Geotechnical Engineering

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Materials Testing

Building Science

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Phase I Environmental Site Assessment

114 Isabella Street
Ottawa, Ontario

Prepared For

2702021 Ontario Inc.

August 30, 2019

Report: PE4701-1

Paterson Group Inc.

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EXECUTIVE SUMMARY

Assessment

Paterson Group was retained by 2702021 Ontario Inc. to conduct a Phase I Environmental Site Assessment (Phase I-ESA) on 114 Isabella Street, in the City of Ottawa, Ontario. The purpose of this Phase I – Environmental Site Assessment was to research the past and current use of the site and study area and to identify any environmental concerns with the potential to have impacted the subject properties.

Based on the historical research, the subject site was developed with a single residential structure circa 1888 and remained as a residence until it was demolished during a fire in 2003. Since then, the site has remained vacant. The demolition of the former on-site residence was considered to represent a potentially contaminating activity (PCA) due to the presence of potential fill material of unknown quality.

Historically, neighbouring lands consisted of residential, commercial with some light-industrial uses. Several PCAs were identified, however the majority of them were not considered to pose a concern to the subject site. Two (2) PCAs were identified in the immediate area of the Phase I Property: a former machine shop at 100 Isabella Street and an automotive body shop at 120 Isabella Street (461 O'Connor Street).

Based on a previous Phase II ESA conducted by Kollaard Associates Inc. (Kollaard) in 2013, the potential presence of impacted fill material on-site, the presence of a former machine shop and presence of an automotive body shop were addressed as areas of potential environmental concern (APECs) on the Phase I Property. Several tests pits and one monitoring boreholes ll were placed on-site to investigate these APECs. Soil samples were submitted for BTEX, PHCs, PAHs and metals analysis. Based on the test results, impacted fill material was identified within the vicinity of the former dwelling. Groundwater samples were submitted for BTEX, PHCs and PAH analysis. The test results did not detect any groundwater impact.

Following the historical review, a site visit was conducted. The subject property is vacant with no buildings or structures noted. At the time of the site visit, the site was used for parking and storage of trailers and c-cans. No additional PCAs were identified with the current use of the Phase I Property or lands within the Study Area. Therefore, no areas of potential environmental concern with respect to the Phase I Property were identified. **No further Phase II ESA is recommended at this time.**

Recommendations

Impacted fill material was identified at 114 Isabella Street in the 2013 Phase II ESA prepared by Kollaard. The fill material encountered during the subsurface investigation is considered to be contaminated, particularly from an off-site disposal standpoint. The fill material was observed to contain various building debris (e.g. glass, concrete, wood etc.) that will require disposal at an approved disposal facility during site development.

Prior to the disposal of the impacted fill, at Toxicity Characteristic Leaching Procedure (TCLP) will need to be carried out on a representative fill sample to confirm its suitability for disposal at an approved waste disposal facility.

1.0 INTRODUCTION

At the request of Mr. Chris Allard of 2702021 Ontario Inc., Paterson Group (Paterson) conducted a Phase I Environmental Site Assessment (Phase I ESA) for 114 Isabella Street, in the City of Ottawa, Ontario. The purpose of this Phase I ESA was to research the past and current use of the site and study area and to identify any environmental concerns with the potential to have impacted the subject property.

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

This Phase I-ESA report has been prepared in general accordance with the requirements of Ontario Regulation 153/04, as amended, 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:	114 Isabella Street, Ottawa, Ontario.
Property Identification Number:	04123-0086.
Location:	The subject site is situated on the south side of Isabella Street, 65m northeast of the intersection between Isabella Street and O'Conner Street.
Latitude and Longitude:	45° 24' 35" N, 75° 41' 17" W;

Site Description:

Configuration:	Rectangular.
Site Area:	350 m^2 (approximate).
Zoning:	GM4 – General Mixed Use 4th Density.
Current Use:	The subject site is currently vacant with no permanent structures or usage.
Services:	The subject site is located in a municipally serviced area.

3.0 SCOPE OF INVESTIGATION

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

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

4.0 RECORDS REVIEW

4.1 General

Phase I-ESA Study Area Determination

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

First Developed Use Determination

Based on the 1888 Fire Insurance Plans, the Phase I Property was occupied by a residential dwelling. For the purpose of this assessment, the first developed land use of the Phase I Property was residential in 1888.

Fire Insurance Plans

Fire Insurance Plans (FIPs) from 1888, 1912, 1925 and 1956 were reviewed for the Phase I Study Area. The 1888 – 1956 FIPs depict the subject land as being occupied by a residential dwelling.

Based on the FIPs, several Potentially Contaminating Activities (PCAs), as shown in Table 1, were identified within the Phase I Study Area.

