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Phase I-Environmental Site Assessment

2425-2431 Bank Street
Ottawa, Ontario

Prepared For

Zlepnig Holdings Limited

December 11, 2019

Report: PE4793-1R

TABLE OF CONTENTS

List of Figures

List of Appendices

EXECUTIVE SUMMARY

Assessment

Paterson Group was retained by Zlepnig Holdings Limited to conduct a Phase I-Environmental Site Assessment (ESA) for 2425-2431 Bank Street, in the City of Ottawa, Ontario, herein referred to as the Phase I Property. The purpose of this Phase I-ESA was to research the past and current use of the Phase I Property and 250m study area and to identify any environmental concerns with the potential to have impacted the Phase I Property.

According to the historical research, the Phase I Property was vacant land possibly used for agricultural purposes, until it was first developed in 1957 with a small motel and residential dwelling. The motel was later upgraded in the late 1960s. In 1984, the original motel was demolished and replaced with a portion of the present-day building, followed by an additional expansion of a third floor in 1988. In 1999/2000, a six-storey building was constructed and incorporated into the original building.

Historical land use in the surrounding area was primarily for residential purposes to the north and east and commercial retail to the east and south. Two (2) potentially contaminating activities (PCAs) were identified: a retail fuel outlet and oil changers (service centre) located at 2471 Bank Street across Hunt Club Road. These PCAs were not considered to have the potential to impact the subject property based on the distance of the activities from the site and their cross-gradient location. A few other off-site PCAs were identifed, however given the significant separation distances, these properties are not considered to generate areas of potential environmental concern (APECs) to the Phase I Property.

Following the historical research, a site visit was conducted. The Phase I Property is occupied by a retirement home situated on the central portion of the site, while the remainder of the site is asphaltic concrete covered parking with landscaped areas. No potential concerns were identifed with the current use of the Phase I Property.

Surrounding land use consists of primarily residential to the north and east with commercial properties along Bank Street. The RFO and service garage remains in operation at 2471 Bank Street. As previously discussed, the RFO and service garage are PCAs that do not represent APECs on the Phase I Property.

Conclusion

Based on the results of the assessment, **it is our opinion, that a Phase II Environmental Site Assessment is not required for the Phase I Property.**

1.0 INTRODUCTION

At the request of Zlepnig Holdings Limited, Paterson Group (Paterson) conducted a Phase I-Environmental Site Assessment (Phase I-ESA) for the property at 2425-2431 Bank Street, in the City of Ottawa, Ontario, herein referred to as the Phase I Property. 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 land.

Paterson was engaged to conduct this Phase I-ESA by Mr. Fred Zlepnig with Zlepnig Holdings Limited. Mr. Zlepnig can be reached by telephone at (613) 737-0811.

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 (O.Reg.) 153/04, as amended, under the 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:	2425-2431 Bank Street, Ottawa, Ontario
Legal Description:	Parts of 1 & 2 of RP5R 9433, Part 1, East of Bank Street, Part of Lot 5, Concession 3 Rideau Front, in the Township of Gloucester, now in the City of Ottawa, Ontario
Property Identification Number:	04156-0112 and 04156-0162
Location:	The site is located on the northeast corner of the Bank Street and Hunt Club Road intersection, in the City of Ottawa, Ontario. For the purpose of this assessment, Bank Street is assumed to run in a north-south direction. Refer to Figure 1 - Key Plan in the Figures section following the text.
Latitude and Longitude:	45° 21' 16.82" N, 75° 38' 57" W

Site Description:

Configuration:	Irregular
Site Area:	1.52 hectares (approximately)
Zoning:	MC – Mixed Use Zone
Current Use:	The subject site is occupied by a retirement home.
Services:	The 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 O.Reg. 153/04, as amended, 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 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 personal interview with the property owner, the Phase I Property was first developed with a residential dwelling and small motel in 1957.

Fire Insurance Plans

Fire Insurance Plans (FIPs) are not available for the area of the subject site.

City of Ottawa Street Directories

City directories at the National Archives were reviewed in approximate 10-year intervals from 1947 to 2011 as part of the Phase I ESA. The subject and neighbouring properties within the Phase I Study Area were used for residential and commercial purposes. Potentially Contaminating Activities (PCAs) identified within the Phase I study area are summarized in Table 1.

Table 1: Potentially Contaminating Activities
City Directories Review Summary

Address	Listed Activity	Years Listed	Approximate Distance / Orientation from Site
Bank Street			
2471	Oil changers (service centre) Petro Canada Ltd. South keys auto centre	2000-2011 2000-2011 1990	45-55 m Southeast
2446	Hills cleaners K-zee Paints	2000 2000	180 m South
2430	Hillary's cleaners	1990	99 m Southwest

The off-site PCAs noted above are not considered to represent areas of potential environmental concern (APECs) on the Phase I Property, based on their separation distances and/or cross-gradient orientations with respect to the subject site.

The locations of the aforementioned PCAs relative to the Phase I Property are depicted on Drawing PE4793-2 - Surrounding Land Use Plan, in the figures section following the text.

Chain of Title

Paterson did not request a Chain of Title for the subject site as it was determined that sufficient information was gathered from other sources, such aerial photographs, city directories, previous engineering reports, as well as the personal interview.

Plan of Survey

A plan of survey was not available for review as part of this assessment.

Previous Engineering Reports

Paterson reviewed the following reports as part of this assessment:

- Phase I-Environmental Site Assessment, The Southway Inn, 2431 Bank Street, Ottawa, Ontario, prepared by Paterson Group Inc., dated April 10, 2001.

Paterson conducted a Phase I-ESA for the subject property. No potentially contaminating activities were identified with the former or current use of the subject land. Based on the neighbouring land use, an existing retail fuel outlet (RFO) located at 2471 Bank Street was not considered to have the potential to impact the subject property since the underground storage tanks (USTs) and associated pump equipment were situated at least 100 m southeast of the subject land and were considered to be cross-gradient. Based on the findings of the Phase I ESA, a Phase II ESA was not recommended.

Paterson conducted a subsurface investigation in 1999. Based on our investigation, the site geology generally consists of an asphaltic concrete structure, followed by fill material consisting of silty sand (reworked native soil) with some gravel (crushed stone), underlain by silty sand/sandy silt, followed by natively clayey silt and/or glacial till. No deleterious material was encountered during the subsurface investigation.

4.2 Environmental Source Information

Areas of Natural Significance

A search for areas of natural significance and features within the Phase I Study Area was conducted on the website of the Ontario Ministry of Natural Resources (MNR) on November 8, 2019. The search did not reveal any natural features or ANSIs within the Phase I Study Area.

PCB Inventory

A search of national PCB waste storage sites was conducted on November 8, 2019. No PCB waste storage sites are located within the Phase I Study Area.

Environment Canada

A search of the National Pollutant Release Inventory (NPRI) was conducted electronically on November 8, 2019. Based on the search results, the Phase I Property and other properties within the 250m study area are not listed in the NPRI.

Ministry of the Environment, Conservation and Parks (MECP) Instruments

A request was submitted to the MECP Freedom of Information (FOI) 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. Based on the MECP response, no records were found for the Phase I Property. A copy of the response is appended to this report.

MECP Submissions

A request was submitted to the MECP FOI office for information with respect to reports related to environmental conditions for the property. Based on the MECP response, no records were found for the Phase I Property. A copy of the response is appended to this report.

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 Municipal Coal Gasification Plant Sites are located within the Phase I Study Area.

MECP Incident Reports

A request was submitted to the MECP FOI 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. Based on the MECP response, no records were found for the Phase I Property. A copy of the response is appended to this report.

MECP Waste Management Records

A request was submitted to the MECP FOI office for information with respect to waste management records. Based on the MECP response, no records were found for the Phase I Property. A copy of the response is appended to this report.

MECP Brownfields Environmental Site Registry

A search of the MECP Brownfields Environmental Site Registry (ESR) was conducted as part of this assessment for the site, neighbouring properties and the general area of the site. No Records of Site Condition (RSCs) were filed for the Phase I Property or for properties 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. There are no active or closed waste disposal sites or former manufactured gas or coal tar distillation plans within the Phase I Study Area.

Technical Standards and Safety Authority (TSSA)

The TSSA, Fuels Safety Branch in Toronto was contacted electronically on November 8, 2019, to inquire about current and former underground storage tanks, spills and incidents for the site and neighbouring properties. According to the TSSA response, five (5) active records were found regarding underground storage tanks (USTs) and ancillary equipment associated with a retail fuel outlet (FRO) located at 2471 Bank Street, approximately 50 m southeast of the Phase I Property. Based on its location relative to the Phase I Property, this off-site potentially contaminating activity (PCA) is not considered to represent an area of potential environmental concern (APEC) on the Phase I Property. A copy of the TSSA correspondence is included 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. Based on the document, there are no closed landfill sites within the vicinity of the Phase I Property or for other properties within the Phase I Study Area.

City of Ottawa Historical Land Use Inventory (HLUI)

A request for a search of the City of Ottawa's Historical Land Use Inventory (HLUI) database was submitted to the City of Ottawa in November of 2019. At the time this report was issued, a response had not yet been received. The search results will be forwarded to the client upon receipt. A copy of the HLUI request is provided 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. Based on the review, the following observations have been made:

1949 The subject site is undeveloped land at this time. Neighbouring lands are occupied by residential dwellings, farmsteads and agricultural lands.

1965 The aerial photograph shown on the GeoOttawa website shows the subject site as developed with a residential dwelling on the northern portion, a motel on the central portion and a small building on the southern portion of the site.

1968 The subject site is developed with a portion of the present-day structure. Lands further south and east appear to be developed with a combination of commercial and residential.

1978 No significant changes are apparent on the subject site or surrounding lands to the east, west and south. Lands to the north are developed with a subdivision.

1984 The northern portion of the property has been redeveloped with part of the present-day structure. No other significant changes are

noted on the subject site. Another subdivision can be seen further south of the site.

1999 The southern building on-site appears to have been upgraded. No other changes are apparent on the subject site. Neighbouring lands to the east, south and west have been developed with commercial retailers. Hunt Club Road can be seen in its current configuration.

2002 The subject site appears to have been upgraded with a new building situated on the central portion of the property. The surrounding lands remain unchanged from the previous photograph.

2011 No significant changes are apparent on the subject site or on neighbouring lands, with the exception of the property to the west, across Bank Street, which is now developed with a commercial building.

2017 No significant changes are apparent on the subject site or on neighbouring lands.

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 and from the City of Ottawa website. The topographic maps indicate that the local topography in the immediate vicinity of the site is relatively flat, while the regional topography generally slopes down to the northwest in the direction of Sawmill Creek. 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. 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, which is generally less than 150 m above sea level.

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 Billings Formation. Overburden on the northern and southern portions of the site consists of fluvial terraces (sand and silt) and plain till, respectively, with depths ranging from 25 to 50 m over the entire site.

Natural Water Bodies and Areas of Natural Significance

No areas of natural significance are known to exist on the Phase I Property or within the Phase I Study Area. No natural bodies of water are known to exist on the Phase I Property; however, Sawmill Creek is located approximately 150 m to the south west.

Water Well Records

The MECP online interactive well record mapping system was accessed on November 13, 2019, to conduct a search for all drilled wells within 250 m of the Phase I Property. The search returned a total of twenty-one (21) records for fifteen (15) potable wells and six (6) monitoring wells.

Based on the review of these records, one domestic well record was identified on the Phase I Property. According to the record, the well was drilled in 1954 to a depth of approximately 23 m below the ground surface (mbgs). The stratigraphy reported consisted of clay overlying shale bedrock. Bedrock was encountered at approximately 18 mbgs.

The remaining domestic wells were drilled between 1949 to 2001 for properties approximately 100 to 200 m away from the Phase I Property. It is expected that these wells have not been used since the area has been municipally serviced, despite that there were no well abandonment records found within the Phase I Study Area.

Four (4) of the six (6) monitoring wells identifed within the study area were located on a neighbouring property to the southeast, across Hunt Club Road at 2515 Bank Street, which is currently occupied by a retail fuel outlet (RFO) and retail mall. The monitoring wells were drilled in support of an Environmental Investigation. According to these well records, the wells were drilled to a depth of approximately 4.6 mbgs. The stratigraphy in this area consisted of an asphalt pavement, followed by sand, underlain by silt with some sand.

Bedrock was not encountered. No other information that was considered pertinent was provided in these well records. Copies of the well records are provided in Appendix 2.

5.0 INTERVIEWS

Mr. Fred Zlepnig was interviewed via email on November 14, 2019. According to Mr. Zlepnig, his grandparents purchased the property in the mid-1950s and built a small motel containing 7 units and a residential dwelling circa 1957. In the late 1960s, his family expanded the motel.

In 1984, the original motel was demolished and replaced with the present day two-storey building, followed by an additional expansion and third floor in 1988, which served as a hotel. In 1999/2000 a six-storey building was constructed on the central portion of the property. From 2015 to 2017, the hotel transitioned into a retirement/senior's residence and opened in March of 2017.

Mr. Steve Zlepnig was interviewed at the time of the site visit on November 14, 2019. The present-day buildings are heated with natural gas-fired boilers. According to Mr. Zlepnig, there are no chemicals or fuel stored on-site. Mr. Zlepnig was unaware of any potential environmental concerns regarding the Phase I Property and surrounding properties.

6.0 SITE RECONNAISSANCE

6.1 General Requirements

Ms. Mandy Witteman from the Environmental Department of Paterson conducted the site visit. Weather conditions were overcast and snowy with a temperature of approximately -6°C on November 14, 2019. At the time of the site visit, neighbouring land use within the Phase I Study Area was also assessed.

6.2 Specific Observations at Phase I Property

Buildings and Structures

A portion of the present-day building is a 3-storey slab-on-grade structure that was constructed in 1983. Additional upgrades were incorporated into the original building in 1988, 1999/2000 and 2016. The upgrades in 1988 included a pool and restaurant; in 1999/2000 they included a six-storey building to the northeast side of the original structure; and in 2016 they included a retractable sunroof.

The exterior of the building is finished in red brick with some metal cladding. The roof is a flat tar/gravel style structure supported by steel beams.

Subsurface Structures and Utilities

The Phase I Property is situated in a municipally serviced area. Underground utility services on the subject land include natural gas, electricity, water and sewer services. The services enter the Phase I Property from Bank Street.

No well or private sewage system were observed on the property at the time of the site visit. No other subsurface structures or utilities were observed at the time of the site visit.

Site Features

The subject building is surrounding by asphaltic concrete paved parking areas and access roads to the north, south and to some extent to the east. Landscaped areas are present to the west, south and east of the building and the property boundary.

Site drainage is primarily sheet flow on the paved surfaces, which have been provided with catch basins on-site. The landscaped areas have also been generally graded to drain towards Bank Street and Hunt Club Road. The ground surface was partially covered in snow at the time of the site visit. No signs of surficial contamination were observed at the time of the site visit.

The regional topography slopes down in a north-westerly direction towards Sawmill Creek. Site features are presented on Drawing PE4793-1 – Site Plan, provided in the Figures section following the text.

Interior Assessment

A general description of the interior of the subject building is as follows:

- ❒ Floor finishes consist of carpet, ceramic tiles and poured concrete (utility rooms);
- ❒ Wall finishes consist of gypsum board and ceramic tiles;
- ❒ Ceilings are finished with stipple plaster and gypsum board;
- ❒ Lighting is provided by incandescent and fluorescent fixtures.

Based on a designated substance survey conducted by Paterson in 2015, there are no potentially asbestos containing materials (ACMs) and lead-based paints (LBPs) present within the subject building.

Fuel and Chemical Storage

The subject building is heated with natural gas-fired equipment. A natural gas back-up generator was noted on the west side of the subject building. No fuels or chemicals were observed on the interior or exterior of the Phase I Property at the time of the site assessment, with the exception of common household cleaning products that were properly stored within the subject building. No signs of leaks or staining were observed on the interior or exterior of the Phase I Property.

Wastewater Discharge

Wastewater discharged from the Phase I Property includes wash water and sewage. Several floor drains were observed on the interior of the subject structure. The drains appeared to be dry at the time of the site visit. One covered sump pit was noted inside the boiler room. No unusual odour was noted at the time of the site visit. No concerns were noted with regards to wastewater discharge at the Phase I Property.

Waste Management

Non-hazardous domestic waste and recycling is stored in bins on the northeast side of the property and collected by a licenced contractor on a regular basis

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: Commercial space (retail and restaurant), followed by residential;
- South: Bank Street and Hunt Club Road intersection, followed by a retail mall;
- East: Retirement home, followed by a chapel;
- Southeast: Hunt Club Road, followed by Oil Changers and Petro Canada;
- West: Bank Street, followed by commercial space (retailers, medical clinic, and restaurants).

Land use within the Phase I Study Area consists of commercial businesses, retailers and residential. Two PCAs were identified with the neighbouring land use located at 2471 Bank Street: an automotive service garage and an RFO, located approximately 50 m southwest of the Phase I Property. As previously discussed in Previous Engineering Reports Section, the existing RFO and oil changers are not considered to represent APECs on the Phase I Property. No other concerns were identified with the current use of the surrounding lands. The surrounding land use within the Phase I Study Area is presented on Drawing PE4793-2 – Surrounding Land Use Plan.

7.0 REVIEW AND EVALUATION OF INFORMATION

7.1 Land Use History

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

Table 2: Current and Past Use of the Phase I Property 2425-2431 Bank Street

Year	Property Owner	Description of Property	Property Use	Other Observations from FIPs, Aerial Photographs, Directories, etc.
Prior to mid-1950s	Unknown	Vacant land	Unknown	*1949 aerial photograph:* Shows the Phase I Property as undeveloped, vacant land.
Mid-1950s-1957	Zlepnig	Vacant land	Possibly Residential use	*Based on personal interview with a Zlepnig family member*
1957-2017	Zlepnig Family	Residential until 1984 Southway Inn/Hotel	Residential use Commercial use	*Based on personal interviews and city directories.*
2017-present	Zlepnig Family (Zlepnig Holdings Limited)	Waterford Retirement Home	Commercial use	*Based on personal interviews*

Potentially Contaminating Activities and Areas of Potential Environmental Concerns

Based on the historical review and observations during the site reconnaissance, five (5) potentially contaminating activities (PCAs) were identified on the neighbouring lands to the southwest, as per Column A of Table 2 of the O.Reg. 153/04, as amended, include the following:

- PCA 28 – "Gasoline and Associated Products Storage in Fixed Tanks," associated with a retail fuel outlet situated to the southeast at 2471 Bank Street;

- PCA 52 – "Storage, maintenance, fuelling and repair of equipment, vehicles, and material used to maintain transportation systems," associated with an automotive service garage located at 2471 Bank Street;

- PCA 37 – "Operation of Dry Cleaning Equipment," associated with former drycleaner located at 2446 Bank Street;
- PCA 39 – "Paints Manufacturing, Professing and Bulk Storage," associated with a former paint shop located at 2446 Bank Street; and
- PCA 37 – "Operation of Dry Cleaning Equipment," associated with former drycleaner located at 2430 Bank Street.

