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Phase I Environmental Site Assessment

3-33 Selkirk Street
and 2 Montreal Road
Ottawa, Ontario

Prepared For

Main and Main

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Report: PE4546-1

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EXECUTIVE SUMMARY

Assessment

Paterson Group was retained by Main and Main to conduct a Phase I Environmental Site Assessment (Phase I-ESA) of 3-33 Selkirk Street and 2 Montreal Road, in the City of Ottawa, Ontario. The purpose of this Phase I – Environmental Site Assessment 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 properties.

The subject site was first developed for commercial and residential purposes prior to 1912. A lumber yard is observed in the southeast corner with small dwellings and a bank along Montreal Road on the 1912 FIP. Prior to 1956, a retail fuel outlet was constructed in the northwest corner of the site. The site underwent minor developments between 1912 and the late 1950s when the southern portion of the site was redeveloped with the existing commercial plaza. Historical research indicated that the commercial plaza contained a dry cleaners during the 1960s. The presence of the lumber yard, retail fuel outlet, and a drycleaner are considered to represent APECs on the subject site.

Adjacent properties were developed for residential, commercial and institutional purposes prior to 1912. Two different properties to the east of the subject site were used as either a retail fuel outlet or automotive service stations and are considered to represent an APEC on the subject site. Additional PCAs were identified within the Phase I ESA study area during the historical research, however none are considered to represent an APEC on the subject site based on the separation distance, information contained within Paterson's files and/or down/cross-gradient locations.

Following the historical review, a site visit was conducted. The site is currently occupied by a single storey commercial plaza with a partial basement and several mezzanines. Neighbouring properties consist of commercial, residential, and institutional properties. No new APECs were identified as part of the site visit.

Recommendations

Based on the results of the Phase I - Environmental Site Assessment, it is our opinion that **a Phase II - Environmental Site Assessment is required for the subject site.**

1.0 INTRODUCTION

At the request of Main and Main, Paterson Group (Paterson) conducted a Phase I Environmental Site Assessment (Phase I ESA) for 3-33 Selkirk Street and 2 Montreal Road, in the City of Ottawa, Ontario. 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. Rooie Ash of Main and Main. Main and Main's offices are located at 109 Atlantic Avenue, Toronto, Ontario, M6K 1X4. Mr. Ash can be reached by phone 416-530-2438.

This report has been prepared specifically and solely for the above noted project which is described herein. It contains all 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 (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: 3-33 Selkirk Street and 2 Montreal Road, Ottawa, Ontario.

Legal Description: Part of Lots 6 and 7, Gore Junction, Rideau Front, Gloucester Township, City of Ottawa, Ontario.

Property Identification Number: 04237-0001, 04237-0003.

Location: The subject site covers the entire block bound by Montreal Road, North River Road, Selkirk Street and Montgomery Street, in Ottawa, Ontario.

Latitude and Longitude: 45° 25' 56" N, 75° 40' 05" W;

Site Description:

Configuration: Irregular

Site Area: 1.64ha (approximate).

Zoning: GM – General Mixed Use
TM – Traditional Main Street.

Current Use: The subject site is currently occupied by a large commercial plaza and surface parking.

Services: The subject site is located 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 the 1912 Fire Insurance Plan for the City of Ottawa, the property was first developed for commercial purposes prior to 1912.

Fire Insurance Plans

Fire Insurance Plans from 1912 and 1956 were reviewed for the area of the subject site and surrounding properties.

The 1912 Fire Insurance Plan (FIP) shows the property as developed with the W.C. Edwards Company Limited Eastview Lumber Yard near the intersection of Montgomery Street (formerly Victoria) and Selkirk Street (formerly John), a bank near the intersection of Montreal Road and Montgomery Street, and a residential dwelling at the corner of Montreal Road and North River Road (formerly Russell Road). The surrounding properties are developed with residential dwellings and commercial properties with the exception of the Eastview Public School on the east side of Montgomery Street.

In 1956, the subject property remains occupied by a building supply company (D. Kemp Edwards Limited), a bank and residential dwellings. At the intersection of North River Road and Montreal Road a Retail Fuel Outlet is now present. The surrounding properties remain commercial, residential and institutional. Two off-site potentially contaminating activities were identified during the review of the 1956 FIPs, an automotive service garage to the east of the subject site and a retail fuel outlet to the north of the subject site. No other significant concerns were identified during a review of the FIPs.

City of Ottawa Street Directories

City directories at the National Archives were reviewed in approximate 10 year intervals from 1924 to 2010 as part of the Phase I ESA. The directories indicated that the subject site was used for primarily commercial purposes during the years reviewed. The property remained listed as various commercial tenants until 2011, the last year reviewed. A review of the city directories identified several onsite and offsite PCAs within the Phase I ESA study area. A summary of Potentially Contaminating Activities in the Phase I study area is provided in the table below.

Table 1: City Directories – Potentially Contaminating Activities in Phase I Study Area			
Address	Listed Activity (years listed)	Distance / Orientation from site	APEC (Y/N)
2 Montreal Road	McLean's Service Station (1954) Drouin Esso (1963-1984) Esso Gas Bar (1993)	Northern Portion of Subject Site	Y
21, 23C Selkirk Street	Parker Cleaners (1963-2000)	Southern Portion of Subject Site	Y
1 Montreal Road	Cummings Auto Service Station (1934-1945) Gladwin Shell (1954-1974) Caron Shell (1984) Shell Canada (1993-2010)	15m North	N
42 Montreal Road	Gulf Car Wash (1974) Vanier Petro Canada (1984-2010)	15m East	Y
11 Montreal Road	Superior Cleaners (1954)	20m North	N
299 Montgomery Street	Ontario Automatic Transmission Services (1984-2010)	25m East	Y
44 Montreal Road	Carriere Percy Garage (1954) Carriere Used Cars (1963)	60m East	N
59 Montreal Road	Yee Hop Laundry (1945)	60m Northeast	N
350 Montgomery Street	Moore's Sunoco (1963) Charette Sunoco (1974) Ken's Auto Center (1984) Mike's Sunoco (1993) Mike's Repair Center (2000-2010)	100m Southeast	N
71 Montreal Road	Grandmaitre Coal (1945)	120m Northeast	N
73 Montreal Road	Imperial Oil Service Station (1934)	120m Northeast	N

Several service stations, publishers, and printers were identified as PCAs in the Phase I study area. Based on the separation distance and/or cross-gradient location of these properties with respect to the subject site, most PCAs are not considered to represent Areas of Potential Environmental Concern, however four of the PCAs identified during the city directories search, the former retail fuel

outlets on the northern portion of the subject site, the former dry cleaners within the commercial plaza, the current retail fuel outlet and current mechanic are considered to represent APECs on the subject site.

4.2 Environmental Source Information

Environment and Climate Change Canada

A search of the National Pollutant Release Inventory (NPRI) was conducted electronically on April 10, 2019. The subject site was not listed in the NPRI database. No records of pollutant release were listed in the database for properties located within the Phase I Study Area.

PCB Inventory

A search of national PCB waste storage sites was conducted. No PCB waste storage sites were identified on the subject site or within a 250m radius.

Ontario Ministry of Environment (MECP) Instruments

A request was submitted to the MECP Freedom of Information office for information with respect to certificates of approval, permits to take water, certificates of property use or any other similar MECP issued instruments for the site. At the time of issuing this report, as response from the MECP had not been received. If the response contains pertinent information, the client will be notified.

MECP Coal Gasification Plant Inventory

The Ontario Ministry of Environment 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 within the Phase I study area.

MECP Incident Reports

A request was submitted to the MECP Freedom of Information office for information with respect to records concerning environmental incidents, orders, offences, spills, discharges of contaminants or inspections maintained by the MECP for the site or adjacent properties. At the time of issuing this report, as response from the MECP had not been received. If the response contains pertinent information, the client will be notified.

MECP Waste Management Records

A request was submitted to the MECP Freedom of Information office for information with respect to waste management records. At the time of issuing this report, as response from the MECP had not been received. If the response contains pertinent information, the client will be notified.

MECP Submissions

A request was submitted to the MECP Freedom of Information office for information with respect to reports related to environmental conditions have been submitted to the MECP. At the time of issuing this report, as response from the MECP had not been received. If the response contains pertinent information, the client will be notified.

MECP Brownfields Environmental Site Registry

A search of the MECP Brownfields Environmental Site Registry 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 found for the subject site or within the Phase I study area.

MECP Waste Disposal Site Inventory

The Ontario Ministry of Environment 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 former waste disposal sites, industrial manufactured gas plants, or coal tar distillation plants were identified within the Phase I study area.

Areas of Natural Significance Interest (ANSI)

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 (MNR) on April 10, 2019. The search did not reveal any natural features or areas of natural significance within the Phase I study area.

Technical Standards and Safety Authority (TSSA)

The TSSA Fuels Safety Branch was contacted by email on April 15, 2019. There are no active underground storage tanks recorded in the TSSA registry for the subject property. The TSSA search returned four expired records (one gasoline station and three for fuel tanks) for the former retail fuel outlet at 2 Montreal

Road. One active retail fuel outlet was identified at 42 Montreal Road. The active fuel outlet is considered to represent an APEC to the northeast corner of the subject site.

