PATERSON GROUP

remedial action plan

re: **Environmental Remedial Action Plan**

Proposed Site Redevelopment
178, 180, 182 and 200 Isabella Street – Ottawa, Ontario

to: **Minto Communities – Mr. Kevin Harper – kharper@minto.com**
date: January 15, 2026
file: PE4710-RAP.01R

Further to your request and authorization, Paterson Group (Paterson) has prepared a remedial action plan for the Phase II Property addressed, 178, 180, 182 and 200 Isabella Street, in the City of Ottawa. The subject site is shown on Drawing PE4710-1R – Site Plan, appended to this remedial action plan.

At the time of this Remedial Action Plan, the estimated quantities are preliminary estimates.

Environmental Site Conditions

Background Information

In addition to the original Phase I and Phase II Environmental Site Assessments (ESAs), multiple Phase I and Phase II ESA Updates have been completed for the subject site. Findings from the Phase I ESAs identified historical site uses that were considered potentially contaminating activities (PCAs), resulting in the identification of areas of potential environmental concern (APECs), as well as the presence of fill material of unknown quality given that up to 7 former buildings have been present on site at one time or another. Consequently, Paterson conducted a Phase II ESA to further assess these APECs.

Based on the 2019 Phase II ESA, fill material in the area of BH2-19 was identifed as impacted with lead and several PAHs in excess of the selected MECP Tabe 3 residential standards. All of the groundwater test results were in compliance with the selected MECP standards.

As part of the more recent Phase II ESA Updates completed in 2023 and 2025, groundwater samples were collected from BH1 and submitted for laboratory analysis of BTEX and petroleum hydrocarbons (PHCs; F1–F4). No BTEX or PHC exceedances were identified. Based on the available data, groundwater beneath the subject site is considered to be clean.

Contaminated Fill Material

Based on the findings of the Phase II ESAs, fill material in the area of BH2-19 is contaminated with metals (lead) and several PAHs in excess of the selected MECP Table 3 Residential Standards. The fill material across the subject site extends from ground surface to approximate depths ranging between 0.60 mbgs and 2.80 mbgs.

The fill material across the site consists primarily of silty sand with gravel, with occasional concrete and brick fragments observed in boreholes. It is expected that some demolition debris will be encountered, in the fill present across the site. Any such fill material identified during the foundation excavation program will have to be removed from the subject site as contaminated soil.

Soil testing will be required in conjunction with the excavation program to segregate clean soil/fill from impacted fill and for final confirmatory purposes.

Salt Impacted Soil

EC and SAR are not considered to be contaminants of concern to the subject site but need to be considered when determining a reuse site location for soil leaving during development.

Groundwater

Based on the findings of the Phase II ESAs, groundwater data available to date did not identify any impact. However, as a precautionary measure we recommend carrying a nominal budget to deal with impacted groundwater.

If any free groundwater is encountered during construction il will require testing to confirm the appropriate method of disposal.

Record of Site Condition

Due to a change in land use, the proposed residential development will require a Record of Site Condition (RSC) to be filed with the MECP. The suggested approach consists of a full depth generic RSC for the property upon completion of remediation program.

Remedial Action Plan Summary

The suggested remedial action plan is as follows:

- A soil remediation program to separate impacted fill from the clean soil will be conducted. Additional testing will be required as per O. Reg. 406/19 – On-Site and Excess Soil Management and to segregate impacted material from clean material (fill/soil). This approach will be used in conjunction with the site development.

- All the impacted fill will be segregated from clean soil and disposed off site at an approved waste disposal facility. A TCLP analysis will be carried out on a representative sample. Excavated soil will be screened using visual and olfactory observations and a portable soil vapour analyser.

- Non-impacted soil will be assessed to determine an appropriate reuse site. Any excess soil generated during the site redevelopment will be managed in accordance with Ontario Regulation 406/19 – On-Site and Excess Soil Management.

- Final confirmatory soil testing will be conducted to verify that the subject site is clean, and a final remediation report will be prepared and incorporated in the Phase II-ESA report.

- A Record of Site Condition (RSC) will be filed with the MECP.

Estimated Quantities

Based on the most recent information, the proposed development on the subject site will consist of a 19-storey residential building with two levels of underground parking. It is anticipated that the entire site area will be excavated to the base of the P2 parking level, to an approximate depth of 7 m below ground surface.

Based on the available borehole data, the average depth of fill extends to about 1.90 m below ground surface (mbgs) in the western portion of the site and approximately 0.60 mbgs in the eastern portion. The total volume of fill material at the subject site is estimated to be approximately 3,650 m³.

It is estimated that approximately 50% to 60% of the fill material is impacted and will require disposal at an approved landfill facility. Accordingly, the volume of fill material requiring landfill disposal is estimated to range from approximately 1,825 m³ (≈3,650 mt) to 2,190 m³ (≈4,380 mt).

