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## Phase I Environmental Site Assessment

Part of 2190 Halifax Drive  
Ottawa, Ontario

Prepared For

Urbandale Corporation

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December 13, 2024

Report: PE4234-1R

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## **EXECUTIVE SUMMARY**

### **Assessment**

A Phase I – Environmental Site Assessment was carried out for part of the property addressed 2190 Halifax Drive, in the City of Ottawa, Ontario. The purpose of this environmental assessment was to research the past and current use of the subject site and adjacent properties and identify any environmental concerns with the potential to impact the subject property.

Based on a review of historical sources, the Phase I Property appears to have never been developed. The northern and eastern portion of the site have been paved for parking or an access lane associated with the adjacent residential apartment building to the north, which was developed at some time between 1969 and 1974. Based on a 1968 site plan provided by the client for review, an underground oil storage tank may have been present on the northeastern portion of the Phase I Property.

Surrounding properties were historically used for agricultural purposes, until residential development occurred on the north side of Walkley Road in the 1960's, followed by additional development with commercial and or institutional properties on either side of Walkley Road, in the 1970's. Other than the aforementioned potential UST, no on-site PCAs or off-site PCAs with the potential to result in an APEC on the Phase I Property, were identified during the historical review.

Following the historical review, a site visit was conducted. The Phase I Property is partially paved as described above, while the remainder of the site is landscaped. The southern portion of the subject land is slightly above the grade of Walkley Road and the eastern portion of the site slopes down to the north. Vent and fill pipes indicating a potential UST were identified along the south wall of the adjacent apartment building to the north, resulting in an APEC on the northeastern portion of the Phase I Property (it has since been confirmed that the UST was removed). No other PCAs were identified on the subject site at the time of the site visit.

At the time of the site visit, the current use of the adjacent and neighbouring properties within the Phase I ESA Study Area were observed from publicly accessible areas. No off-site PCAs with the potential to impact the Phase I Property were identified at the time of the site visit.

## Conclusion

Based on the results of the Phase I ESA, **a Phase II Environmental Site Assessment is recommended for the Phase I Property.** A Phase II ESA has since been completed and is provided under separate cover.

## 1.0 INTRODUCTION

At the request of Urbandale Corporation (Urbandale), Paterson Group (Paterson) conducted a Phase I - Environmental Site Assessment (Phase I ESA) for a parcel of land along the north side of Walkley Road, west of Halifax Drive, in the City of Ottawa, Ontario. The subject land forms part of a larger parcel of land addressed 2190 Halifax Drive. The purpose of this Phase I ESA was to research the past and current use of the site and study area and to identify any environmental concerns with the potential to have impacted the subject property.

Paterson was engaged to conduct this Phase I ESA by Mr. Roger Tuttle of Urbandale Corporation. Mr. Tuttle can be reached by telephone at (613) 731-6331.

This report has been prepared specifically and solely for the above noted project which is described herein. It contains all of our findings and results of the environmental conditions at this site.

This Phase I ESA report has been prepared in general accordance with the requirements of Ontario Regulation 153/04 as amended by O.Reg. 269/11 (Environmental Protection Act), and also complies with the requirements of CSA Z768-01. 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 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. The historical research relies on information supplied by others, such as local, provincial and federal agencies and was limited within the scope-of-work, time and budget of the project herein.

## 2.0 PHASE I PROPERTY INFORMATION

Address:	Part of 2190 Halifax Drive, Ottawa, Ontario.
Legal Description:	Part of Lot 19, Rideau Front, Junction Gore, former Township of Gloucester, now the City of Ottawa
Property Identification Number:	04176-0105
Location:	The subject site is located on the north side of Walkley Road, approximately 175m west of Halifax Drive. The property forms the southwestern corner of the larger parcel of land addressed 2190 Halifax Drive.
Latitude and Longitude:	45° 23' 12" N, 75° 37' 24" W
<b>Site Description:</b>	
Configuration:	Rectangular (approximate)
Site Area:	0.65 hectares (approximate)
Zoning:	R5B H(39) – Residential
Current Use:	The northern portion of the Phase I Property is currently occupied by a paved parking lot associated with the residential development to the north and east. The southern portion of the Phase I Property consists of a vacant, landscaped area.
Services:	The subject site is situated in a municipally serviced area.

### **3.0 SCOPE OF INVESTIGATION**

The scope of work for this Phase I – Environmental Site Assessment was as follows:

- Determine the historical activities on the subject site and study area by conducting a review of readily available records, reports, photographs, plans, mapping, databases and regulatory agencies;
- Investigate the existing conditions present at the subject site and study area by conducting site reconnaissance;
- Conduct interviews with persons knowledgeable of current and historic operations on the subject property, and if warranted, neighbouring properties;
- Present the results of our findings in a comprehensive report in general accordance with the requirements of Ontario Regulation 269/11 amending O.Reg. 153/04 made under the Environmental Protection Act and in compliance with the requirements of CSA Z768-01;
- Provide a preliminary environmental site evaluation based on our findings;
- Provide preliminary remediation recommendations and further investigative work if contamination is suspected or encountered.

## **4.0 RECORDS REVIEW**

### **4.1 General**

#### **Phase I ESA Study Area Determination**

A radius of approximately 250 m was determined to be appropriate as a Phase I ESA study area for this assignment. Properties outside the 250 m radius are not considered to have impacted the subject land, based on their significant distance from the site.

#### **First Developed Use Determination**

Based on a review of historically available information, the Phase I Property has never been developed with a building structure. The northern portion of the Phase I Property was paved between 1965 and 1976, in association with the residential development to the north.

#### **National Archives**

Fire insurance plans (FIPs) reviewed at the National Archives did not cover the Phase I Property or the majority of the lands within the Phase I Study Area. FIPs dated 1963 were however available for the lands further east of the Phase I Property, east of Halifax Drive, which were developed with the Regency Court Apartments (2231 and 2247 Walkley Road) as well as an electric substation (2151 Walkley Road). Alta Vista Baptist Church was present further to the north of the Phase I Property, along the north side of Canterbury Avenue, followed by residential dwellings along Plesser Street.

City directories were reviewed at the National Archives, in approximate 10 year intervals, for the properties within the Phase I Study Area. The property at 2190 Halifax Street, of which the Phase I Property is part, was first listed in 1970 as residential. Adjacent and neighbouring properties were first listed as a combination of residential, commercial and institutional properties in the 1970's

#### **Site Plan**

A site plan prepared by J. L. Richards and Associates Limited and dated July 24, 1968, was provided to Paterson for review. The plan shows the Phase I Property in its current configuration.



Based on the site plan, an oil tank (approximately 68,200L in volume) was buried on the northeastern portion of the Phase I Property, approximately 65m north of Walkley Road, and approximately 20m east of the adjacent parking garage structure to the west. Oil transfer lines lead from the underground storage tank (UST), to the boiler room associated with the adjacent apartment building to the north of the Phase I Property.

## **4.2 Environmental Source Information**

### **Environment Canada**

A search of the National Pollutant Release Inventory (NPRI) was conducted electronically on February 14, 2018. Properties within the Phase I Study Area were not listed in the NPRI.

### **PCB Inventory**

A search of national PCB waste storage sites was conducted. No PCB waste storage sites are located within the Phase I Study Area.

### **Ontario Ministry of Environment, Conservation and Parks (MOECP) Instruments**

A request was submitted to the MOECP Freedom of Information office for information with respect to certificates of approval, permits to take water, certificates of property use or any other similar MOECP issued instruments for the site. Based on the MOECP response letter dated March 22, 2018, no records were located responsive to the request. A copy of the letter is provided in Appendix 2.

### **MOECP Coal Gasification Plant Inventory**

The MOECP document titled "Municipal Coal Gasification Plant Site Inventory, 1991" was reviewed to reference the locations of former plants with respect to the site. No coal gasification plants were identified in the Phase I Study Area.

### **MOECP Incident Reports**

A request was submitted to the MOECP Freedom of Information office for information with respect to records concerning environmental incidents, orders, offences, spills, discharges of contaminants or inspections maintained by the MOECC for the site or adjacent properties. Based on the MOECP response letter dated March 22, 2018, no records were located responsive to the request. A copy of the letter is provided in Appendix 2.

### **MOECP Waste Management Records**

A request was submitted to the MOECP Freedom of Information office for information with respect to waste management records. Based on the MOECP response letter dated March 22, 2018, no records were located responsive to the request. A copy of the letter is provided in Appendix 2.

### **MOECP Submissions**

A request was submitted to the MOECP Freedom of Information office for information with respect to reports related to environmental conditions for the property. Based on the MOECP response letter dated March 22, 2018, no records were located responsive to the request. A copy of the letter is provided in Appendix 2.

### **MOECP Brownfields Environmental Site Registry**

A search of the MOECP Brownfields Environmental Site Registry was conducted as part of this assessment, for properties located within the Phase I Study Area. No Records of Site Condition (RSCs) were filed for the Phase I Property or for any properties within the Phase I Study Area.

### **MOECP Waste Disposal Site Inventory**

The Ontario Ministry of Environment, Conservation and Parks document titled "Waste Disposal Site Inventory in Ontario, 1991" was reviewed as part of the historical research. This document includes all recorded active and closed waste disposal sites, industrial manufactured gas plants and coal tar distillation plants in the Province of Ontario. No records were listed for the Phase I Property or for properties within the Phase I Study Area.

### **Areas of Natural Significance**

A search for areas of natural significance and features within the Phase I Study Area was conducted on the web site of the Ontario Ministry of Natural Resources and Forestry (MNRF) on February 14, 2018. No areas of natural significance were identified on the Phase I Property or within the Phase I Study Area.

### **Technical Standards and Safety Authority (TSSA)**

The TSSA, Fuels Safety Branch in Toronto was contacted electronically on February 14, 2018, to inquire about current and former underground storage tanks, spills and incidents for the site and neighbouring properties.

Based on the TSSA response received on March 29, 2018, no records were identified for the Phase I Property or immediately adjacent properties. A copy of the TSSA correspondence is provided in Appendix 2.

### **City of Ottawa Landfill Document**

The document entitled “Old Landfill Management Strategy, Phase I – Identification of Sites, City of Ottawa”, was reviewed. No landfill sites were identified within the Phase I Study Area.

### **City of Ottawa Historical Land Use Inventory (HLUI)**

An HLUI application form, requesting information from the City’s Historical Land Use Inventory (HLUI 2005) database for the Phase I Property and adjacent lands, was submitted to the City of Ottawa. According to the City of Ottawa response dated March 22, 2018, one activity was identified in the HLUI database for 2240 Halifax Drive (part of 2190 Halifax Drive). The activity, identified as pet photography, is considered to be a home-based business and is not considered to be a potentially contaminating activity.

Three (3) activities were identified in the HLUI, for properties situated within 50m of the Phase I Property: a waste generator number for 900 Canterbury Avenue (Canterbury High School) approximately 175m west of the Phase I Property, a Hydro Ottawa property at 2251 Walkley Road (previously addressed 2151 Walkley Road on the 1963 FIP), over 250m east of the Phase I Property, and Fed-National Revenue, classified as a commercial printing industry, at 2204 Walkley Road and over 50m southeast of the Phase I Property. Based, on the separation distances from the Phase I Property in combination with the nature of the activities, they are not considered to represent a concern to the Phase I Property. A copy of the City’s response has been included in Appendix 2.

## **4.3 Physical Setting Sources**

### **Aerial Photographs**

Historical air photos from the National Air Photo Library were reviewed in approximate ten (10) year intervals. The review period dates to the first available air photos for the site. Based on the review, the following observations have been made:

1960            The Phase I Property is vacant, undeveloped land. Surrounding lands are also vacant and undeveloped, with the exception of Walkley Road which is present immediately to the south.