The TSSA records also identify an expired retail fuel outlet at 350 Montgomery Street and an active retail fuel outlet at 1 Montreal Road. Based on the downgradient/cross gradient locations and separation distances, the retail fuel outlets are not considered to represent an APEC to the subject site.

City of Ottawa Landfill Document

The document entitled “Old Landfill Management Strategy, Phase I – Identification of Sites, City of Ottawa”, was reviewed. No former landfills were identified within the Phase I study area.

City of Ottawa Historical Land Use Inventory

Paterson previously completed a search of the City’s Historical Land Use Inventory (HLUI 2005) database for an adjacent property where the search area included the subject site. No new HLUI activities were identified in the Phase I ESA study area based on the response from the adjacent property. Based on a review of this response, no new PCAs or APECs not previously identified during the historical research were noted.

Former Industrial Sites – City of Ottawa

The document titled “Mapping and Assessment of Former Industrial Sites, City of Ottawa” was reviewed. No former industrial sites were identified within the Phase I study area.

Previous Engineering Reports

The following reports were reviewed prior to conducting this assessment:

- Phase I - Environmental Site Assessment, 3-33 Selkirk Street, Ottawa, Ontario”, prepared by Pinchin Environmental, dated June 2013.

The Pinchin Phase I ESA did not include the property at 2 Montreal Road. Pinchin did not identify any issues of potential environmental concern on the 3-33 Selkirk Street. Pinchin did however identify a dry cleaners on the property between 1961 and 1971. The dry cleaners was not considered to represent an environmental concern based on a conversation with a site representative that concluded the dry cleaners operated as a drop off only and did not operate dry

cleaning equipment on site. Pinchin identified three off-site activities which could result in potential subsurface impacts at the site; retail fuel outlets at 2 Montreal Road and 42 Montreal Road, and an automotive service garage at 299 Montgomery Street. Pinchin recommended that subsurface investigations be completed as part of a redevelopment program for the subject site.

Paterson was also able to review several reports for the former retail fuel outlet located at 2 Montreal Road. Based on the reports for the former RFO, soil and groundwater impacts are present throughout the former RFO property.

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 back to the first available air photos for the site. Based on the review, the following observations have been made:

- | | |
|------|--|
| 1928 | The lumber yard identified in the 1912 Fire Insurance Plans is visible on the southern portion of the Phase I ESA property. Surrounding properties appear to have been developed with residential dwellings. |
| 1945 | The lumber yard remains visible in the southeast corner of the subject site. Development appears to have taken place along Montreal Road, however due to the quality of the air photo the nature of the development is not able to be distinguished. Additional development has taken place in the surrounding properties. |
| 1960 | The subject site appears to be under construction with the existing retail plaza. Development of the surrounding areas continue with commercial and residential buildings. |
| 1975 | The retail plaza has been fully developed at this time. A retail fuel outlet is visible on the west side of the 2 Montreal Road property. To the east of the subject site redevelopment of the adjacent properties with a commercial plaza has taken place. |
| 1985 | No significant changes appear to have been made to the subject site. Redevelopment of the surrounding properties for commercial and residential purposes continues. |

- 1999 The subject site and surrounding properties are approximately in their current configuration. The retail fuel outlet and buildings located on 2 Montreal Road have been demolished.
- 2017 (City of Ottawa Website) No significant changes have been made to the subject site. The surrounding properties are approximately in their current configuration.

The retail fuel outlets observed on 2 and 42 Montreal Road are considered to represent APECs on the Phase I ESA property. No other APECs were identified during the aerial photo review. Laser copies of selected aerial photographs reviewed are included in Appendix 1.

Topographic Maps

Topographic maps were obtained from Natural Resources Canada - The Atlas of Canada website. The topographic maps indicate that the subject site and surround area is generally flat, sloping down to the north and west. An illustration of the referenced topographic map is present on Figure 2 - Topographic Map following the body of this report.

Physiographic Maps

A Physiographic Map was reviewed from the Natural Resources Canada - The Atlas of Canada website. According to this physiographic map, the site is located in the St. Lawrence Lowlands. 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 located 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 the information from NRCAN, bedrock in the area of the site consists of shale of the Billings Formation. Based on the maps, the thickness of overburden ranges from 3 to 10 m. Overburden consists of offshore marine sediments (sand and silt).

Water Well Records

A search of the MECP's web site for all drilled well records within 250 m of the subject site was conducted on April 10, 2019. The search identified several records in the study area, none of which are considered to identify new potentially contaminating activities on the subject site. The well records were all for monitoring wells, with the exception of two drinking water well records which appear to be improperly located. No drinking water wells are considered to be present within the Phase I ESA study area.

Water Bodies and Areas of Natural Significance

The closest water body is the Rideau River, approximately 35m to the west of the subject site. No areas of Natural Significance were identified in the Phase I study area.

5.0 INTERVIEWS

Property Owner Representative

Mr. Rooie Ash, a project coordinator with Main and Main, was interviewed via email during various portions of the Phase I ESA process. Mr. Ash provided Paterson with the previous environmental site assessment reports completed by other consultants for the subject site. Mr. Ash did not know of any environmental concerns with the subject site other than those identified within the previous environmental reports.

6.0 SITE RECONNAISSANCE

6.1 General Requirements

The site assessment was conducted on April 3, 2019. Weather conditions were partly sunny, with a temperature of approximately 5 °C. Mr. Austin Cooney 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 reconnaissance.

6.2 Specific Observations at the Phase I Property

Buildings and Structures

The subject site is occupied by a large commercial plaza with a partial basement in the southwest corner of the building and mezzanines in several of the units. The plaza was constructed in the late 1950s and is expected to have undergone several renovations since construction.

Site Features

The subject site is primarily occupied by the subject building or paved with asphaltic concrete and gravel surfaces. Adjacent properties are approximately at grade with respect to the subject site. Site drainage consists of runoff towards catch basins located within the parking areas and on the surrounding streets.

Below Ground Structures

No below ground structures were identified at the time of the site visit, aside from utilities (natural gas, electrical, sewer and water).

Potable Water Source

The subject property is municipally serviced.

Potential Environmental Concerns

Groundwater Monitoring Wells

Groundwater monitoring wells are located on the 2 Montreal Road property. No groundwater monitoring wells were identified on the Selkirk Street property. The groundwater monitoring wells on the 2 Montreal Road property were installed by other consultants as part of the subsurface investigations for the former retail fuel outlet. No new environmental concerns are considered to be present due to the presence of the groundwater monitoring wells.

Underground Utilities

Underground utilities were located as part of the Phase II-ESA conducted in conjunction with this Phase I ESA. Several catch basins and underground power services were identified throughout the parking areas.

Ground Surface

The ground surface across the majority of the property consists of asphaltic concrete or crushed stone, with small landscaped areas near the property boundaries.

Railway Lines

No railway lines were observed on the subject site or within the Phase I ESA study area.

Polychlorinated Biphenyls (PCBs)

No concerns relating to PCBs were identified on the subject site.

Unidentified Substances

There were no unidentified substances on the exterior of the subject property at the time of this assessment.

Waste Storage and Disposal

The site currently generates non-hazardous waste and recyclable materials. Waste is stored in a trash bins along Selkirk Street. No concerns with respect to waste storage and disposal were identified on the subject site.

Fuels and Chemical Storage

No signs of fuel or chemical storage were identified during the Phase I ESA.

Interior Assessment

A general assessment of the building interior is as follows:

- The floors consisted predominantly of concrete, carpet and vinyl floor tiles
- The walls and ceilings consisted of drywall, concrete block and suspended ceiling tiles.
- Lighting throughout the building was a mixture of fluorescent, incandescent and LED fixtures.

Potentially Hazardous Building Products

Ozone Depleting Substances (ODSs)

Refrigerators, coolers and fire extinguishers may be potential sources of ozone depleting substances (ODSs) on site. These appliances should be regularly serviced and maintained by certified contractors.

Potentially Hazardous Building Materials

A designated substance survey and asbestos management plan has been completed for the subject site by a previous consultant and is available under a separate cover.

Other Potential Environmental Concerns

Wastewater Drainage

Wastewater drainage from the building is expected to drain into the City of Ottawa sewer system.

Neighbouring Properties

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

- North - Montreal Road followed by commercial (retail fuel outlet and other retail buildings) properties.
- South - Selkirk Street followed by office buildings and residential properties.
- East - Montgomery Street followed by commercial (automotive service garage and retail fuel outlet) and institutional properties.
- West - North River Road followed by offices, residential and institutional properties.

Land use within the Phase I study area is shown on Drawing PE4546-2 - Surrounding Land Use Plan. The use of the properties to the east of the subject site as an automotive service garage and retail fuel outlet is considered to pose an environmental concern to the subject site.

7.0 REVIEW AND EVALUATION OF INFORMATION

7.1 Land Use History

The following table indicates the current and past uses of the site dating back to the first developed use of the site.

Table 2: Land Use History			
Time Period	Land Use	Potentially Contaminating Activities	Areas of Potential Environmental Concern
1912-Present	Commercial	Former Retail Fuel Outlet Former Lumber Yard Former Dry Cleaners Retail Plaza	Former Retail Fuel Outlet Former Lumber Yard Former Dry Cleaners

Potentially Contaminating Activities (PCAs)

Three potentially contaminating activities (Former Retail Fuel Outlet, Former Lumber Yard, and Former Dry Cleaners) were identified on the subject site.