Table 1: FIP – Potentially Contaminating Activities (PCA) in Phase I Study Area

Address	Years listed	Activity	Distance / Orientation from site
110 Isabella Street	1925-1956	Vendall machine shop; soft drinks cabinet assembly	Immediately east
North of Isabella Street	1912-1925	Coal storage bins	18m north
Isabella Street at O'Connor Street	1912	Planning mill at the intersection between Isabella Street and O'Conner Street	20m west
North of Isabella Street	1888-1956	Grand Trunk Railway / Canadian National Railway	22m north
136 Isabella Street	1925-1956	Coal Shed	70m west
Isabella Street at Metcalfe Street	1912	Planing mill at the intersection between Isabella Street and Metcalfe Street	90m east
Isabella Street at Metcalfe Street	1888	Ottawa Porcelain and Carbon Co.	130m east
Isabella Street at Metcalfe Street	1912	Planing and cabinet making	130m east
132 Catherine Street	1925-1956	"Greasing" and oil warehouse	140 m west
132 Catherine Street	1925-1956	Gasoline service station (2 USTs)	150m west
Isabella Street at Bank Street	1956	The Samuel Rodgers Oil Company	200m west

The off-site PCAs identified in the FIPs review are not considered to generate Areas of Potential Environmental Concern APECs on the Phase I Property, based on the separation distances and/or orientation with respect to the subject site.

The presence of a former machine shop at 100 Isabella Street is not considered an APEC on the Phase I Property, since this PCA was addressed in a previous Phase II ESA, conducted by Kollaard in 2013. Furthermore, a Record of Site Condition (RSC) was filed for 110 Isabella Street in 2005. Based on information contained in the previous Phase II ESA report combined with the RSC, the former machine shop represents a former PCA that does not result in an APEC on the Phase I Property. More information regarding the 2013 Phase II ESA has been provided in the Previous Engineering Reports section.

City of Ottawa Street Directories

City directories at the National Archives were reviewed in approximate 10-year intervals from 1890 to 2010 as part of the Phase I ESA.

The subject site was first listed in the directories as a residenence in 1890 and remained as a residence. No concerns were identified with the past use of the subject site during the directories review.

Several PCAs were identified within the study area and have been summarized in Table 2.

Table 2: City Directories – Potentially Contaminating Activities (PCA) in Phase I Study Area

Address	Years listed	Activity	Distance / Orientation from site
120 Isabella Street	2010	Elie Auto Body Collision Repair & Paint	10 m West
120 Isabella Street	1989	Superior Auto Body Ltd.	10 m West
120 Isabella Street	1980	Atlantica Body Shop	10 m West
120 Isabella Street	1970	Robitaille Dan Body Shop	10 m West
120 Isabella Street	1970	Corrigan's Garage	10 m West
461 O'Conner Street	2010	Griffin Automotive Services Ltd.	10m west
140-142 Pretoria Avenue	1910-1940	Fire station No 9	95m south
437-443 O'Conner Street	1930-1949	National Printers Ltd.	120m west
158 Isabella Street	1940	Morrison Lamothe Ltd Garage	125m west
182 Isabella Street	1949-1960	Harrison Geo P Ltd. Coal, fuel, oil, burners	200m west

The off-site PCAs identifed in the city directories review are not considered to generate Areas of Potential Environmental Concern APECs on the Phase I Property, based on the separation distances and/or orientation with respect to the subject site.

The presence of the automotive body shop at 120 Isabella Street was not considered an APEC on the Phase I Property, since this PCA was addressed in a previous Phase II ESA, conducted by Kollaard in 2013. Based on information contained in the previous Phase II ESA report, the automotive body shop is considered a former PCA that does not result in an APEC on the Phase I Property. More information regarding the 2013 Phase II ESA has been provided in the Previous Engineering Reports section.

Previous Engineering Reports

- "Phase II Environmental Site Assessment – 114 Isabella Street, City of Ottawa, Ontario," prepared by Kollaard Associates Inc. (Kollaard), dated November 25, 2013.

Based on the Phase II ESA report, Kollaard conducted a Phase I ESA in June 2013 that identified three (3) potentially contaminating activities (PCAs) that resulted in areas of potential environmental concern (APECs) on the subject land. These PCAs include on-site presence of fill material containing building debris from the former dwelling, the presence of a former machine shop on the property immediately east at 100 Isabella Street (formerly 110 Isabella Street) and the presence of an automotive body shop on a property to the west at 120 Isabella Street.

The aforementioned APECS were addressed in the Phase II ESA work, which consisted of drilling two (2) boreholes and seven (7) test pits. The boreholes were placed along the eastern property edge, while the test pits were placed to obtain general coverage of the site. One borehole (northeast corner) was completed as a monitoring well.

Twelve (12) soil samples were submitted for BTEX, PHCs (fractions, F1-F4), PAHs and metals analysis. BTEX, PHCs and PAHs test parameters were in compliance with the selected MECP standards. The analytical results indicated however, that there are potential metal impacts (cobalt and vanadium) in the fill material. Based on the soil results, the underlying native silty clay material had not been impacted and therefore, contamination is confined only in the fill layer.