It was determined however, that the service garage and underground storage tanks (USTs) and associated pump equipment were situated at least 50 to 100 m southeast of the subject land and are considered to be cross-gradient, with the groundwater direction expected to be towards the southwest and thus, they are not considered to pose a risk to the subject land. Therefore, these off-site PCAs are not considered to result in APECs on the Phase I Property.

Off-site PCAs that are not considered to represent APECs on the Phase I Property, are identified in green on Drawing PE4793-2 – Surrounding Land Use Plan.

Contaminants of Potential Concern

There are no APECs on the Phase I Property and therefore, no contaminants of potential concern (CPCs).

7.2 Conceptual Site Model

Geological and Hydrogeological Setting

Based on the 1999 subsurface investigation, site soils generally consisted of an asphaltic concrete structure, followed by fill material consisting of silty sand with some gravel, underlain by silty sand/sandy silt, followed by native clayey silt and/or glacial till. Inferred bedrock was encountered approximately at 20 m BGS.

According to the Geological Survey of Canada website, the bedrock in the area of the Phase I Property is reported to consist of shale of the Billings Formation. The overburden is reported to consist of fluvial terraces (sand and silt) with plain till of depths ranging from 25 to 50 m over the entire site.

The regional topography slopes down in a northwesterly direction towards the Sawmill Creek. The local groundwater flow beneath the Phase I Property is inferred to be in a north-westerly direction.

Water Bodies and Areas of Natural Significance

No areas of natural significance are known to exist on the Phase I Property or within the Phase I Study Area. No natural bodies of water are known to exist on the Phase I Property; however, Sawmill Creek is located approximately 150 m to the southwest.

Potable Water Well Records

One domestic well record was identified on the Phase I Property. According to the record, the well was drilled in 1954 to a depth of approximately 23 m below the ground surface (mbgs). The stratigraphy reported on-site consisted of clay overlying shale bedrock. Bedrock was encountered at approximately 18 mbgs. It is expected that this well has not been used since the area has been municipally serviced, despite that there were no abandonment records found within the Phase I Study Area.

Monitoring Well Records

No monitoring well records were identified for the Phase I Property. Monitoring well records were identified for the RFO across Hunt Club Road at 2515 Bank Street, which is currently occupied by a retail fuel outlet (RFO) and retail mall. The monitoring wells were drilled in support of an Environmental Investigation.

Existing Buildings and Structures

The subject building consists of a 3 to 6 storey retirement home that was initially constructed in 1983 with a slab-on-grade foundation. Additional upgrades were incorporated into the original building in 1988 and 1999/2000.

The exterior of the building is finished in red brick with some metal cladding. The roof is a flat tar/gravel style structure supported by steel beams.

Subsurface Structures and Utilities

Presently, underground services include natural gas, water and sewer services entering the west face of the subject building from Bank Street. A storm sewer connects four (4) on-site catch basins which lead to a sewer main on Bank Street. No other subsurface structures or utilities are present on the Phase I Property.

Fill Material

Fill material was identified across the Phase I Property during the 1999 subsurface investigation consisting of silty sand (reworked native soil) with some gravel (engineered fill). No visual or olfactory evidence of deleterious materials or signs of contamination were identified in the fill material.

Neighbouring Land Use

Neighbouring land use within the Phase I Study Area consists primarily of residential to the north and east, and commercial retailers to the south and west. A retail fuel outlet and service garage were identified on the property to the southeast, located at 2471 Bank Street, across Hunt Club Road from the Phase I Property. Based on the cross-gradient orientation, these PCAs are not considered APECs on the Phase I Property.

Potentially Contaminating Activities and Areas of Potential Environmental Concern

As per Section 7.1 of this report, no potentially contaminating activities (PCAs) that resulted in areas of potential environmental concern (APECs) were identified on the Phase I Property.

Contaminants of Potential Concern

As per Section 7.1 of this report, there are no APECs and thus, no contaminants of potential concern (CPCs) on the Phase I Property.

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 no historical or existing on-site PCAs that have resulted in APECs on the Phase I Property. While several historical and/or existing PCAs were identifed within the Phase I Study Area during this assessment, they were not considered to generate APECs to the Phase I Property, based on the separation distance and the cross-gradient orientation with respect to the subject property.

A variety of independent sources were consulted as part of this assessment, 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 Zlepnig Holdings Limited to conduct a Phase I-Environmental Site Assessment (ESA) for 2425-2431 Bank Street, in the City of Ottawa, Ontario, herein referred to as the Phase I Property. The purpose of this Phase I-ESA was to research the past and current use of the Phase I Property and 250m study area and to identify any environmental concerns with the potential to have impacted the Phase I Property.

According to the historical research, the Phase I Property was vacant land possibly used for agricultural purposes, until it was first developed in 1957 with a small motel and residential dwelling. The motel was later upgraded in the late 1960s. In 1984, the original motel was demolished and replaced with a portion of the present-day building, followed by an additional expansion of a third floor in 1988. In 1999/2000, a six-storey building was constructed and incorporated into the original building.

Historical land use in the surrounding area was primarily for residential purposes to the north and east and commercial retail to the east and south. Two (2) potentially contaminating activities (PCAs) were identified: a retail fuel outlet and oil changers (service centre) located at 2471 Bank Street across Hunt Club Road. These PCAs were not considered to have the potential to impact the subject property based on the distance of the activities from the site and their cross-gradient location. A few other off-site PCAs were identifed, however given the significant separation distances, these properties are not considered to generate areas of potential environmental concern (APECs) to the Phase I Property.

Following the historical research, a site visit was conducted. The Phase I Property is occupied by a retirement home situated on the central portion of the site, while the remainder of the site is asphaltic concrete covered parking with landscaped areas. No potential concerns were identifed with the current use of the Phase I Property.

Surrounding land use consists of primarily residential to the north and east with commercial properties along Bank Street. The RFO and service garage remains in operation at 2471 Bank Street. As previously discussed, the RFO and service garage are PCAs that do not represent APECs on the Phase I Property.

Conclusion

Based on the results of the assessment, **it is our opinion, that a Phase II Environmental Site Assessment is not required for the Phase I Property.**

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 Zlepnig Holdings Limited. Permission and notification from Zlepnig Holdings Limited and Paterson will be required to release this report to any other party.

Paterson Group Inc.

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

Mark D'Arcy, P.Eng., QP$_{ESA}$

Report Distribution:

- ❑ Zlepnig Holdings Limited
- ❑ 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
National Energy Board.

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 Record 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.
Interra Technologies Limited Report “Mapping and Assessment of Former Industrial Sites, City of Ottawa”, 1988.
geoOttawa: City of Ottawa electronic mapping website.
City of Ottawa Historical Land Use Inventory (HLUI) Database

Local Information Sources
Personal Interviews.

Public Information Sources
Google Earth.
Google Maps/Street View.

FIGURES

FIGURE 1 – KEY PLAN

FIGURE 2 – TOPOGRAPHIC MAP

DRAWING PE4793-1 – SITE PLAN

DRAWING PE4793-2 – SURROUNDING LAND USE PLAN

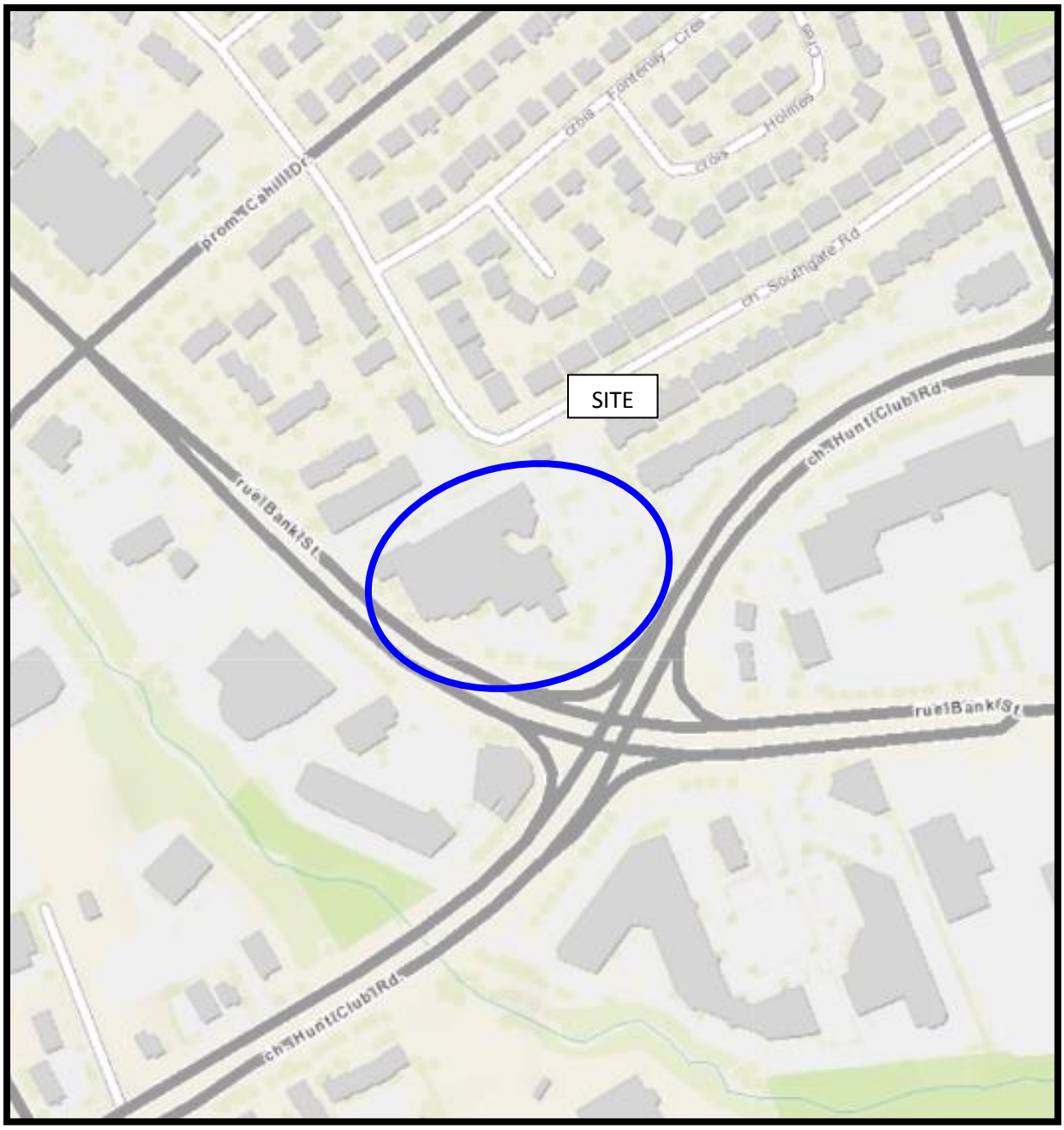


FIGURE 1

KEY PLAN

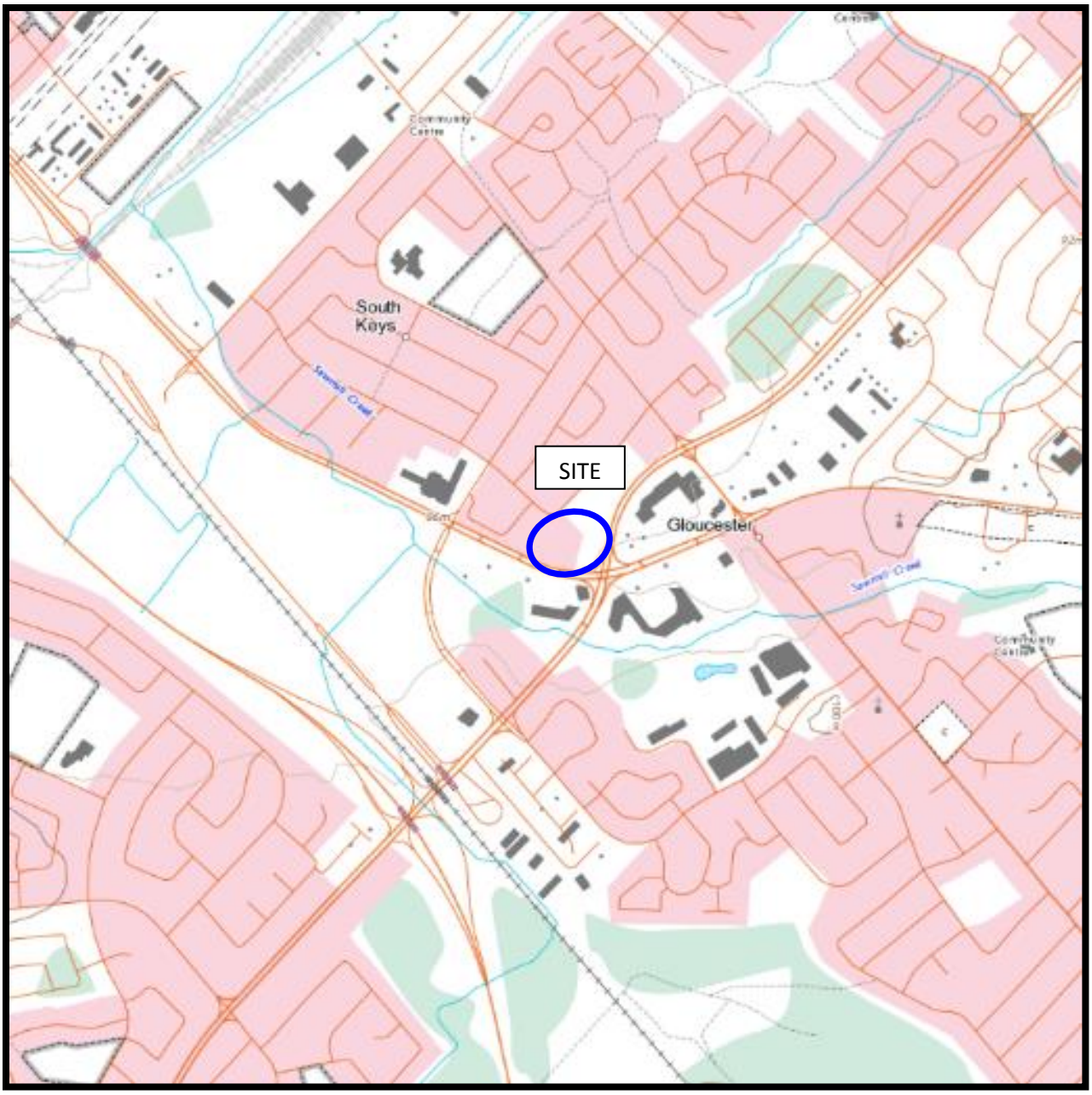
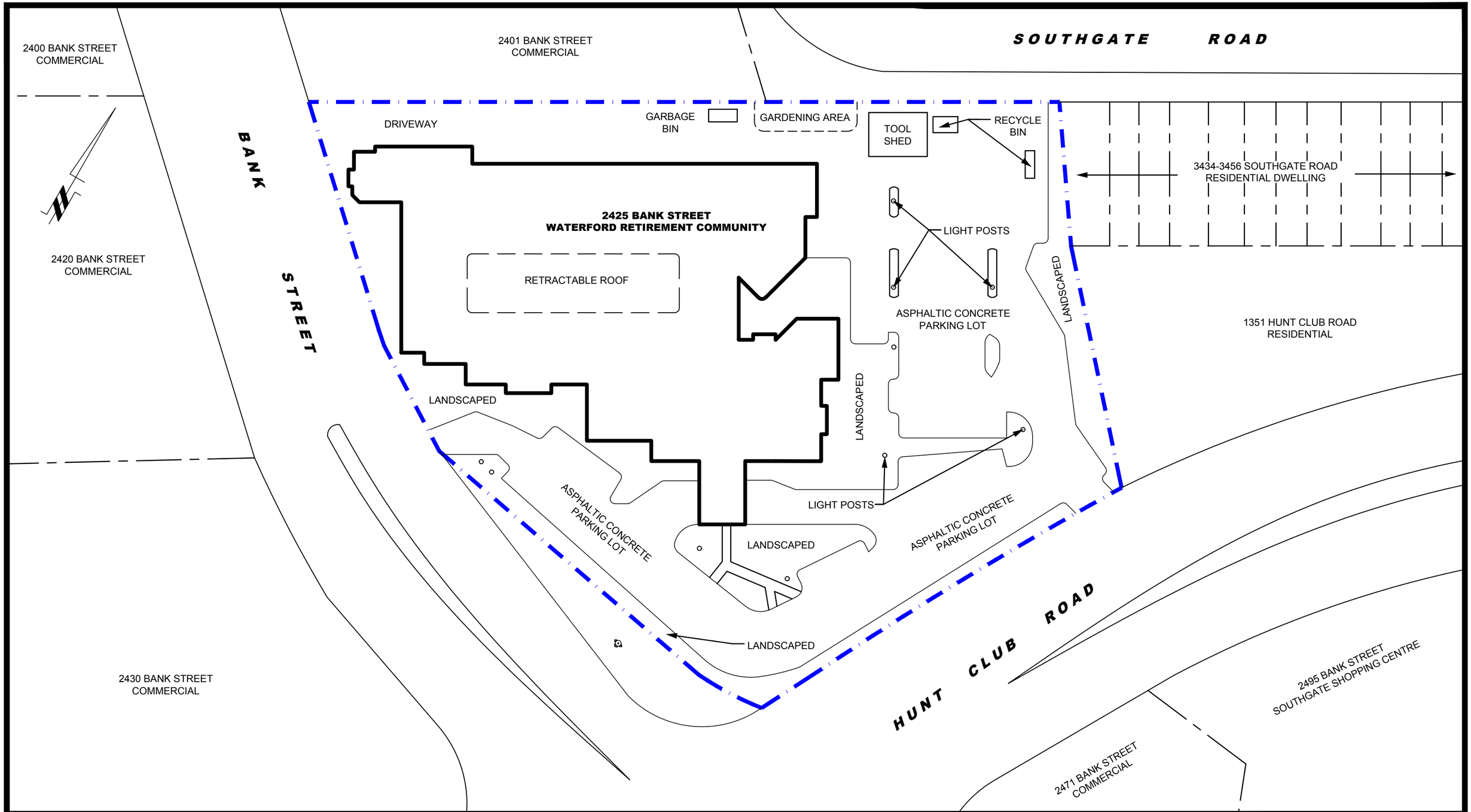