Several additional Potentially Contaminating Activities (PCAs) outside of the subject property but within the Phase I study area were identified. The majority of these PCAs are not considered to pose a concern to the subject site based on information contained within Paterson’s files, their separation distance from the subject site and/or their down- or cross-gradient location from the Phase I property. Two off-site PCAs are considered to represent APECs on the subject site, the existing retail fuel outlet and the existing automotive garage both located to the east of the subject site are considered to represent APECs. Contaminating Activities are shown on Drawing PE4546-2 Surrounding Land Use Plan.

Areas of Potential Environmental Concern (APEC)

Table 3: Areas of Potential Environmental Concern					
Area of Potential Environmental Concern	Location of Area of Potential Environmental Concern with respect to Phase I Property	Potentially Contaminating Activity	Location of PCA (on-site or off-site)	Contaminants of Potential Concern	Media Potentially Impacted (Groundwater, Soil, and/or Sediment)
Former Retail Fuel Outlet	Northern section of Phase I ESA property	Item 28 - Gasoline and Associated Products Storage in Fixed UST	On-Site	PHCs, BTEX	Soil and groundwater
Former Lumber Yard	Southeast corner of Phase I ESA property	Not Applicable	On-Site	Metals	Soil and groundwater
Former Dry Cleaners	South central portion of Phase I ESA property	Item 37 – Operation of Dry Cleaning Equipment (where chemicals are used)	On-Site	VOCs	Soil and groundwater
Existing Retail Fuel Outlet	Northeast corner of Phase I ESA property	Item 28 - Gasoline and Associated Products Storage in Fixed Tanks	Off-Site	PHCs, BTEX	Groundwater
Existing Automotive Service Garage	Eastern property boundary of Phase I ESA property	Item 52 – Storage, maintenance, fuelling, and repair equipment, vehicles, and material used to maintain transportation systems	Off-Site	PHCs, BTEX	Groundwater
Application of Road Salt for safety purposes	Within Parking Areas of Phase I ESA property	Not Applicable	On-Site	EC/SAR, Sodium, Chlorides	Soil and/or groundwater

Contaminants of Potential Concern (CPC)

Based on the APECs, the following Contaminants of Potential Concern (CPCs) have been identified:

- Petroleum Hydrocarbons Fractions 1 through 4 (PHCs F1-F4) – this suite of parameters encompasses gasoline (Fraction 1), diesel and fuel oil (Fraction 2), and heavy oils (Fractions 3 and 4). PHCs F1-F4 were selected as CPCs for the Phase I property based on the historical presence of a retail fuel outlet on the subject site and the existing retail fuel outlet and automotive service garage to the east of the subject site.
- Benzene, Toluene, Ethylbenzene, and Xylenes (BTEX) were selected as CPCs for the Phase I property based on the historical presence of a retail fuel outlet on the subject site and the existing retail fuel outlet and automotive service garage to the east of the subject site.

- ❑ Metals (including Mercury and Chromium VI) were selected as CPCs for the Phase I property based on the former use of the property as a lumber yard.
- ❑ Volatile Organic Compounds (VOCs) were selected as CPCs for the Phase I property based on the former dry cleaners located within the retail plaza of the subject site.
- ❑ Electrical Conductivity/Sodium Adsorption Ratio (EC/SAR) and Sodium/Chlorides were selected as CPCs for the Phase I property based on the application of road salt to the parking lot for safety purposes.

7.2 Conceptual Site Model

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 the information from NRCAN, bedrock in the area of the site consists of shale of the Billings Formation. Based on the maps, the thickness of overburden ranges from 3 to 10 m. Overburden consists of offshore marine sediments (sand and silt). Groundwater is expected to be encountered in the overburden or the upper weathered shale bedrock.

Contaminants of Potential Concern

As per Section 7.1 of this report, CPCs identified on the subject site include Metals (including Hg, and CrVI), PHCs, BTEX, and VOCs.

Existing Buildings and Structures

The subject site is occupied by a commercial plaza with a partial basement in the southwest corner of the building and mezzanines in several of the units.

Water Bodies

The closest water body is the Rideau River, approximately 35m to the west of the subject site.

Areas of Natural Significance

There are no areas of natural and scientific interest on the subject property or within the Phase I ESA study area

Drinking Water Wells

The subject site is located within a municipally supplied area and drinking water wells are not considered to be present within the Phase I ESA study area.

Neighbouring Land Use

Neighbouring land use in the Phase I study area consists of commercial, residential and institutional properties. Land use is shown on Drawing PE4546-2 Surrounding Land Use Plan.

Potentially Contaminating Activities and Areas of Potential Environmental Concern

As per Section 7.1 of this report, Potentially Contaminating Activities and Areas of Potential Environmental Concern were identified within the Phase I ESA study area. Four PCAs were identified on the subject site during the historical review or Phase I ESA site visit. Two additional off site PCAs representing APECs on the subject site were identified during the historical review;

- Former retail fuel outlet along the northern part of the subject site;
- Former dry cleaner located within the retail plaza on the subject site;
- Former lumber yard, located in the southeastern corner of the subject site;
- Existing Retail fuel outlet located to the east of the subject site;
- Existing automobile service garage located to the east of the subject site;
- Application of road salt for safety purposes.

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 which have the potential to have impacted 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 CONCLUSIONS

Assessment

Paterson Group was retained by Main and Main to conduct a Phase I Environmental Site Assessment (Phase I-ESA) of 3-33 Selkirk Street and 2 Montreal Road, in the City of Ottawa, Ontario. The purpose of this Phase I – Environmental Site Assessment 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 properties.

The subject site was first developed for commercial and residential purposes prior to 1912. A lumber yard is observed in the southeast corner with small dwellings and a bank along Montreal Road on the 1912 FIP. Prior to 1956, a retail fuel outlet was constructed in the northwest corner of the site. The site underwent minor developments between 1912 and the late 1950s when the southern portion of the site was redeveloped with the existing commercial plaza. Historical research indicated that the commercial plaza contained a dry cleaners during the 1960s. The presence of the lumber yard, retail fuel outlet, and a drycleaner are considered to represent APECs on the subject site.

Adjacent properties were developed for residential, commercial and institutional purposes prior to 1912. Two different properties to the east of the subject site were used as either a retail fuel outlet or automotive service stations and are considered to represent an APEC on the subject site. Additional PCAs were identified within the Phase I ESA study area during the historical research, however none are considered to represent an APEC on the subject site based on the separation distance, information contained within Paterson's files and/or down/cross-gradient locations.

Following the historical review, a site visit was conducted. The site is currently occupied by a single storey commercial plaza with a partial basement and several mezzanines. Neighbouring properties consist of commercial, residential, and institutional properties. No new APECs were identified as part of the site visit.

Recommendations

Based on the results of the Phase I - Environmental Site Assessment, it is our opinion that **a Phase II - Environmental Site Assessment is required for the subject site.**

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, 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 Main and Main. Permission and notification from the above noted party and Paterson will be required to release this report to any other party.

Paterson Group Inc.



Michael Beaudoin, P.Eng.



Mark S. D'Arcy, P.Eng.



Report Distribution:

- Main and Main
- Paterson Group

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 mapping).
Natural Resources Canada – The Atlas of Canada.
Environment Canada, National Pollutant Release Inventory.
PCB Waste Storage Site Inventory.

Provincial Records

MECP Freedom of Information and Privacy Office.
MECP Municipal Coal Gasification Plant Site Inventory, 1991.
MECP document titled “Waste Disposal Site Inventory in Ontario”.
MECP Brownfields Environmental Site Registry.
Office of Technical Standards and Safety Authority, Fuels Safety Branch.
MNR Areas of Natural Significance.
MECP Water Well Inventory.

Municipal Records

The City of Ottawa Historical Land Use Inventory.
The City of Ottawa geoOttawa website.

Local Information Sources

Personal Interviews.

Public Information Sources

Google Earth.
Google Maps/Street View.