Two (2) groundwater samples were submitted for BTEX, PHCs and PAH analysis. Based on the test results, the groundwater samples were in compliance with the selected MECP standards.

Based on the Phase II, metal impacted fill material is present on-site. Fill material encountered during the subsurface investigation contained building debris, such as glass, concrete, wood, bricks, etc.) and is therefore considered contaminated and will require off-site disposal during development.

As for the remaining two (2) APECs on-site: the presence of the adjacent former machine shop (110 Isabella Street) and presence of a neighbouring automotive body shop (120 Isabella Street) have been addressed and are considered former PCAs that no longer represent APECs on the Phase I Property.

4.2 Environmental Source Information

Environment and Climate Change Canada

A search of the National Pollutant Release Inventory (NPRI) was conducted electronically on July 31, 2019. The subject site was not listed in the NPRI database. No records of pollutant release were listed in the database for properties located within the Phase I Study Area.

Areas of Natural and Scientific Interest (ANSI)

A search for areas of natural significance and features within the Phase I study area was conducted on the web site of the Ontario Ministry of Natural Resources (MNR) on July 31, 2019. The search did not reveal any natural features or areas of natural significance within the Phase I study area.

PCB Inventory

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

Ontario Ministry of Environment (MECP) Instruments

A request was submitted to the MECP Freedom of Information (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 information with respect to certificates of approval, permits to take water, certificates of property use or any other similar MECP issued instruments were issued in relation to the subject site or

neighbouring properties. A copy of the MECP FOI response is appended to this report.

MECP Incident Reports

A request was submitted to the MECP Freedom of Information office for information with respect to records concerning environmental incidents, orders, offences, spills, discharges of contaminants or inspections maintained by the MECP for the site or adjacent properties. Based on the MECP response, no information with respect to records concerning environmental incidents, orders, offences, spills, discharges of contaminants or inspections were reported for the subject site or neighbouring properties. A copy of the MECP FOI response is appended to this report.

MECP Waste Management Records

A request was submitted to the MECP Freedom of Information office for information with respect to waste management records. At the time of issuance of this report, a response had not been received. Based on the MECP response, no information was provided regarding waste management records in relation to the subject site or neighbouring properties. A copy of the MECP FOI response is appended to this report.

MECP Submissions

A request was submitted to the MECP Freedom of Information office for information with respect to reports related to environmental conditions have been submitted to the MECP. Based on the MECP response, no information was provided regarding environmental conditions in relation to the subject site or neighbouring properties. A copy of the MECP FOI 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. No Record of Site Condition (RSC) was found for the subject site, however, two (2) RSCs were identified within the study area for 100 Isabella Street and 424 Metcalfe Street.

The RSC property at 100 Isabella Street is located immediately east of the subject site. According to the ESR website, approximately 3600 cubic meters of contaminated soil was removed off-site, as well as soil within 3 meters of the RSC Property boundary. No groundwater treatment was required.

Based on the reported maximum concentrations for soil and groundwater, this RSC Property is not considered to pose a risk to the Phase I Property.

The RSC property at 424 Metcalfe Street is located 125 m north of the subject site. Based on the separation distance, and information provided on the ESR website, this RSC property is not considered to pose concern to the Phase I Property.

MECP Waste Disposal Site Inventory

The Ontario Ministry of Environment document titled "Waste Disposal Site Inventory in Ontario, 1991" was reviewed as part of the historical research. This document includes all recorded active and closed waste disposal sites, industrial manufactured gas plants and coal tar distillation plants in the Province of Ontario. No waste disposal sites were identified within the Phase I study area.

MECP Coal Gasification Plant Inventory

The Ontario Ministry of Environment document titled "Municipal Coal Gasification Plant Site Inventory, 1991" was reviewed to reference the locations of former plants with respect to the site. No coal gasification plants were identified within the Phase I study area.

Technical Standards and Safety Authority (TSSA)

The TSSA, Fuels Safety Branch in Toronto, was contacted on July 31, 2019 to inquire about current and former underground/aboveground storage tanks, spills and incidents for the subject and neighbouring properties. No records were found for the subject site or surrounding area.

City of Ottawa Landfill Document

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

City of Ottawa Historical Land Use Inventory

A search of the City’s Historical Land Use Inventory (HLUI 2005) database for the subject property was conducted as part of the Phase I ESA. At the time of issuance of this report, a response had not been received. A copy of the response will be forwarded to the client, should it contain any pertinent information.

Former Industrial Sites

The report entitled "Mapping and Assessment of Former Industrial Sites, City of Ottawa" prepared by Intera Technologies Limited was reviewed. Three (3) former industrial sites were identified within the vicinity of the subject property, as presented in Table 3.

