carried out for the subject site to address the aforementioned APECs. The subsurface investigation consisted of drilling three boreholes throughout the subject site, all of which were equipped with groundwater monitoring wells.

The boreholes were advanced to depths ranging from approximately 6.71 m to 8.84 m below the existing ground surface and terminated within an overburden layer of grey silty clay. It should be noted that a dynamic cone penetration test was carried out at BH2-22, which was terminated on practical refusal on inferred bedrock at a depth of approximately 18.21 m below ground surface.

In general, the subsurface soil profile encountered at the borehole locations consists of a surficial layer of fill material (brown silty sand with crushed stone, gravel, and trace demolition debris) over top of brown silty clay, turning grey at deeper depths in line with the water table.

Three soil samples were submitted for laboratory analysis of BTEX, PHCs (F1- F4), PAHs, metals, PCBs, EC, SAR, and/or pH parameters. Based on the analytical test results, elevated concentrations of molybdenum and EC were detected in the shallow layer of fill material at BH2-22, located in the northern portion of the subject site. It should be noted however, that the exceedance of EC is considered to be due to the use of a substance on surfaces for the safety of vehicular or pedestrian traffic under conditions of snow or ice or both, and therefore, is deemed to meet the site standards.

Groundwater samples were recovered on February 24, 2022 and submitted for laboratory analysis of BTEX, PHCs (F1-F4), and/or PCB parameters. Based on the analytical test results, none of the aforementioned parameters were detected in the groundwater samples analyzed, and as such, the results are in compliance with the selected MECP Table 3 non-potable groundwater standards.

Based on the findings of the Phase II ESA, metal impacted soil/fill material was identified on-site, requiring some remedial work. 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 is as follows:

- It is our understanding that the proposed development will require the excavation of a half-basement level during site redevelopment.
- Paterson personnel will therefore be present on-site at the time of the excavation to monitor the removal of any impacted soils.
- All 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 interim confirmatory samples for metal parameters within the area of contamination.
- 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.
- Any impacted soil identified in excess of the appropriate MECP Table 3 Residential Soil Standards for Non-Potable Groundwater Conditions will be placed into trucks and hauled to an approved waste disposal facility.
- Based on the findings of the Phase II ESA, the groundwater beneath the subject site is not contaminated.
- Upon completion of the remedial program, confirmatory soil testing will be carried out and a summary report will be prepared including our observations, findings, analytical test results, and any recommendations.

We trust that this information satisfies your requirements.

Mr. Doug Burnside
Page 4
File: PE5378-RAP.01

Best Regards,

Paterson Group Inc



Nick Sullivan, B.Sc.



Mark D'Arcy, P.Eng., QP_{ESA}

Paterson Group Inc.

Head Office and Laboratory
154 Colonnade Road South
Ottawa - Ontario - K2E 7J5
Tel: (613) 226-7381 Fax: (613) 226-6344

Northern Office and Laboratory
63 Gibson Street
North Bay - Ontario - P1B 8Z4
Tel: (705) 472-5331 Fax: (705) 472-2334