FIGURES

FIGURE 1 – KEY PLAN

FIGURE 2 – TOPOGRAPHIC MAP

DRAWING PE4546-1 – SITE PLAN

DRAWING PE4546-2 – SURROUNDING LAND USE PLAN

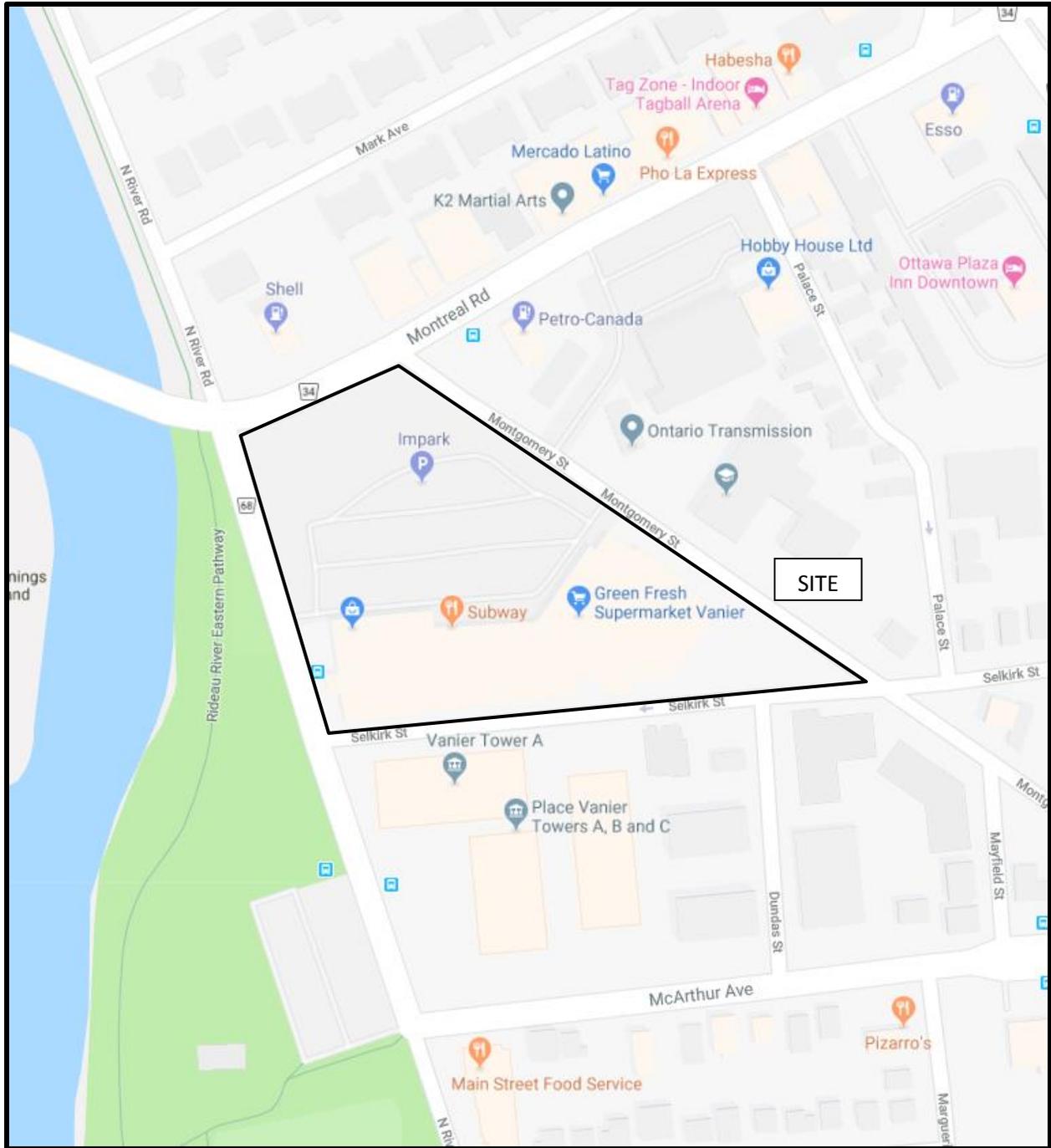


FIGURE 1
KEY PLAN

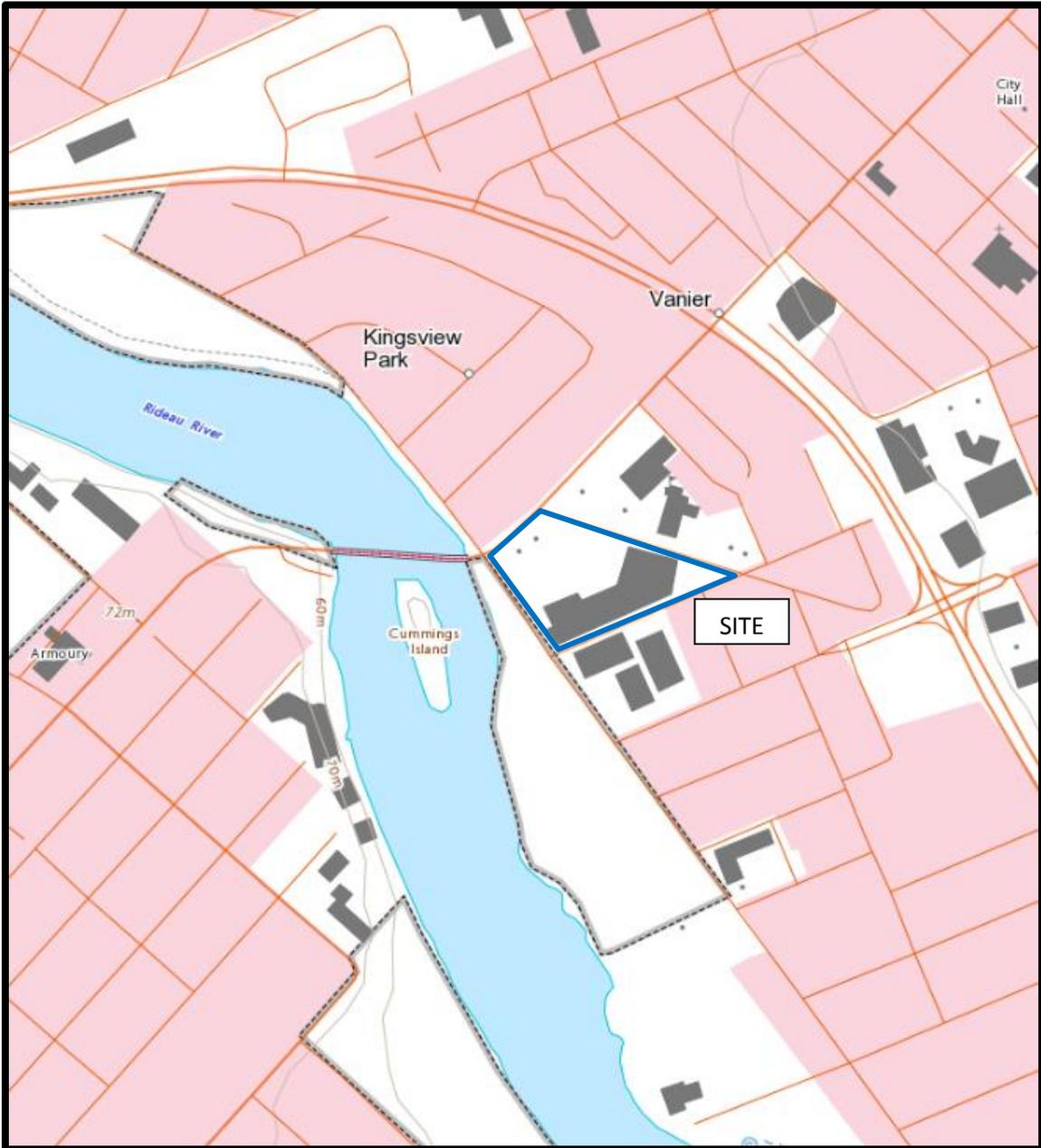
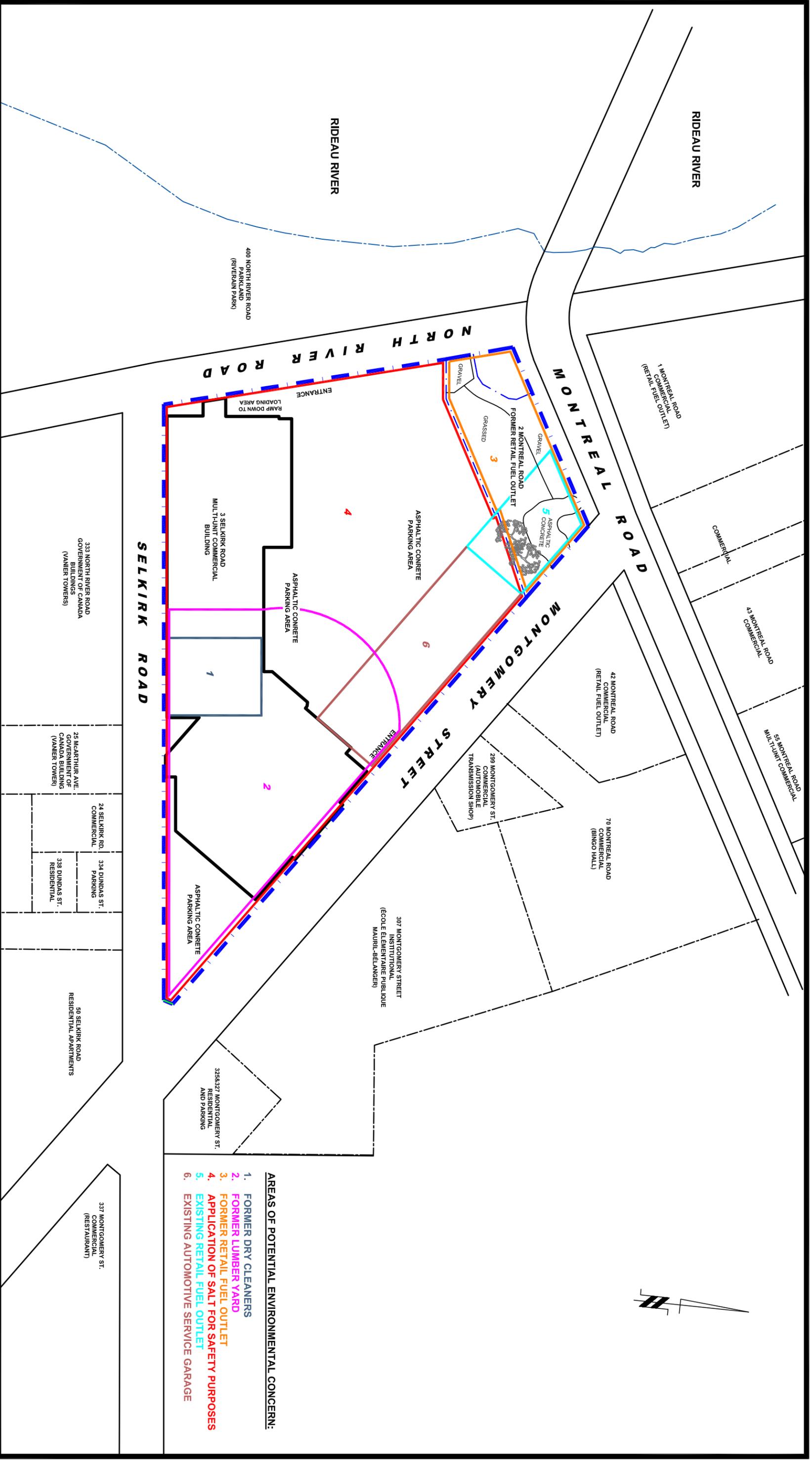