Table 3: Former Industrial Sites

Site No.	Address	Type of Industry	Operator	Approx. Distance from Subject Site
35	439-443 O'Connor Street	Printing, publishing and allied industries	National Printers Ltd.	120m north
30	Corner of Isabella Street and Metcalfe Street	Commercial printing industries	Dominion Loose Leaf Co. Ltd.	130m east
31	Corner of Isabella Street and Metcalfe Street	Refined petroleum and coal products	Ottawa Porcelain & Carbon Co.	130m east

Based on their separation distance from the subject property, the former industrial sites are not considered to result in APECs on the Phase I Property.

4.3 Physical Setting Sources

Aerial Photographs

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

1928 The subject site appears to be occupied by a single residential building. The subject site lies within a residential city block on the south side of Isabella Street. South of Isabella Street the land appears to be mostly residential in use while the Canadian National Railway lies to the north of Isabella Street.

1958 No significant changes have been made to the subject site. Immediately east of the site, the building has been extended however generally little significant redevelopment has occurred south of Isabella Street. North of Isabella Street, numerous buildings associated with the railway have been demolished.

1965 No significant changes have been made to the subject site. Further extension of the building immediately east of the subject site has occurred. Many of the properties fronting onto Isabella Street have been removed and replaced with larger buildings or parking lots. Properties fronting onto and south of Pretoria Avenue appear to remain residential in nature. North of Isabella Street, the railway has been demolished and the Highway No 417 is under construction.

1976 No significant changes have been made to the subject site. At the intersection between Isabella Street and O'Conner Street, a high rise office block has been constructed occupying the block between Isabella Street and Pretoria Avenue. Elsewhere along Isabella Street commercial buildings have been developed. To the north, the Highway No 417 is complete at this time.

1991 No significant changes have been made to the subject site. Further commercial development occurred along Isabella Street.

2002 No significant changes have been made to the subject site or surrounding properties.

2005 (Not appended) The building occupying the subject site has been demolished.

2011 No significant changes have been made to the subject site. The land immediately east of the subject site, has been redeveloped with an apartment building.

2017 No significant changes have been made to the subject site or surrounding properties.

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

Topographic Maps

Topographic maps were obtained from Natural Resources Canada - The Atlas of Canada website. The topographic maps indicate that the subject site and surrounding area slopes down gently to the east. An illustration of the referenced topographic map is presented in Figure 2 - Topographic Map following the body of this report.

Physiographic Maps

A Physiographic Map was reviewed from the Natural Resources Canada - The Atlas of Canada website. According to this physiographic map, the site is located in the St. Lawrence Lowlands. According to the mapping description provided: "The lowlands are plain-like areas that were all affected by the Pleistocene glaciations and are therefore covered by surficial deposits and other features associated with the ice sheets." The subject site is located in the Central St. Lawrence Lowland, "where the land is rarely more than 150 m above sea level, except for the Monteregian Hills, which consist of intrusive igneous rocks".

Geological Maps

The Geological Survey of Canada website on the Urban Geology of the National Capital Area was consulted as part of this assessment. Based on the information from NRCAN, bedrock in the area of the site consists of shale, limestone, dolostone and siltstone of the Billings Formation. Based on available information, the thickness of overburden is anticipated to be around 18-20 m and consists of glacio-marine sediments.

Water Well Records

A search of the MECP's web site for all drilled well records within 250 m of the subject site was conducted on July 30, 2019. The search identified nine (9) records in the subject area, dating from 2007 to 2017, all comprising monitoring wells.

The nearest well is located approximately 100m north of the subject site. No indication of contamination was recorded in any of the records. Given the municipally supplied area, water supply wells are not expected in the subject area.

Based on the well records, the stratigraphy in the area of the subject site consists of fill material, underlain by silty clay or clay, followed by silt. Bedrock was not encountered in the area. A copy of the well records are appended to this report (Appendix 2).

Water Bodies and Areas of Natural Significance

There are no waterbodies or areas of natural and scientific interest on the subject site or within the study area.

5.0 INTERVIEWS

The property owner could not be contacted for comment regarding the history of the property.

6.0 SITE RECONNAISSANCE

6.1 General Requirements

The site assessment was conducted on August 1, 2019. Weather conditions were sunny, with a temperature of approximately 28 °C. Mr. Philip Price from the Environmental Department of Paterson Group conducted the site visit. In addition to the site, the uses of neighbouring properties within the Phase I study area were also assessed at the time of the site reconnaissance.

6.2 Specific Observations at the Phase I Property

Buildings and Structures

There are no buildings on the Phase I Property.

Site Features

The subject property is vacant with no buildings or structures noted. At the time of the site visit the site was used for parking and storage of two trucks, two trailers and two locked shipping containers (c-cans). The site is surfaced with gravel and in parts is overgrown with self-seeded grass and weeds.

Site drainage consists of infiltration and sheet flow to Isabella Street. Both the subject site and surrounding properties appear flat and level.

