



**PATERSON
GROUP**

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Geotechnical Engineering
Environmental Engineering
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Materials Testing
Building Science
Rural Development Design
Retaining Wall Design
Noise and Vibration Studies

Attention: **Mr. Charbel Bouroufail**

Subject: **Phase I-Environmental Site Assessment Update
7628 Flewellyn Road
Ottawa, Ontario**

patersongroup.ca

Dear Sir,

Further to your request, Paterson Group (Paterson) conducted a Phase I Environmental Site Assessment (ESA) Update for the aforementioned property. This report updates a Phase I ESA entitled "Phase I Environmental Site Assessment, 7628 Flewellyn Road, Ottawa, Ontario" prepared by Paterson Group Inc. (Paterson), dated May 3, 2021.

This update report is intended to meet the requirements for an updated Phase I ESA, as per the MECP O.Reg. 153/04, as amended. This update report is to be read in conjunction with the 2021 report.

Background

The property addressed 7628 Flewellyn Road is herein referred to as the Phase I Property, which is located on the south side of Flewellyn Road, approximately 600 m east of Munster Road, in the City of Ottawa, Ontario. Refer to Figure 1 - Key Plan following the text of this letter.

The Phase I Property is currently occupied by an automotive salvage yard and metal recycling facility. The subject land is an irregular shaped lot with an approximate footprint of 20.22 hectares, zoned for rural countryside where private domestic water wells and septic systems are relied upon.





Previous Engineering Reports

- “Environmental Impact Screening Assessment, 7628 Flewellyn Road, Ottawa, Ontario,” prepared by CM3 Environmental Inc. and dated December 16, 2020.

CM3 carried out an environmental impact screening assessment to assess the presence of potential contaminants of concern associated with a former engine pulling station on the eastern portion of the subject site and the quarry operations on the adjacent property to the west, as well as the residential homes to the north and east of the subject site.

The subsurface program consisted of drilling three (3) boreholes (MW1-MW3) to assess the potential concerns. All of the boreholes were instrumented with groundwater monitoring wells. The soil profile encountered during the program generally consisted of sand and gravel overlying bedrock, which was encountered at an average depth of 1.0 m below ground surface. The boreholes were terminated in bedrock at a maximum depth of 14.8 m below ground surface (mbgs). Groundwater was encountered within the bedrock at an average depth of 9.3 mbgs and was determined to be flowing in a southeasterly direction.

Three (3) soil samples were submitted for laboratory analysis of VOCs, BTEX, and PHC (F₁-F₄). According to the analytical test results, the concentration of PHC F₃ in soil sample MW1-SA1 was in excess of the selected MECP Table 6 Industrial Standards, while all other parameter concentrations analyzed were in compliance.

Three (3) groundwater samples were submitted for laboratory analysis of VOCs, BTEX, PHC (F₁-F₄), Metals, PAHs, and PCB parameters. According to the analytical test results, the concentration of PAHs (benzo[a]pyrene, benzo[b]fluoranthene, and chrysene) in the groundwater sample obtained from MW2 was in excess of the selected MECP standards, while all other parameter concentrations analysed were in compliance.

Based on the findings of the subsurface investigation, soil remediation in the immediate area of MW1 was recommended to address the PHC (F₃) impact. Furthermore, it was recommended that MW2 be resampled to confirm its quality.

- “Phase I-Environmental Site Assessment, 7628 Flewellyn Road, Ottawa, Ontario,” prepared by Paterson Group Inc. (Paterson), dated May 3, 2021.

Based on a domestic well record identified in the Phase I ESA report, the first developed use of the Phase I Property was residential circa 1952. In 2011, the Phase I Property was repurposed into an automotive salvage yard and metal recycling facility.



Activities associated with the salvage yard and recycling facility included a fuelling station that consisted of three (3) aboveground storage tanks (ASTs), situated on the northern portion of the Phase I Property. Additionally, six (6) aboveground waste fluid storage tanks were observed adjacent to a temporary storage building that housed an automobile fluid draining station.