FIGURE 2

TOPOGRAPHIC MAP



- AREAS OF POTENTIAL ENVIRONMENTAL CONCERN:**
1. FORMER DRY CLEANERS
 2. FORMER LUMBER YARD
 3. FORMER RETAIL FUEL OUTLET
 4. APPLICATION OF SALT FOR SAFETY PURPOSES
 5. EXISTING RETAIL FUEL OUTLET
 6. EXISTING AUTOMOTIVE SERVICE GARAGE

patersongroup
 consulting engineers

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

NO.	REVISIONS	DATE	INITIAL

MAIN AND MAIN DEVELOPMENTS

PHASE I - ENVIRONMENTAL SITE ASSESSMENT
3-33 SELKIRK STREET AND 2 MONTREAL ROAD

OTTAWA,
 ONTARIO

Scale:	1:1000	Date:	04/2019
Drawn by:	RCG	Report No.:	PE4546-1
Checked by:	MB	PE4546-1	
Approved by:	MSD	Revision No.:	

APPENDIX 1

AERIAL PHOTOGRAPHS

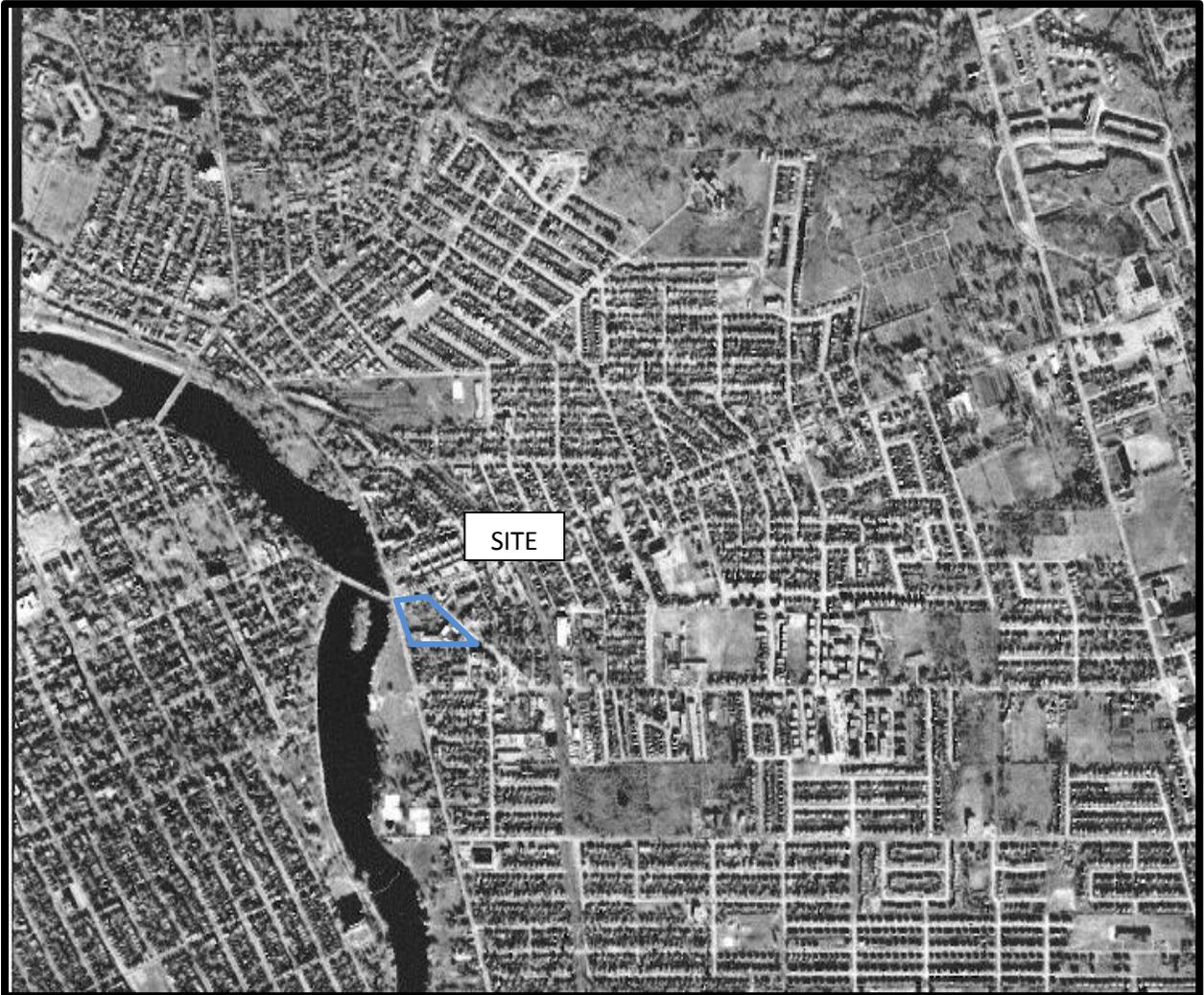
SITE PHOTOGRAPHS



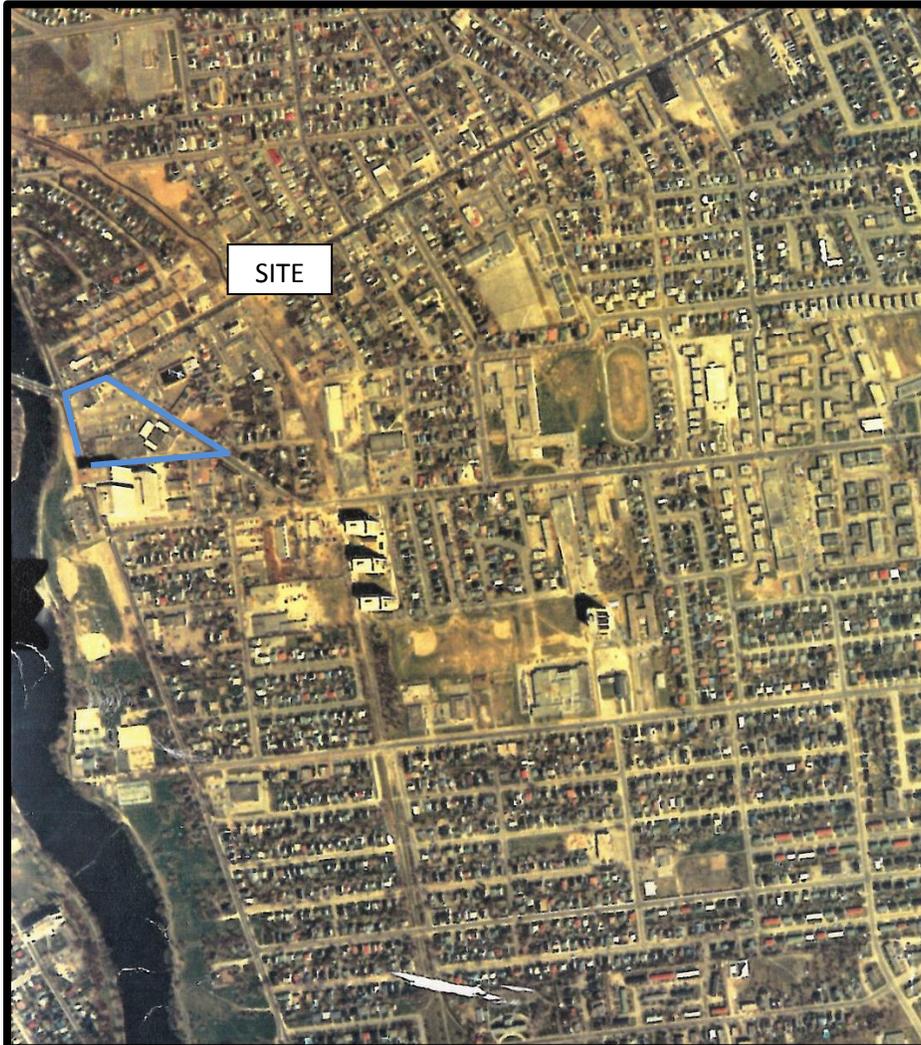
AERIAL PHOTOGRAPH
1928



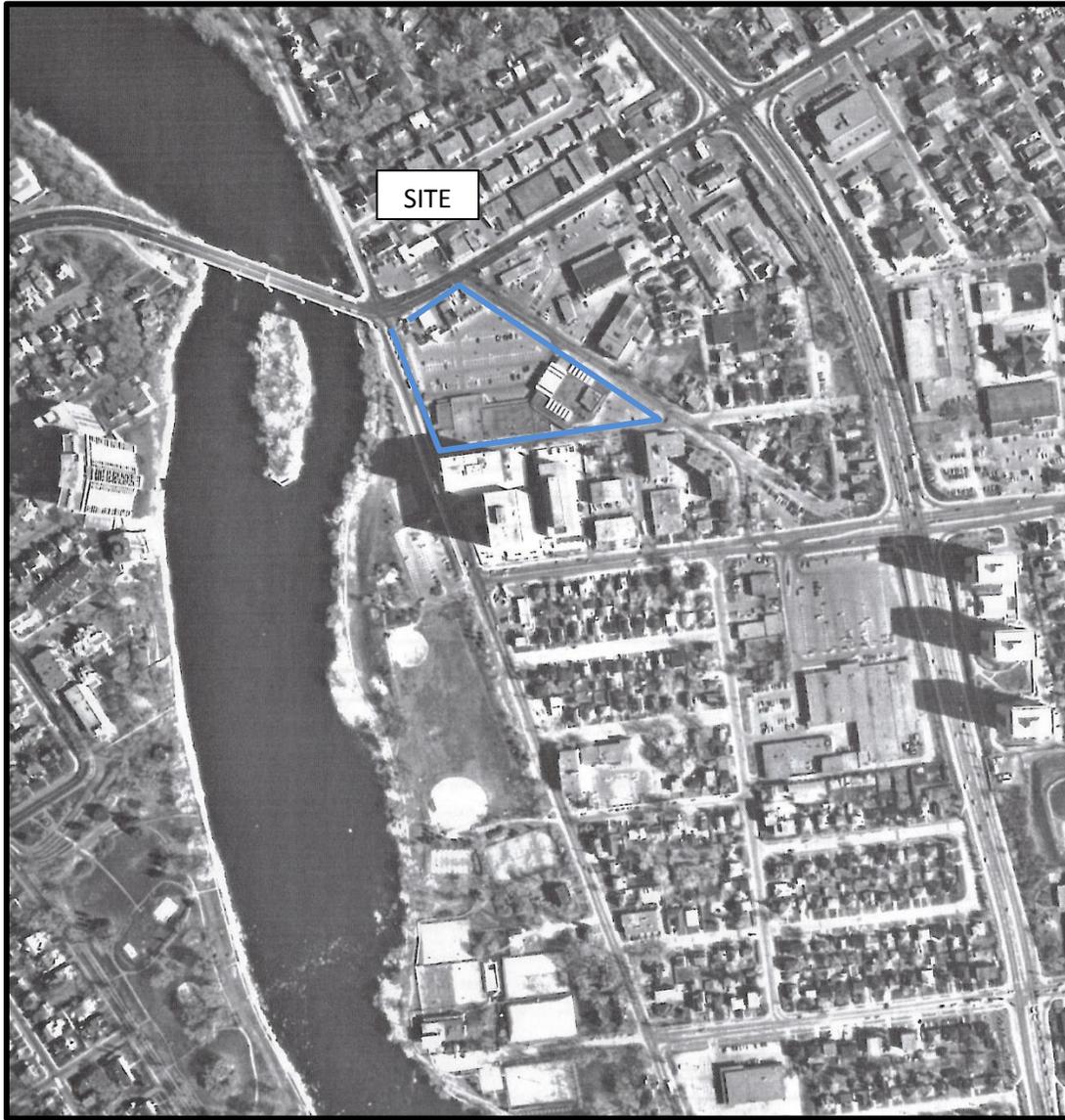
AERIAL PHOTOGRAPH
1945



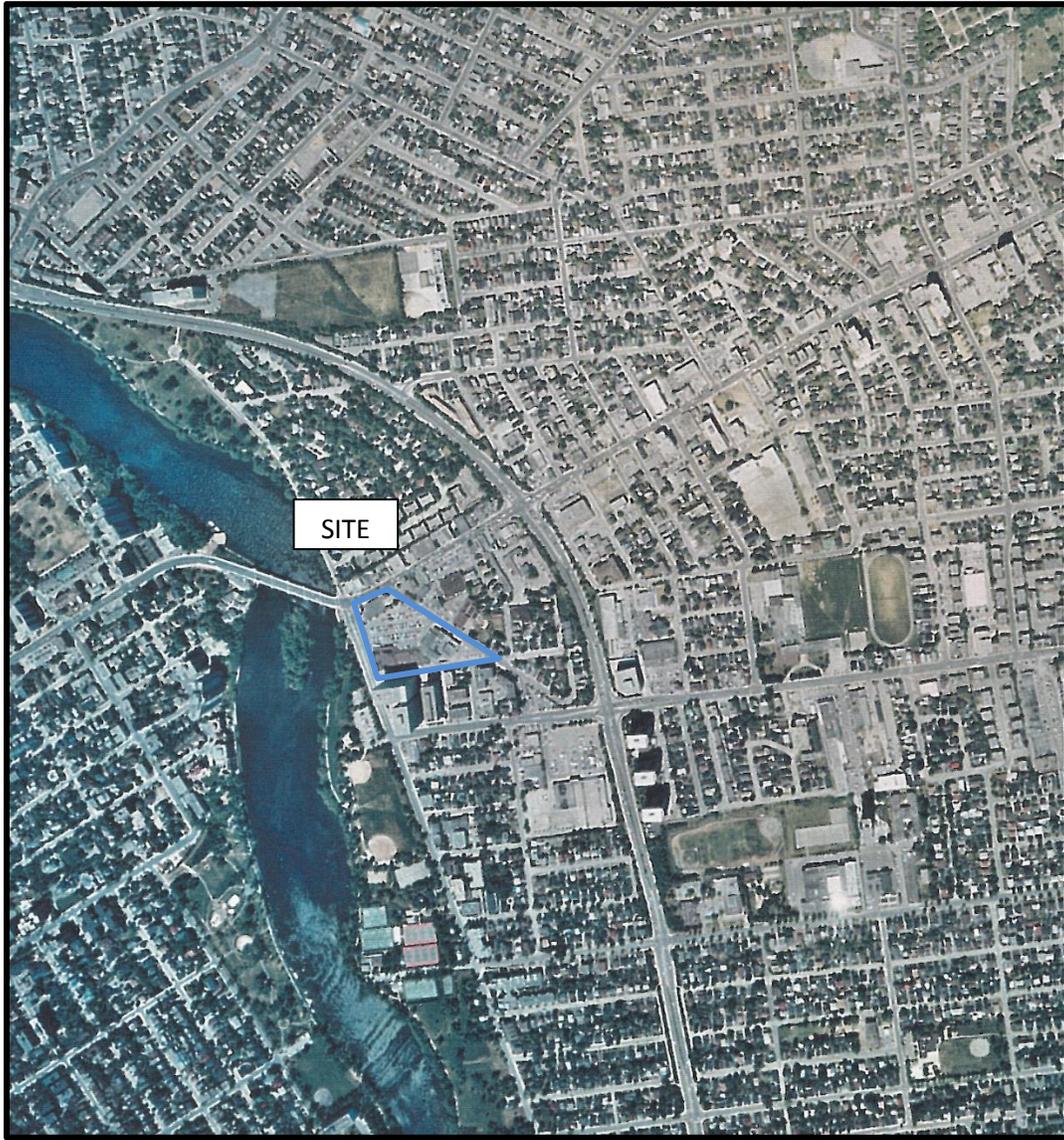
AERIAL PHOTOGRAPH
1960



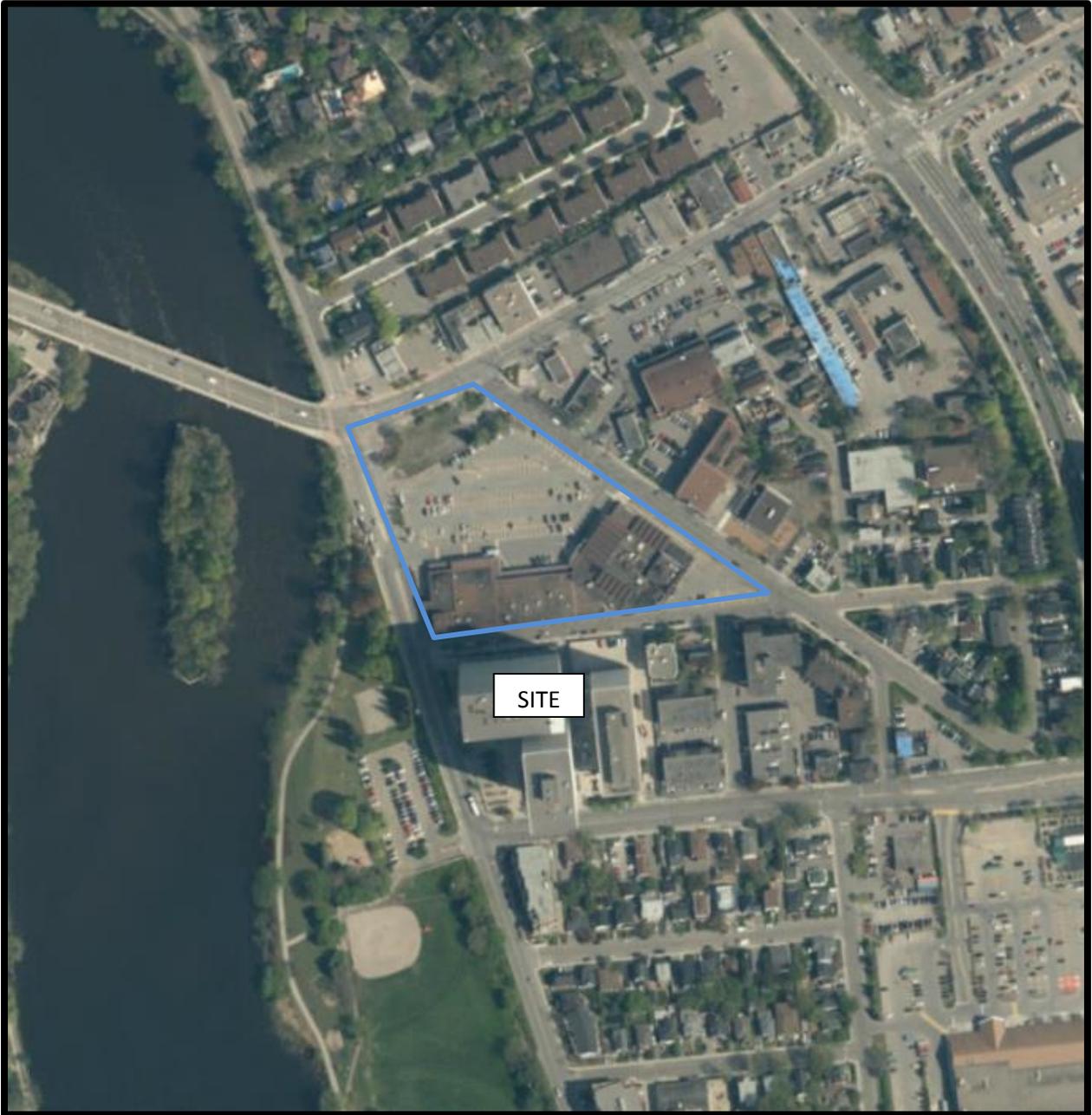
AERIAL PHOTOGRAPH
1975



AERIAL PHOTOGRAPH
1985



AERIAL PHOTOGRAPH
1999



AERIAL PHOTOGRAPH
2017

APPENDIX 2

MECP FREEDOM OF INFORMATION REQUEST

WATER WELL RECORDS

TSSA CORRESPONDENCE

Freedom of Information Request

This form is for requesting documents which are in the Ministry's files on environmental concerns related to properties. Please refer to the guide on completion and use of this form. Our fax no. is (416) 314-4285.

Requester Data			For Ministry Use Only	
Name, Company Name, Mailing Address and Email Address of Requester Michael Beaudoin Paterson Group Inc. 154 Colonnade Road Ottawa, ON K2E 7J5 Email address: mbeaudoin@patersongroup.ca			FOI Request No.	Date Request Received
Telephone/Fax Nos. Tel. 613-226-7381 Fax 613-226-6344			Fee Paid <input type="checkbox"/> ACCT <input type="checkbox"/> CHQ <input type="checkbox"/> VISA/MC <input type="checkbox"/> CASH	
Your Project/Reference No. PE4546		Signature/Print /Name of Requester Michael Beaudoin	<input type="checkbox"/> CNR <input type="checkbox"/> ER <input type="checkbox"/> NOR <input type="checkbox"/> SWR <input type="checkbox"/> WCR <input type="checkbox"/> SAC <input type="checkbox"/> IEB <input type="checkbox"/> EAA <input type="checkbox"/> EMR <input type="checkbox"/> SWA	
Request Parameters				