It should be noted that, based on the results of the future testing, the volume of contaminated fill requiring disposal at a licensed landfill facility may vary from the quantity estimated in the table above.

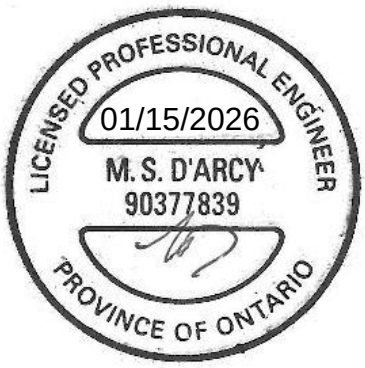
We trust this satisfies your immediate requirements.

Best Regards,

Paterson Group Inc.

Kuldeep Panchal, M. Eng.

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



Attachments:

- Drawing PE4710-1R – Site Plan

Report Distribution:

- Minto Communities
- Paterson Group Inc.

HIGHWAY 417

ISABELLA STREET

FH - TBM

TRANSFORMER PAD

CONCRETE SIDEWALK

BH 1
100.88
(98.79)

GRASS/WEED COVERED

200 ISABELLA STREET
VACANT

(FORMER TINSMITH AT REAR OF #186 ISABELLA)

BH 1-19
101.44

APEC 4

BH 5-19
101.22

APEC 3

BH 3
101.37

APEC 1

APEC 2

BH 2-19
100.86
(96.16)

BH 2
101.33
(99.29)

182 ISABELLA STREET
VACANT (FORMER COAL AND OIL BUSINESS)

180 ISABELLA STREET
VACANT
(FORMER COAL AND OIL BUSINESS, HEATING CONTRACTOR)

BH 4-19
101.48

APEC 5

178 ISABELLA STREET
VACANT
(FORMER COAL AND OIL BUSINESS)

ASPHALTIC CONCRETE

BH 3-19
101.34
(99.19)

210 ISABELLA STREET
RANDALL'S PAINTS

ASPHALTIC CONCRETE PARKING AREA

460 O'CONNOR STREET
COMMERCIAL / OFFICE BUILDING

575 BANK STREET
RESTAURANT

211 PRETORIA AVENUE
RESIDENTIAL

209 PRETORIA AVENUE
RESIDENTIAL

205 PRETORIA AVENUE
RESIDENTIAL

195-199 PRETORIA AVE.
RESIDENTIAL

191 PRETORIA AVENUE
RESIDENTIAL

187 PRETORIA AVENUE
RESIDENTIAL

183-185 PRETORIA AVENUE
RESIDENTIAL

177 PRETORIA AVENUE
RESIDENTIAL

AREAS OF POTENTIAL ENVIRONMENTAL CONCERN:

APEC 1	FORMER TINSMITH (1956 FIP)
APEC 2	FORMER TENANTS - GEORGE P. HARRIS LIMITED (COAL AND OIL, DIRECTORIES) AND THOMPSON BROTHERS HEATING CONTRACTOR
APEC 3	FILL MATERIAL OF UNKNOWN QUALITY
APEC 4	POTENTIAL DE-ICING
APEC 5	POTENTIAL DE-ICING

SCALE: 1:300

0 1 2 3 4 5 10 15 20m

LEGEND:

- PHASE - I PROPERTY BOUNDARY
- BOREHOLE WITH MONITORING WELL LOCATION (PATERSON 2016 AND 2019 PHASE II ESAS)
- BOREHOLE LOCATION (PATERSON 2016 & 2019)
- BOREHOLE WITH MONITORING WELL LOCATION (DESTROYED)
- 100.88 GROUND SURFACE ELEVATION (m)
- (98.79) GROUNDWATER SURFACE ELEVATION (M) (NOVEMBER 06, 2025)

TBM - TOP SPINDLE OF FIRE HYDRANT LOCATED IN FRONT OF 210 ISABELLA STREET. AN ARBITRARY ELEVATION OF 100.00 m WAS ASSIGNED TO THE TBM.

PATERSON GROUP
9 AURIGA DRIVE
OTTAWA, ON
K2E 7T9
TEL: (613) 226-7381

NO.	REVISIONS	DATE	INITIAL

MINTO COMMUNITIES INC.

PHASE I - ENVIRONMENTAL SITE ASSESSMENT
178, 180, 182 AND 200 ISABELLA STREET

OTTAWA, ONTARIO

Title:

SITE PLAN

Scale: 1:300	Date: 11/2025
Drawn by: GK	Report No.: PE4710-LET.05
Checked by: KMP	Dwg. No.: PE4710-1R
Approved by: MSD	Revision No.:

11x17

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