FIGURE 2

TOPOGRAPHIC MAP



patersongroup
consulting engineers

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

NO.	REVISIONS	DATE	INITIAL

WATERFORD OTTAWA

PHASE I - ENVIRONMENTAL SITE ASSESSMENT
2425 BANK STREET

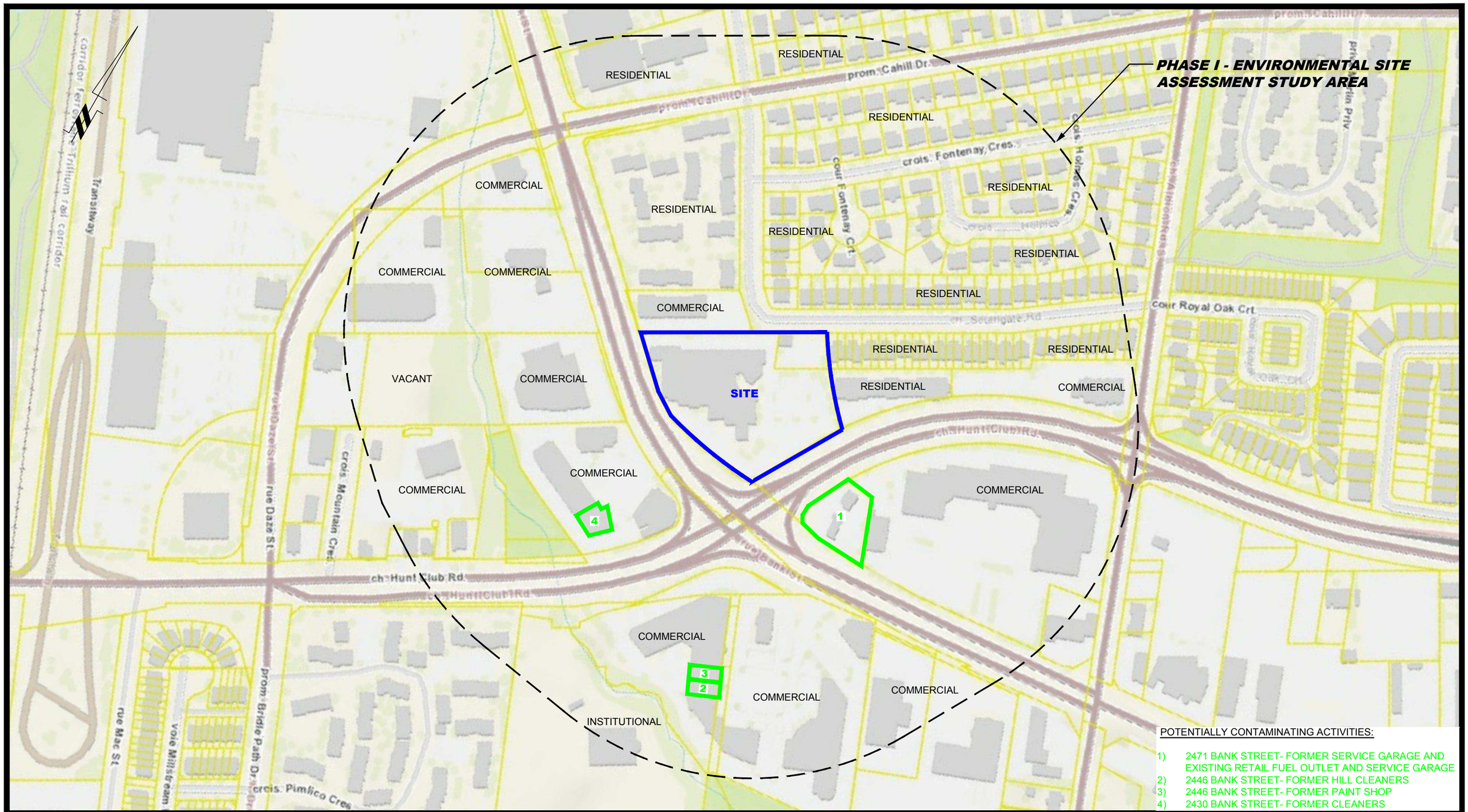
OTTAWA, **ONTARIO**

Title:

SITE PLAN

Scale: 1:750	**Date:** 11/2019
Drawn by: YA	**Report No.:** PE4793-1
Checked by: MW	**Dwg. No.:** PE4793-1
Approved by: MSD	**Revision No.:**

p:\autocad drawings\environmental\pe47xx\pe4793\pe4793-1-site plan.dwg



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

NO.	REVISIONS	DATE	INITIAL

WATERFORD OTTAWA

PHASE I - ENVIRONMENTAL SITE ASSESSMENT
2425 BANK STREET

OTTAWA, ONTARIO

Title:

SURROUNDING LAND USE PLAN

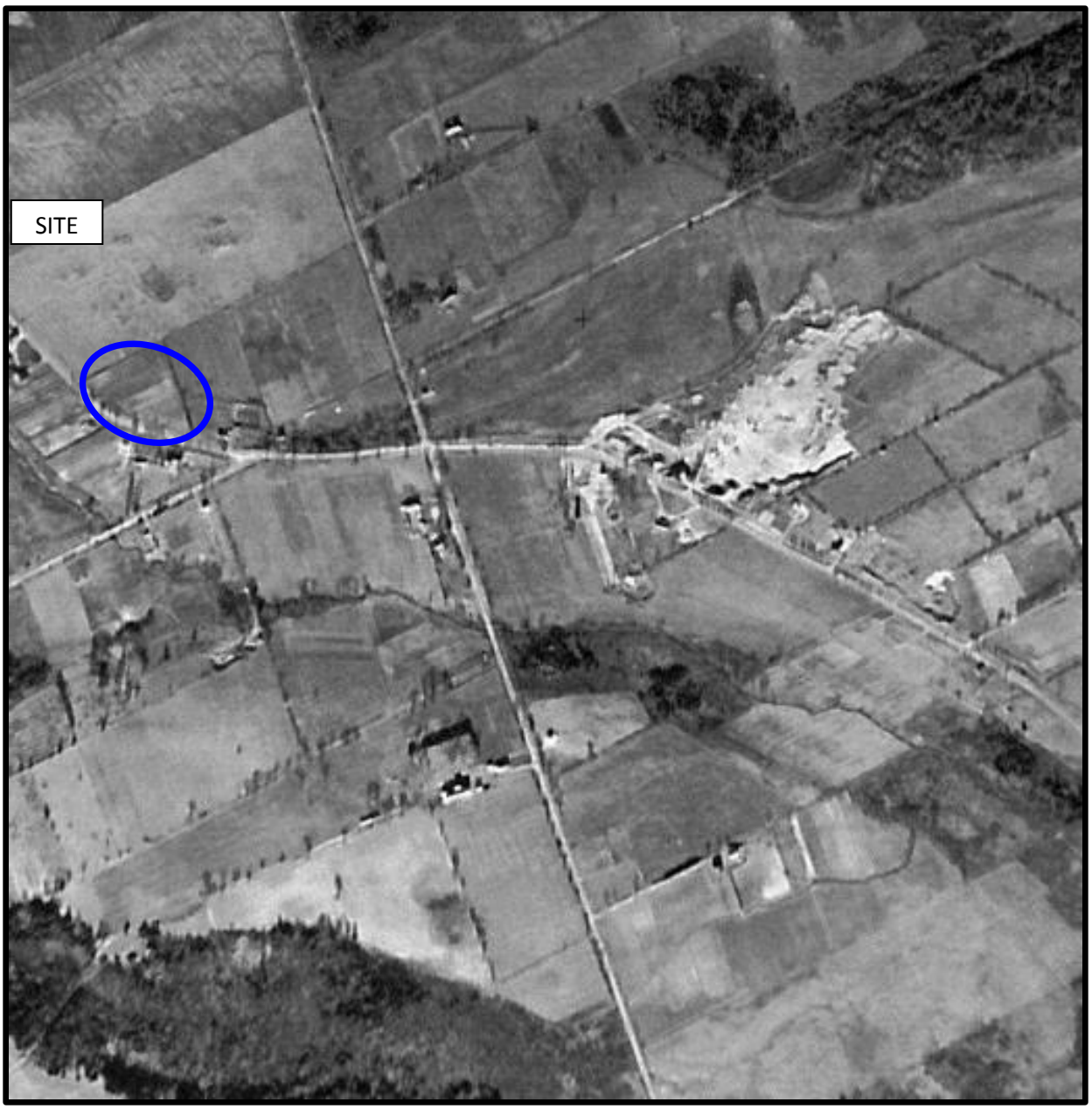
Scale: 1:3000	Date: 11/2019
Drawn by: YA	Report No.: PE4793-1
Checked by: MW	Dwg. No.: PE4793-2
Approved by: MSD	Revision No.:

p:\autocad drawings\environmental\pe4793\xx\pe4793-2-surrounding land use plan.dwg