Municipal Address / Lot, Concession, Geographic Township (Municipal address essential for cities, towns or regions) 3, 5, 7, 9, 11, 13, 15, 17, 19, 21, 23, 25, 27, 29, 31, 33 Selkirk Street, Ottawa, Ontario (all one owner, adjacent properties)				
Present Property Owner(s) and Date(s) of Ownership Osgoode Properties				
Previous Property Owner(s) and Date(s) of Ownership				
Present/Previous Tenant(s), (if applicable) grocery store, beer store, dry cleaner, restaurant, veterinarian				
Search Parameters			Specify Year(s) Requested	
<i>Files older than 2 years may require \$60.00 retrieval cost. There is no guarantee that records responsive to your request will be located.</i>				
Environmental concerns (General correspondence, occurrence reports, abatement)			all	
Orders			all	
Spills			all	
Investigations/prosecutions ► Owner AND tenant information must be provided			all	
Waste Generator number/classes			all	
Certificates of Approval ► Proponent information must be provided				
1985 and prior records are searched manually. Search fees in excess of \$300.00 could be incurred, depending on the types and years to be searched. Specify Certificates of Approval number(s) (if known). If supporting documents are also required, mark SD box and specify type e.g. maps, plans, reports, etc.				
			SD	Specify Year(s) Requested
air - emissions				1986-present
water - mains, treatment, ground level, standpipes & elevated storage, pumping stations (local & booster)				1986-present
sewage - sanitary, storm, treatment, stormwater, leachate & leachate treatment & sewage pump stations				1986-present
waste water - industrial discharges				1986-present
waste sites - disposal, landfill sites, transfer stations, processing sites, incinerator sites				1986-present
waste systems - PCB destruction, mobile waste processing units, haulers: sewage, non-hazardous & hazardous waste				1986-present
pesticides - licenses				1986-present

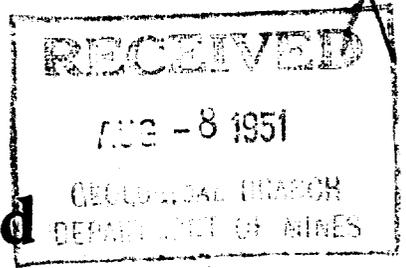
A \$5.00 non-refundable application fee, payable to the Minister of Finance, is mandatory. The cost of locating on-site and/or preparing any record is \$30.00/hour and 20 cents/page for photocopying and you will be contacted for approval for fees in excess of \$30.00.



15 No 7802

UTM 118 4147162 10 E