No evidence of recent excavation, fill placement or observation/monitoring wells was observed on the subject property. No evidence of current or former railway or spur lines on the subject property was observed at the time of the site visit. There were no unidentified substances observed on the exterior of the subject site. The above-noted site features are shown on Drawing PE4701-1 - Site Plan.

Potentially Contaminating Activities

No potentially contaminating activities were observed at the site at the time of this assessment.

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 - Isabella Street followed by vacant grassed land with the Highway No 417 beyond.
- South - Residential land followed by Pretoria Avenue and further residential land beyond.
- East - Residential condominiums and assisted living residences followed by Metcalfe Street.
- West - Commercial land (fast food restaurant and Auto Body Collision Repair & Paint) followed by O'Conner Street with high rise commercial (office and retail) land beyond.

Land use within the Phase I study area is shown on Drawing PE4701-2 - Surrounding Land Use Plan. During the walkover, an approximately 1000 litre above ground storage tank (AST) was noted at 461 O'Conner Street, associated with Griffin Automotive Services Ltd. No staining was noted around the tank. Though this feature represents a PCA, it is not considered to have the potential to impact the subject site based on the distance from the subject site.

7.0 REVIEW AND EVALUATION OF INFORMATION

7.1 Land Use History

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

Table 4: Current and Past Use of the Phase I ESA Property
114 Isabella Street

Year	Property Owner	Description of Property	Property Use	Other Observations from FIPs, Aerial Photographs, Directories, etc.
Prior to 1888	Unknown	Unknown	Residential use	1888 FIPs
1888-2003	Various private individuals	Residential	Residential use	City Directories, Kollaard 2013 Phase II ESA Report
2003-2019	Private Individuals and possibly others Ashlar Homes	Vacant	Vacant	Aerial photographs Kollaard 2013 Phase II ESA Report
2019-present	Unknown	Vacant	Vacant	No information available

Potentially Contaminating Activities and Areas of Potential Environmental Concern

Nineteen (19) PCAs were identified within the study area. Based on separation distances, orientation and/or previous analytical results from the on-site Phase II ESA (Kollaard, 2013), none of the identified PCAs are considered to represent APECs on the Phase I Property. The location of these PCAs are depicted in green on Drawing PE4601-2 –Surrounding Land Use Plan, in the Figures section of this report.

Contaminants of Potential Concern (CPC)

No Contaminants of Potential Concern (CPCs) were identified on the subject site.

7.2 Conceptual Site Model

Geological and Hydrogeological Setting

Based on the information from NRCAN, bedrock in the area of the site consists of shale, limestone, dolostone and siltstone of the Billings Formation. Based on

available information, the thickness of overburden is anticipated to be around 18-20 m and consists of glacio-marine sediments.

Groundwater flow is interpreted to be in a north to northwesterly direction.

Contaminants of Potential Concern

As per Section 7.1 of this report, no Contaminants of Potential Concern (CPCs) were identified on the subject site.

Existing Buildings and Structures

Water Bodies and Areas of Natural Significance

No water bodies or areas of natural significance were identified on the Phase I Property. The Rideau Canal is the closest water body and is located approximately 390 m southeast of the Phase I Property.

Drinking Water Wells

Records of nine (9) wells were found in the study area all comprising monitoring wells, dating from 2007 to 2017.

The nearest well is located approximately 100m north of the subject site. No indication of contamination was recorded in any of the records.

Given the municipally supplied area, water supply wells are not expected in the subject area.

Neighbouring Land Use

Neighbouring land use in the Phase I Study Area consists of residential and commercial properties. Land use is shown on Drawing PE4701-2 Surrounding Land Use Plan.

Potentially Contaminating Activities and Areas of Potential Environmental Concern

As per Section 7.1 of this report, nineteen (19) PCAs were identified within the Phase I Study Area; however, as discussed previously, they do not represent areas of potential environmental concern 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 APECs on the Phase I 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 2702021 Ontario Inc. to conduct a Phase I Environmental Site Assessment (Phase I-ESA) on 114 Isabella Street, in the City of Ottawa, Ontario. The purpose of this Phase I – Environmental Site Assessment was to research the past and current use of the site and study area and to identify any environmental concerns with the potential to have impacted the subject properties.

Based on the historical research, the subject site was developed with a single residential structure circa 1888 and remained as a residence until it was demolished during a fire in 2003. Since then, the site has remained vacant. The demolition of the former on-site residence was considered to represent a potentially contaminating activity (PCA) due to the presence of potential fill material of unknown quality.

Historically, neighbouring lands consisted of residential, commercial with some light-industrial uses. Several PCAs were identified, however the majority of them were not considered to pose a concern to the subject site. Two (2) PCAs were identified in the immediate area of the Phase I Property: a former machine shop at 100 Isabella Street and an automotive body shop at 120 Isabella Street (461 O'Connor Street).