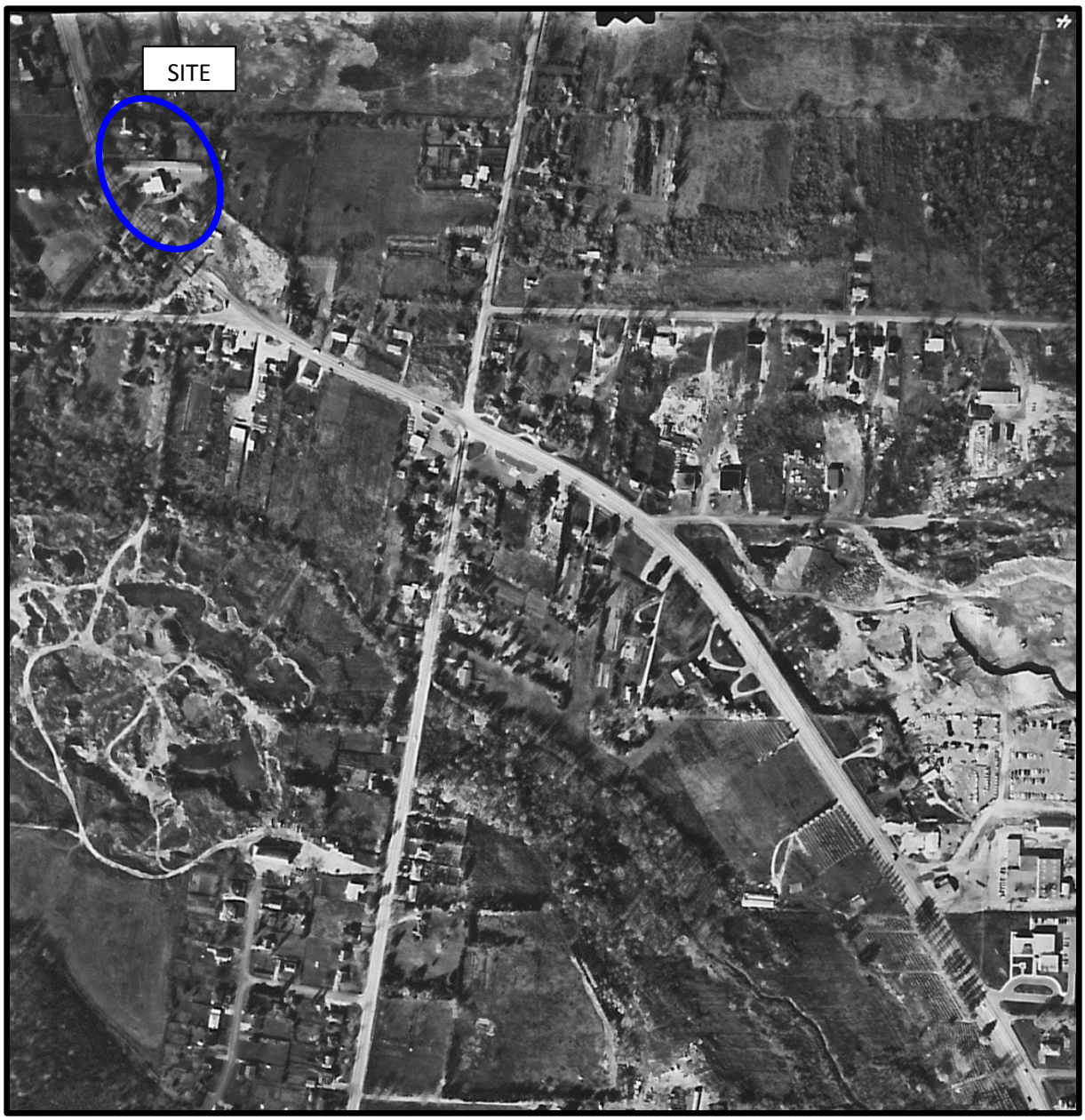
APPENDIX 1

AERIAL PHOTOGRAPHS

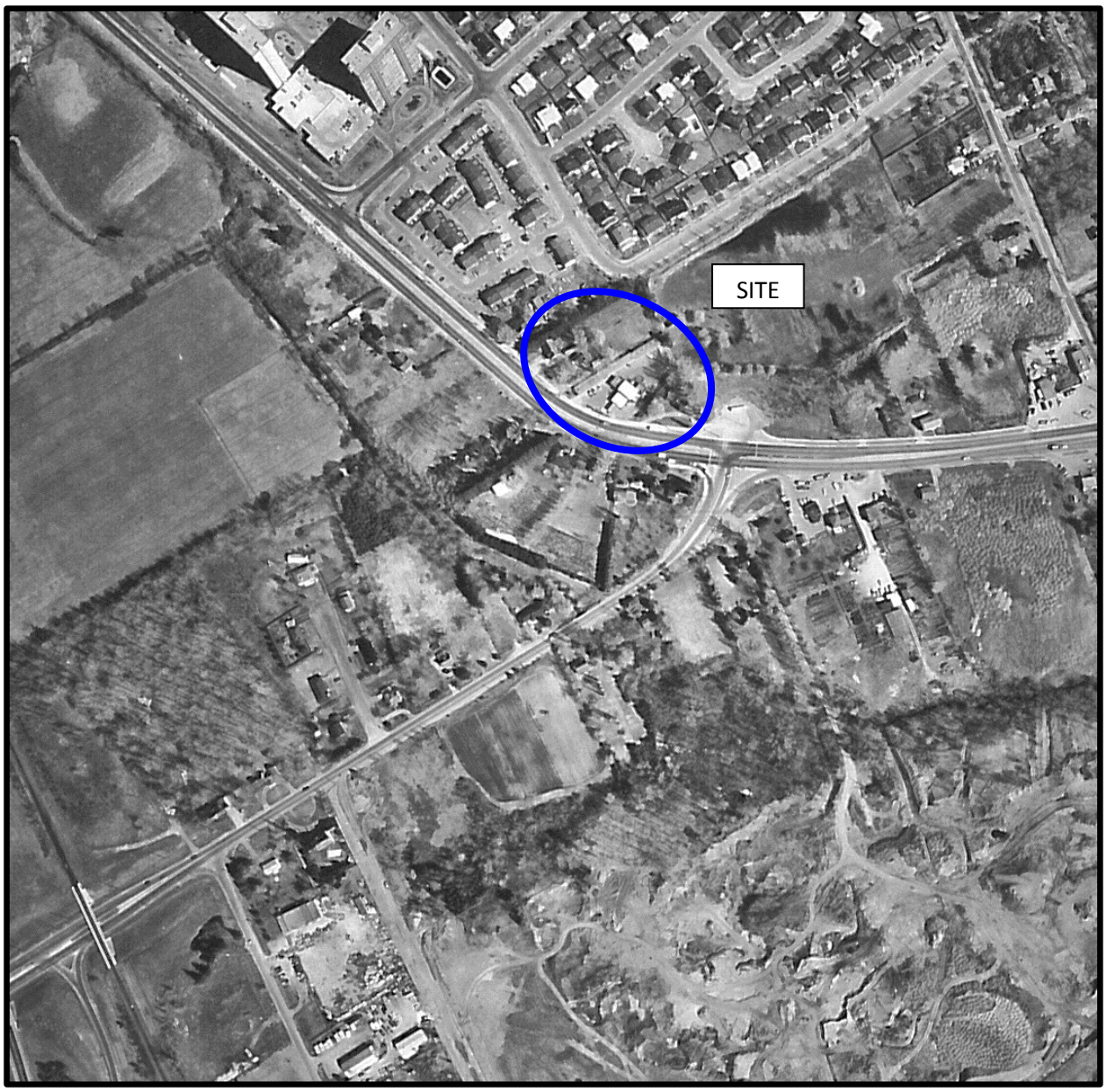
SITE PHOTOGRAPHS



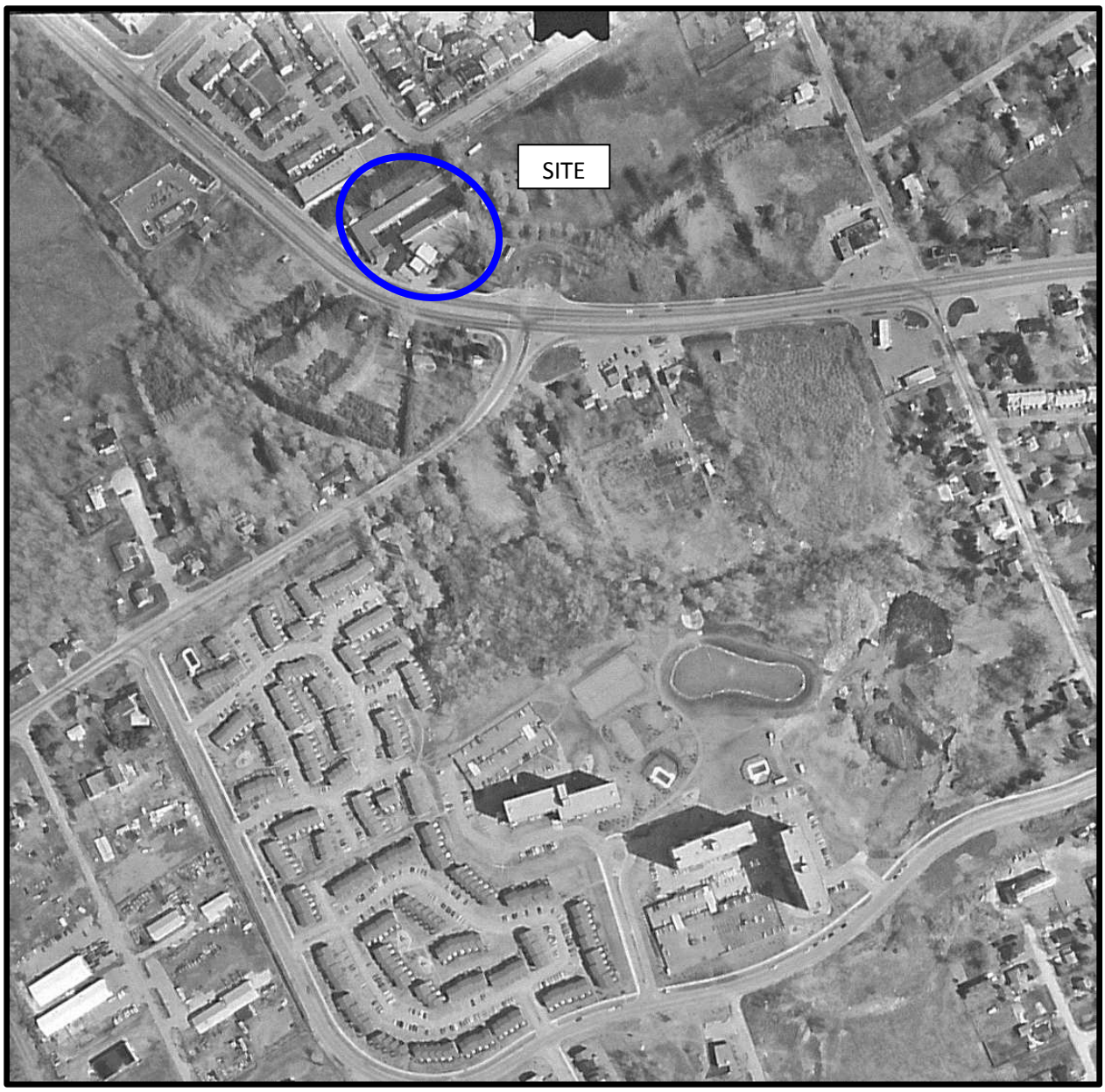
AERIAL PHOTOGRAPH
1949



AERIAL PHOTOGRAPH
1968



AERIAL PHOTOGRAPH
1978



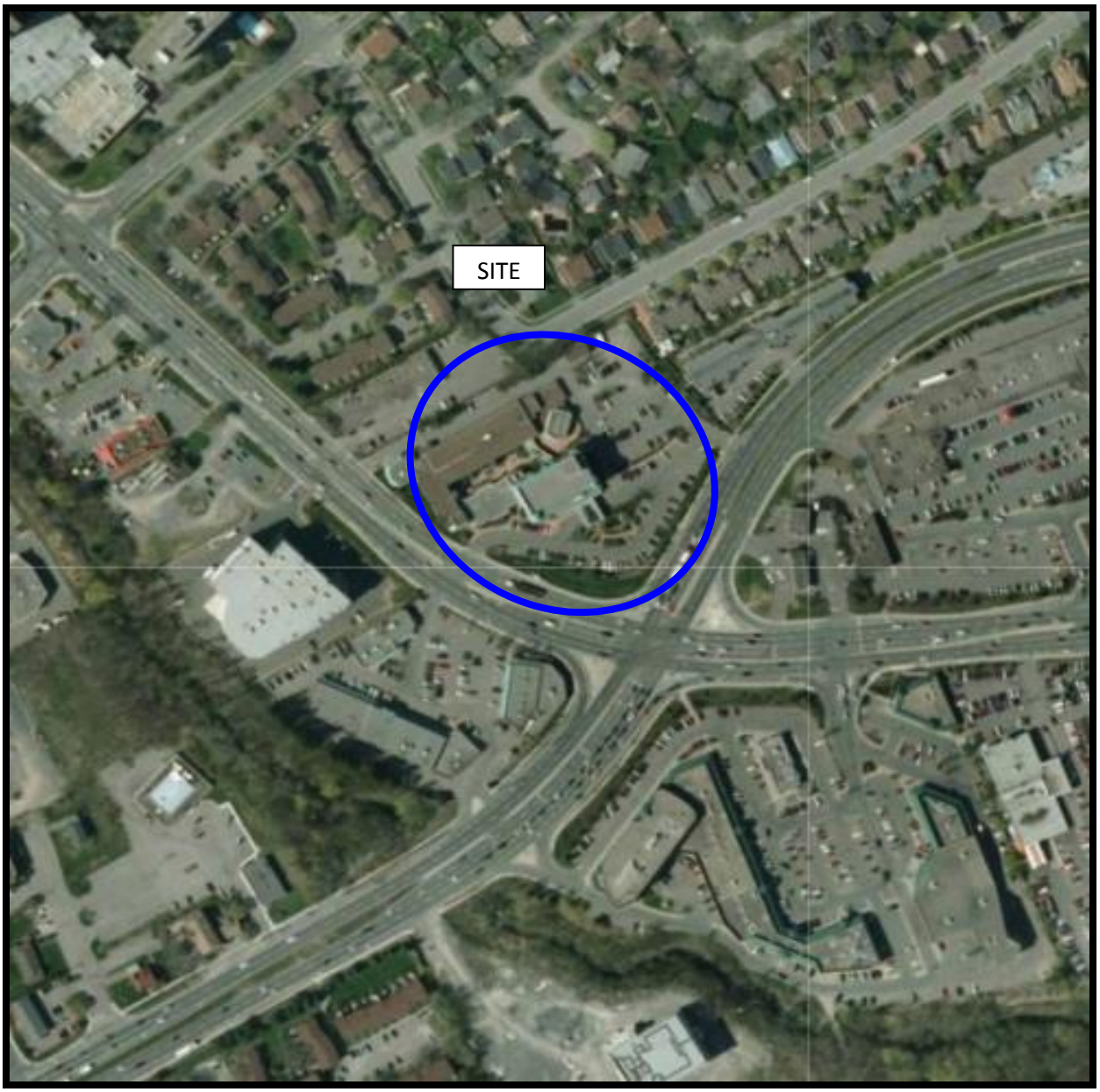
AERIAL PHOTOGRAPH
1984

AERIAL PHOTOGRAPH
1999

patersongroup

AERIAL PHOTOGRAPH
2002

patersongroup



AERIAL PHOTOGRAPH
2011

AERIAL PHOTOGRAPH
2017

patersongroup

Site Photographs

PE4793 2425 Bank Street – Ottawa, ON November 14, 2019

Photograph 1: Southern (front) view of the subject building, looking north.

Photograph 2: Southwestern view of the Phase I Property, taken from the southern portion of the property, looking towards Bank Street.

Photograph 3: Southeastern view of the Phase I Property, taken from the east entrance of the property fronting Hunt Club Road.

Photograph 4: Central east view of the Phase I Property, looking west.

Photograph 5: Eastern view of the Phase I Property, looking north.

Photograph 6: Central view of the Phase I Property, looking west.

APPENDIX 2

MECP FREEDOM OF INFORMATION

MECP WELL RECORDS

CITY OF OTTAWA HLUI SEARCH

TSSA CORRESPONDENCE

Ministry of the Environment, Conservation and Parks

Access and Privacy Office

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

Ministère de l'Environnement, de la Protection de la nature et des Parcs

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

12e étage
40, avenue St. Clair ouest
Toronto ON M4V 1M2
Tél. : (416) 314-4075

Ontario

November 28, 2019

Mandy Witteman
Paterson Group Inc.
154 Colonnade Road
Ottawa, ON K2E 7J5

Dear Mandy Witteman:

RE: ***Freedom of Information and Protection of Privacy Act* Request**
Our File # A-2019-07748, Your Reference PE4793

This letter is in response to your request made pursuant to the *Freedom of Information and Protection of Privacy Act* relating to 2425 Bank Street, 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 Hira Ashraf at (416) 314-4075 or hira.ashraf@ontario.ca.

Yours truly,

Hira

Dalia Bouganim
Manager (A), Access and Privacy

Go Back to Map

Well ID

Well ID Number: 7244904
Well Audit Number: *Z191446*
Well Tag Number:

This table contains information from the original well record and any subsequent updates.

Well Location

Address of Well Location	1179 HUNT CLUB ROAD
Township	GLOUCESTER TOWNSHIP
Lot	005
Concession	RF 03
County/District/Municipality	OTTAWA-CARLETON
City/Town/Village	Ottawa
Province	ON
Postal Code	n/a
UTM Coordinates	NAD83 — Zone 18 Easting: 449042.00 Northing: 5022651.00
Municipal Plan and Sublot Number	
Other	

Overburden and Bedrock Materials Interval

General Colour	Most Common Material	Other Materials	General Description	Depth From	Depth To

Annular Space/Abandonment Sealing Record

Depth From	Depth To	Type of Sealant Used (Material and Type)	Volume Placed
4 ft	0 ft	BACKFILL	

24.833 ft 4 ft 1/4 HOLEPLUG PETTLETS

Method of Construction & Well Use

Method of Construction	Well Use

Status of Well

Abandoned-Other

Construction Record - Casing

Inside Diameter	Open Hole or material	Depth From	Depth To

Construction Record - Screen

Outside Diameter	Material	Depth From	Depth To

Well Contractor and Well Technician Information

Well Contractor's Licence Number: 1119

Results of Well Yield Testing

After test of well yield, water was
If pumping discontinued, give reason
Pump intake set at
Pumping Rate
Duration of Pumping
Final water level
If flowing give rate
Recommended pump depth
Recommended pump rate
Well Production
Disinfected?

Draw Down & Recovery

Draw Down Time(min)	Draw Down Water level	Recovery Time(min)	Recovery Water level
SWL			
1		1	
2		2	
3		3	
4		4	
5		5	
10		10	
15		15	
20		20	
25		25	
30		30	
40		40	
45		45	
50		50	
60		60	

Water Details

Water Found at Depth	Kind

Hole Diameter

Depth From	Depth To	Diameter

Audit Number: Z191446

Date Well Completed: June 01, 2015

Date Well Record Received by MOE: July 21, 2015

Updated: October 29, 2019
Share facebook twitter Print
Tags

- Environment and energy,
- Drinking water

Go Back to Map

Well ID

Well ID Number: 1507838
Well Audit Number:
Well Tag Number:

This table contains information from the original well record and any subsequent updates.

Well Location

Address of Well Location	
Township	OTTAWA CITY
Lot	
Concession	
County/District/Municipality	OTTAWA-CARLETON
City/Town/Village	
Province	ON
Postal Code	n/a
UTM Coordinates	NAD83 — Zone 18 Easting: 449330.70 Northing: 5022492.00
Municipal Plan and Sublot Number	
Other	

Overburden and Bedrock Materials Interval

General Colour	Most Common Material	Other Materials	General Description	Depth From	Depth To
BLUE	CLAY			0 ft	60 ft
	MSND			60 ft	85 ft
	GRVL			85 ft	98 ft

Annular Space/Abandonment Sealing Record

Depth	Depth	Type of Sealant Used	Volume

From	To	(Material and Type)	Placed

Method of Construction & Well Use

Method of Construction	Well Use
Diamond	
	Domestic

Status of Well

Water Supply

Construction Record - Casing

Inside Diameter	Open Hole or material	Depth From	Depth To
3 inch	STEEL		96 ft

Construction Record - Screen

Outside Diameter	Material	Depth From	Depth To

Well Contractor and Well Technician Information

Well Contractor's Licence Number: 1802

Results of Well Yield Testing

After test of well yield, water was	CLEAR
If pumping discontinued, give reason	
Pump intake set at	
Pumping Rate	5 GPM
Duration of Pumping	2 h:0 m
Final water level	20 ft
If flowing give rate	
Recommended pump depth	
Recommended pump rate	
Well Production	PUMP
Disinfected?	

Draw Down & Recovery

Draw Down Time(min)	Draw Down Water level	Recovery Time(min)	Recovery Water level
SWL	4 ft		
1		1	
2		2	
3		3	
4		4	
5		5	
10		10	
15		15	
20		20	
25		25	
30		30	
40		40	
45		45	
50		50	
60		60	

Water Details

Water Found at Depth	Kind
98 ft	Sulphur

Hole Diameter

Depth From	Depth To	Diameter

Audit Number:

Date Well Completed: September 29, 1953

Date Well Record Received by MOE: October 22, 1953

Updated: October 29, 2019
Share facebook twitter Print
Tags

- Environment and energy,
- Drinking water

– 316/56.

M 1 8 Z 4 4 9 3 3 1 0 E

9 R 5 0 2 2 2 1 1 0 N

Elev. 9 R 0 2 8 1

Basin 2 5

15 No 1735

ONTARIO

The Well Drillers Act

Department of Mines, Province of Ontario

Water Well Record

OTTAWA ~~E.R.F.~~ OTTAWA CITY

[redacted] ....Con.....Lot 5.....Pt. Lot........

[redacted] Acres

[redacted] including pump)....................

Pipe and Casing Record		Pumping Test	
Casing diameter(s)	5"	Date	NOV. 7 1949
Length(s) of casing(s)	84'	Developed Capacity	250 G.P.H.
Length of screen		Duration of Test	30 MIN
Type of screen		Pumping Rate	300 G.P.H.
Type of pump		Drawdown	12'
Capacity of pump		Static level of completed well	28'
Depth of pump setting		Is well a gravel-wall type?	No

Water Record

Kind (fresh or mineral) .... FRESH

Quality (hard, soft, contains iron, sulphur etc.) ...... SOFT

Appearance (clear, cloudy, coloured) .... CLEAR

For what purpose(s) is the water to be used? ... HOUSEHOLD

How far is well from possible source of contamination? .. 20'

What is source of contamination? ...... SEPTIC TANK

Enclose a copy of any mineral analysis that has been made of water ....

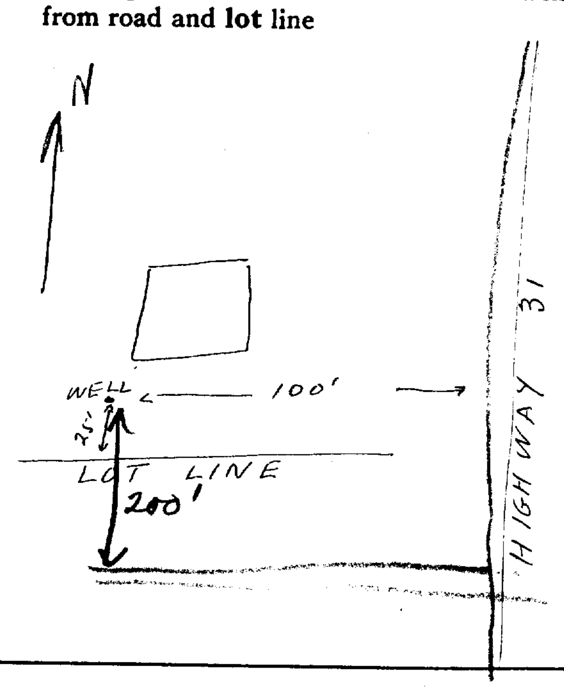
Depth(s) to Water Horizon(s)	Kind of Water	No. of Feet Water Rises
90	GOOD	62

Well Log

Drift and Bedrock Record	From	To
CLAY	0 ft.	84 ft.
LIMESTONE	84	133

Location of Well

In diagram below show distances of well from road and lot line



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

Drilling Firm ..... F. A. McLEAN & SON

Address ..... 185 JAMES ST OTTAWA ONTARIO

Recorded by JOHN LARKIN .... Address ....

Date ..... NOV. 7 1949 .... Licence Number ....

24

UTM | 18 | Z | 414912810 | E
| 19 | R | 5101212313210 | N
Elev. | 9 | R | 012917
Basin | 25 |

ONTARIO

The Water-well Drillers Act, 1954
Department of Mines

15 No. 7773

GROUND WATER BRANCH
DEC 16 1957
ONTARIO WATER RESOURCES COMMISSION

Water-Well Record

[redacted]

~~Township, Village, Town or~~ City OTTAWA
~~Township~~ Village, Town or City) OTTAWA
Address

Date completed 29 (day) SEP (month) 57 (year)

Pipe and Casing Record

Casing diameter(s) 4
Length(s) 80
Type of screen NONE
Length of screen

Pumping Test

Static level 10
Pumping rate 300 GPH
Pumping level 20
Duration of test 1 HR

Well Log

Water Record

Overburden and Bedrock Record	From ft.	To ft.	Depth(s) at which water(s) found	No. of feet water rises	Kind of water (fresh, salty, or sulphur)
CLAY	0	20			
HARD PAN	20	40			
CLAY	40	65			
GRAVEL	65	80	65-80	70	FRESH

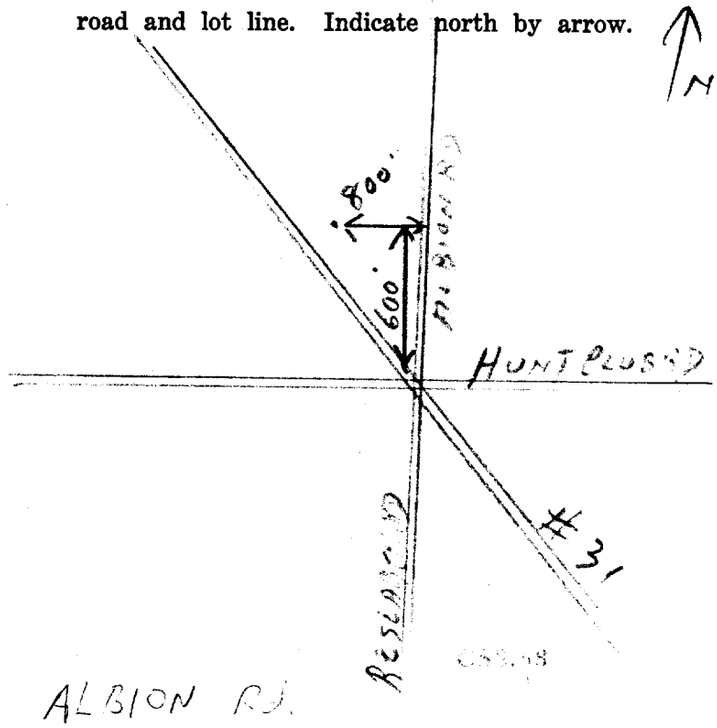
For what purpose(s) is the water to be used? HOUSE
Is water clear or cloudy? CLEAR
Is well on upland, in valley, or on hillside? HILLSIDE
Drilling firm SHANAHAN
Address BRITANNIA
Name of Driller MANION WILLIAMS
Address
Licence Number

I certify that the foregoing statements of fact are true.

Date DEC 5/57 Signature of Licensee

Location of Well

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



Form 5

UTM 18 Z 444400 E
9 R 5022340 N
Elev. 9 R 0297
Basin 25

GROUND WATER BRANCH
15 No. 774
MAY 20 1958
ONTARIO WATER RESOURCES COMMISSION

ONTARIO

The Water-well Drillers Act, 1954
Department of Mines

Water-Well Record

County or Territorial District [redacted] Township, Village, Town or City OTTAWA
n Village, Town or City)
Address
Date completed (day) (month) (year)

Pipe and Casing Record		Pumping Test	
Casing diameter(s)	3"	Static level	2
Length(s)	87	Pumping rate	1000 GPH
Type of screen	None	Pumping level	20
Length of screen		Duration of test	2 HRS

Well Log / **Water Record**

Overburden and Bedrock Record	From ft.	To ft.	Depth(s) at which water(s) found	No. of feet water rises	Kind of water (fresh, salty, or sulphur)
Clay	0	45			
Sand	45	84			
Limestone	84	90	90	88	Fresh

For what purpose(s) is the water to be used? House

Is water clear or cloudy? Clear

Is well on upland, in valley, or on hillside?