9 R 510311 10410 N
Elev. 9 R 011815
Basin 25

The Well Drillers Act
Department of Mines, Province of Ontario



Water Well Record

County or Territorial District Carleton Place Town or City Ottawa
Date Completed 7/2/51 Cost of well (excluding pump) Billings

Pipe and Casing Record

Pumping Test

Casing diameter(s) 6 Date 7/2/51
Length(s) of casing(s) 27 Static level 1.4
Type of screen 2.5 Pumping level 2.5
Length of screen 2.5 Pumping rate 2.5
Distance from top of screen to ground level 2.5 Duration of test 2.5
Is well a gravel-wall type? 2.5 Distance from cylinder or bowls to ground level 2.5

Water Record

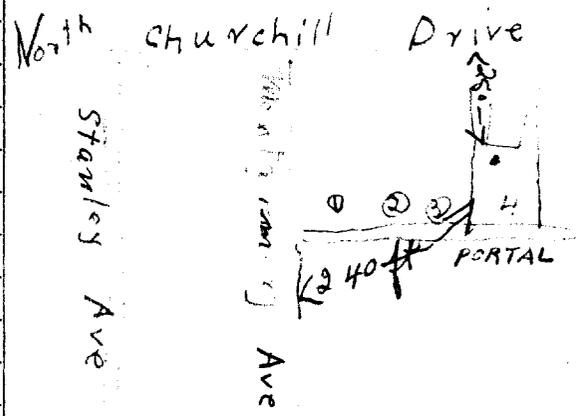
Kind (fresh or mineral) <u>fresh</u>	Depth(s) to Water Horizon(s)	Kind of Water	No. of Feet Water Rises
Quality (hard, soft, contains iron, sulphur, etc.) <u>medium</u>			
Appearance (clear, cloudy, coloured) <u>clear</u>		<u>little</u>	
For what purpose(s) is the water to be used? <u>house</u>		<u>Mineral</u>	<u>71</u>
How far is well from possible source of contamination?		<u>they</u>	
What is the source of contamination?		<u>city</u>	
Enclose a copy of any mineral analysis that has been made of water			

Well Log

Overburden and Bedrock Record	From	To
	0 ft.	...ft.
<u>Black loam</u>	<u>1</u>	<u>3</u>
<u>Soft dark shale</u>	<u>3</u>	<u>96</u>

Location of Well

In diagram below show distances of well from road and lot line. Indicate north by arrow.



Situation: Is well on upland, in valley, or on hillside?
Drilling Firm Gordon Mulligan
Address 1100 St. Lawrence St. Ottawa
Name of Driller John Munro Address 703 Gilmour St
Date 7/2/51 Licence Number

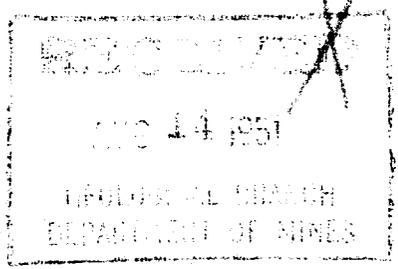
Signature of Licensee

UTM 1182 4476110E
 19R 503110410N
 Elev. 9R 0185
 Basin 25



15 No 8525

The Well Drillers Act
 Department of Mines, Province of Ontario



Water Well Record

County or Territorial District Carleton Township, Village, Town or City Ottawa
 Town or City Ottawa
 Date completed Jan 11 1951 (day) (month) (year) Cost of well (excluding pump)

Pipe and Casing Record

Pumping Test

Casing diameter(s) 4 inch Date

Length(s) of casing(s) 43 3/8 feet Static level 1.7 feet

Type of screen

Length of screen

Distance from top of screen to ground level

Is well a gravel-wall type?