The neighbouring lands within the vicinity of the subject site were generally observed to be used for residential purposes, with the exception of a neighbouring quarry operation. Due to the large spatial distance from any PCAs on the neighbouring quarry, this site is not considered to pose an environmental concern to the subject site.

The surrounding lands within the Phase I Study Area were developed for residential purposes, with the exception of a large quarry operation adjacent to the west. Based on the spatial orientation relative to the Phase I Property, this off-site PCA or quarry was not considered to represent an APEC on the Phase I Property.

Based on the findings of this Phase I ESA, the use of the Phase I Property, including the ASTs and waste fluid tanks as well as the fluid draining station were considered to result in APECs. A subsequent Phase II ESA was conducted to assess to potential impact on the Phase I Property as a result of the aforementioned APECs.

☐ “Phase II-Environmental Site Assessment, 7628 Flewellyn Road, Ottawa, Ontario,” prepared by Paterson Group Inc. (Paterson), dated July 6, 2021.

The Phase II ESA program consisted of drilling six (6) boreholes across the Phase II Property, in three (3) of which, groundwater monitoring wells were installed. Three (3) boreholes were advanced to maximum depth of approximately 10 mbgs and terminated within the bedrock, while the remaining three (3) boreholes were terminated at practical refusal to augering on inferred bedrock at depths ranging from 1.2 to 2.2 mbgs.

The subsurface soil profile encountered during the field program consisted of a thin (0.15 m) layer of brown silty sand with gravel and rock fragments, overlying interbedded limestone, dolostone, and shale bedrock. Due to the shallow nature of the soil profile encountered at BH1-BH3 (less than 0.2 m of overburden), as well as the poor recovery of any surficial soils (mostly rock fragments), no soil samples were submitted for laboratory analysis.

Groundwater samples were recovered from the monitoring wells installed on site and submitted for laboratory analysis of VOCs and PHCs (F₁-F₄). A groundwater sample from MW2 was also recovered and submitted for analytical testing of VOCs, PHCs (F₁-F₄) and PAHs, as recommended by CM3 in 2020.



Based on the analytical results, all of the groundwater samples, including the sample from MW2, complied with the selected MECP Table 6 Standards.

It is our opinion that the PAH exceedances identified in the groundwater sample from MW2 in 2020 were not representative of the actual groundwater quality at that time, and likely a result of sediment in the groundwater sample.

Based on the findings of the 2020 and 2021 subsurface programs completed by CM3 and Paterson, respectively, it was concluded that the PHC impacted soil identified in the immediate area of MW1 did not pose any risk regarding the current use of the Phase I Property, and as such, no additional work was considered necessary at that time.

It was recommended that consideration should be given to completing a soil remediation program in the future should the site be redeveloped.

Personal Interview

Ms. Victoria Freeborn, the chief operations officer of Cash for Trash, was available at the time of the site inspection to respond to questioning.

According to Ms. Freeborn, operations and/or activities or new changes associated with the Phase Property have remained the same since the 2021 Phase I ESA.

Any other pertinent information obtained during the interview has been included in the relevant sections of this report.

Site Reconnaissance

A site visit was conducted on March 30, 2023. No apparent changes were made to the Phase I Property since the 2021 site visit. The Phase I Property still operates as salvage yard and metal recycling facility – all above ground structures and building and fueling station are present on-site. The former groundwater monitoring wells that were drilled on-site as part of the Phase II ESA completed in 2021 were still noted on-site and remain viable.

A depiction of the Phase I Property is illustrated on Drawing PE5254-1 – Site Plan, in the Figures section of the 2021 Phase I ESA report.

The neighbouring lands appear unchanged since the 2021 Phase I ESA.



Update Records Review

Aerial Photographs

The latest aerial photograph reviewed as part of the 2021 Phase I ESA was from 2019. A Google Earth image from 2023 was reviewed as part of this assessment. Based on the review of the 2019 and 2023 images, there were no apparent changes to the Phase I Property or properties within the Phase I Study Area.