A residential subdivision is present further to the north. Lands further to the east and west of the Phase I Property appear to be in the initial stages of land development. An apparent creek is present further to the southwest of the Phase I Property, on the south side of Walkley Road.

- 1968      The Phase I Property and immediately adjacent properties remain unchanged from the previous photograph. Halifax Drive is present further to the east, followed by residential development. Residential development has also occurred further west of the site
- 1975      The northern portion of the Phase I Property is paved and used as a parking lot, while the southern portion of the site is landscaped. The adjacent lands to the north and east are occupied by the existing residential development which consists of several apartment buildings and townhouse units as well as a parking garage. The land adjacent to the west remains vacant, while the land to the northwest has been developed with a school. Apparent commercial development has occurred on the south side of Walkley Road, further to the southwest of the Phase I Property.
- 1984      No changes have been made to the Phase I Property from the previous photograph. A sports track is now present on the adjacent property to the west. What appears to be additional commercial development has occurred on the south side of Walkley Road, south of the Phase I Property. No other significant changes appear to have been made to the adjacent and neighbouring properties.
- 1993      No significant changes appear to have been made to the Phase I Property or to the immediately adjacent lands. Further commercial development has occurred along the south side of Walkley Road, further south and southeast of the Phase I Property.
- 2008      (City of Ottawa, geoOttawa) The Phase I Property and surrounding lands appear to remain unchanged from the previous photograph.
- 2017      (City of Ottawa website) The Phase I Property and adjacent lands appear as the currently exist, with no significant changes noted from the previous photograph.

Laser copies of selected aerial photographs reviewed are included in Appendix 1.

## **Topographic Maps**

Topographic information was obtained from Natural Resources Canada – The Atlas of Canada website. The topographic maps indicate that the elevation of the subject site is approximately 80m above sea level (masl). The regional topography in the general area of the site slopes downward to the east. An illustration of the referenced topographic map is presented on Figure 2 – Topographic Map, appended to this report.

## **Physiographic Maps**

A Physiographic Map was reviewed from the Natural Resources Canada – The Atlas of Canada website, as a part of this assessment. According to the publication and mapping, the site is situated within the St. Lawrence Lowlands, Till Plains (Drumlinized) physiographic region. According to the mapping description provided: “The lowlands are plain-like areas that were all affected by the Pleistocene glaciations and are therefore covered by surficial deposits and other features associated with the ice sheets.” The subject site is in the Central St. Lawrence Lowland, “where the land is rarely more than 150 m above sea level, except for the Monteregion Hills, which consist of intrusive igneous rocks.

## **Geological Maps**

The Geological Survey of Canada website on the Urban Geology of the National Capital Area was consulted as part of this assessment. Based on this information, bedrock in the area of the site consists of shale of the Carlsbad Formation. Overburden consists of offshore marine sediments (clay and silt with erosional terraces), with a drift thickness of 10 to 15 m.

## **Water Well Records**

A search of the MOECPs web site for all drilled well records within 250 m of the subject site was conducted on February 14, 2018. Based on the search results, there are no potable wells or monitoring wells present on the Phase I Property or within the Phase I Study Area.

## **Water Bodies and Areas of Natural Significance**

McEwen Creek is the closest water body, at approximately 530m to the southeast of the Phase I Property. No other water bodies were identified within the Phase I Study Area. No areas of natural significance were identified within the Phase I Study Area.

## **5.0 INTERVIEWS**

### **Property Owner Representatives**

Mr. Roger Tuttle, the Construction Manager with Urbandale Corporation, the current property owner, was interviewed via email and telephone as part of the Phase I ESA. According to Mr. Tuttle, the larger property of which the Phase I Property is part, was developed with two high-rise apartment buildings and townhouses between 1966 and 1970. Mr. Tuttle provided Paterson with a site plan that indicated a buried oil tank; he indicated that the tank was decommissioned and removed in the 1980's when the apartments were converted to natural gas, however he was not able to confirm the tank removal. Mr. Tuttle indicated that the townhouses situated to the east of the Phase I Property have always been heated with natural gas-fired equipment. Mr. Tuttle was unaware of any other potential environmental concerns on the Phase I Property or on adjacent or neighbouring properties within the Phase I Study Area.

## **6.0 SITE RECONNAISSANCE**

### **6.1 General Requirements**

The site assessment was conducted on February 21, 2018. Weather conditions were overcast, with a temperature of approximately 2°C. Personnel from the Environmental Department of Paterson Group conducted the site visit. In addition to the site, the uses of neighbouring properties within the Phase I Study Area were also assessed at the time of the site visit.

### **6.2 Specific Observations at Phase I Property**

#### **Buildings and Structures**

The Phase I Property is a vacant parcel of land. A paved parking lot and access lane are present on the northwestern and eastern portions of the Phase I Property, while the remainder of the site is landscaped. Light standards are present on the Phase I Property however, no buildings or other above-ground structures are present, as depicted on Drawing PE4234-1 – Site Plan, in the Figures section of this report.

## **Underground Utilities**

The Phase I Property is situated in a municipally serviced area. Underground utilities on the Phase I Property include private electrical, water and sewer services as well as telecom and natural gas lines. Approximate locations of buried services are shown on Drawing PE4234-1 – Site Plan.

## **Site Features**

The Phase I Property is not developed with any building structures. It is a vacant piece of land that exists as part of a larger residential property. The northern and eastern portions of the Phase I Property are paved with a parking lot and access lane, while the remainder of the site is landscaped.

Drainage on site consists of primarily of sheet drainage to catch basins within the parking area, with some surficial infiltration across the landscaped areas. No standing water or evidence of surficial staining was observed on the exterior of the Phase I Property at the time of the site visit. It should be noted that the site was largely covered with ice and snow at the time of the site visit.

No aboveground storage tanks (ASTs) were observed on the exterior of the property at the time of the site visit.

Vent and fill pipes indicating the presence of an existing or former underground storage tank (UST) were observed along the south wall of the apartment building immediately north of the Phase I Property. The possibility of an existing or former UST is considered to be a PCA resulting in an area of potential environmental concern (APEC) on the property. The UST was later confirmed to have been removed.

Catch basins are present on the Phase I Property. With the exception of the vent and fill pipes as well as the former fuel lines associated with the former UST, no other underground structures, drains, pits, or sumps were observed on the exterior of the Phase I Property during the site visit. No wells or private sewage systems were observed onsite, nor are any expected to be present, as the site is located in a municipally-serviced area.

Domestic waste generated from the adjacent apartment building to the north, is stored in a container situated on the Phase I Property. The waste is collected on a regular basis by a contractor licenced for these works. Otherwise, waste materials are not generated on the Phase I Property.

No evidence of recent excavation was observed on the exterior of the Phase I Property. No evidence of current or former railway or spur lines on the subject land were observed at the time of the site visit. There were no unidentified substances observed on the exterior of the Phase I Property.

The above-noted site features are shown on Drawing PE4234-1 - Site Plan.

### **Fill Material**

No obvious signs of fill material were noted at the time of the site visit. Fill material was identified on the western portion of the Phase I Property during the concurrent Geotechnical Investigation conducted within the footprint of the proposed residential building. The fill material consisted of crushed stone associated with the pavement structure and ranged in depth from 0.38 to 0.51m below grade, and was not considered to pose a concern to the Phase I Property.

Fill material was identified in the former tank nest during a Phase II ESA conducted for the Phase I Property subsequent to the conclusion of the Phase I ESA. The fill material appeared to consist of a combination of silt, clay and sand and is considered to consist of reworked native material placed subsequent to the removal of the UST.

### **Phase I Study Area**

An inspection of the neighbouring properties was conducted from publicly accessible roadways at the time of the site visit. Land use adjacent to the Phase I Property was as follows:

- North – Parking garage structure followed by residential apartment buildings (part of larger property addressed 2190 Halifax Drive);
- South – Walkley Road followed by Federal office buildings (2200-2204 Walkley Road) and the Ottawa Masonic Temple (2100 Walkley Road);
- East – Residential townhouse units (part of the larger property addressed 2190 Halifax Drive) followed by Halifax Drive and residential apartment buildings; and
- West – Sports field associated with Canterbury High School (900 Canterbury High School).

The current use of the immediately adjacent properties is not considered to pose an environmental concern to the Phase I Property. Land use within the Phase I Study Area is shown on Drawing PE4234-2 – Surrounding Land Use Plan in the Figures section of this report, following the text.



## 7.0 REVIEW AND EVALUATION OF INFORMATION

### 7.1 Land Use History

Based on a historical review, the Phase I Property has never been developed with a building structure, although it is part of a larger parcel of land that was developed for residential purposes between 1969 and 1974. The northern and eastern portions of the subject land are paved (parking lot and access laneway) at this time, while the remainder of the Phase I Property has always been landscaped.

#### Potentially Contaminating Activities (PCAs)

The following potentially contaminating activity (PCA) was identified on the Phase I Property:

- Item 28, Table 2, O.Reg.153/04, as amended by O.Reg. 269/11: “Gasoline and Associated Products Storage in Fixed Tanks”, based on a former UST on the Phase I Property.

The following off-site PCAs were identified within the Phase I Study Area:

- Item 20, Table 2, O.Reg. 153/04 as amended by O.Reg. 269/11: “Explosives and Ammunition Manufacturing, Production and Bulk Storage”; and

These PCAs were identified based on the presence of a Federal Armoury at 2100 Walkley Road. An additional PCA not specified in Table 2, a commercial printing industry, was identified at 2204 Walkley Road.

Based on their separation distances with respect to the Phase I Property the off-site PCAs noted above are not considered to represent APECs on the subject land. These PCAs are depicted in green on Drawing PE4234-2 – Surrounding Land use Plan.

The on-site PCA noted above is considered to represent an Area of Potential Environmental Concern (APECs) on the Phase I Property as further discussed in the following section. This PCA is depicted in red on Drawing PE4234-2 – Surrounding Land use Plan.

#### Areas of Potential Environmental Concern (APECs)

The location of the on-site PCA and resulting APEC as well as the associated contaminants of potential concern (CPCs) and potentially impacted media are presented in the Table 1.

<b>Table 1 Area of Potential Environmental Concern</b>					
<b>Area of Potential Environmental Concern</b>	<b>Location of Area of Potential Environmental Concern with respect to Phase I Property</b>	<b>Potentially Contaminating Activity</b>	<b>Location of PCA (on-site or off-site)</b>	<b>Contaminants of Potential Concern</b>	<b>Media Potentially Impacted (Groundwater, Soil, and/or Sediment)</b>
APEC 1	Northeastern portion of Phase I Property	28 – Gasoline and Associated Products Storage in Fixed Tanks	On-site	BTEX/PHCs (F <sub>1</sub> -F <sub>4</sub> )	Soil, Groundwater

The APEC is depicted in red on Drawing PE4234-1 – Site Plan.

### **Contaminants of Potential Concern (CPCs)**

Contaminants of potential concern (CPCs) on the Phase I Property include benzene, toluene, ethylbenzene and xylenes (BTEX) and petroleum hydrocarbons (PHC, F<sub>1</sub>-F<sub>4</sub>).

## **7.2 Conceptual Site Model**

### **Existing Buildings and Structures**

The Phase I Property is a vacant parcel of land. The northern and eastern portions of the subject land are paved with a parking lot and access lane. Light standards are present on the Phase I Property however, no buildings or other above-ground structures are present, as depicted on Drawing PE4234-1 – Site Plan, in the Figures section of this report.

### **Geological and Hydrogeological Setting**

The Geological Survey of Canada website on the Urban Geology of the National Capital Area was consulted as part of this assessment. Based on this information, bedrock in the area of the site consists shale of the Carlsbad Formation. Overburden consists of offshore marine sediments, with a drift thickness of 10 to 15 m.