Pumping level

Pumping rate

Duration of test

Distance from cylinder or bowls to ground level

Water Record

Kind (fresh or mineral)	Depth(s) to Water Horizon(s)	Kind of Water	No. of Feet Water Rises
<u>fresh mineral</u>	<u>32</u>		<u>17 feet from top</u>
Quality (hard, soft, contains iron, sulphur, etc.)			
<u>iron</u>			
Appearance (clear, cloudy, coloured)			
<u>clear</u>			
For what purpose(s) is the water to be used?			
<u>household</u>			
How far is well from possible source of contamination?			
<u>50 2/10 feet</u>			
What is the source of contamination?			
<u>Septic tank</u>			
Enclose a copy of any mineral analysis that has been made of water			

Well Log

Overburden and Bedrock Record

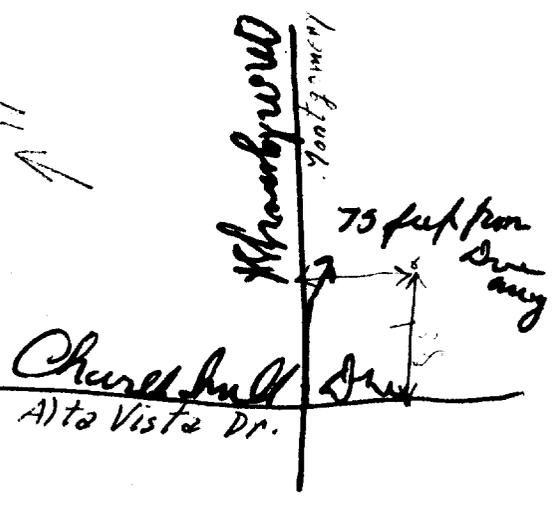
From To

0 ft.ft.

<u>Soil & Clay</u>	<u>0</u>	<u>43 3/8</u>
<u>Rock</u>	<u>43 3/8</u>	<u>102</u>

Location of Well

In diagram below show distances of well from road and lot line. Indicate north by arrow.



Situation: Is well on upland, in valley, or on hillside? hill

Drilling Firm Gordon S. Mulligan

Address W. J. Estabrook Ottawa

Name of Driller James Stiller Address Ramsayville

Date January 11 1951 Licence Number

Signature of Licensee

Michael Beaudoin

From: Public Information Services <publicinformationsservices@tssa.org>
Sent: April-15-19 12:02 PM
To: Michael Beaudoin
Subject: RE: 3 Selkirk Street

Hello Michael,

Thank you for your request for confirmation of public information.

I have searched the below noted addresses and I have located the following record:

Inst Number	Context	Address	City	Province	Postal Code	Status
9884250	FS GASOLINE STATION - SELF SERVE	1 MONTREAL RD	OTTAWA	ON	K1L 6E8	Active
10060999	FS GASOLINE STATION - FULL SERVE	1 MONTREAL RD	VANIER	ON	K1L 6E8	EXPIRED
10381969	FS CYLINDER EXCHANGE	1 MONTREAL RD	OTTAWA	ON	K1L 6E8	Active
11092890	FS LIQUID FUEL TANK	1 MONTREAL RD	OTTAWA	ON	K1L 6E8	Active
11092913	FS LIQUID FUEL TANK	1 MONTREAL RD	OTTAWA	ON	K1L 6E8	Active
11092938	FS LIQUID FUEL TANK	1 MONTREAL RD	OTTAWA	ON	K1L 6E8	Active
9582901	FS GASOLINE STATION - SELF SERVE	2 MONTREAL RD	VANIER	ON	K1L 6E9	EXPIRED
11030557	FS LIQUID FUEL TANK	2 MONTREAL RD	VANIER	ON	K1L 6E9	EXPIRED
11030574	FS LIQUID FUEL TANK	2 MONTREAL RD	VANIER	ON	K1L 6E9	EXPIRED
11030589	FS LIQUID FUEL TANK	2 MONTREAL RD	VANIER	ON	K1L 6E9	EXPIRED
9754509	FS GASOLINE STATION - SELF SERVE	42 MONTREAL RD	VANIER	ON	K1L 6E7	Active
26279630	FS CYLINDER EXCHANGE	42 MONTREAL RD	OTTAWA	ON	K1L 6E7	Active
11030601	FS LIQUID FUEL TANK	42 MONTREAL RD	VANIER	ON	K1L 6E7	Active
11254314	FS LIQUID FUEL TANK	42 MONTREAL RD	VANIER	ON	K1L 6E7	Active
11254338	FS LIQUID FUEL TANK	42 MONTREAL RD	VANIER	ON	K1L 6E7	Active

9805068	FS GASOLINE STATION - FULL SERVE	350 MONTGOMERY ST	VANIER	ON	K1L 7X2	EXPIRED
11030543	FS LIQUID FUEL TANK	350 MONTGOMERY ST	VANIER	ON	K1L 7X2	EXPIRED
11305725	FS LIQUID FUEL TANK	350 MONTGOMERY ST	VANIER	ON	K1L 7X2	EXPIRED
11305743	FS LIQUID FUEL TANK	350 MONTGOMERY ST	VANIER	ON	K1L 7X2	EXPIRED

For a further search in our archives, or for copies of documents, 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 or through mail along with the appropriate fee. TSSA's fee schedule can be found at: https://www.tssa.org/en/about-tssa/resources/Documents/Public-Information-Fee-Schedule_Jan_2018.pdf. 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.

Kind regards,

Yalini



Yalini Kanagendran | Public Information Agent

Facilities
 345 Carlingview Drive
 Toronto, Ontario M9W 6N9
 Tel: +1-416-734-3449 | Fax: +1-416-231-6183 | E-Mail: publicinformationservices@tssa.org
www.tssa.org



From: Michael Beaudoin <MBeaudoin@Patersongroup.ca>
Sent: April 15, 2019 10:19 AM
To: Public Information Services <publicinformationservices@tssa.org>
Subject: 3 Selkirk Street

Good Morning

Could you please complete a search of your records for underground/aboveground storage tanks, historical spills or other infractions for the following address(es) for properties located in the City of Ottawa (possibly City of Vanier/Town of Eastview);

3, 21, 23, 33 Selkirk Street

1, 2, 42 Montreal Road

299, 300, 350 Montgomery Street

Michael Beaudoin, P. Eng.

patersongroup
solution oriented engineering
over 60 years servicing our clients

154 Colonnade Road South
Ottawa, Ontario, K2E 7J5
Tel: (613) 226-7381 Ext. 233

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.

APPENDIX 3

QUALIFICATIONS OF ASSESSORS

POSITION

Environmental Engineer

EDUCATION

Carleton University, B.Eng. 2010
Environmental Engineering

EXPERIENCE

2010-present

Paterson Group Inc.

Consulting Engineers
Geotechnical and Environmental Division
Environmental Engineer

**Environmental
Engineering**

**Geotechnical
Engineering**

**Materials Testing
Quality Control**

Building Sciences

Hydrogeology

Archeological Services

SELECT LIST OF PROJECTS

Rideau Street Reconstruction - Ottawa
Main Street Reconstruction - Ottawa
Woodroffe Avenue Reconstruction – Ottawa
Westboro Connection Remediation - Ottawa
Former Alcan Plant Redevelopment - Kingston
Former Nordex Facility Redevelopment - Kingston
Jack Garland Airport Remediation – North Bay
Highway 17 Twinning Project – Arnprior
Watermain Construction – North Bay
Waste Audits – Various City of Ottawa Facilities
Parks Recycling Pilot Program – Various City of Ottawa parks
Special Events Recycling Pilot Program – Special Events with the City of Ottawa
Groundwater Remediation and Monitoring Program Supervision – Ottawa
Designated Substance Surveys – Residential and Commercial Sites – Ottawa
Asbestos Air Testing – Various Locations - Ottawa
Mould Testing – Various Locations - Ottawa
Phase I & II Environmental Site Assessments – Residential, Commercial and Industrial Sites – Ottawa (CSA Z768-01 and O.Reg 269/11)

Mark S. D'Arcy, P.Eng., QP^{ESA} Senior Environmental/Geotechnical Engineer

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.

EDUCATION

B.A.Sc. 1991, Geological Engineering, Queen's University, Kingston, ON

LICENCE/ PROFESSIONAL AFFILIATIONS

Professional Engineers of Ontario
ESA Qualified Person with MOECC
Ottawa Geotechnical Group
Consulting Engineers of Ontario

YEARS OF EXPERIENCE

With Paterson: 28

OFFICE LOCATION

154 Colonnade Road South,
Nepean, Ontario, K2E 7J5

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)
- Riverview Development – Kingston, Ontario, Phase I ESA, Phase II ESA, and filing of an RSC in the MOECC Environmental Site Registry (Senior Project Manager)
- Monitoring Landfills for River Valley, Kipling and Lavagine (Senior Project Manager)

PROFESSIONAL EXPERIENCE

May 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.