Drilling firm F. R. Cassette
Address 1652 Bank St. Ottawa

Name of Driller Same
Address

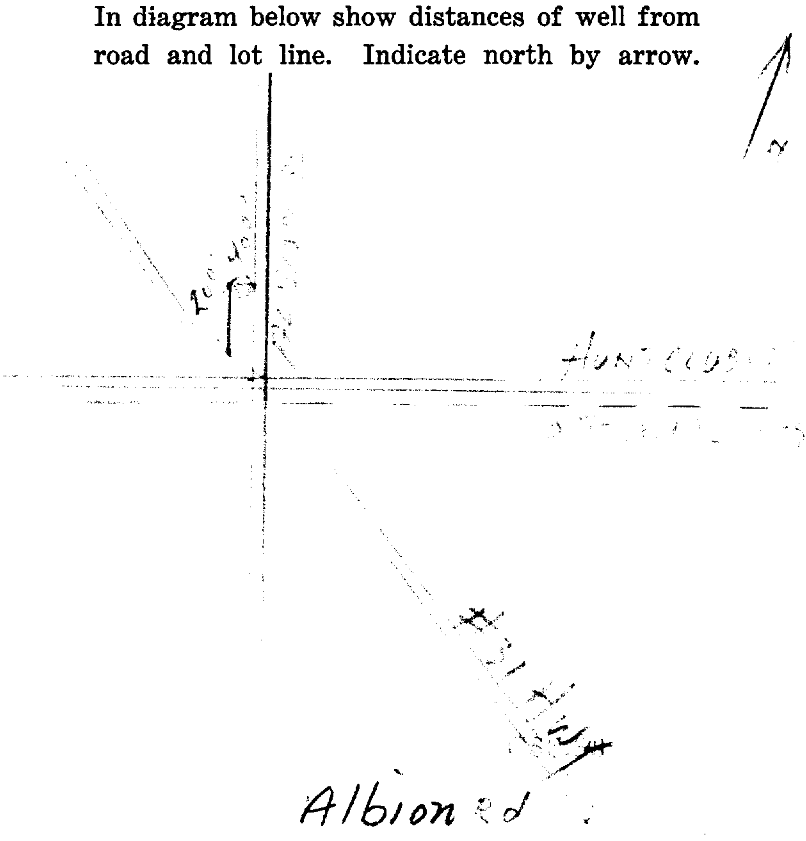
Licence Number 395

I certify that the foregoing statements of fact are true.

Date 17/10/58 — F. R. Cassette
Signature of Licensee

Location of Well

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



Form 5

UTM 1 8 Z 4 4 9 1 1 8 0 E

1 9 R 5 0 2 2 2 0 0 N

Elev. 1 9 R 0 3 0 0

Basin 2 5

ONTARIO

The Water-well Drillers Act, 1954

Department of Mines

RECEIVED 15 No. OCT - 5 1955 GEOLOGICAL BRANCH DEPARTMENT of MINES

7836

BW

Water-Well Record

County or Territorial District Carleton ~~Township, Village, Town or~~ City Ottawa

[redacted] n Village, Town or City) Metcalfe HY

Address Billings Bridge

(day) (month) (year)

Pipe and Casing Record	
Casing diameter(s)	3"
Length(s)	98
Type of screen	
Length of screen	

Pumping Test	
Static level	8 ft
Pumping rate	[illegible]
Pumping level	25 ft
Duration of test	3 hrs

Well Log / Water Record

Overburden and Bedrock Record	From ft.	To ft.	Depth(s) at which water(s) found	No. of feet water rises	Kind of water (fresh, salty, or sulphur)
Clay	0	60	111	104	fresh
sand	60	98			
lime stone	98	111			

For what purpose(s) is the water to be used? House

Is water clear or cloudy? Clear

Is well on upland, in valley, or on hillside? Hillside

Drilling firm J B Dufresne

Address [illegible] Ottawa

Name of Driller F. Corsette

Address 1622 Base Line RD Ottawa

Licence Number 372

I certify that the foregoing statements of fact are true.

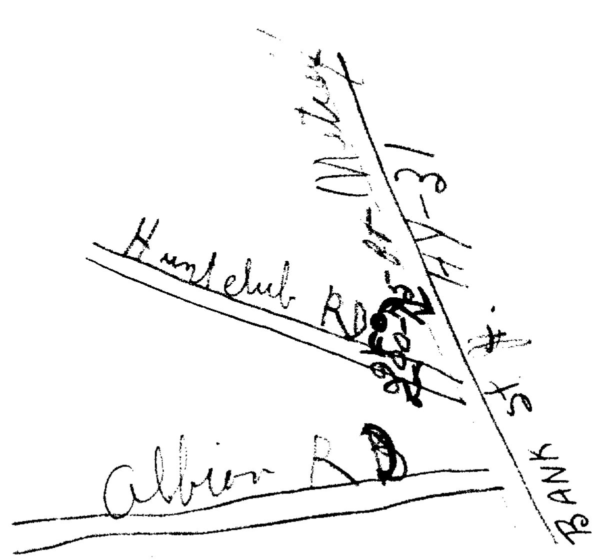
Date 14/9/55 F. Corsette

Signature of Licensee

Location of Well

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

BW



BANK ST.
~~Hunt Club Rd.~~

Form 5

UTM 18 Z 414911510 E
9 R 5012121310 10 N
Elev. 9 R 012 19 10
Basin 25

ONTARIO

The Water-well Drillers Act, 1954
Department of Mines

RECEIVED
OCT - 6 1954
GEOLOGICAL BRANCH
DEPARTMENT of MINES

15 No 7837

Water-Well Record

OTTAWA.

County or Territorial District Carleton ~~Township, Village, Town or~~ City Gloucester
Village, Town or City) Billing Bridge
[redacted] ddress Ottawa
Date completed ... (day) / (month) (year)

Pipe and Casing Record

Casing diameter(s) 3
Length(s) 76
Type of screen
Length of screen

Pumping Test

Static level Over flow
Pumping rate 600 gal per hr
Pumping level
Duration of test

Well Log

Overburden and Bedrock Record	From ft.	To ft.
Clay	0	60
Gravel	60	76

Water Record

Depth(s) at which water(s) found	No. of feet water rises	Kind of water (fresh, salty, or sulphur)
76	76	Sulphur

For what purpose(s) is the water to be used? HOUSE
Is water clear or cloudy? CLEAR
Is well on upland, in valley, or on hillside? VALLEY
Drilling firm J B DUFRESNE
Address OTTAWA

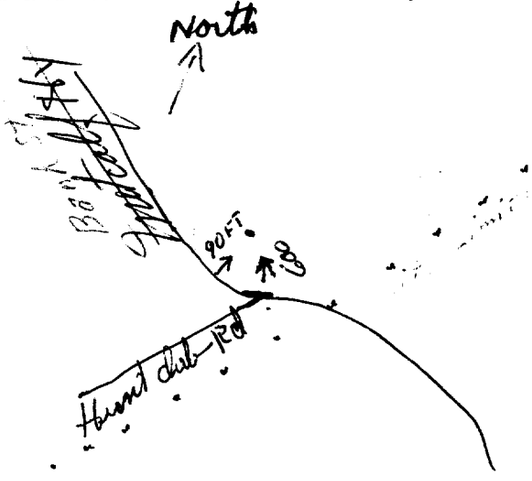
Name of Driller J Lorette
Address 665 Kilmaurs St
Ottawa
Licence Number 395

I certify that the foregoing statements of fact are true.

Date J Lorette
Signature of Licensee

Location of Well

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



Form 5

Baxter Street

UTM 1 18 Z 4 4 9 0 9 5 E
1 9 R 5 0 2 2 2 2 4 0 N
Elev. 1 9 R 0 2 9 0
Basin 2 5

1 № 7840

RECEIVED
JAN 29 1953
GEOLOGICAL BRANCH
DEPARTMENT of MINES

ONTARIO

The Well Drillers Act
Department of Mines, Province of ~~Ontario~~

Water Well Record

[redacted] p, ~~Village~~, ~~Town or City~~ ~~Nepean~~ Ottawa
[redacted] Town or City) Billings Bridge P.O.
[redacted] s Billings Bridge P.O. Ottawa

Date Completed Jan 20/53 (day) (month) (year) Cost of Well (excluding pump)

Pipe and Casing Record

Casing diameter(s) 3"
Length(s) of casing(s) 87
Type of screen
Length of screen
Distance from top of screen to ground level
Is well a gravel-wall type? Top of Rock

Pumping Test

Date Jan 20/53
Static level 3 ft
Pumping level 15 ft
Pumping rate 500 gls per hr
Duration of test 1 Hour
Distance from cylinder or bowls to ground level

Water Record

Kind (fresh or mineral) Mineral
Quality (hard, soft, contains iron, sulphur, etc.) Sulphur
Appearance (clear, cloudy, coloured) Clear
For what purpose(s) is the water to be used? Household

How far is well from possible source of contamination? 50 ft
What is the source of contamination? Septic T
Enclose a copy of any mineral analysis that has been made of water

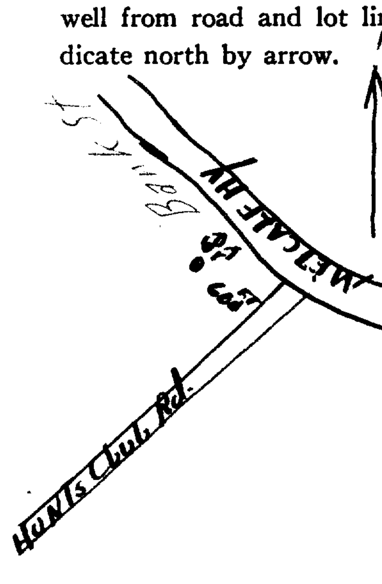
Depth(s) to Water Horizon(s)	Kind of Water	No. of Feet Water Rises
87	Mineral	84

Well Log

Overburden and Bedrock Record	From	To
	0 ft.	....ft.
Clay	0	40
Sandy Clay	40	87

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? Valley
Drilling Firm J B Dufour
Address 870 Fairbairn
Name of Driller F. Consefter
Date Jan 20/53
Address
Licence Number 89
J B Dufour
Signature of Licensee

Form 5

Bank Street
~~Metcalfe Rd~~

UTM 1 8 z 4 4 9 2 2 0 E
9 R 5 0 2 2 2 6 0 N
Elev. 9 R 0 3 0 0
Basin 2 3

ONTARIO

The Well Drillers Act
Department of Mines, Province of Ontario

No 7842

RECEIVED
JAN 29 1953
GEOLOGICAL BRANCH
DEPARTMENT of MINES

Water Well Record

[redacted] ~~Village, Town~~ or City Ottawa
[redacted] Town or City) Billings Bridge P.O.
[redacted] Billings Bridge P.O. Ottawa

Date Completed Jan 16 / 53 (day) (month) (year) Cost of Well (excluding pump)

Pipe and Casing Record		Pumping Test	
Casing diameter(s)	3"	Date	Jan 15/53
Length(s) of casing(s)	83	Static level	Overflow
Type of screen		Pumping level	
Length of screen		Pumping rate	
Distance from top of screen to ground level		Duration of test	
Is well a gravel-wall type?	Rock	Distance from cylinder or bowls to ground level	

Water Record

Kind (fresh or mineral) fresh Mineral
Quality (hard, soft, contains iron, sulphur, etc.) Sulphur
Appearance (clear, cloudy, coloured) Clear
For what purpose(s) is the water to be used? Household

How far is well from possible source of contamination? 50
What is the source of contamination? Septic tank
Enclose a copy of any mineral analysis that has been made of water

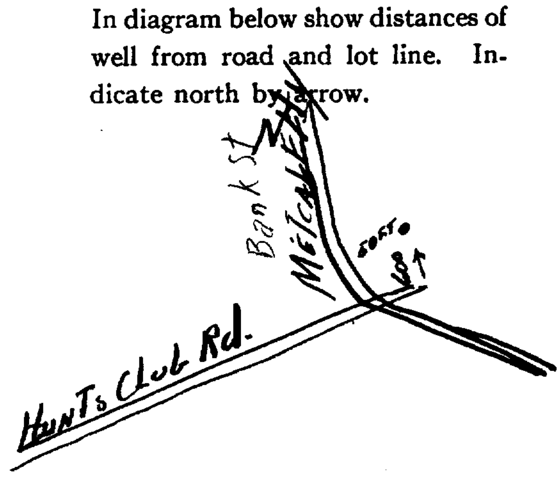
Depth(s) to Water Horizon(s)	Kind of Water	No. of Feet Water Rises
90	Mineral	91

Well Log

Overburden and Bedrock Record	From	To
	0 ft.	...ft.
Clay	0	83
Soft Limestone	83	90

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? Valley
Drilling Firm J. B. Dufresne
Address 870 Carling
Name of Driller J. Cossette Address
Date Jan 15/53 Licence Number 89

J. B. Dufresne
Signature of Licensee

Form 5

Bank Street
~~Metcalfe Rd #31~~

UTM | 1 | 8 | Z | 4 | 4 | 9 | 2 | 1 | 2 | 5 | E
| 5 | R | 5 | 0 | 1 | 2 | 1 | 2 | 1 | 1 | 9 | 10 | N

Elev. | 4 | R | 0 | 1 | 3 | 0 | 1 | 0 |

Basin | 2 | 5 |

The Ontario Water Resources Commission Act

WATER WELL RECORD

County or District Carleton

Township, Village, Town or City Ottawa

Con 2466 Bank St.

Date completed 16 (day) 12 (month) 63 (year)

[redacted]

ress 2466 Bank ST.

Casing and Screen Record

Inside diameter of casing 5"

Total length of casing 95'

Type of screen none

Length of screen —

Depth to top of screen —

Diameter of finished hole 5"

Pumping Test

Static level 10'

Test-pumping rate 10 G.P.M.

Pumping level 15'

Duration of test pumping 8 hrs

Water clear or cloudy at end of test clear

Recommended pumping rate 8 G.P.M.

with pump setting of 20' feet below ground surface

Well Log

Overburden and Bedrock Record	From ft.	To ft.	Water Record: Depth(s) at which water(s) found	Water Record: Kind of water (fresh, salty, sulphur)
Sand	0	75		
gravel	75	90		
course gravel	90	95	90-95	fresh

For what purpose(s) is the water to be used? house

Is well on upland, in valley, or on hillside? hillside

Drilling or Boring Firm McLean Water Supply

Address 1532 Raven Ave

Licence Number 1089

Name of Driller or Borer H. Sally

Address

Date Dec 16, 1963

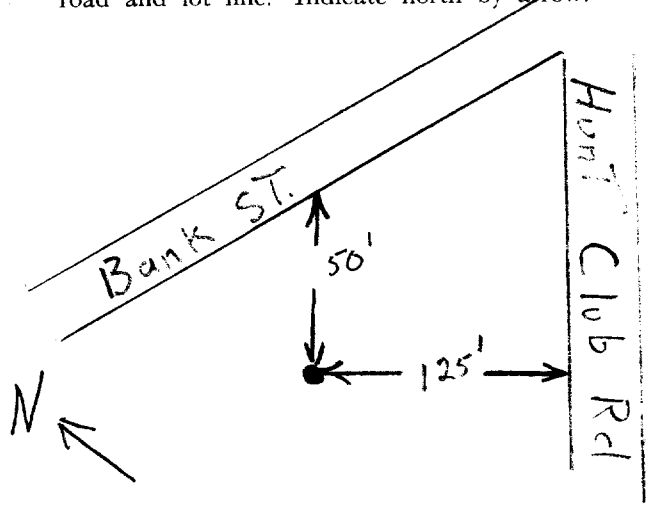
(Signature of Licensed Drilling or Boring Contractor)

Form 7 15M-60-4138

OWRC COPY

Location of Well

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



Bank ST.

UTM 18 Z 4 4 9 3 4 0 E
15 R 5 0 2 2 1 9 0 N
Elev. 14 R 0 3 0 0
Basin 25

15 No. 8309

RECEIVED
JAN - 5 1951
GEOLOGICAL BRANCH
DEPARTMENT OF MINES

ONTARIO

The Well Drillers Act
Department of Mines, Province of Ontario

Water Well Record

County or Territorial District [redacted] ~~Township, Village, Town or City~~ City of Ottawa ~~Gloucester~~
[redacted] own or City) .... Billings Bridge
Date Completed 13 (day) April (month) 1950 (year) Cost of Well (excluding pump) $300.00

Pipe and Casing Record		Pumping Test	
Casing diameter(s)	4 inch	Date	
Length(s) of casing(s)	101 ft.	Static level	① 8' ② 0'
Type of screen		Pumping level	
Length of screen		Pumping rate	
Distance from top of screen to ground level		Duration of test	
Is well a gravel-wall type?		Distance from cylinder or bowls to ground level	

Water Record

Kind (fresh or mineral) .... fresh
Quality (hard, soft, contains iron, sulphur, etc.) .... hard
Appearance (clear, cloudy, coloured) .... clear
For what purpose(s) is the water to be used? .... household
How far is well from possible source of contamination? .... none
What is the source of contamination? ....
Enclose a copy of any mineral analysis that has been made of water ....

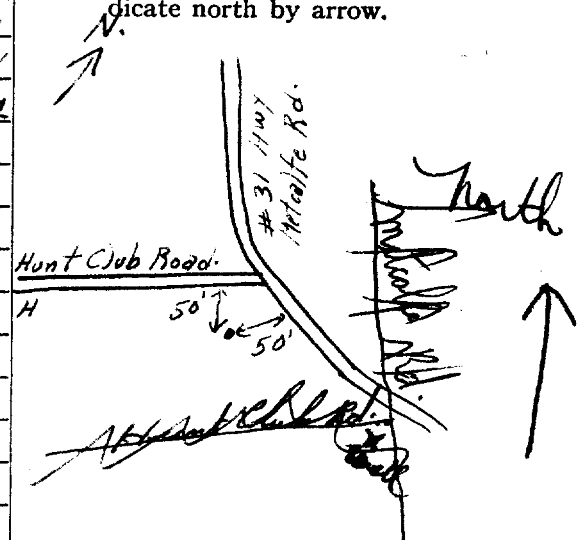
Depth(s) to Water Horizon(s)	Kind of Water	No. of Feet Water Rises
~~4 ft.~~	~~fresh~~	~~118 ft.~~
① 8		0
② 124		124

Well Log

Overburden and Bedrock Record	From	To
[illegible]	0 ft.	8 ft.
[illegible]		
[illegible]	8	100
Coarse black gravel	100	101
Grey limestone	101	124

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? .... upland
Drilling Firm .... John W. Adams
Address .... Ramsayville
Name of Driller .... J. W. Adams .... Address .... Ramsayville
Date .... Dec. 30/50 .... Licence Number 41

J. W. Adams
Signature of Licensee

FORM 5

HUNT CLUB RD.