Regional groundwater flow is expected to be in an easterly direction, towards Greens Creek, located approximately 2.5km east-northeast of the Phase I Property.

## **Water Bodies**

There are no water bodies on the Phase I Property. The closest water body is McEwen Creek, located approximately 450m to the southeast of the Phase I Property.

## **Areas of Natural Significance**

No areas of natural significance were identified within the Phase I Study Area.

## **Water Wells**

A search of the MOECPs web site for all drilled well records within 250 m of the subject site was conducted on February 14, 2018. Based on the search results, there are no potable wells or monitoring wells present on the Phase I Property or within the Phase I Study Area.

## **Neighbouring Land Use**

Neighbouring land use in the Phase I Study Area is currently residential, institutional or commercial (south of Walkley Road). The current uses of the neighbouring properties are not considered to pose an environmental concern to the Phase I Property.

## **Potentially Contaminating Activities and Areas of Potential Environmental Concern**

As per Section 6.1 of this report, a former UST was identified on the Phase I Property (PCA 28) resulting in an APEC on northeastern portion of the subject land.

Off-site PCAs (20 and 21) associated with the Federal Armoury at 2100 Walkley Road, approximately 80m southwest of the Phase I Property, were identified within the Phase I Study Area, as well as a commercial printing industry at 2204 Walkley Road, approximately 50m southeast of the Phase I Property. Based on the separation distances, these properties are not considered to represent APECs on the Phase I Property.

## **Contaminants of Potential Concern**

Contaminants of potential concern (CPCs) identified on the Phase I Property include BTEX and PHCs (F<sub>1</sub>-F<sub>4</sub>).

### **Assessment of Uncertainty and/or Absence of Information**

The information available for review as part of the preparation of this Phase I ESA is considered to be sufficient to conclude that there are areas of potential environmental concern on the subject site.

The presence of potentially contaminating activities was confirmed by a variety of independent sources, and as such, the conclusions of this report are not affected by uncertainty which may be present with respect to the individual sources.

## 8.0 CONCLUSION

### Assessment

A Phase I – Environmental Site Assessment was carried out for part of the property addressed 2190 Halifax Drive, in the City of Ottawa, Ontario. The purpose of this environmental assessment was to research the past and current use of the subject site and adjacent properties and identify any environmental concerns with the potential to impact the subject property.

Based on a review of historical sources, the Phase I Property appears to have never been developed. The northern and eastern portion of the site have been paved for parking or an access lane associated with the adjacent residential apartment building to the north, which was developed at some time between 1969 and 1974. Based on a 1968 site plan provided by the client for review, an underground oil storage tank may have been present on the northeastern portion of the Phase I Property.

Surrounding properties were historically used for agricultural purposes, until residential development occurred on the north side of Walkley Road in the 1960's, followed by additional development with commercial and or institutional properties on either side of Walkley Road, in the 1970's. Other than the aforementioned potential UST, no on-site PCAs or off-site PCAs with the potential to result in an APEC on the Phase I Property, were identified during the historical review.

Following the historical review, a site visit was conducted. The Phase I Property is partially paved as described above, while the remainder of the site is landscaped. The southern portion of the subject land is slightly above the grade of Walkley Road and the eastern portion of the site slopes down to the north. Vent and fill pipes indicating a potential UST were identified along the south wall of the adjacent apartment building to the north, resulting in an APEC on the northeastern portion of the Phase I Property (it has since been confirmed that the UST was removed). No other PCAs were identified on the subject site at the time of the site visit.

At the time of the site visit, the current use of the adjacent and neighbouring properties within the Phase I ESA Study Area were observed from publicly accessible areas. No off-site PCAs with the potential to impact the Phase I Property were identified at the time of the site visit.

## Conclusion

Based on the results of the Phase I ESA, a **Phase II Environmental Site Assessment is recommended for the Phase I Property.** A Phase II ESA has since been completed and is provided under separate cover.

## 9.0 STATEMENT OF LIMITATIONS

This Phase I - Environmental Site Assessment report has been prepared in general accordance with O.Reg. 153/04 as amended by O.Reg. 269/11, and meets the requirements of CSA Z768-01. 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 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. The historical research relies on information supplied by others, such as, local, provincial and federal agencies and was limited within the scope-of-work, time and budget of the project herein.

Should any conditions be encountered at the subject 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 Urbandale Corporation. Permission and notification from Urbandale Corporation and Paterson will be required to release this report to any other party.

### Paterson Group Inc.



Karyn Munch, P.Eng., QP<sub>ESA</sub>



Mark S. D'Arcy, P.Eng., QP<sub>ESA</sub>



### Report Distribution:

- Urbandale Corporation
- Paterson Group Inc.

## 10.0 REFERENCES

### **Federal Records**

Air photos at the Energy Mines and Resources Air Photo Library.  
National Archives.  
Maps and photographs (Geological Survey of Canada surficial and subsurface).  
Natural Resources Canada – The Atlas of Canada.  
Environment Canada, National Pollutant Release Inventory.  
PCB Waste Storage Site Inventory.

### **Provincial Records**

MOECP Freedom of Information and Privacy Office.  
MOECP Municipal Coal Gasification Plant Site Inventory, 1991.  
MOECP document titled “Waste Disposal Site Inventory in Ontario”.  
MOECP Brownfields Environmental Site Registry.  
Office of Technical Standards and Safety Authority, Fuels Safety Branch.  
MNR Areas of Natural Significance.  
MOECP Water Well Inventory.  
Chapman, L.J., and Putnam, D.F., 1984: ‘The Physiography of Southern Ontario, Third Edition’, Ontario Geological Survey Special Volume 2.

### **Municipal Records**

City of Ottawa Document “Old Landfill Management Strategy, Phase I - Identification of Sites”, prepared by Golder Associates, 2004.  
The City of Ottawa Historical Land Use Inventory.  
Intera Technologies Limited Report “Mapping and Assessment of Former Industrial Sites, City of Ottawa”, 1988.  
The City of Ottawa eMap website.

### **Local Information Sources**

Geotechnical Investigation prepared by Paterson Group, 2018.  
Site Plan prepared by J.L. Richards & Associates, 1968.

### **Public Information Sources**

Google Earth.  
Google Maps/Street View.