Based on a previous Phase II ESA conducted by Kollaard Associates Inc. (Kollaard) in 2013, the potential presence of impacted fill material on-site, the presence of a former machine shop and presence of an automotive body shop were addressed as areas of potential environmental concern (APECs) on the Phase I Property. Several tests pits and one monitoring boreholes ll were placed on-site to investigate these APECs. Soil samples were submitted for BTEX, PHCs, PAHs and metals analysis. Based on the test results, impacted fill material was identified within the vicinity of the former dwelling. Groundwater samples were submitted for BTEX, PHCs and PAH analysis. The test results did not detect any groundwater impact.

Following the historical review, a site visit was conducted. The subject property is vacant with no buildings or structures noted. At the time of the site visit, the site was used for parking and storage of trailers and c-cans. No additional PCAs were identified with the current use of the Phase I Property or lands within the Study

Area. Therefore, no areas of potential environmental concern with respect to the Phase I Property were identified. **No further Phase II ESA is recommended at this time.**

Recommendations

Impacted fill material was identified at 114 Isabella Street in the 2013 Phase II ESA prepared by Kollaard. The fill material encountered during the subsurface investigation is considered to be contaminated, particularly from an off-site disposal standpoint. The fill material was observed to contain various building debris (e.g. glass, concrete, wood etc.) that will require disposal at an approved disposal facility during site development.

Prior to the disposal of the impacted fill, at Toxicity Characteristic Leaching Procedure (TCLP) will need to be carried out on a representative fill sample to confirm its suitability for disposal at an approved waste disposal facility.

9.0 STATEMENT OF LIMITATIONS

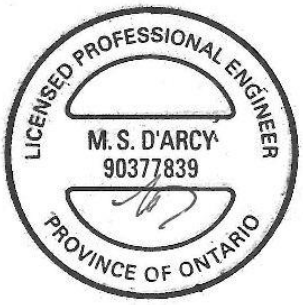
This Phase I - Environmental Site Assessment report has been prepared in general accordance with O.Reg. 153/04, as amended, and meets the requirements of CSA Z768-01. The conclusions presented herein are based on information gathered from a limited historical review and field inspection program. The 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 differs from our findings, we request that we are notified immediately in order to allow for a reassessment.

This report was prepared for the sole use of 2702021 Ontario Inc. Permission and notification from the above-noted party and Paterson will be required to release this report to any other party.

Paterson Group Inc.

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



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

Report Distribution:

- ❑ 2702021 Ontario Inc.
- ❑ Paterson Group

10.0 REFERENCES

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

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

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

Local Information Sources
Personal Interviews.