UTM | 18 | Z | 4 1 4 9 1 3 7 10 | E

| 5 | R | 5 0 1 2 1 2 1 0 1 0 | N

Elev. | 4 | R | 0 1 3 10 10 |

Basin | 2 4 5 | | 1 1 |

ONTARIO

The Water-well Drillers Act, 1954

Department of Mines

15 No. 8310

RECEIVED
JUN 6 1955
GEOLOGICAL BRANCH
DEPARTMENT of MINES

Water-Well Record

County or Territorial District CARLETON Township, Village, Town or City Ottawa

[redacted]

Village, Town or City)

ddress Billings Bridge

(day) (month) (year)

Pipe and Casing Record

Casing diameter(s) 4 inch

Length(s) 64 feet

Type of screen

Length of screen

Pumping Test

Static level 9 feet

Pumping rate 420 gal PH

Pumping level 9 feet

Duration of test 1 hr

Well Log

Overburden and Bedrock Record	From ft.	To ft.	Depth(s) at which water(s) found	No. of feet water rises	Kind of water (fresh, salty, or sulphur)
loom and hard gravel	0	25	62	[redacted]	fresh
Sand & Gravel	25	40			
hard pan	40	62		53	

For what purpose(s) is the water to be used?

house hold use

Is water clear or cloudy? Clear

Is well on upland, in valley, or on hillside?

[redacted] hillside

Drilling firm James Kettles

Address Ramsayville Ontario

Name of Driller

Address

Licence Number 637

I certify that the foregoing statements of fact are true.

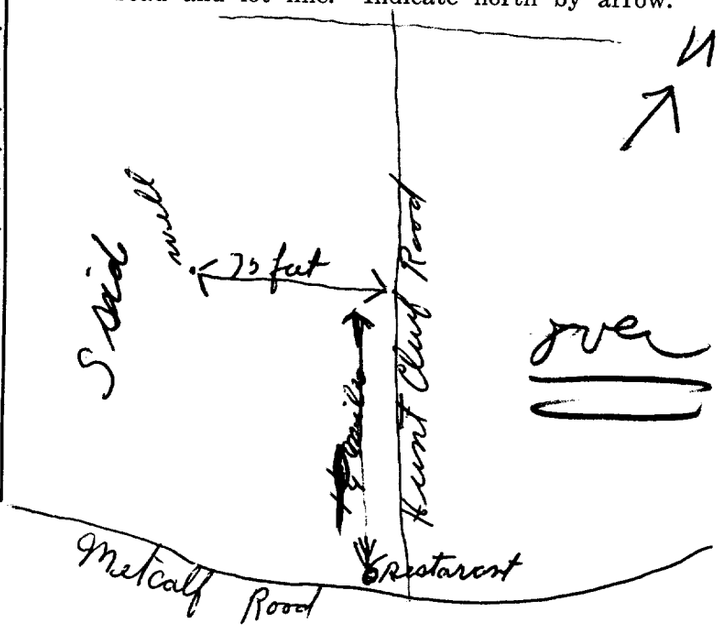
Date

James Kettles

Signature of Licensee

Location of Well

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



over

Form 5

Hunt Club Road

UTM 18 Z 449250 E

5 R 5022200 N

Elev. 4 R 0306

Basin 25

15 No 8324

The Ontario Water Resources Commission Act

WATER WELL RECORD

County or District Carleton Township, Village, Town or City ~~Gloucester~~ OTTAWA

Con. ~~3 RF~~ Lot ~~5~~ Date completed 25 (day) Oct (month) 1966 (year)

[redacted] dress 1195 HUNT CLUB Rd.

Casing and Screen Record		Pumping Test	
Inside diameter of casing	3"	Static level	6
Total length of casing	87	Test-pumping rate	3 G.P.M.
Type of screen	—	Pumping level	35
Length of screen	—	Duration of test pumping	4 hrs
Depth to top of screen	—	Water clear or cloudy at end of test	clear
Diameter of finished hole	2"	Recommended pumping rate	3 G.P.M.
		with pump setting of	35 feet below ground surface

Well Log: Overburden and Bedrock Record	From ft.	To ft.	Water Record: Depth(s) at which water(s) found	Kind of water (fresh, salty, sulphur)
Clay	0	30	163	Fresh
Sand	30	85		
Lime Stone	85	163		

For what purpose(s) is the water to be used? House

Is well on upland, in valley, or on hillside? Hillside

Drilling or Boring Firm F. R. Cornette

Address 1510 Base line Rd. Ottawa

Licence Number 1473

Name of Driller or Borer —

Address —

Date —

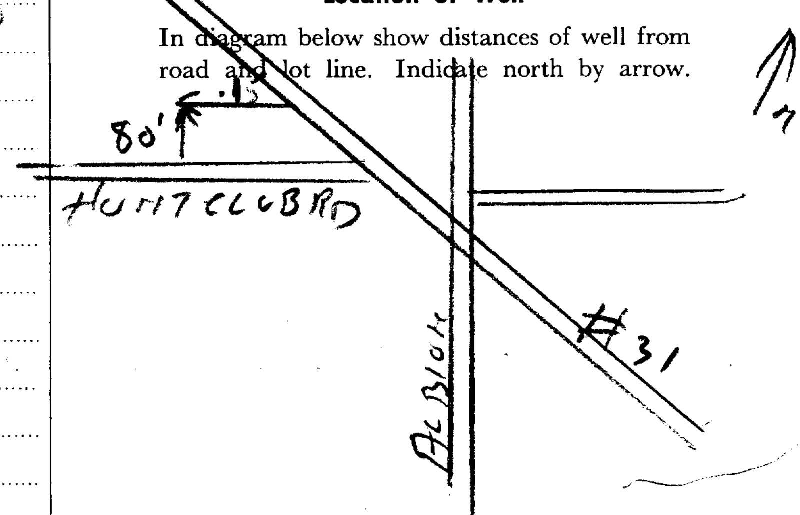
F R Cornette
(Signature of Licensed Drilling or Boring Contractor)

Form 7 15M-60-4138

OWRC COPY

Location of Well

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



1195 HUNT CLUB RD - OTTAWA

UTM 18 Z 449090 E
9 R 5022120 N
Elev. 90290
Basin 25
nl Record

103

ONTARIO

15 №. 8353

RECEIVED
JAN 5 1951
GEOLOGICAL BRANCH
DEPARTMENT OF MINES

The Well Drillers Act
Department of Mines, Province of Ontario

Water Well Record

[redacted] Township, ~~Village, Town~~ or City ... Ottawa ~~Gloucester~~

[redacted] Town or City ... Billings Bridge

Date Completed ... Aug. 1950 (day) (month) (year) 10th Aug 50 Cost of Well (excluding pump) $300.00

Pipe and Casing Record		Pumping Test	
Casing diameter(s)	4"	Date	10 Aug/50
Length(s) of casing(s)	66 ft.	Static level	5'
Type of screen	Casing pulled	Pumping level	
Length of screen		Pumping rate	
Distance from top of screen to ground level		Duration of test	
Is well a gravel-wall type?		Distance from cylinder or bowls to ground level	

Water Record

Kind (fresh or mineral) ... fresh
Quality (hard, soft, contains iron, sulphur, etc.) ... hard
Appearance (clear, cloudy, coloured) ... Clear
For what purpose(s) is the water to be used? ... household

How far is well from possible source of contamination? ... None
What is the source of contamination? ...
Enclose a copy of any mineral analysis that has been made of water ...

Depth(s) to Water Horizon(s)	Kind of Water	No. of Feet Water Rises
8'		

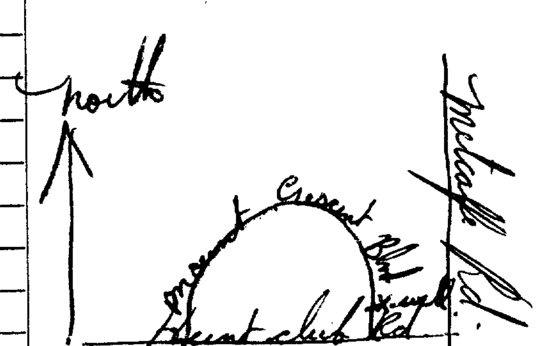
Well Log

Overburden and Bedrock Record	From	To
Brown Clay	0 ft.	8 ft.
Grey Quicksand	8	65
fine black gravel	65	66
N.B. well finished about 10 Aug 50		
(1) but not used due to pressure		
of quicksand		
# 2 Well completed ~~end of Aug.~~ Aug 15th has identical		
log - ~~but~~ except for fact gravel		
Coarser & depth 80' -		
wells 2' apart.		

Location of Well

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

#1 well.



See back

Situation: Is well on upland, in valley, or on hillside? ... Valley
Drilling Firm ... J. W. Adams
Address ... Ramsayville Ont
Name of Driller ... J. W. Adams Address ... Ramsayville
Date ... Dec 30/50 Licence Number ... 41

J. W. Adams
Signature of Licensee

FORM 5

1 Mountain Crescent
MOUNT CRESCENT Blvd.

UTM | 18 | Z | 4 4 9 0 9 0 | E
| 9 | R | 5 0 2 2 1 2 0 | N
Elev. | 9 | R | 0 2 9 0 |
Basin | 2 5 | | | |
#2 well

104

ONTARIO

15 No. 8554

The Well Drillers Act
Department of Mines, Province of Ontario

Water Well Record

[redacted] ~~Township, Village, Town~~ or City ..Ottawa..........
[redacted] (Town or City)..........
[redacted] ..Billings Bridge..........

Date Completed ..15.. ..Aug.. ..193[illegible].. Cost of Well (excluding pump)..........
(day) (month) (year)

Pipe and Casing Record		Pumping Test	
Casing diameter(s)	[illegible]"	Date	
Length(s) of casing(s)		Static level	5'
Type of screen		Pumping level	
Length of screen		Pumping rate	
Distance from top of screen to ground level		Duration of test	
Is well a gravel-wall type?		Distance from cylinder or bowls to ground level	

Water Record

Kind (fresh or mineral) ..[illegible]..
Quality (hard, soft, contains iron, sulphur, etc.) ..[illegible]..
Appearance (clear, cloudy, coloured) ..[illegible]..
For what purpose(s) is the water to be used? ..[illegible]..
....
How far is well from possible source of contamination? ....
What is the source of contamination? ....
Enclose a copy of any mineral analysis that has been made of water..........

Depth(s) to Water Horizon(s)	Kind of Water	No. of Feet Water Rises
5'		

Well Log

Overburden and Bedrock Record	From	To
	0 ft.	....ft.
[illegible] clay	[illegible]	8
[illegible] quicksand	[illegible]	63
[illegible]	[illegible]	6[illegible]
[illegible]	[illegible]	[illegible]

Location of Well

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

#2 well.

[illegible]

Aug. '3[illegible]

Situation: Is well on upland, in valley, or on hillside? ....
Drilling Firm ..[illegible]..
Address ..[illegible]..
Name of Driller .... Address ....
Date ..[illegible].. Licence Number ....

....
Signature of Licensee

Form 5

1 Mountain Crescent
MOUNT CRESCENT BLVD.

116

UTM 18 Z 449080 E
9 R 5022140 N
Elev. 9 R 0290
Basin 25

15 No. 8555

ONTARIO

The Well Drillers Act
Department of Mines, Province of Ontario

Water Well Record

County or Territorial District Carleton Township, ~~Village, Town~~ or City Ottawa ~~Gloucester~~

[redacted] own or City) Billings Bridge

Date Completed ~~Aug 29~~ 30 (day) Aug (month) /50 (year) Cost of Well (excluding pump) $145.00

Pipe and Casing Record		Pumping Test	
Casing diameter(s)	4 inch	Date	Aug. 30/50
Length(s) of casing(s)	55 ft	Static level	5' ~~above surface~~
Type of screen		Pumping level	
Length of screen		Pumping rate	
Distance from top of screen to ground level		Duration of test	
Is well a gravel-wall type?		Distance from cylinder or bowls to ground level	

Water Record

Kind (fresh or mineral) fresh
Quality (hard, soft, contains iron, sulphur, etc.) hard
Appearance (clear, cloudy, coloured) clear
For what purpose(s) is the water to be used? household
How far is well from possible source of contamination? none
What is the source of contamination?
Enclose a copy of any mineral analysis that has been made of water

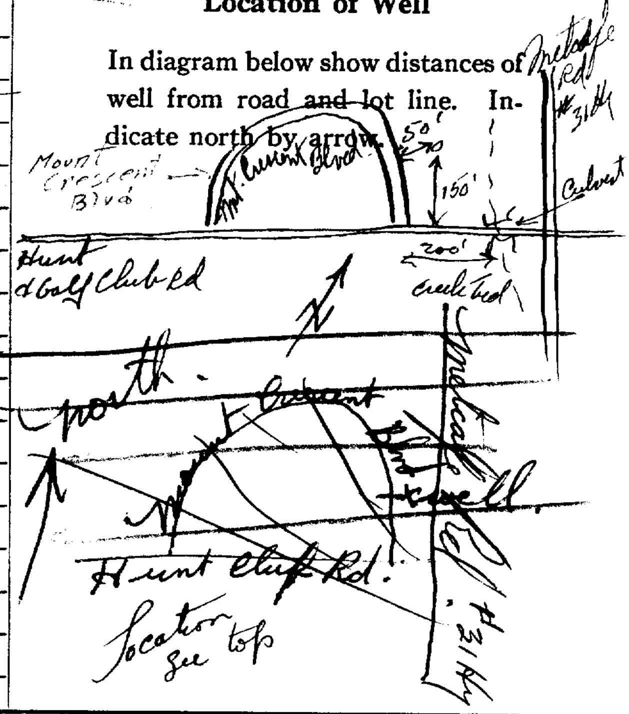
Depth(s) to Water Horizon(s)	Kind of Water	No. of Feet Water Rises
8'		

Well Log

Overburden and Bedrock Record	From	To
Brown Clay	0 ft.	8 ft.
Grey Quicksand & Clay Mixture	8	65
Coarse black gravel	65	→

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? Valley
Drilling Firm J. W. Adams
Address Ramsayville
Name of Driller J. W. Adams Address Ramsayville
Date Dec. 3d /50 Licence Number 41

J. W. Adams
Signature of Licensee

FORM 5

6 Mountain Crescent
Mt. Crescent Blvd.

Ontario **Ministry of the Environment**

The Ontario Water Resources Act
WATER WELL RECORD

Print only in spaces provided.
Mark correct box with a checkmark, where applicable.

11 (1 2) **1532607** Municipality 15502 (10 14) Con. (15 22 23 24)

County or District	Township/Borough/City/Town/Village	Con block tract survey, etc.	Lot (25-27)
Ottawa-Carleton	Ottawa	NA	NA
[redacted]	Address: Ottawa, Ont	Date completed (48-53): 25 day 09 month 01 year	

21 (1 2) UTM (10) Northing (12 17) (18 24) RC (25) Elevation (26) RC (30) Basin Code (31) ii iii iv (47)

LOG OF OVERBURDEN AND BEDROCK MATERIALS (see instructions)

General colour	Most common material	Other materials	General description	Depth - feet From	Depth - feet To
	sand	gravel		0	102
blue	clay	grey Limestone		102	880

31 (10 14 15 21) (32 43) (54 65 75 80)

32

41 WATER RECORD

Water found at - feet	Kind of water
294	1 ☒ Fresh 2 ☐ Salty 3 ☐ Sulphur 4 ☐ Minerals 5 ☐ Gas
790	1 ☐ Fresh 2 ☒ Salty 3 ☐ Sulphur 4 ☐ Minerals 5 ☐ Gas
	1 ☐ Fresh 2 ☐ Salty 3 ☐ Sulphur 4 ☐ Minerals 5 ☐ Gas
	1 ☐ Fresh 2 ☐ Salty 3 ☐ Sulphur 4 ☐ Minerals 5 ☐ Gas
	1 ☐ Fresh 2 ☐ Salty 3 ☐ Sulphur 4 ☐ Minerals 5 ☐ Gas

51 CASING & OPEN HOLE RECORD

Inside diam inches	Material	Wall thickness inches	Depth - feet From	Depth - feet To
6 4	1 ☒ Steel 2 ☐ Galvanized 3 ☐ Concrete 4 ☐ Open hole 5 ☐ Plastic	188	0	110
8 3/4	1 ☐ Steel 2 ☐ Galvanized 3 ☐ Concrete 4 ☒ Open hole 5 ☐ Plastic		0	108
6	1 ☐ Steel 2 ☐ Galvanized 3 ☐ Concrete 4 ☒ Open hole 5 ☐ Plastic		108	880

SCREEN

Sizes of opening (Slot No.) (31-33)	Diameter (34-38) inches	Length (39-40) feet
Material and type	Depth at top of screen (41-44) feet	(30)

61 PLUGGING & SEALING RECORD

☒ Annular space ☐ Abandonment

Depth set at - feet From	Depth set at - feet To	Material and type (Cement grout, bentonite, etc.)
2	110	cement grout

(80)

71 PUMPING TEST

Pumping test method (10): 1 ☐ Pump 2 ☐ Bailer
Pumping rate (11-14): 7 GPM
Duration of pumping (15-16) Hours (17-18) Mins:

Static level (19-21)	Water level end of pumping (22-24)	Water levels during (25)	15 minutes (26-28)	30 minutes (29-31)	45 minutes (32-34)	60 minutes (35-37)
30 feet	860 feet	1 ☐ Pumping 2 ☒ Recovery	694 feet	609 feet	524 feet	489 feet

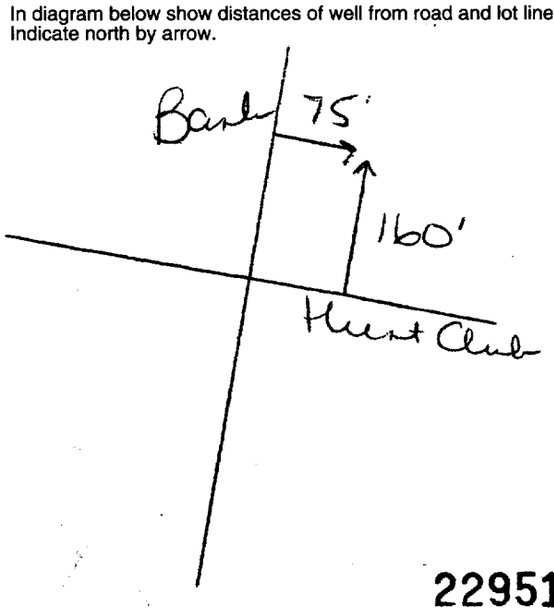
If flowing give rate (38-41)	Pump intake set at	Water at end of test (42)
GPM	feet	☐ Clear ☒ Cloudy

Recommended pump type	Recommended pump setting (43-45)	Recommended pump rate (46-49)
☐ Shallow ☒ Deep	860 feet	7 GPM

(50-53)

LOCATION OF WELL

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



229514

FINAL STATUS OF WELL (54)

1 ☒ Water supply 2 ☐ Observation well 3 ☐ Test hole 4 ☐ Recharge well 5 ☐ Abandoned, insufficient supply 6 ☐ Abandoned, poor quality 7 ☐ Abandoned (Other) 8 ☐ Dewatering 9 ☐ Unfinished 10 ☐ Replacement well

WATER USE (55-56)

1 ☐ Domestic 2 ☐ Stock 3 ☒ Irrigation 4 ☐ Industrial 5 ☐ Commercial 6 ☐ Municipal 7 ☐ Public supply 8 ☐ Cooling & air conditioning 9 ☐ Not use 10 ☐ Other

METHOD OF CONSTRUCTION (57)

1 ☐ Cable tool 2 ☐ Rotary (conventional) 3 ☐ Rotary (reverse) 4 ☐ Rotary (air) 5 ☒ Air percussion 6 ☐ Boring 7 ☐ Diamond 8 ☐ Jetting 9 ☐ Driving 10 ☐ Digging 11 ☐ Other

Name of Well Contractor	Well Contractor's Licence No.
Arlock Drilling Ltd	1119
Address: RR#2 Jasper, ONT	
Name of Well Technician: Shannon Purcell	Well Technician's Licence No.: T2122
Signature of Technician/Contractor	Submission date: 19 day 10 mo 01 yr

MINISTRY USE ONLY

Data source (58)	Contractor (59-62)	Date received (63-68) (80)
	1119	JAN 08 2002
Date of inspection	Inspector	
Remarks: CSS.ES2		

0506 (07/00) Front Form 9

2 - MINISTRY OF THE ENVIRONMENT COPY

Ontario — Ministry of the Environment

Well Tag No. *(Place Sticker and/or Print Below)* **A104491** A104491

Well Record

Regulation 903 Ontario Water Resources Act

MW 1 804 Page 1 of 5

Measurements recorded in: ☑ Metric ☐ Imperial

[redacted]

Well Location

Address of Well Location (Street Number/Name): 2515 Bank St.