# **FIGURES**

**FIGURE 1 – KEY PLAN**

**FIGURE 2 – TOPOGRAPHIC MAP**

**DRAWING PE4234-1 – SITE PLAN**

**DRAWING PE4234-2 – SURROUNDING LAND USE PLAN**

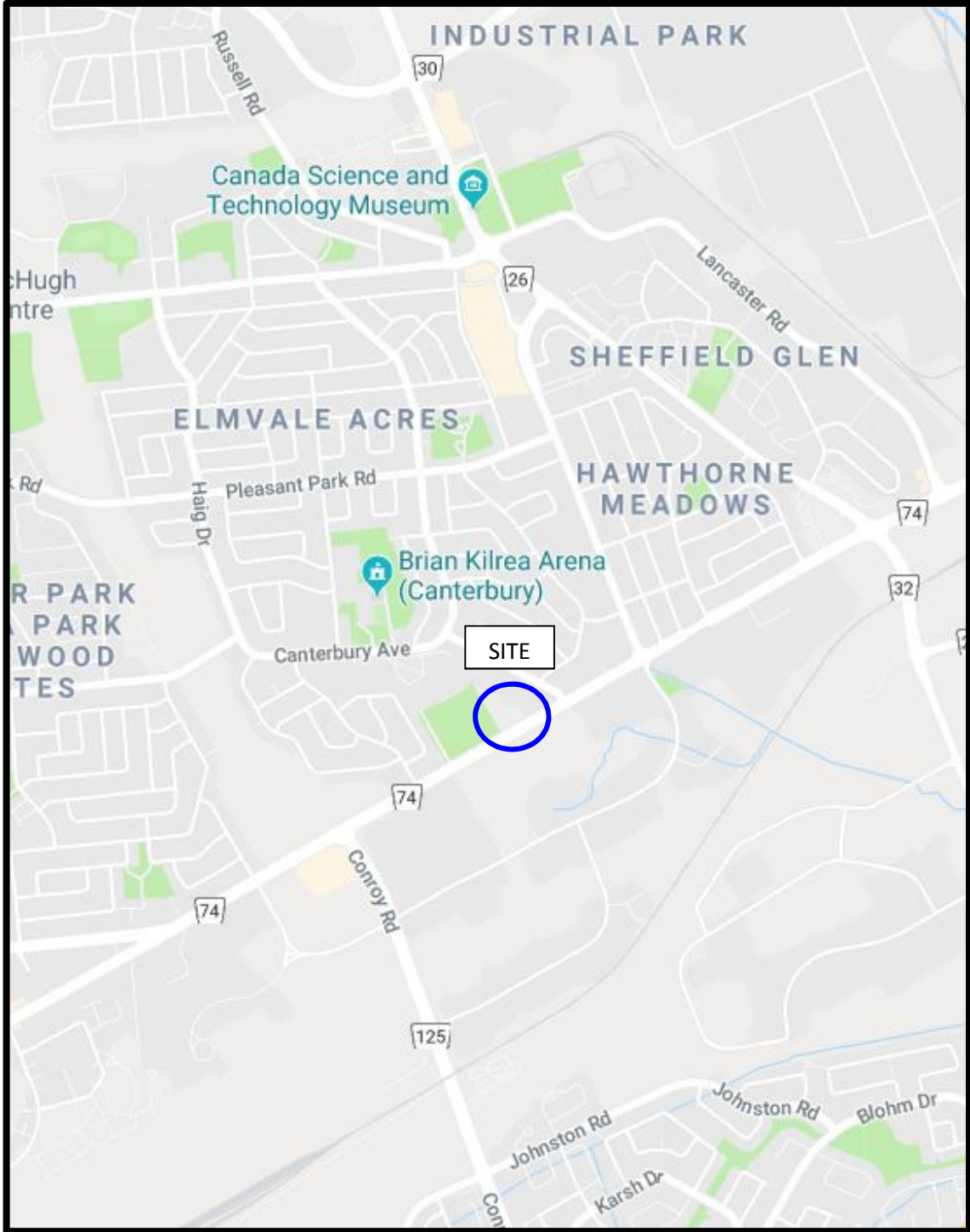


FIGURE 1  
KEY PLAN

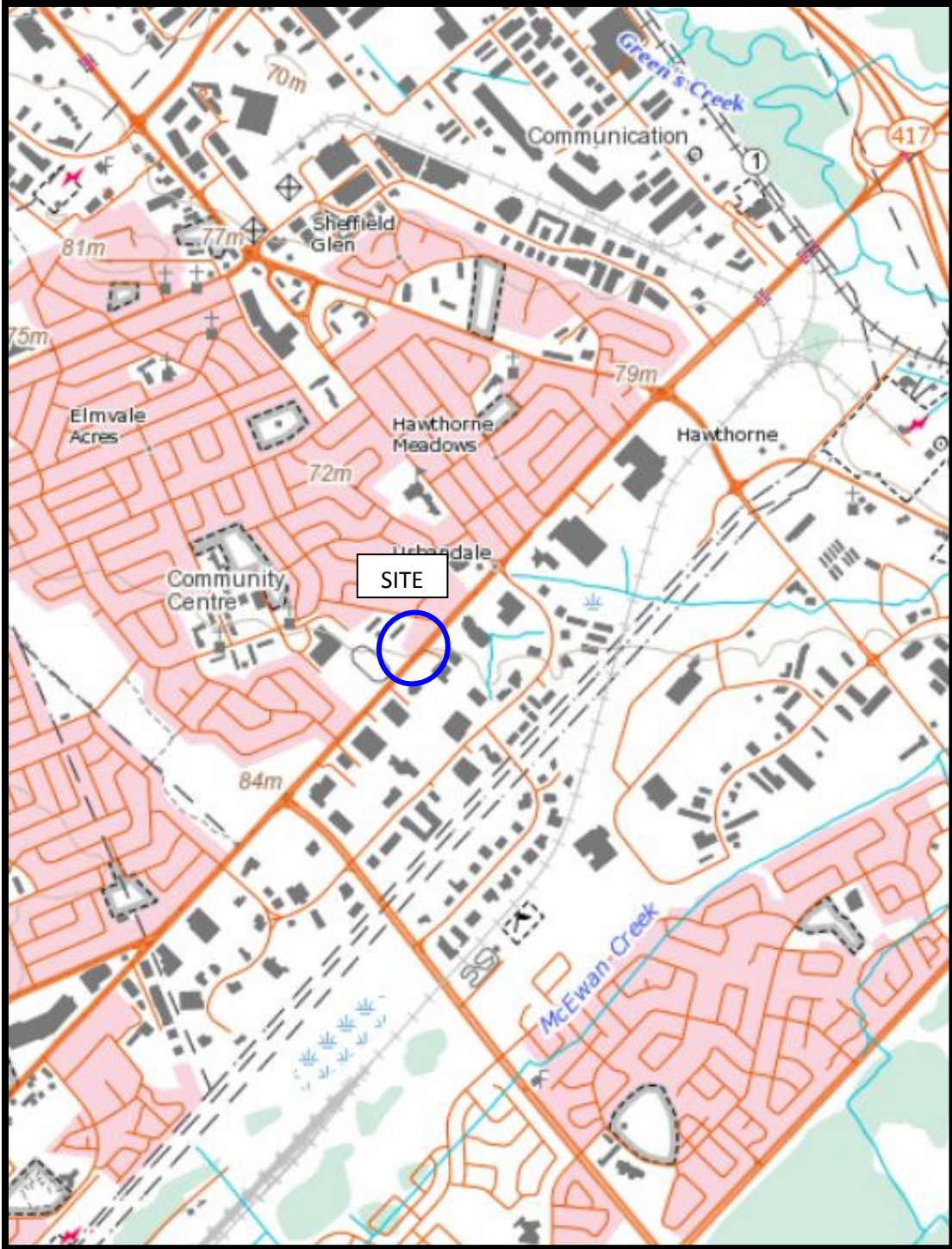
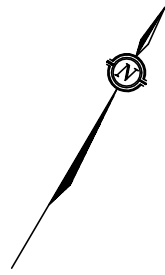
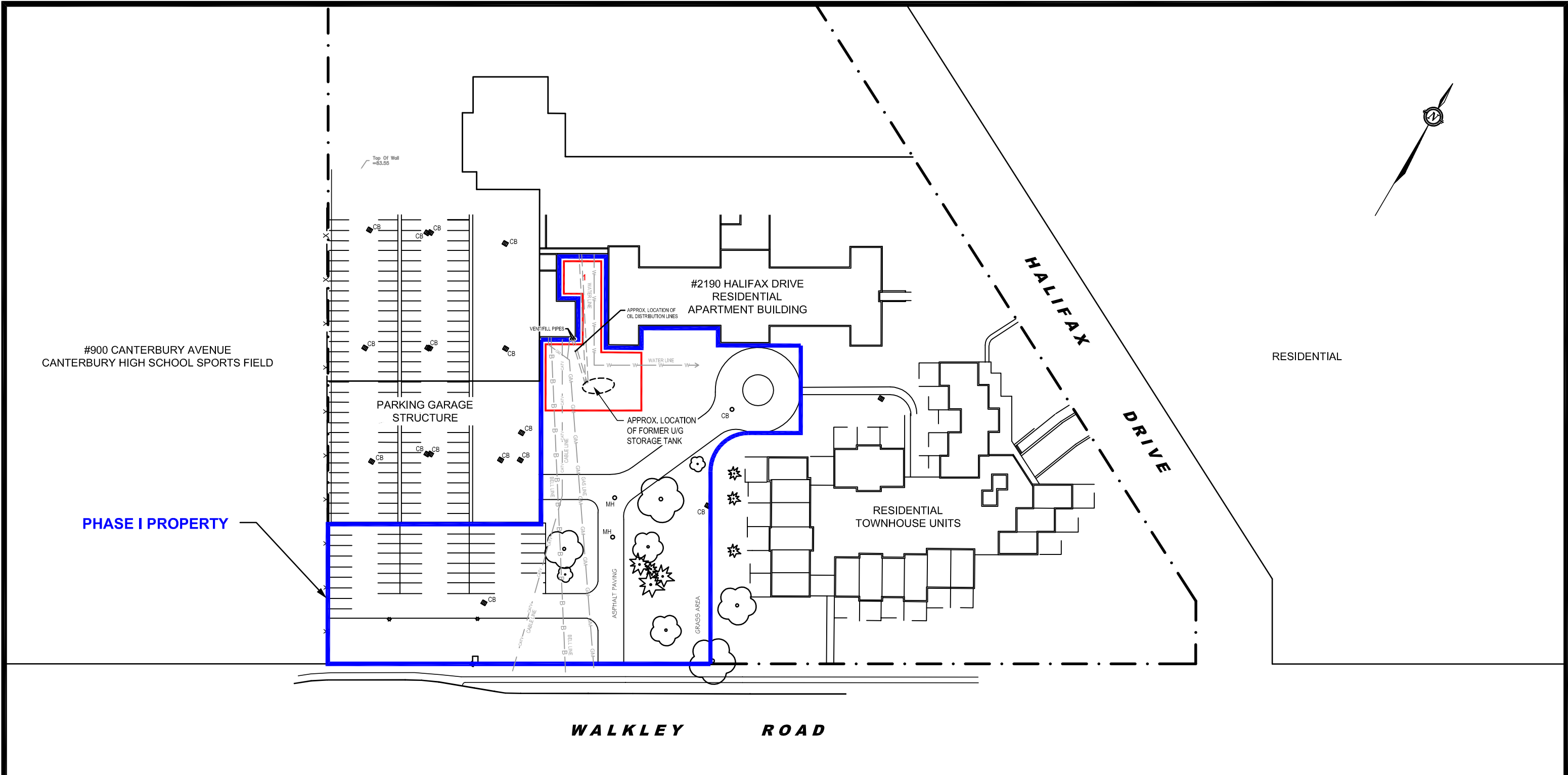


FIGURE 2  
TOPOGRAPHIC MAP



#2140 WALKLEY ROAD  
OTTAWA MASONIC CENTRE

#2200 WALKLEY ROAD  
FEDERAL GOVERNMENT OFFICE BUILDINGS

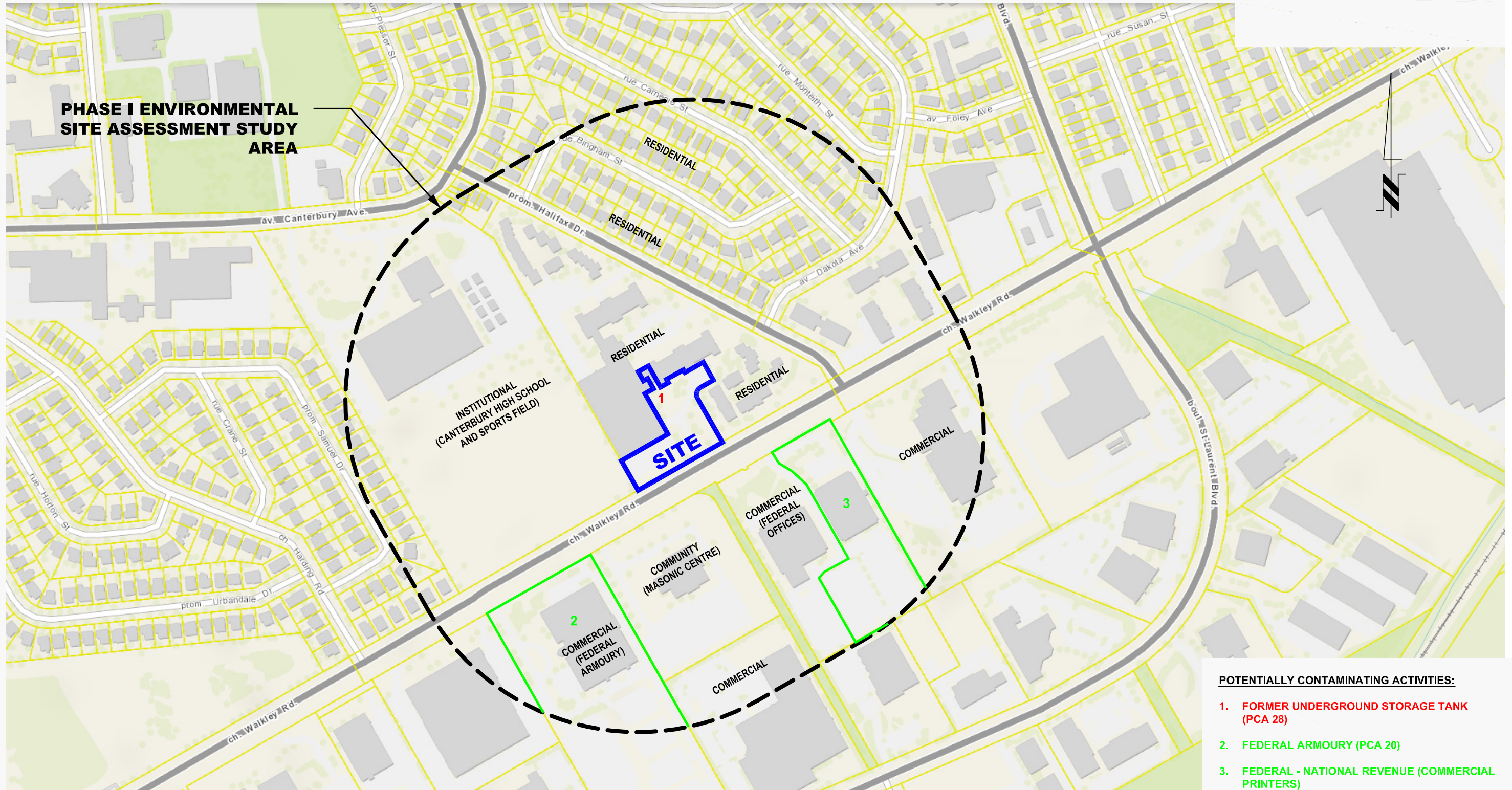
**AREA OF POTENTIAL ENVIRONMENTAL CONCERN:**  
1. **RESULTING FROM FORMER UNDERGROUND STORAGE TANK**

**patersongroup**  
consulting engineers  
  
154 Colonnade Road South  
Ottawa, Ontario K2E 7J5  
Tel: (613) 226-7381 Fax: (613) 226-6344

NO.	REVISIONS	DATE	INITIAL
0			

URBANDALE CORPORATION  
**PHASE I - ENVIRONMENTAL SITE ASSESSMENT**  
WALKLEY ROAD AT HALIFAX DRIVE  
  
OTTAWA, ONTARIO  
Title: **SITE PLAN**

Scale:	1:1000	Date:	02/2018
Drawn by:	MPG	Report No.:	PE4234-1
Checked by:	KM	Dwg. No.:	<b>PE4234-1</b>
Approved by:	MSD	Revision No.:	0



- POTENTIALLY CONTAMINATING ACTIVITIES:**
- 1. FORMER UNDERGROUND STORAGE TANK (PCA 28)
  - 2. FEDERAL ARMOURY (PCA 20)
  - 3. FEDERAL - NATIONAL REVENUE (COMMERCIAL PRINTERS)