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

FIGURES

FIGURE 1 – KEY PLAN

FIGURE 2 – TOPOGRAPHIC MAP

DRAWING PE4701-1 – SITE PLAN

DRAWING PE4701-2 – SURROUNDING LAND USE PLAN

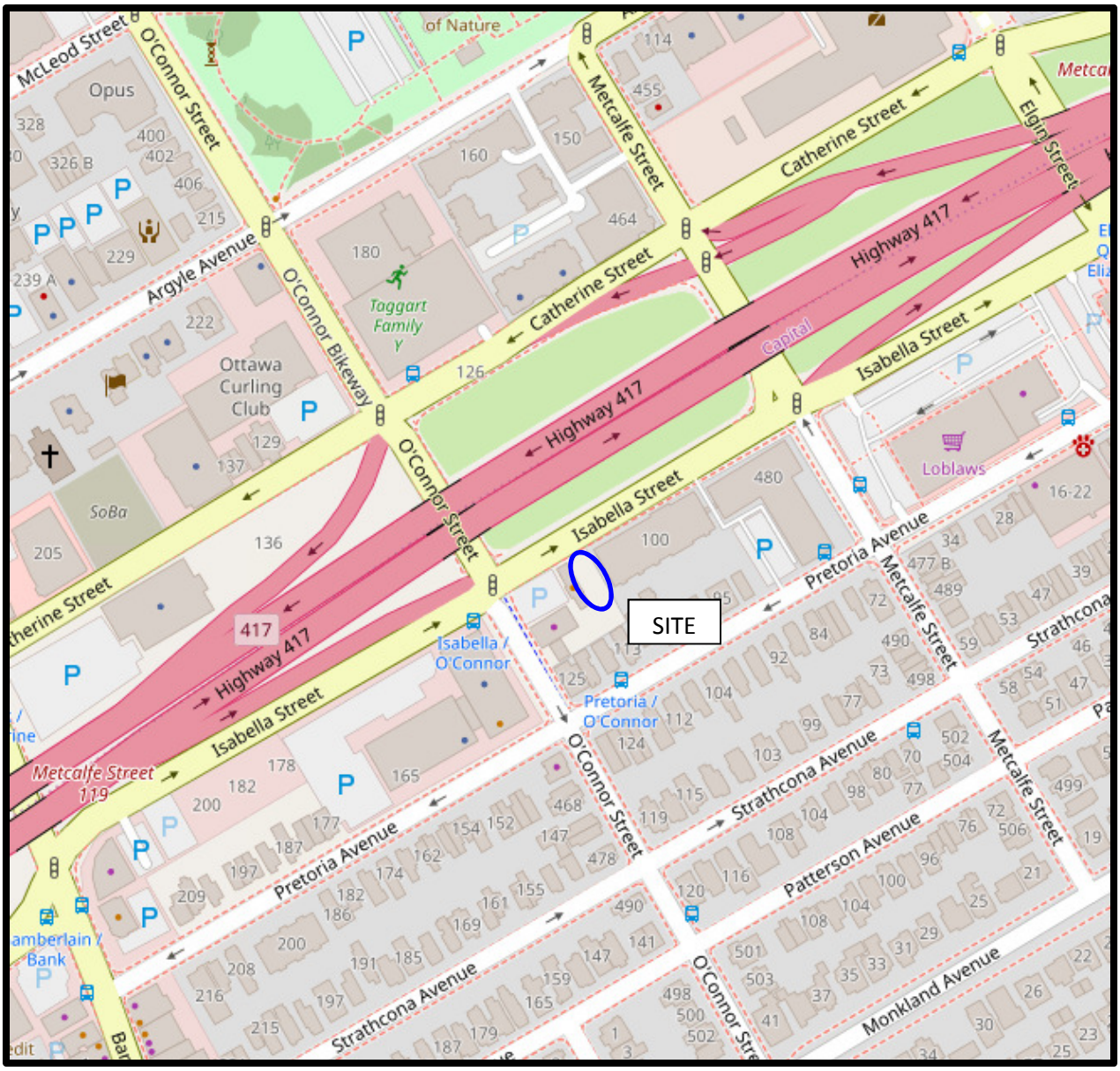


FIGURE 1

KEY PLAN