Township:

Lot:

Concession:

County/District/Municipality:

City/Town/Village: Ottawa

Province: Ontario

Postal Code:

UTM Coordinates: NAD 83 Zone 18 Easting 449406 Northing 5022471

Municipal Plan and Sublot Number:

Other:

Overburden and Bedrock Materials/Abandonment Sealing Record *(see instructions on the back of this form)*

General Colour	Most Common Material	Other Materials	General Description	Depth (m/ft) From	Depth (m/ft) To
Brn	Silt	fine Sand	soft, dry	0	2.44
Gry	Clay		soft, wet	2.44	4.57

Annular Space

Depth Set at (m/ft) From	To	Type of Sealant Used (Material and Type)	Volume Placed (m³/ft³)
0	.31	Concrete / flushmount	
.31	1.22	Benseal	
1.22	4.57	Sand	

Method of Construction

☐ Cable Tool ☐ Diamond ☐ Rotary (Conventional) ☐ Jetting ☐ Rotary (Reverse) ☐ Driving ☐ Boring ☐ Digging ☐ Air percussion ☑ Other, *specify* Direct Push

Well Use

☐ Public ☐ Commercial ☐ Not used ☐ Domestic ☐ Municipal ☐ Dewatering ☑ Test Hole ☑ Monitoring ☐ Livestock ☐ Irrigation ☐ Cooling & Air Conditioning ☐ Industrial ☐ Other, *specify*

Construction Record - Casing

Inside Diameter (cm/in)	Open Hole OR Material (Galvanized, Fibreglass, Concrete, Plastic, Steel)	Wall Thickness (cm/in)	Depth (m/ft) From	Depth (m/ft) To
4.03	PVC	.368	0	1.5

Construction Record - Screen

Outside Diameter (cm/in)	Material (Plastic, Galvanized, Steel)	Slot No.	Depth (m/ft) From	Depth (m/ft) To
4.82	PVC	10	1.5	4.57

Status of Well

☐ Water Supply ☐ Replacement Well ☑ Test Hole ☐ Recharge Well ☐ Dewatering Well ☑ Observation and/or Monitoring Hole ☐ Alteration (Construction) ☐ Abandoned, Insufficient Supply ☐ Abandoned, Poor Water Quality ☐ Abandoned, other, *specify* ☐ Other, *specify*

Water Details

Water found at Depth (m/ft)	Gas	Kind of Water: Fresh	Untested	Other, specify

Hole Diameter

Depth (m/ft) From	To	Diameter (cm/in)
0	4.57	8.25

Results of Well Yield Testing

After test of well yield, water was: ☐ Clear and sand free ☐ Other, *specify*

If pumping discontinued, give reason:

Pump intake set at *(m/ft)*

Pumping rate *(l/min / GPM)*

Duration of pumping ____ hrs + ____ min

Final water level end of pumping *(m/ft)*

If flowing give rate *(l/min / GPM)*

Recommended pump depth *(m/ft)*

Recommended pump rate *(l/min / GPM)*

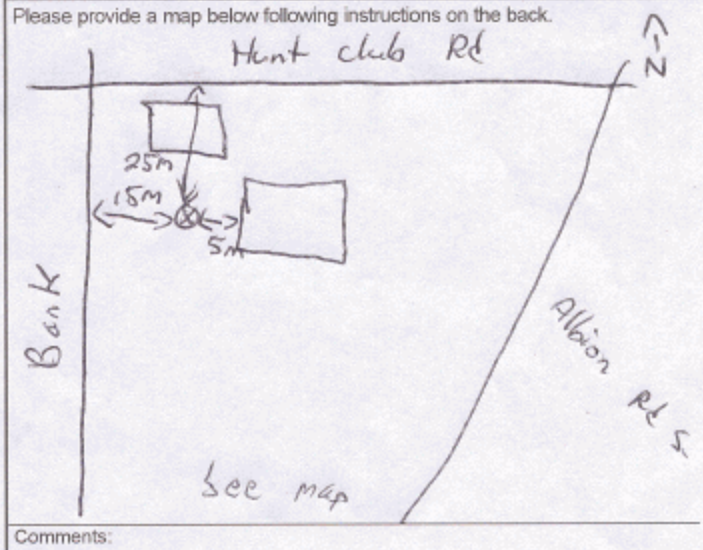
Well production *(l/min / GPM)*

Disinfected? ☐ Yes ☐ No

Draw Down Time (min)	Draw Down Water Level (m/ft)	Recovery Time (min)	Recovery Water Level (m/ft)
Static Level			
1		1	
2		2	
3		3	
4		4	
5		5	
10		10	
15		15	
20		20	
25		25	
30		30	
40		40	
50		50	
60		60	

Map of Well Location

Please provide a map below following instructions on the back.



Comments:

Well Contractor and Well Technician Information

Business Name of Well Contractor: Strata Soil Sampling Inc

Well Contractor's Licence No.: 7241

Business Address (Street Number/Name): 147-2 West Beaver Creek Rd

Municipality: Richmond Hill

Province: Ontario

Postal Code: L4B1C6

Business E-mail Address: Wrecords@stratasoil.com

Bus. Telephone No. *(inc. area code)*: 905-764-9304

Name of Well Technician (Last Name, First Name): Muir, Mike

Well Technician's Licence No.: 3448

Signature of Technician and/or Contractor: Mike Muir

Date Submitted: 2010/11/30

Well owner's information package delivered ☐ Yes ☐ No

Date Package Delivered: Y Y Y Y M M D D

Date Work Completed: 2010/11/08

Ministry Use Only

Audit No. z120892

DEC 08 2010 Received

Ministry's Copy

Ontario — Ministry of the Environment

Measurements recorded in: ☑ Metric ☐ Imperial

Well Tag No. (Place Sticker and/or Print Below) A104492 **A104492**

Well Record

Regulation 903 Ontario Water Resources Act

MW 2 8040 Page 2 of 5

[redacted]

Address of Well Location (Street Number/Name)	Township	Lot	Concession
2515 Bank st.			

County/District/Municipality	City/Town/Village	Province	Postal Code
	Ottawa	Ontario	

UTM Coordinates	Zone	Easting	Northing	Municipal Plan and Sublot Number	Other
NAD 83	18	449366	5022491		

Overburden and Bedrock Materials/Abandonment Sealing Record *(see instructions on the back of this form)*

General Colour	Most Common Material	Other Materials	General Description	Depth (m/ft) From	Depth (m/ft) To
Brn	Sand	silt	soft, dry	0	2.44
Gry	Clay	fine Sand	Soft, Saturated	2.44	4.57

Annular Space

Depth Set at (m/ft) From	To	Type of Sealant Used (Material and Type)	Volume Placed (m³/ft³)
0	.31	Concrete / flushmount	
.31	1.22	Benseal	
1.22	4.57	Sand	

Method of Construction

☐ Cable Tool ☐ Diamond ☐ Rotary (Conventional) ☐ Jetting ☐ Rotary (Reverse) ☐ Driving ☐ Boring ☐ Digging ☐ Air percussion ☑ Other, specify Direct Push

Well Use

☐ Public ☐ Commercial ☐ Not used ☐ Domestic ☐ Municipal ☐ Dewatering ☑ Test Hole ☑ Monitoring ☐ Livestock ☐ Irrigation ☐ Cooling & Air Conditioning ☐ Industrial ☐ Other, specify

Construction Record - Casing

Inside Diameter (cm/in)	Open Hole OR Material (Galvanized, Fibreglass, Concrete, Plastic, Steel)	Wall Thickness (cm/in)	Depth (m/ft) From	Depth (m/ft) To
4.03	PVC	.368	0	1.5

Construction Record - Screen

Outside Diameter (cm/in)	Material (Plastic, Galvanized, Steel)	Slot No.	Depth (m/ft) From	Depth (m/ft) To
4.82	PVC	10	~~1.5~~	4.57

Status of Well

☐ Water Supply ☐ Replacement Well ☑ Test Hole ☐ Recharge Well ☐ Dewatering Well ☑ Observation and/or Monitoring Hole ☐ Alteration (Construction) ☐ Abandoned, Insufficient Supply ☐ Abandoned, Poor Water Quality ☐ Abandoned, other, specify ☐ Other, specify

Water Details

Water found at Depth (m/ft)	Gas	Kind of Water: Fresh	Untested	Other, specify
	☐	☐	☐	
	☐	☐	☐	
	☐	☐	☐	

Hole Diameter

Depth (m/ft) From	To	Diameter (cm/in)
0	4.57	8.25

Results of Well Yield Testing

After test of well yield, water was: ☐ Clear and sand free ☐ Other, specify

If pumping discontinued, give reason:

Pump intake set at (m/ft)

Pumping rate (l/min / GPM)

Duration of pumping ____ hrs + ____ min

Final water level end of pumping (m/ft)

If flowing give rate (l/min / GPM)

Recommended pump depth (m/ft)

Recommended pump rate (l/min / GPM)

Well production (l/min / GPM)

Disinfected? ☐ Yes ☐ No

	Draw Down Time (min)	Draw Down Water Level (m/ft)	Recovery Time (min)	Recovery Water Level (m/ft)
Static Level				
1			1	
2			2	
3			3	
4			4	
5			5	
10			10	
15			15	
20			20	
25			25	
30			30	
40			40	
50			50	
60			60	

Map of Well Location

Please provide a map below following instructions on the back.

see map MW2

Comments:

Well Contractor and Well Technician Information

Business Name of Well Contractor	Well Contractor's Licence No.
Strata Soil Sampling Inc	7241

Business Address (Street Number/Name)	Municipality
147-2 West Beaver Creek Road	Richmond Hill

Province	Postal Code	Business E-mail Address
Ontario	L4B1C6	wrecords@stratasoil.com

Bus. Telephone No. (inc. area code)	Name of Well Technician (Last Name, First Name)
905-764-9304	Muir, Mike

Well Technician's Licence No.	Signature of Technician and/or Contractor	Date Submitted
3448	Mike Muir	2010/11/30

Well owner's information package delivered ☐ Yes ☐ No

Date Package Delivered: YYYY MM DD

Date Work Completed: 2010/11/18

Ministry Use Only

Audit No. z120893

DEC 06 2010

Received

Ministry's Copy

S12227

Ontario — Ministry of the Environment

Well Record

Regulation 903 Ontario Water Resources Act

Measurements recorded in: ☑ Metric ☐ Imperial

Well Tag No. *(Place Sticker and/or Print Below)* A126646 **Tag#: A126646**

Page 1 of 1

Well Owner's Information

First Name	Last Name / Organization	E-mail Address	☐ Well Constructed by Well Owner
	Riocan Real Estate		

Mailing Address (Street Number/Name)	Municipality	Province	Postal Code	Telephone No. *(inc. area code)*
2300 Yonge St.	~~ON~~ Toronto	ON	M4P 1E4	

Well Location

Address of Well Location (Street Number/Name)	Township	Lot	Concession
2515 Bank St.			

County/District/Municipality	City/Town/Village	Province	Postal Code
	Ottawa	Ontario	

UTM Coordinates	Zone	Easting	Northing	Municipal Plan and Sublot Number	Other
NAD 83	18	449449	5025259		

Overburden and Bedrock Materials/Abandonment Sealing Record *(see instructions on the back of this form)*

General Colour	Most Common Material	Other Materials	General Description	Depth (m/ft) From	Depth (m/ft) To
BLK	asphalt	gravel	loose	0	.31
BRN	sand	silt stones	soft	.31	.91
GRY	silt	sand	soft	.91	4.57

Annular Space

Depth Set at (m/ft) From	To	Type of Sealant Used *(Material and Type)*	Volume Placed *(m³/ft³)*
0	.31	flushmount/concrete	
.31	1.22	bentonite	
1.22	4.57	filter sand	

Method of Construction

☐ Cable Tool ☐ Diamond ☐ Rotary (Conventional) ☐ Jetting ☐ Rotary (Reverse) ☐ Driving ☐ Boring ☐ Digging ☐ Air percussion ☒ Other, *specify* Direct Push

Well Use

☐ Public ☐ Commercial ☐ Not used ☐ Domestic ☐ Municipal ☐ Dewatering ☐ Livestock ☒ Test Hole ☒ Monitoring ☐ Irrigation ☐ Cooling & Air Conditioning ☐ Industrial ☐ Other, *specify*

Construction Record - Casing

Inside Diameter *(cm/in)*	Open Hole OR Material (Galvanized, Fibreglass, Concrete, Plastic, Steel)	Wall Thickness *(cm/in)*	Depth (m/ft) From	Depth (m/ft) To
4.02	PVC	.368	0	1.52

Construction Record - Screen

Outside Diameter *(cm/in)*	Material (Plastic, Galvanized, Steel)	Slot No.	Depth (m/ft) From	Depth (m/ft) To
4.83	PVC	10	1.52	4.57

Status of Well

☐ Water Supply ☐ Replacement Well ☒ Test Hole ☐ Recharge Well ☐ Dewatering Well ☒ Observation and/or Monitoring Hole ☐ Alteration (Construction) ☐ Abandoned, Insufficient Supply ☐ Abandoned, Poor Water Quality ☐ Abandoned, other, *specify* ☐ Other, *specify*

Water Details

Water found at Depth (m/ft)	Kind of Water: ☐ Fresh ☐ Untested ☐ Gas ☐ Other, *specify*
Water found at Depth (m/ft)	Kind of Water: ☐ Fresh ☐ Untested ☐ Gas ☐ Other, *specify*
Water found at Depth (m/ft)	Kind of Water: ☐ Fresh ☐ Untested ☐ Gas ☐ Other, *specify*

Hole Diameter

Depth (m/ft) From	Depth (m/ft) To	Diameter *(cm/in)*
0	4.57	8.25

Results of Well Yield Testing

After test of well yield, water was: ☐ Clear and sand free ☐ Other, *specify*

If pumping discontinued, give reason:

Pump intake set at *(m/ft)*

Pumping rate *(l/min / GPM)*

Duration of pumping _____ hrs + _____ min

Final water level end of pumping *(m/ft)*

If flowing give rate *(l/min / GPM)*

Recommended pump depth *(m/ft)*

Recommended pump rate *(l/min / GPM)*

Well production *(l/min / GPM)*

Disinfected? ☐ Yes ☐ No

	Draw Down Time *(min)*	Draw Down Water Level *(m/ft)*	Recovery Time *(min)*	Recovery Water Level *(m/ft)*
Static Level				
1			1	
2			2	
3			3	
4			4	
5			5	
10			10	
15			15	
20			20	
25			25	
30			30	
40			40	
50			50	
60			60	

Map of Well Location

Please provide a map below following instructions on the back.