**patersongroup**  
consulting engineers

154 Colonnade Road South  
Ottawa, Ontario K2E 7J5  
Tel: (613) 226-7381 Fax: (613) 226-6344

NO.	REVISIONS	DATE	INITIAL
0			

OTTAWA,  
Title:

URBANDALE CORPORATION  
PHASE I - ENVIRONMENTAL SITE ASSESSMENT  
WALKLEY ROAD AT HALIFAX DRIVE

ONTARIO

**SURROUNDING LAND USE PLAN**

Scale:	1:4000
Drawn by:	MPG
Checked by:	KM
Approved by:	MSD

Date:	04/2018
Report No.:	PE4234-1
Dwg. No.:	<b>PE4234-2</b>
Revision No.:	0

# **APPENDIX 1**

**AERIAL PHOTOGRAPHS**

**SITE PHOTOGRAPHS**



AERIAL PHOTOGRAPH  
1960

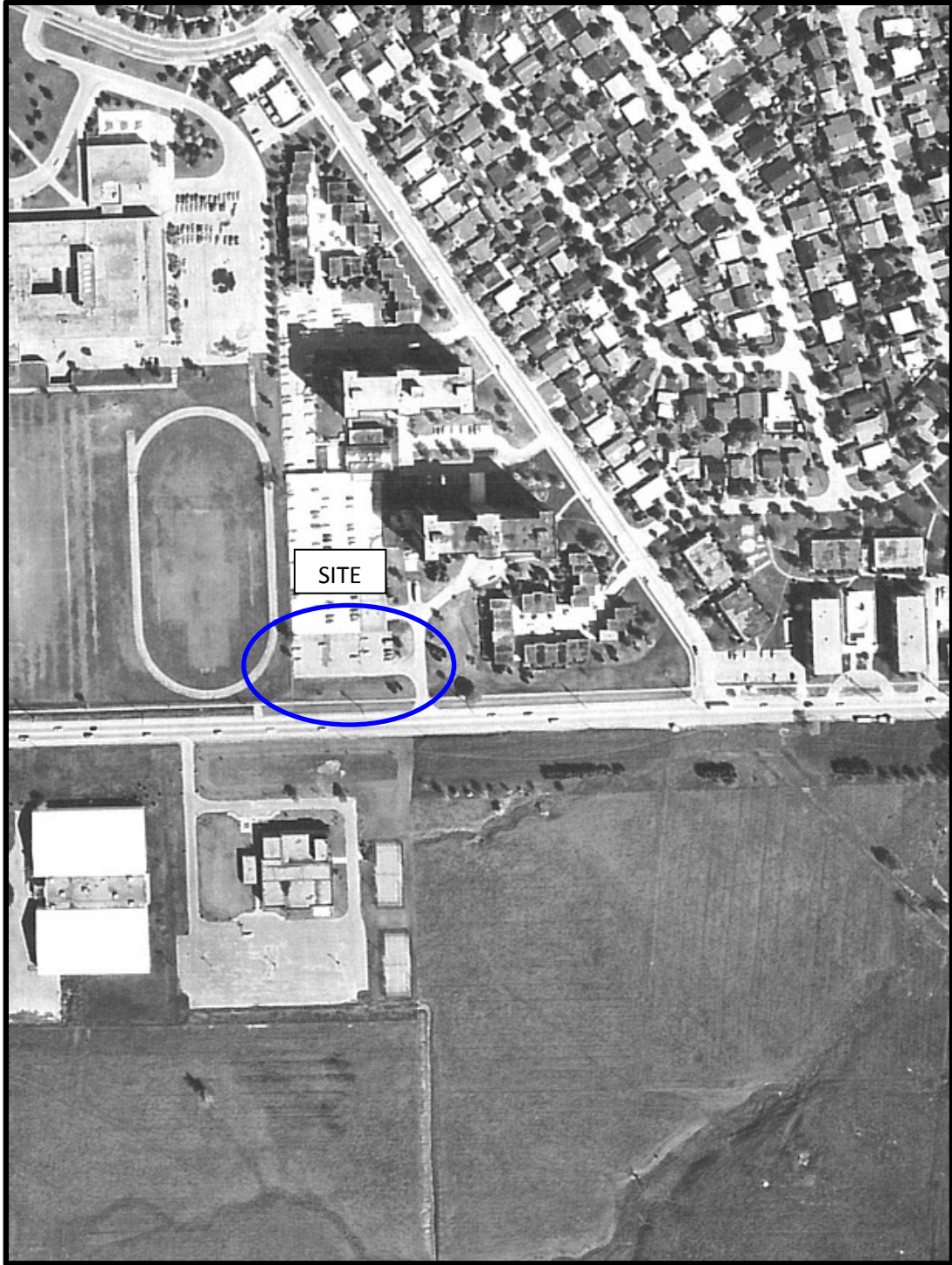


AERIAL PHOTOGRAPH  
1968





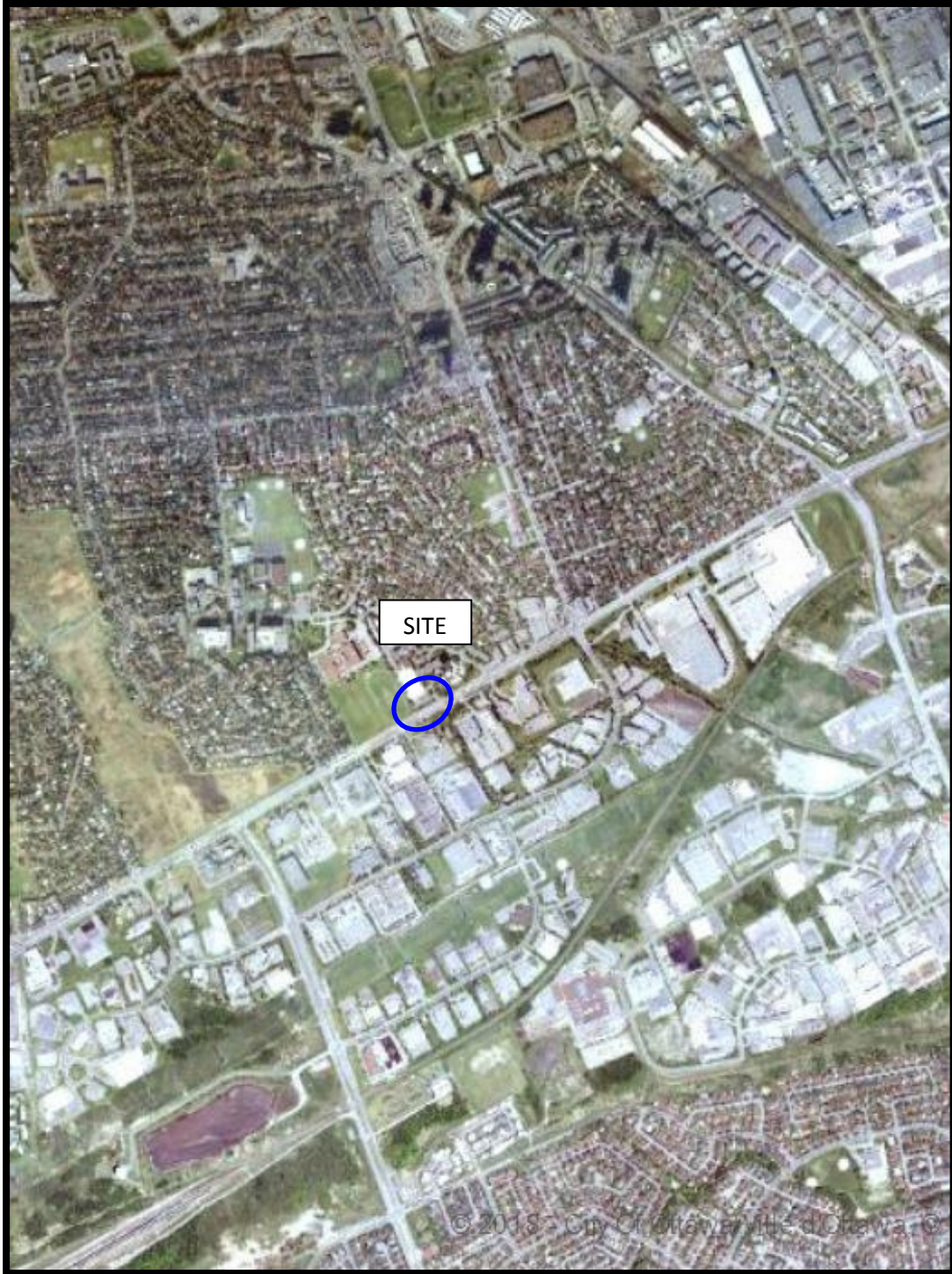
AERIAL PHOTOGRAPH  
1975



AERIAL PHOTOGRAPH  
1984



AERIAL PHOTOGRAPH  
1993



AERIAL PHOTOGRAPH  
2008

## Site Photographs

PE4234

Walkley Road at Halifax Drive, Ottawa, ON

February 20, 2018



Photograph 1: View of the Phase I Property, facing southeast.



Photograph 2: View of Phase I Property, facing east. Photograph also depicts residential dwellings on the property further to the east.

## Site Photographs

PE4234

Walkley Road at Halifax Drive, Ottawa, ON

February 20, 2018



Photograph 3: View of the adjacent parking garage structure to the north, facing north.



Photograph 4: View of the eastern face of the adjacent parking structure, facing northwest.

## Site Photographs

PE4234

Walkley Road at Halifax Drive, Ottawa, ON

February 20, 2018



Photograph 5: View of entrance to 2190 Halifax Drive, domestic waste storage and residential apartment building on the adjacent property to the east/northeast of the Phase I Property.



Photograph 6: View of sports field (Canterbury High School) adjacent to the west, facing northwest.

## Site Photographs

PE4234

Walkley Road at Halifax Drive, Ottawa, ON

February 20, 2018



Photograph 7: View of Ottawa Masonic Centre to the southwest of the Phase I Property, facing southwest.



Photograph 8: View of federal office building, southeast of Phase I Property, facing southeast.



# **APPENDIX 2**

**MOECP FREEDOM OF INFORMATION SEARCH**

**TSSA CORRESPONDENCE**

**CITY OF OTTAWA HISTORICAL LAND USE INVENTORY SEARCH**

Ministry of the Environment  
and Climate Change

Freedom of Information and  
Protection of Privacy Office

12<sup>th</sup> Floor  
40 St. Clair Avenue West  
Toronto ON M4V 1M2  
Tel: (416) 314-4075  
Fax: (416) 314-4285

Ministère de l'Environnement et de  
l'Action en matière de changement  
climatique

Bureau de l'accès à l'information et  
de la protection de la vie privée

12<sup>e</sup> étage  
40, avenue St. Clair ouest  
Toronto ON M4V 1M2  
Tél. : (416) 314-4075  
Télééc.: (416) 314-4285



March 22, 2018

Karyn Munch  
Paterson Group Inc.  
154 Colonnade Road  
Ottawa, ON K2E 7J5

Dear Karyn Munch:

RE: ***Freedom of Information and Protection of Privacy Act Request***  
**Our File # A-2018-01411, Your Reference PE4234**

This letter is in response to your request made pursuant to the *Freedom of Information and Protection of Privacy Act* relating to 2190 Halifax Drive, Ottawa.

After a thorough search through the files of the Ministry's Ottawa District Office, Investigations and Enforcement Branch, Environmental Assessment and Permissions Branch, Environmental Monitoring and Reporting Branch, Sector Compliance Branch and Safe Drinking Water Branch, no records were located responsive to your request. To provide you with this response and in accordance with Section 57 of the *Freedom of Information and Protection of Privacy Act*, the fee owed is \$30.00 for 1 hour of search time @ \$30.00 per hour. **We have applied the \$30.00 for this request from your initial payment. This file is now closed.**

You may request a review of my decision by contacting the Information and Privacy Commissioner/Ontario, 2 Bloor Street East, Suite 1400, Toronto, ON M4W 1A8 (800-387-0073 or 416-326-3333). Please note that there is a \$25.00 fee and you only have 30 days from receipt of this letter to request a review.