Ministry of the Environment, Conservation and Parks (MECP) Freedom of Information Request (FOI)

A request was submitted to the MECP Freedom of Information (FOI) office for information with respect to reports related to environmental conditions, records concerning environmental incidents, orders, offences, spills, discharges of contaminants, or inspections, and MECP issued instruments for the Phase I Property at the time of the 2021 Phase I ESA. The MECP FOI response has not been received at the time of issuance of the 2021 report.

Given that there have been no apparent changes to the Phase I Property since 2021, it is not likely that new information and/or records would be revealed should an additional MECP FOI request be submitted as part of this update.

MECP Brownfields Environmental Site Registry

A search of the MECP Brownfields Environmental Site Registry (ESR) was conducted as part of this assessment for the site, neighbouring properties and the general area of the site. No Records of Site Condition (RSCs) were identified for the Phase I Property nor were there any new RSCs for properties within the Phase I Study Area.

Technical Standards and Safety Authority (TSSA)

The TSSA, Fuels Safety Branch in Toronto was contacted electronically on March 29, 2023, to inquire about current and former underground storage tanks, spills and incidents for the site and neighbouring properties. Based on the TSSA response, there are no records pertaining to the Phase I Property or on properties within the Phase I Study Area. A copy of the TSSA correspondence is appended to this report.

City of Ottawa Historical Land Use Inventory (HLUI)

As part of the original assessment, a request to the City of Ottawa's Historical Land Use Inventory (HLUI) database to search for historical activities associated with the Phase I Property and properties within the Phase I Study Area.



Based on the response received from the City on June 9, 2021, no information pertaining to the Phase I Property was identified during the City's search, with the exception of the current on-site operation/activity (automotive salvage yard), which has been addressed in the 2021 Phase II ESA report prepared by Paterson.

An off-site activity was identified in the HLUI search included the quarry/gavel and sand pit on the neighbouring property to the west. As previously discussed, this gravel pit/quarry is not considered to represent an APEC on the Phase I Property.

Given that there have been no apparent changes to the Phase I Property since 2021, it is not likely that new information and/or records would be revealed should an additional HLUI request be submitted as part of this update. A copy of the HLUI response letter and search results are appended to this report.

Update Conceptual Site Model and Conclusion

As a result of the records update and follow-up site visit undertaken as part of this assessment in order to meet the requirements of O.Reg. 153/04, as amended, no new potentially contaminating activities (PCAs) or areas of potential environmental concern (APECs) were identified as part of this Phase I ESA Update.

Based on this Phase I-ESA Update, **it is our opinion that a Phase II-ESA Update is not required for the Phase I Property at this time.**

Recommendations

Our recommendation remains the same, in that, consideration should be given to completing a soil remediation program during future site redevelopment.

Statement of Limitations

This Phase I - Environmental Site Assessment Update report has been prepared under the supervision of a Qualified Person, in general accordance with Ontario Regulation 153/04, as amended, under the Environmental Protection Act.

The conclusions presented herein are based on information gathered from a limited historical review and field inspection program. The findings of the Phase I ESA Update are based on a review of readily available geological, historical, and regulatory information and a cursory review made at the time of the field assessment.



Should any conditions be encountered at the site and/or historical information that differ from our findings, we request that we be notified immediately in order to allow for a reassessment.

This report was prepared for the sole use of Cash for Trash. Permission and notification from Cash for Trash and Paterson will be required to release this report to any other party.

We trust that this submission satisfies your current requirements. Should you have any questions please contact the undersigned.

Sincerely,

Paterson Group Inc.

Mandy Witteman, M.A.Sc., P.Eng.

Mark D'Arcy, P.Eng., QPESA



Appendix:

- TSSA Response
- Figure 1 – Key Plan

Report Distribution:

- Cash for Trash
- Paterson Group