MW1
See Map

Comments:

Well Contractor and Well Technician Information

Business Name of Well Contractor	Well Contractor's Licence No.
Strata Soil Sampling Inc.	7241

Business Address (Street Number/Name)	Municipality	Province	Postal Code	Business E-mail Address
147-2 West Beaver Creek Road	Richmond Hill	Ontario	L4B 1C6	wrecords@stratasoil.com

Bus. Telephone No. *(inc. area code)*	Name of Well Technician (Last Name, First Name)	Well Technician's Licence No.	Signature of Technician and/or Contractor	Date Submitted
905-764-9304	Beatty, Brian	3616		2012/03/02

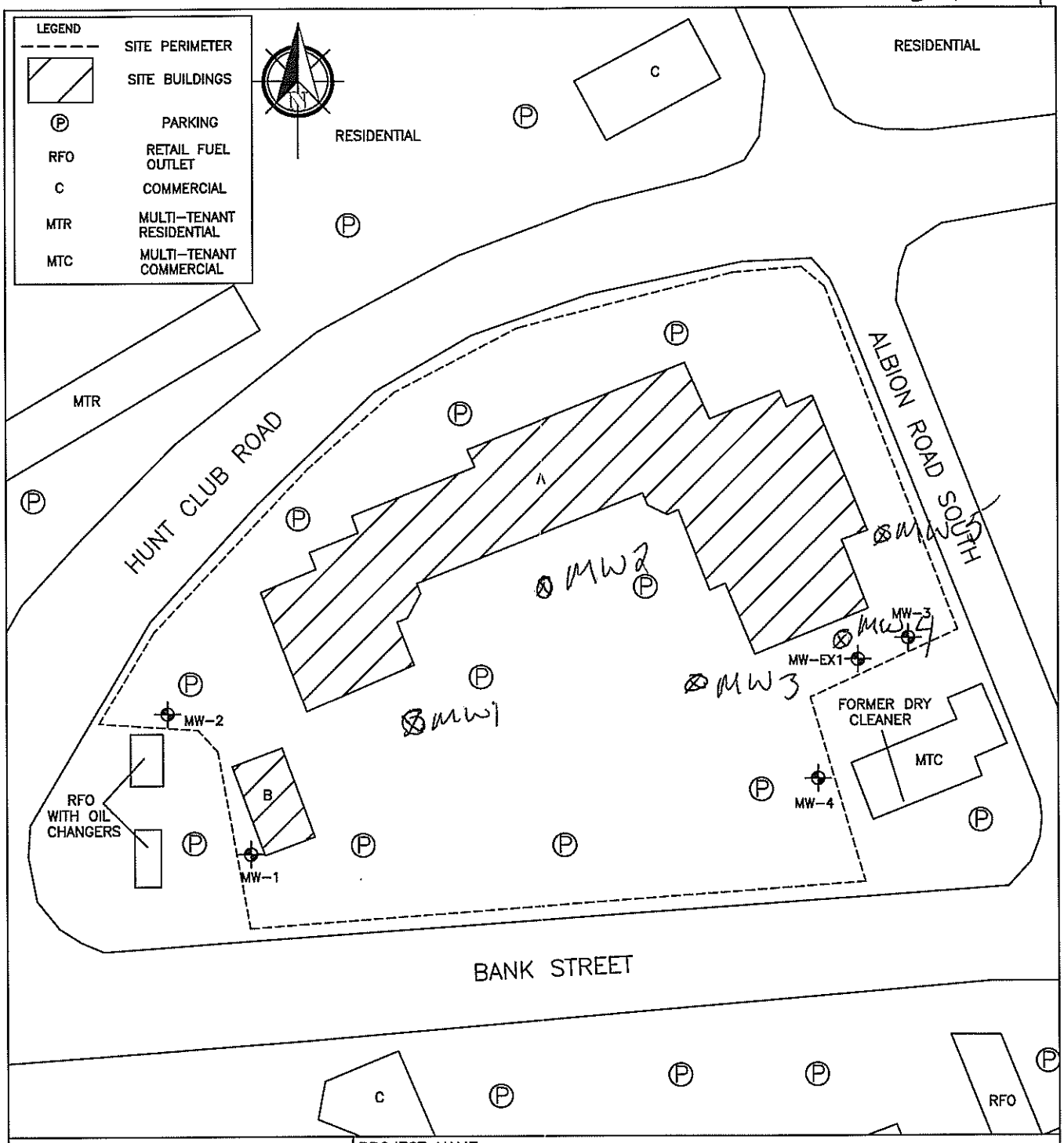
Well owner's information package delivered	Date Package Delivered	Date Work Completed
☐ Yes ☒ No		2012/02/21

Ministry Use Only

Audit No. Z146436

Received

S-12227



PROJECT NAME: PHASE I ENVIRONMENTAL SITE ASSESSMENT			
CLIENT NAME: RIOCAN REAL ESTATE INVESTMENT TRUST			
PROJECT LOCATION: 2515 BANK STREET, OTTAWA, ONTARIO			
DRAWING NAME: SITE AND SURROUNDING LAND USE PLAN			DRAWING NO. FIG. 2
SCALE: NTS	PROJECT NO.: 61608	DATE: SEPTEMBER 2010	

PINCHIN ENVIRONMENTAL

C-7241

2146436

S12227

Ontario — Ministry of the Environment

Measurements recorded in: ☑ Metric ☐ Imperial

Well Tag No. (Pl) A086684 **A 086684**

Well Record

Regulation 903 Ontario Water Resources Act

Page 1 of 2

Well Owner's Information

First Name	Last Name / Organization	E-mail Address	☐ Well Constructed by Well Owner
	Biocan Real Estate		

Mailing Address (Street Number/Name)	Municipality	Province	Postal Code	Telephone No. (inc. area code)
2300 Yonge St.	Toronto	ON	M4P 1E4	

Well Location

Address of Well Location (Street Number/Name)	Township	Lot	Concession
2513 Bank St.			

County/District/Municipality	City/Town/Village	Province	Postal Code
	Ottawa	Ontario	

UTM Coordinates	Zone	Easting	Northing	Municipal Plan and Sublot Number	Other
NAD 83	18	449478	5022548		

Overburden and Bedrock Materials/Abandonment Sealing Record *(see instructions on the back of this form)*

General Colour	Most Common Material	Other Materials	General Description	Depth (m/ft) From	Depth (m/ft) To
BLK	asphalt	gravel	loose	0	.31
BRN	sand	silt, stones	soft	.31	.91
GRY	silt	sand	soft	.91	4.57

Annular Space

Depth Set at (m/ft) From	To	Type of Sealant Used (Material and Type)	Volume Placed (m³/ft³)
0	.31	flushmount/concrete	
.31	1.22	bentonite	
1.22	4.57	filter sand	

Method of Construction

☐ Cable Tool ☐ Diamond
☐ Rotary (Conventional) ☐ Jetting
☐ Rotary (Reverse) ☐ Driving
☐ Boring ☐ Digging
☐ Air percussion
☐ Other, specify Direct Push

Well Use

☐ Public ☐ Commercial ☐ Not used
☐ Domestic ☐ Municipal ☐ Dewatering
☐ Livestock ☒ Test Hole ☐ Monitoring
☐ Irrigation ☐ Cooling & Air Conditioning
☐ Industrial
☐ Other, specify

Construction Record - Casing

Inside Diameter (cm/in)	Open Hole OR Material (Galvanized, Fibreglass, Concrete, Plastic, Steel)	Wall Thickness (cm/in)	Depth (m/ft) From	Depth (m/ft) To
4.02	PVC	.168	0	1.52

Construction Record - Screen

Outside Diameter (cm/in)	Material (Plastic, Galvanized, Steel)	Slot No.	Depth (m/ft) From	Depth (m/ft) To
4.83	PVC	10	1.52	4.57

Status of Well

☐ Water Supply
☐ Replacement Well
☒ Test Hole
☐ Recharge Well
☐ Dewatering Well
☐ Observation and/or Monitoring Hole
☐ Alteration (Construction)
☐ Abandoned, Insufficient Supply
☐ Abandoned, Poor Water Quality
☐ Abandoned, other, specify
☐ Other, specify

Water Details

Water found at Depth (m/ft)	Kind of Water	Water found at Depth (m/ft)	Kind of Water	Water found at Depth (m/ft)	Kind of Water
☐ Gas	☐ Fresh ☐ Untested ☐ Other, specify	☐ Gas	☐ Fresh ☐ Untested ☐ Other, specify	☐ Gas	☐ Fresh ☐ Untested ☐ Other, specify

Hole Diameter

Depth (m/ft) From	Depth (m/ft) To	Diameter (cm/in)
0	4.57	8.25

Results of Well Yield Testing

After test of well yield, water was:
☐ Clear and sand free
☐ Other, specify

If pumping discontinued, give reason:

Pump intake set at (m/ft)

Pumping rate (l/min / GPM)

Duration of pumping ____ hrs + ____ min

Final water level end of pumping (m/ft)

If flowing give rate (l/min / GPM)

Recommended pump depth (m/ft)

Recommended pump rate (l/min / GPM)

Well production (l/min / GPM)

Disinfected? ☐ Yes ☐ No

	Draw Down Time (min)	Draw Down Water Level (m/ft)	Recovery Time (min)	Recovery Water Level (m/ft)
Static Level				
1			1	
2			2	
3			3	
4			4	
5			5	
10			10	
15			15	
20			20	
25			25	
30			30	
40			40	
50			50	
60			60	

Map of Well Location

Please provide a map below following instructions on the back.

MW 2

See Map

Comments:

Well Contractor and Well Technician Information

Business Name of Well Contractor	Well Contractor's Licence No.
Strata Soil Sampling Inc.	7241

Business Address (Street Number/Name)	Municipality
147-2 West Beaver Creek Road	Richmond Hill

Province	Postal Code	Business E-mail Address
Ontario	L4B 1C6	wrecords@stratasoil.com

Bus. Telephone No. (inc. area code)	Name of Well Technician (Last Name, First Name)
905-764-9304	Beatty, Brian

Well Technician's Licence No.	Signature of Technician and/or Contractor	Date Submitted
3161		2012/03/02

Well owner's information package delivered ☐ Yes ☐ No

Date Package Delivered: YYYY MM DD

Date Work Completed: 2012/02/21

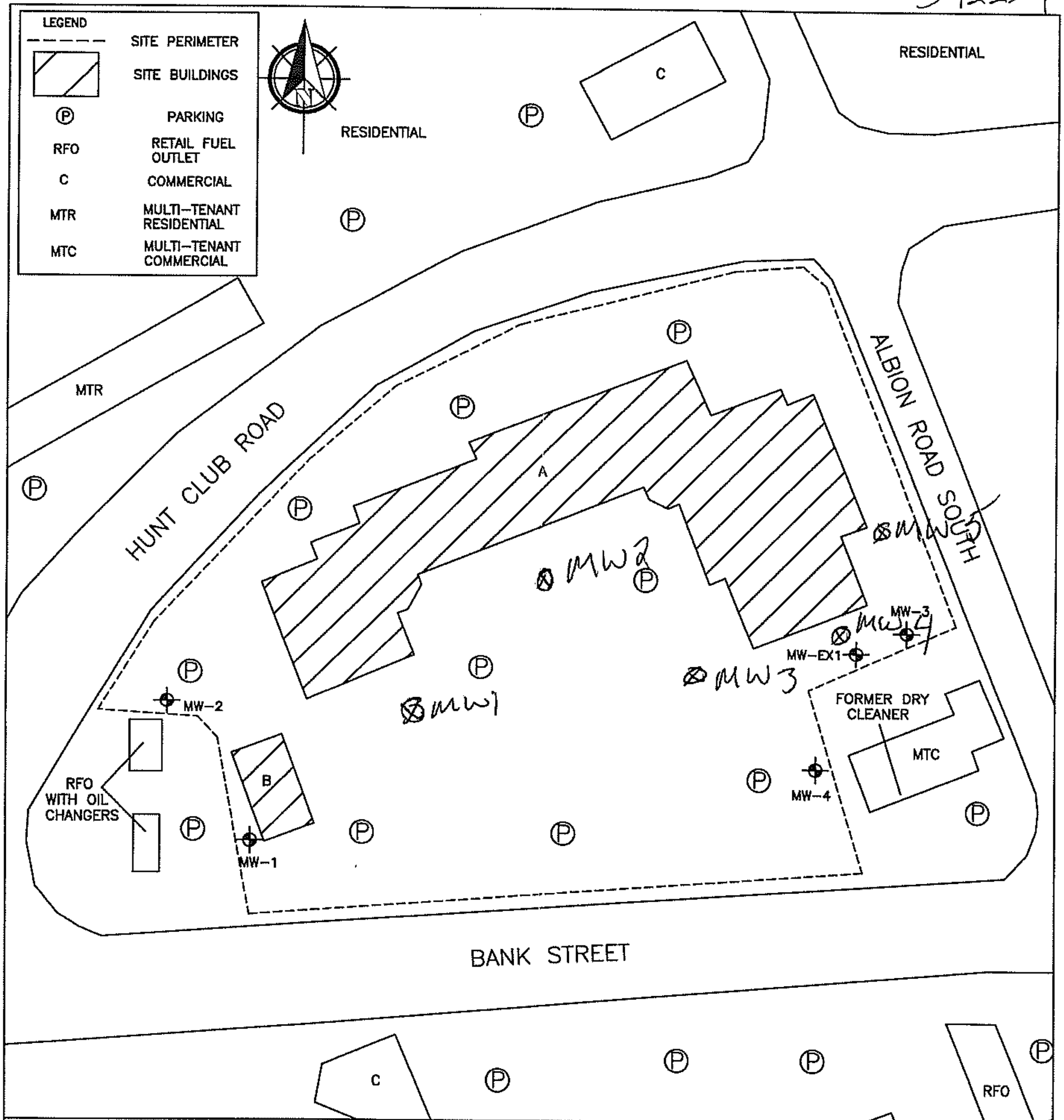
Ministry Use Only

Audit No. Z146435

Received MAY 10 2012

Page 6

S-12227



PROJECT NAME	PHASE I ENVIRONMENTAL SITE ASSESSMENT
CLIENT NAME	RIOCAN REAL ESTATE INVESTMENT TRUST
PROJECT LOCATION	2515 BANK STREET, OTTAWA, ONTARIO
DRAWING NAME	SITE AND SURROUNDING LAND USE PLAN
SCALE	NTS
PROJECT NO.	61608
DATE	SEPTEMBER 2010
DRAWING NO.	FIG. 2

PINCHIN ENVIRONMENTAL

C73411

2464355

patersongroup Consulting Engineers

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

Geotechnical Engineering
Environmental Engineering
Hydrogeology
Geological Engineering
Materials Testing
Building Science
Archaeological Services

www.patersongroup.ca

November 8, 2019
File: PE4793-HLUI

City of Ottawa
110 Laurier Avenue W
Ottawa, Ontario
K1P 1J1

Subject: **Authorization Letter, HLUI Search**
Phase I-Environmental Site Assessment
2425 Bank Street, Ottawa ON

Dear Sir or Madame,

Please consider this letter as confirmation that Paterson Group has been retained to conduct a Phase I-Environmental Site Assessment at the aforementioned property.

With this letter, the property owner authorizes the City of Ottawa and other regulatory bodies to release, to Paterson Group, information requested for the purpose of completing an environmental assessment of the property.

Name of Company/Property Owner:	ZLEPNIG HOLDINGS LIMITED
Name of Representative	FRED ZLEPNIG
Signature of Representative	
Date	Fred Zlepnig 2019.11.11 09:02:09 -05'00'

Mandy Witteman

From: Public Information Services <publicinformationservices@tssa.org>
Sent: November-11-19 11:17 AM
To: Mandy Witteman
Subject: RE: Search Records Request (PE4793) - Record Fuels

Follow Up Flag: Flag for follow up
Flag Status: Flagged

Hello,

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

Inst Number	Context	Address	City	Province	Postal Code	Inststatusname	Segment1
9766138	FS Facility	2471 BANK ST	OTTAWA	ON	K1V 8R9	Active	FS GASOLINE STATION - SELF SERVE
10090599	FS Facility	2471 BANK ST	OTTAWA	ON	K1V 8R9	EXPIRED	FS PROPANE CYLR HANDLING FACILITY
26279544	FS Facility	2471 BANK ST	OTTAWA	ON	K1V 8R9	Active	FS CYLINDER EXCHANGE
51269494	FS Liquid Fuel Tank	2471 BANK ST	OTTAWA	ON	K1V 8R9	Active	FS LIQUID FUEL TANK
10900502	FS Liquid Fuel Tank	2471 BANK ST	OTTAWA	ON	K1V 8R9	Active	FS LIQUID FUEL TANK
11317870	FS Liquid Fuel Tank	2471 BANK ST	OTTAWA	ON	K1V 8R9	Active	FS LIQUID FUEL TANK
11317892	FS Liquid Fuel Tank	2471 BANK ST	OTTAWA	ON	K1V 8R9	Active	FS LIQUID FUEL TANK

Effective November 1, 2017 TSSA requires that any requests for the release of public information, must complete the release for public information form. The release for public information form can be found at https://www.tssa.org/en/about-tssa/release-of-public-information.aspx?_mid_=392. Please complete the form (1 address per form) and email the completed form to 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,

Roxana

Public Information Agent
Facilities and Business Services
345 Carlingview Drive
Toronto, Ontario M9W 6N9
Tel: +1-416-734-6222 | Fax: +1-416-734-3568 | E-Mail: publicinformationservices@tssa.org
www.tssa.org

From: Mandy Witteman <MWitteman@Patersongroup.ca>
Sent: November 8, 2019 4:45 PM
To: Public Information Services <publicinformationservices@tssa.org>
Subject: Search Records Request (PE4793)

Good afternoon,

Could you please complete a search of your records for **underground/aboveground storage tanks, historical spills or other incidents/infractions** for the following addresses in **Ottawa, ON:**

Bank St: 2425, 2471, 2495, 2446, 2400, 2430,
Hunt club Rd: 1351
Thank you.

Cheers,

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

patersongroup
solution oriented engineering
over 60 years servicing our clients

154 Colonnade Road South
Ottawa, Ontario, K2E 7J5

Tel: (613) 226-7381 Ext. 339
Cell: (403) 921-1157

APPENDIX 3

QUALIFICATIONS OF ASSESSORS

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

POSITION

Intermediate Environmental Engineer

EDUCATION

Carleton University
M.A.Sc., Environmental Engineering, 2013
B.Eng., Environmental Engineering, 2008

MEMBERSHIPS & AWARDS

Ontario Professional Engineers Association (EIT)
NSERC Industry R&D Scholarship

EXPERIENCE

2018 – Present
Paterson Group Inc.
Consulting Engineers
Geotechnical and Environmental Division
Environmental Engineer

2014 – 2015
Thurber Engineering Limited
Oil Sand Tailings Group
Tailings Engineer

2009 – 2014
Carleton University
Department of Civil & Environmental Engineering
Research Engineer, Research Assistant & Teaching Assistant

2008 – 2009
SLR Consulting Limited
Contaminated Sites
Junior Environmental Engineer

SELECTED LIST OF PROJECTS

Phase I & II Environmental Site Assessments – NRC, Kingston
Remediation – National Capital Region, Saskatchewan
Multi-lift and dry-stacking pilot programs – Northern Alberta
Polymer amended oil sand tailings – Northern Alberta
Hydraulic cut-off wall – Allen, Saskatchewan
Cemented paste backfill systems – Northern Ontario

Mark S. D'Arcy, P. Eng.

patersongroup

Geotechnical Engineering

Environmental Engineering

Hydrogeology

Geological Engineering

Materials Testing

Building Science

Archaeological Services

POSITION

Associate and Supervisor of the Environmental Division
Senior Environmental/Geotechnical Engineer

EDUCATION

Queen's University, B.A.Sc.Eng, 1991
Geotechnical / Geological Engineering

MEMBERSHIPS

Ottawa Geotechnical Group
Professional Engineers of Ontario

EXPERIENCE

1991 to Present
Paterson Group Inc.
Associate and Senior Environmental/Geotechnical Engineer
Environmental and Geotechnical Division
Supervisor of the Environmental Division

SELECT LIST OF PROJECTS

Mary River Exploration Mine Site - Northern Baffin Island
Agricultural Supply Facilities - Eastern Ontario
Laboratory Facility – Edmonton (Alberta)
Ottawa International Airport - Contaminant Migration Study - Ottawa
Richmond Road Reconstruction - Ottawa
Billings Hurdman Interconnect - Ottawa
Bank Street Reconstruction - Ottawa
Environmental Review – Various Laboratories across Canada - CFIA
Dwyer Hill Training Centre – Ottawa
Nortel Networks Environmental Monitoring - Carling Campus – Ottawa
Remediation Program - Block D Lands – Kingston
Investigation of former landfill sites – City of Ottawa
Record of Site Condition for Railway Lands – North Bay
Commercial Properties – Guelph and Brampton
Brownfields Remediation – Alcan Site - Kingston
Montreal Road Reconstruction - Ottawa
Appleford Street Residential Development - Ottawa
Remediation Program - Ottawa Train Yards
Remediation Program - Bayshore and Heron Gate
Gladstone Avenue Reconstruction – Ottawa
Somerset Avenue West Reconstruction - Ottawa