If you have any questions regarding this matter, please contact Moliann Weir at Moliann.Weir4@ontario.ca.

Yours truly,

  
Janet Dadufalza  
FOI Manager

## Karyn Munch

---

**From:** Public Information Services <publicinformationservices@tssa.org>  
**Sent:** March-29-18 10:32 AM  
**To:** Karyn Munch  
**Subject:** RE: PE4234 - Records Search

Hello Karyn,

Thank you for your inquiry.

We have no record in our database of any fuel storage tanks at the subject addresses.

For a further search in our archives please complete our release of public information form found at <https://www.tssa.org/en/about-tssa/release-of-public-information.aspx?mid=392> and email the completed form to [publicinformationservices@tssa.org](mailto:publicinformationservices@tssa.org) or through mail along with a fee of \$56.50 (including HST) per location. The fee is payable with credit card (Visa or MasterCard) or with a Cheque made payable to TSSA. Although TSSA believes the information provided pursuant to your request is accurate, please note that TSSA does not warrant this information in any way whatsoever.

Thank you and have a great day!

Yalini

---

**From:** Karyn Munch <KMunch@Patersongroup.ca>  
**Sent:** February 14, 2018 4:29 PM  
**To:** Public Information Services <publicinformationservices@tssa.org>  
**Subject:** PE4234 - Records Search

Good afternoon,

Could you please search your records for the following properties in the City of Ottawa:

2140, 2200, 2204 and 2220 Walkley Road  
900 Canterbury Avenue  
2190, 2200, 2210, 2220 and 2230 Halifax Drive

Best Regards,

Karyn Munch, P.Eng.

**patersongroup**  
solution oriented engineering

154 Colonnade Road South  
Ottawa, Ontario, K2E 7J5  
Tel: (613) 226-7381 Ext. 217

Fax: (613) 226-6344

Email: [kmunch@patersongroup.ca](mailto:kmunch@patersongroup.ca)

This electronic message and any attached documents are intended only for the named recipients. This communication from the Technical Standards and Safety Authority may contain information that is privileged, confidential or otherwise protected from disclosure and it must not be disclosed, copied, forwarded or distributed without authorization. If you have received this message in error, please notify the sender immediately and delete the original message.



File Number: D06-03-17-0174

March 22, 2018

Paterson Group  
154 Colonnade Road South  
Ottawa ON  
K2E 7J5

*Sent via email [kmunch@patersongroup.ca]*

Dear Paterson Group,

**Re: Information Request  
2190 Halifax, Ottawa, Ontario (“Subject Property”)**

**Internal Department Circulation**

The Planning, Infrastructure and Economic Development Department has the following information in response to your request for information regarding the Subject Property:

- No information was returned on the Subject Property from Departmental circulation.

**Search of Historical Land Use Inventory**

**This acknowledges receipt of the signed Disclaimer regarding your request for information from the City’s Historical Land Use Inventory (HLUI 2005) database for the Subject Property.**

A search of the HLUI database revealed the following information:

- There is one (1) activity associated with the Subject Property: Activity Number 10761.

The HLUI database was also searched for activity associated with properties located within 50m of the Subject Property. The search revealed the following:

- There are three (3) activities associated with properties located within 50m of the Subject Property: Activity Numbers 10223, 5501 and 9885.

*Shaping our future together  
Ensemble, formons notre avenir*

City of Ottawa  
Planning, Infrastructure and Economic  
Development Department

110 Laurier Avenue West, 4th Floor  
Ottawa, ON K1P 1J1  
Tel: (613) 580-2424 ext. 14743  
Fax: (613) 560-6006  
www.ottawa.ca

Ville d'Ottawa  
Services de la planification, de l'infrastructure et  
du développement économique

110, avenue Laurier Ouest, 4e étage  
Ottawa (Ontario) K1P 1J1  
Tél.: (613) 580-2424 ext. 14743  
Télééc: (613) 560-6006  
www.ottawa.ca

A site map has been included to show the location of the Subject Property as well as the location of all the activities noted above. Additional information may be obtained by contacting:

### **Ontario's Environmental Registry**

The Environmental Registry found at <http://www.ebr.gov.on.ca/ERS-WEB-External/> contains "public notices" about environmental matters being proposed by all government ministries covered by the Environmental Bill of Rights. The public notices may contain information about proposed new laws, regulations, policies and programs or about proposals to change or eliminate existing ones. By using key words i.e. name of proponent/owner and the address one can ascertain if there is any information on the proponent and address under the following categories: Ministry, keywords, notice types, Notice Status, Acts, Instruments and published date (all years).

### **The Ontario Land Registry Office**

Registration of real property is recorded in the Ontario Land Registry Office through the Land Titles Act or the Registry Act. Documents relating to title and other agreements that may affect your property are available to the public for a fee. It is recommended that a property search at the Land Registry Office be included in any investigation as to the historic use of your property. The City of Ottawa cannot comment on any documents to which it is not a party.

Court House  
161 Elgin Street 4th Floor  
Ottawa ON K2P 2K1  
Tel: (613) 239-1230  
Fax: (613) 239-1422

**Please note, as per the HLUI Disclaimer, that the information contained in the HLUI database has been compiled from publicly available records and other sources of information. The HLUI may contain erroneous information given that the records used as sources of information may be flawed. For instance, changes in municipal addresses over time may introduce error. Accordingly, all information from the HLUI database is provided on an "as is" basis with no representation or warranty by the City with respect to the information's accuracy or exhaustiveness in responding to the request.**

**Furthermore, the HLUI database and the results of this search in no way confirm the presence or absence of contamination or pollution of any kind. This information is provided on the assumption that it will not be relied upon by any person for any purpose whatsoever. The City of Ottawa denies all liability to any persons attempting to rely on any information provided from the HLUI database.**

**Please note that in responding to your request, the City of Ottawa does not guarantee or comment on the environmental condition of the Subject Property.**

**You may wish to contact the Ontario Ministry of Environment and Climate Change for additional information.**

If you have any further questions or comments, please contact Justin Marr at 613-580-2424 ext. 14743 or [HLUI@ottawa.ca](mailto:HLUI@ottawa.ca)

Sincerely,

A handwritten signature in cursive script that reads "Justin Marr".

Justin Marr

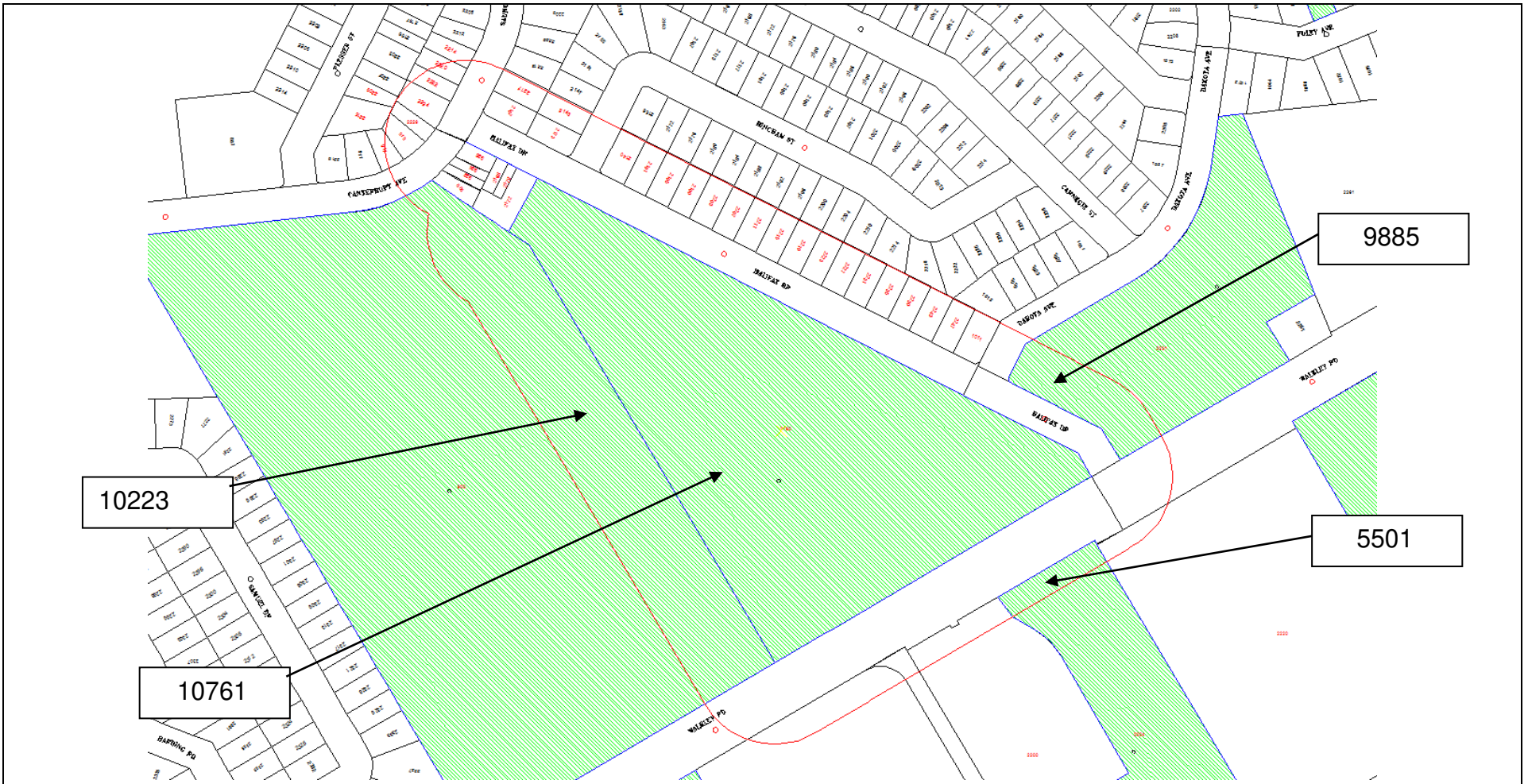
Per:

Michael Boughton, MCIP, RPP  
Senior Planner  
Development Review East  
Planning Services  
Planning, Infrastructure and Economic Development Department

MB / JM

Attach: 5

cc: File no. D06-03-17-0174




Scale 1: n/a

2190 Halifax Drive  
 Ottawa, ON  
 File # D06-03-17-0174  
 Justin Marr



Overview

ID# = Activity Identification Number

 = Subject Site





CITY OF OTTAWA

HLUI ID: \_\_67906D

AREA (Square Metres): 81528.042

Report: RPTC\_OT\_DEV0122

Run On: 16 Mar 2018 at: 17:50:30

Study Year  
2005

PIN  
041760097

Multi-NAIC  
N

Multiple Activities  
N

Activity ID: 10223 Multiple PINS: N

PIN Certainty: 1 Previous Activity ID(s) :

Related PINS: 041760097

Name: OTTAWA-CARLETON DISTRICT SCHOOL BOARD - CANTERBURY HIGH SCHOOL

Address: 900 CANTERBURY AVENUE, OTTAWA

Facility Type: Elementary and Secondary Education

Comments 1: CANTERBURY HIGH SCHOOL

Comments 2:

Generator Number: ON0375208

Storage Tanks:

HL References 1:

HL References 2:

HL References 3: 2000 PID

NAICS SIC  
611110 0

Company Name	Year of Operation
OTTAWA-CARLETON DISTRICT SCHOOL BOARD - CANTERBURY HIGH SCHOOL	c. 2005
OTTAWA-CARLETON DISTRICT SCHOOL BOARD - CANTERBURY HIGH SCHOOL	c. 2000
OTTAWA-CARLETON DISTRICT SCHOOL BOARD - CANTERBURY HIGH SCHOOL	c. 2003



CITY OF OTTAWA

HLUI ID: \_\_679A9B

AREA (Square Metres): 43618.230

Report: RPTC\_OT\_DEV0122

Run On: 16 Mar 2018 at: 17:50:44

Study Year  
2005

PIN  
041760105

Multi-NAIC  
N

Multiple Activities  
N

Activity ID: 10761 Multiple PINS: N

PIN Certainty: 1 Previous Activity ID(s) :

Related PINS: 041760105

Name: PET PHOTOGRAPHY

Address: 2240 HALIFAX DRIVE,

Facility Type: Photographers

Comments 1: #213

Comments 2:

Generator Number:

Storage Tanks:

HL References 1:

HL References 2:

HL References 3: 2005 Select Phone

<b>NAICS</b>	<b>SIC</b>
541920	0

Company Name

PET PHOTOGRAPHY

Year of Operation

c. 2005



CITY OF OTTAWA

HLUI ID: \_\_679G8G

AREA (Square Metres): 17304.430

Report: RPTC\_OT\_DEV0122

Run On: 16 Mar 2018 at: 17:52:03

Study Year  
1998

PIN  
041690139

Multi-NAIC  
Y

Multiple Activities  
N

Activity ID: 9885 Multiple PINS: N

PIN Certainty: 1 Previous Activity ID(s) : 5740

Related PINS: 041690139

Name: OTTAWA HYDRO  
Address: 2151 WALKLEY ROAD, OTTAWA  
Facility Type: Electric Power Systems Industry

Comments 1:

Comments 2:

Generator Number:

Storage Tanks:

HL References 1: M.1963, M.1964, M.1965; FIP1963-641-60317

HL References 2:

HL References 3:

NAICS	SIC
221113	491
221119	491
221112	491
221121	491
221111	491
221122	491

Company Name

Ottawa Hydro

Year of Operation

c. 1963-1965



**CITY OF OTTAWA**

**HLUI ID: \_\_6799GP**

**AREA (Square Metres): 14857.369**

Report: RPTC\_OT\_DEV0122

Run On: 16 Mar 2018 at: 17:52:32

**Study Year**  
2005

**PIN**  
041650844

**Multi-NAIC**  
Y

**Multiple Activities**  
N

**Activity ID:** 5501 **Multiple PINS:** N

**PIN Certainty:** 1 **Previous Activity ID(s) :**

**Related PINS:** 041650844

**Name:** FED-NATIONAL REVENUE  
**Address:** 2204 WALKLEY ROAD, OTTAWA  
**Facility Type:** Commercial Printing Industries

**Comments 1:**

**Comments 2:**

**Generator Number:** ON0426522

**Storage Tanks:**

**HL References 1:**

**HL References 2:**

**HL References 3:** 2000 PID

NAICS	SIC
323116	0
323119	0
911910	0

Company Name	Year of Operation
FED-NATIONAL REVENUE	c. 2000
FED-NATIONAL REVENUE	c. 2001

# **APPENDIX 3**

## **QUALIFICATIONS OF ASSESSORS**

# KARYN MUNCH

*P.ENG., QPESA*  
ROLE

KARYN RECEIVED HER BACHELOR OF ENGINEERING FROM CARLETON UNIVERSITY IN 2002 IN ENVIRONMENTAL ENGINEERING. UPON GRADUATION KARYN BEGAN WORKING AS A CONSULTANT FOR DESSAU SOPRIN INC. AFTER ONE YEAR OF WORKING FOR DESSAU, KARYN JOINED THE PATERSON GROUP IN THE ENVIRONMENTAL DIVISION. KARYN HAS WORKED FOR PATERSON FOR 19 YEARS AND HAS ACCRUED EXTENSIVE FIELD AND OFFICE EXPERIENCE. KARYN'S EXPERIENCE WORKING IN THE FIELD RANGES FROM PHASE I SITE REVIEWS, PHASE II INVESTIGATIONS, REMEDIATION SITE INSPECTIONS AND DESIGNATED SUBSTANCE SURVEYS. THROUGH HER EIGHT YEARS OF FIELD EXPERIENCE, KARYN HAS OBTAINED INVALUABLE KNOWLEDGE ON CONTRACTOR RELATIONSHIPS, BUDGETS, TIME MANAGEMENT, CONSULTANT/OWNER RELATION, QUALITY DATA AND INFORMATION, AND WORKING WITH A VARIETY OF DIFFERENT PERSONNEL AND SITUATIONS. SINCE 2012, KARYN HAS MOVED INTO A MORE SENIOR ROLE BY BECOMING A QUALIFIED PERSON FOR ENVIRONMENTAL ASSESSMENTS, OVERSEEING SMALL TO LARGE SCALE ENVIRONMENTAL PROJECTS, WHICH INCLUDE, PHASE I AND II REPORTS, RECORD OF SITE CONDITIONS AND BROWNFIELD APPLICATIONS. KARYN HAS ASSISTED WITH MARK D'ARCY IN THE DEVELOPMENT OF YOUNG STAFF AND CONTINUOUS IMPROVEMENT OF PATERSON INTERNAL SYSTEMS



## YEARS OF EXPERIENCE

---

- WITH PATERSON: 19
- WITH OTHER FIRMS: 2

## LICENCE/ PROFESSIONAL AFFILIATIONS

---

- ONTARIO SOCIETY OF PROFESSIONAL ENGINEERS

## EDUCATION

---

- B.ENG. 2002, ENVIRONMENTAL ENGINEERING  
CARLETON UNIVERSITY OTTAWA, ON

## OFFICE LOCATION

---

9 AURIGA DRIVE, OTTAWA, ONTARIO, K2E 7T9

## SELECT LIST OF PROJECTS

- THE RIDGE SUBDIVISION, OTTAWA ON, PHASE I ESA, PHASE II ESA, PHASE III ESA, ENVIRONMENTAL SOIL REMEDIATION AND FILING OF A RECORD OF SITE CONDITION (RSC) IN THE MECP ENVIRONMENTAL SITE REGISTRY (PROJECT MANAGER)
- CLARIDGE MOON, OTTAWA ON, PHASE I ESA, PHASE II ESA (PROJECT MANAGER) AND FILING OF AN RSC IN THE MECP ENVIRONMENTAL SITE REGISTRY (PROJECT MANAGER)
- OTTAWA UNIVERSITY DESMARAIS BUILDING, OTTAWA, ON, SOIL REMEDIATION AND REDEVELOPMENT (PROJECT MANAGER)
- RIDEAU CENTRE EXPANSION, OTTAWA, ON, SOIL REMEDIATION PROGRAM AND RSC (PROJECT MANAGER)
- BROWNFIELDS APPLICATIONS – RESIDENTIAL AND COMMERCIAL REDEVELOPMENT - OTTAWA, ONTARIO
- LEES AVENUE REMEDIATION AND RECONSTRUCTION, OTTAWA, ON (FIELD MANAGER)
- PHASE I AND PHASE II INVESTIGATIONS IN ACCORDANCE WITH CSA STANDARDS AND O.REG 153/04

# PROFESSIONAL EXPERIENCE

## **JUNE 2011 TO PRESENT, SENIOR ENVIRONMENTAL ENGINEER, PATERSON GROUP, OTTAWA, ONTARIO**

PROVIDE ON-SITE ENVIRONMENTAL EXPERTISE FOR VARIOUS SOIL AND GROUNDWATER REMEDIATION PROJECTS INCLUDING BUT NOT LIMITED TO THE FOLLOWING: 222 BEECHWOOD REMEDIATION, 1000 WELLINGTON STREET WEST REMEDIATION, 409 MACKAY STREET AND RIDEAU CENTRE EXPANSION.

OVERSEE PHASE I AND PHASE II INVESTIGATIONS IN ACCORDANCE WITH CSA STANDARDS AND O.REG 153/04 ON A VARIETY OF RESIDENTIAL AND COMMERCIAL DEVELOPMENTS.

RESPONSIBLE FOR FILING RECORDS OF SITE CONDITION WITH THE MOECC ENVIRONMENTAL SITE REGISTRY.

PREPARATION OF SUBMISSIONS TO THE CITY OF OTTAWA'S BROWNFIELDS REDEVELOPMENT PROGRAM.

PROBLEM SOLVING TO HELP ADVANCE OR MAINTAIN PROJECT SCHEDULES.

COMPLETE ENVIRONMENTAL REPORTS WITH RECOMMENDATIONS FOR ENVIRONMENTAL CONCERNS.

LIAISING WITH CONTRACTORS, CONSULTANTS, AND GOVERNMENT OFFICIALS.

PROVIDE COST ESTIMATES FOR ENVIRONMENT FIELD PROGRAMS AND CONSTRUCTION COSTS.

REVIEW RFI'S, SUBMITTALS, MONTHLY PROGRESS REPORTS AND OTHER VARIOUS CONSTRUCTION RELATED WORK.

## **JUNE 2009 TO JUNE 2010, ENVIRONMENTAL OFFICER, DEPARTMENT OF INDIGENOUS AND NORTHERN AFFAIRS (INAC), OTTAWA, ONTARIO**

PROVIDED GUIDANCE AND SUPPORT REGARDING VARIOUS ASPECTS OF THE CONTAMINATED SITES MANAGEMENT PLAN (CSMP) AND THE CANADIAN ACCELERATED ACTION PLAN (CEAP), TO REGIONAL INAC OFFICES.

REPORTED TO FEDERAL CONTAMINATED SITES ACTION PLAN (FCSAP) SECRETARIAT ON MONTHLY AND QUARTERLY CSMP PROGRESS.

COMPLETION OF VARIOUS REPORTING REQUIREMENTS INCLUDING PRIVY COUNCIL OFFICE (PCO) REQUESTS REGARDING ACCELERATED REMEDIATION PROJECTS, ANNUAL REFERENCE LEVEL UPDATING, INTERNAL QUARTERLY REPORTS AND FIRST NATION LAND MANAGEMENT (FNLM) CLASS 3 REMEDIATION PROJECTS

COMPOSITION AND REVISION OF THREE-YEAR CSMP AND THE CONTAMINATED SITES PROGRAM RENEWAL.

MANAGEMENT OF VARIOUS DATABASES INCLUDING ESSIMS (INTERNAL TO INAC), IDEA (ENVIRONMENT CANADA) AND CIDM (ELECTRONIC FILING SYSTEM) AND FEDERAL CONTAMINATED SITES INVENTORY (FCSI).

INTERACTED ON A REGULAR BASIS WITH OTHER FEDERAL DEPARTMENTS, OTHER INAC SECTORS, REGIONAL INAC OFFICES AND SENIOR MANAGEMENT.

PARTICIPATED IN AQUATIC SITES WORKING GROUP (ASWG), CONTAMINATED SITES MANAGEMENT WORKING GROUP (CSMWG) AND ENVIRONMENTAL LEARNING REGIME WORKSHOPS/WORKGROUPS.

## **JANUARY 2003 TO JUNE 2009, ENVIRONMENTAL ENGINEER, PATERSON GROUP, OTTAWA, ONTARIO**

EXPERIENCE IN COORDINATION AND MANAGEMENT OF A VARIETY OF ENVIRONMENTAL PROJECTS. TYPICAL PROJECTS INCLUDE PHASE I- ENVIRONMENTAL SITE ASSESSMENTS (ESAS), PHASE II AND III-ENVIRONMENTAL SITE CHARACTERIZATIONS, SOIL AND GROUNDWATER REMEDIATION PROGRAMS, DESIGNATED SUBSTANCE SURVEYS AND THE PREPARATION OF RECORDS OF SITE CONDITION.

COORDINATION OF CONTRACTORS AND FIELD STAFF WHILE DIRECTLY REPORTING TO SENIOR MANAGEMENT AND CLIENT THROUGHOUT THE PROJECT TO ENSURE COMPLETION ON SCHEDULE AND WITHIN BUDGET.

EXPERIENCE IN COLLABORATING WITH PROVINCIAL AND MUNICIPAL BODIES AS WELL AS SUB-CONSULTANTS, CONTRACTORS AND CLIENTS.

EXTENSIVE FIELD EXPERIENCE INCLUDING THE MANAGEMENT OF DRILLING AND EXCAVATION CONTRACTORS, INSPECTION OF ABOVEGROUND AND UNDERGROUND FUEL STORAGE TANKS, SOIL CLASSIFICATION, SOIL AND GROUNDWATER SAMPLING, COLLECTION OF HAZARDOUS BUILDING MATERIALS AND DESIGNATED SUBSTANCES.

RESPONSIBLE FOR THE APPLICATION OF ENVIRONMENTAL, HYDROGEOLOGICAL AND GEOTECHNICAL PRINCIPLES AND PRACTICES IN THE IDENTIFICATION AND DELINEATION OF SOIL AND GROUNDWATER CONTAMINATION PLUMES AND ENSURING COMPLIANCE WITH FEDERAL, PROVINCIAL AND/OR MUNICIPAL LEGAL AND REGULATORY REQUIREMENTS.

PRESENT ANALYTICAL TEST RESULTS, INTERPRETATIONS, ASSESSMENTS, RECOMMENDATIONS AND/OR CONCLUSIONS IN A FINAL TECHNICAL REPORT.

## **AUGUST 2002 TO DECEMBER 2002, JUNIOR ENGINEER, DESSAU SOPRIN INC., OTTAWA, ONTARIO**

RESPONSIBLE FOR SUPERVISION OF WEIGHT-SCALE AND RECORD KEEPING FOR SOIL MANAGEMENT PRACTICES.

MANAGED EXCAVATION CONTRACTORS TO ENSURE SOIL QUALITY CONTROL; DAILY REPORTING TO PROJECT MANAGER.

# MARK S. D'ARCY

P.ENG, QP<sub>ESA</sub>

DIRECTOR – ENVIRONMENTAL DIVISION

AFTER RECEIVING HIS BACHELORS OF APPLIED SCIENCE FROM QUEEN'S UNIVERSITY IN 1991 IN GEOLOGICAL ENGINEERING, MARK JOINED PATERSON GROUP INC. DURING THE FIRST 10 YEARS OF MARK'S CAREER, HE WAS HEAVILY INVOLVED IN ALL ASPECTS OF FIELD WORK, INCLUDING DRILLING BOREHOLES, EXCAVATING TEST PITS, CONDUCTING PHASE I SITE INSPECTIONS, ENVIRONMENTAL SAMPLING AND ANALYSIS AND INSPECTION OF ENVIRONMENTAL REMEDIATIONS. DURING MARK'S FIELD EXPERIENCE, HE GAINED INVALUABLE FIELD AND OFFICE EXPERIENCE, WHICH WOULD PREPARE MARK TO BECOME THE ENVIRONMENTAL DIVISION MANAGER. MARK'S FIELD EXPERIENCE RANGES FROM PHASE I ENVIRONMENTAL SITE ASSESSMENTS (ESAS) TO ON-SITE SOIL AND GROUNDWATER REMEDIATIONS, AS WELL AS, ENVIRONMENTAL/GEOTECHNICAL BOREHOLE INVESTIGATIONS. MARK'S FIELD EXPERIENCE HAS PROVIDED EXTENSIVE KNOWLEDGE OF SUBSURFACE CONDITIONS, CONTRACTOR RELATIONS AND PROJECT MANAGEMENT. THESE SKILLS WOULD PROVIDE MARK WITH THE ABILITY TO UNDERSTAND A VARIETY OF SITUATIONS, WHICH HAS LEAD PATERSON TO AN EXTREMELY SUCCESSFUL ENVIRONMENTAL DEPARTMENT. MARK BECAME THE ENVIRONMENTAL MANAGER IN 2006, WHICH CONSISTED OF TWO ENGINEERS AND TWO FIELD TECHNICIANS. MARK HAS BEEN AN INTEGRAL PART IN GROWING THE ENVIRONMENTAL DIVISION, WHICH NOW CONSISTS OF NINE ENGINEERS AND THREE FIELD TECHNICIANS. MARK IS THE SENIOR PROJECT MANAGER FOR A WIDE VARIETY OF ENVIRONMENTAL PROJECTS WITHIN THE EASTERN ONTARIO AREA INCLUDING PHASE I ESAS, PHASE II ESAS, REMEDIATIONS FOR FILING RECORDS OF SITE CONDITION IN THE ONTARIO MINISTRY OF THE ENVIRONMENT AND CLIMATE CHANGE (MOECC) ENVIRONMENTAL SITE REGISTRY, BROWNFIELD APPLICATIONS AND LANDFILL MONITORING PROGRAMS. AS THE SENIOR PROJECT MANAGER, MARK IS RESPONSIBLE FOR DIRECTING PROJECT PERSONNEL, FINAL REPORT REVIEW AND OVERALL PROJECT SUCCESS. MARK HAS PROVEN LEADERSHIP AND ABILITY TO MANAGE SMALL TO LARGE SCALE PROJECTS WITHIN THE ALLOTTED TIME AND BUDGET.



## YEARS OF EXPERIENCE

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- WITH PATERSON: 33

## LICENCE/ PROFESSIONAL AFFILIATIONS

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- PROFESSIONAL ENGINEERS OF ONTARIO
- ESA QUALIFIED PERSON WITH MECP
- ONTARIO SOCIETY OF PROFESSIONAL ENGINEERS
- CONSULTING ENGINEERS OF ONTARIO

## EDUCATION

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- B.A.SC. 1991, GEOLOGICAL ENGINEERING, QUEEN'S UNIVERSITY, KINGSTON, ON

## OFFICE LOCATION

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9 AURIGA DRIVE, OTTAWA, ONTARIO, K2E 7T9

## SELECT LIST OF PROJECTS

- 222 BEECHWOOD AVENUE, OTTAWA, ONTARIO (SENIOR PROJECT MANAGER FOR PHASE I ESA, PHASE II ESA, PHASE III ESA, ENVIRONMENTAL REMEDIATION)
- 409 MACKAY STREET, OTTAWA, ONTARIO (SENIOR PROJECT MANAGER FOR PHASE I ESA, PHASE II ESA, PHASE III ESA, ENVIRONMENTAL REMEDIATION)
- ART'S COURT REDEVELOPMENT, OTTAWA, ONTARIO (SENIOR PROJECT MANAGER FOR PHASE I ESA, PHASE II ESA, PHASE III ESA, ENVIRONMENTAL REMEDIATION)
- VISITOR WELCOME CENTRE, PHASE II AND PHASE III, PARLIAMENT HILL, OTTAWA, ONTARIO (SENIOR PROJECT MANAGER FOR ENVIRONMENTAL REMEDIATION)
- MATTAWA LANDFILL, MATTAWA, ONTARIO (SENIOR PROJECT MANAGER, ANNUAL WATER QUALITY MONITORING REPORT)
- MULTI-PHASE REDEVELOPMENT OF THE OTTAWA TRAIN YARDS, OTTAWA, ONTARIO (SENIOR PROJECT MANAGER)
- RIDEAU CENTRE EXPANSION, OTTAWA, ONTARIO (SENIOR PROJECT MANAGER FOR PHASE I ESA, PHASE II ESA, PHASE III ESA, ENVIRONMENTAL REMEDIATION)
- 26 STANLEY AVENUE, OTTAWA, ONTARIO, PHASE I ESA, PHASE II ESA (SENIOR PROJECT MANAGER)
- MONITORING LANDFILLS FOR RIVER VALLEY, KIPLING AND LAVIGNE (SENIOR PROJECT MANAGER)
- BLOCK D LANDS – BROWNFIELDS PROJECT - KINGSTON



# PROFESSIONAL EXPERIENCE

## **2001 TO PRESENT, MANAGER OF ENVIRONMENTAL DIVISION, PATERSON GROUP INC., OTTAWA, ONTARIO**

MANAGE ALL ASPECTS OF THE ENVIRONMENTAL DIVISION (MANAGEMENT OF PERSONNEL, BUDGETING, INVOICING, SCHEDULING, BUSINESS DEVELOPMENT, REPORTING, MARKETING, AND FIELDWORK).

REVIEW DAY TO DAY OPERATIONS WITHIN THE ENVIRONMENTAL DIVISION.

DESIGN, PERFORM, AND LEAD PHASE I, II AND PHASE III ESAS, REMEDIATION'S, BROWNFIELD APPLICATIONS AND RECORD OF SITE CONDITIONS, FIELDWORK SURVEYS, EXCAVATION, MONITORING, LABORATORY ANALYSIS, AND INTERPRETATION.

WRITE, PRESENT, AND PUBLISH REPORTS WITH METHODOLOGY AND LABORATORY ANALYSIS RESULTS, ALONG WITH RECOMMENDATIONS FOR ENVIRONMENTAL FINDINGS.

RESPONSIBLE FOR ENSURING PROJECTS MEET MINISTRY OF ENVIRONMENT AND CLIMATE CHANGE STANDARDS AND GUIDELINES.

BUILDING AND FOSTERING RELATIONSHIPS WITH CLIENTS, STAKEHOLDERS, AND MINISTRY OFFICIALS.

SUPERVISE AND CONTINUOUS TRAINING OF STAFF IN ENVIRONMENTAL METHODS (ENVIRONMENTAL SAMPLING TECHNIQUES, TECHNICAL EXPERTISE AND GUIDANCE).

APPLIED DUE DILIGENCE IN ENSURING THE HEALTH AND SAFETY OF STAFF AND THE PUBLIC IN FIELD LOCATIONS.

## **1991 TO 2001, GEOTECHNICAL AND ENVIRONMENTAL ENGINEER, PATERSON GROUP INC., OTTAWA, ONTARIO**

PROVIDE ON-SITE GEOTECHNICAL AND ENVIRONMENTAL EXPERTISE TO VARIOUS CLIENTS.

OVERSEE GEOTECHNICAL AND ENVIRONMENTAL INVESTIGATIONS FOR DRILLING AND TEST PITTING ON NUMEROUS PROPOSED UTILITY INSTALLATIONS, RESIDENTIAL AND COMMERCIAL DEVELOPMENTS.

PROBLEM SOLVING TO HELP ADVANCE OR MAINTAIN PROJECT SCHEDULES.

COMPLETE ENVIRONMENTAL REPORTS WITH RECOMMENDATIONS TO MEET ENVIRONMENTAL STANDARDS SET BY MOE AND CCME STANDARDS.

CONDUCT SITE INSPECTIONS, BEARING MEDIUM EVALUATIONS, BEARING SURFACE INSPECTIONS, CONCRETE TESTING AND FIELD DENSITY TESTING.

LIAISING WITH CONTRACTORS, CONSULTANTS AND GOVERNMENT OFFICIALS.

PROVIDE COST ESTIMATES FOR GEOTECHNICAL AND ENVIRONMENTAL FIELD PROGRAMS AND CONSTRUCTION COSTS.

REVIEW RFI'S, SUBMITTALS, MONTHLY PROGRESS REPORTS AND OTHER VARIOUS CONSTRUCTION RELATED WORK.