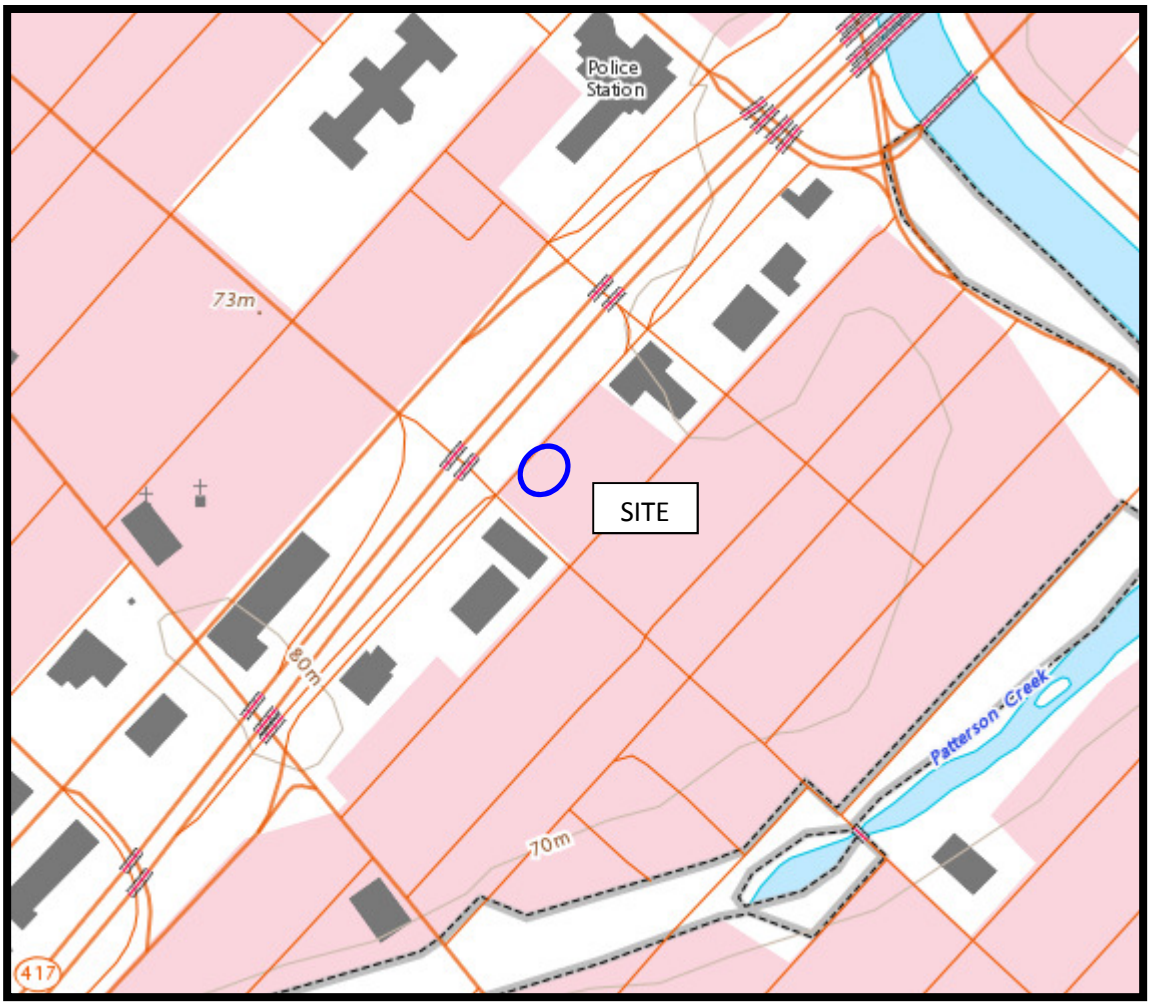
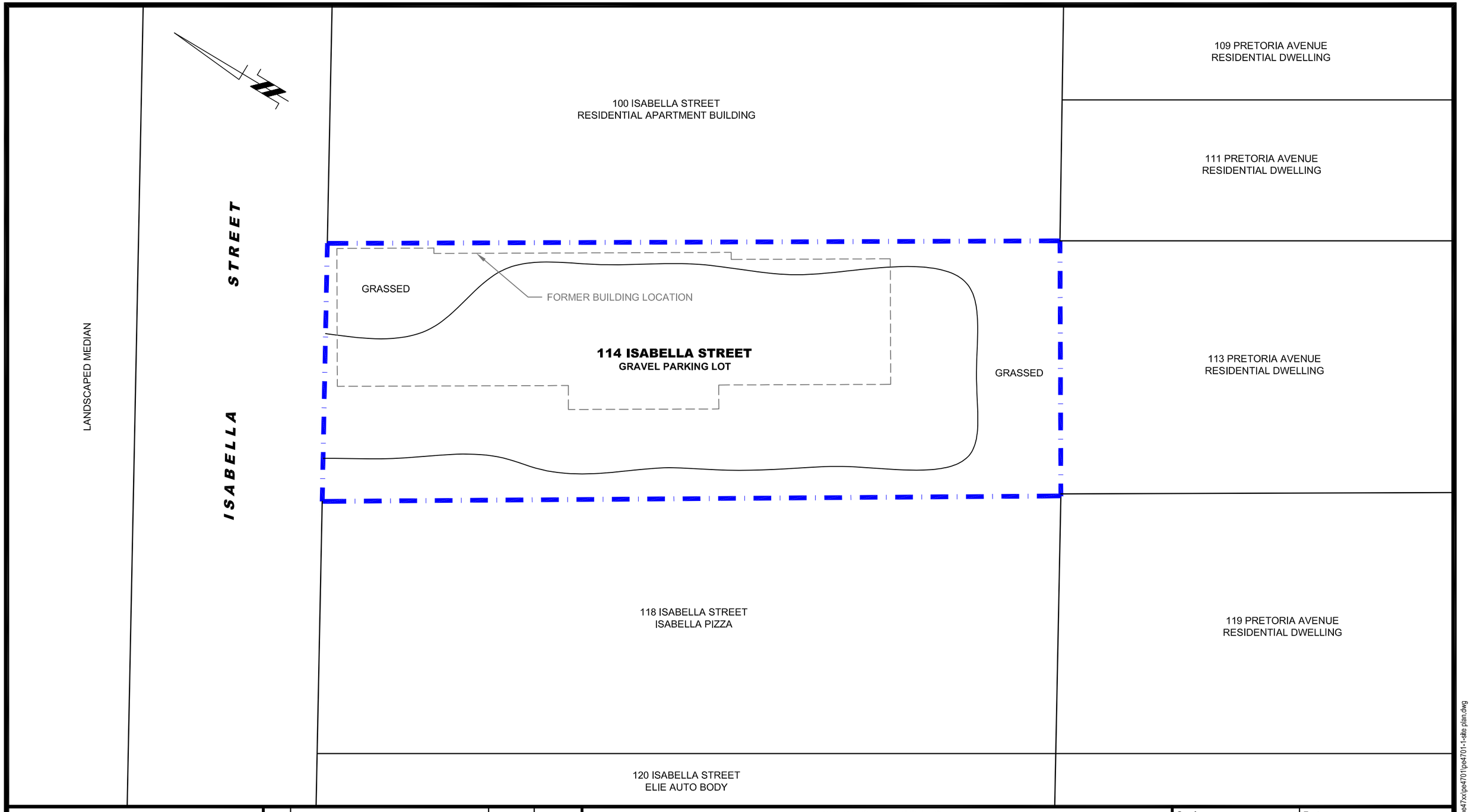


FIGURE 2

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

2702021 ONTARIO INC.

PHASE I - ENVIRONMENTAL SITE ASSESSMENT
114 ISABELLA STREET

OTTAWA, ONTARIO

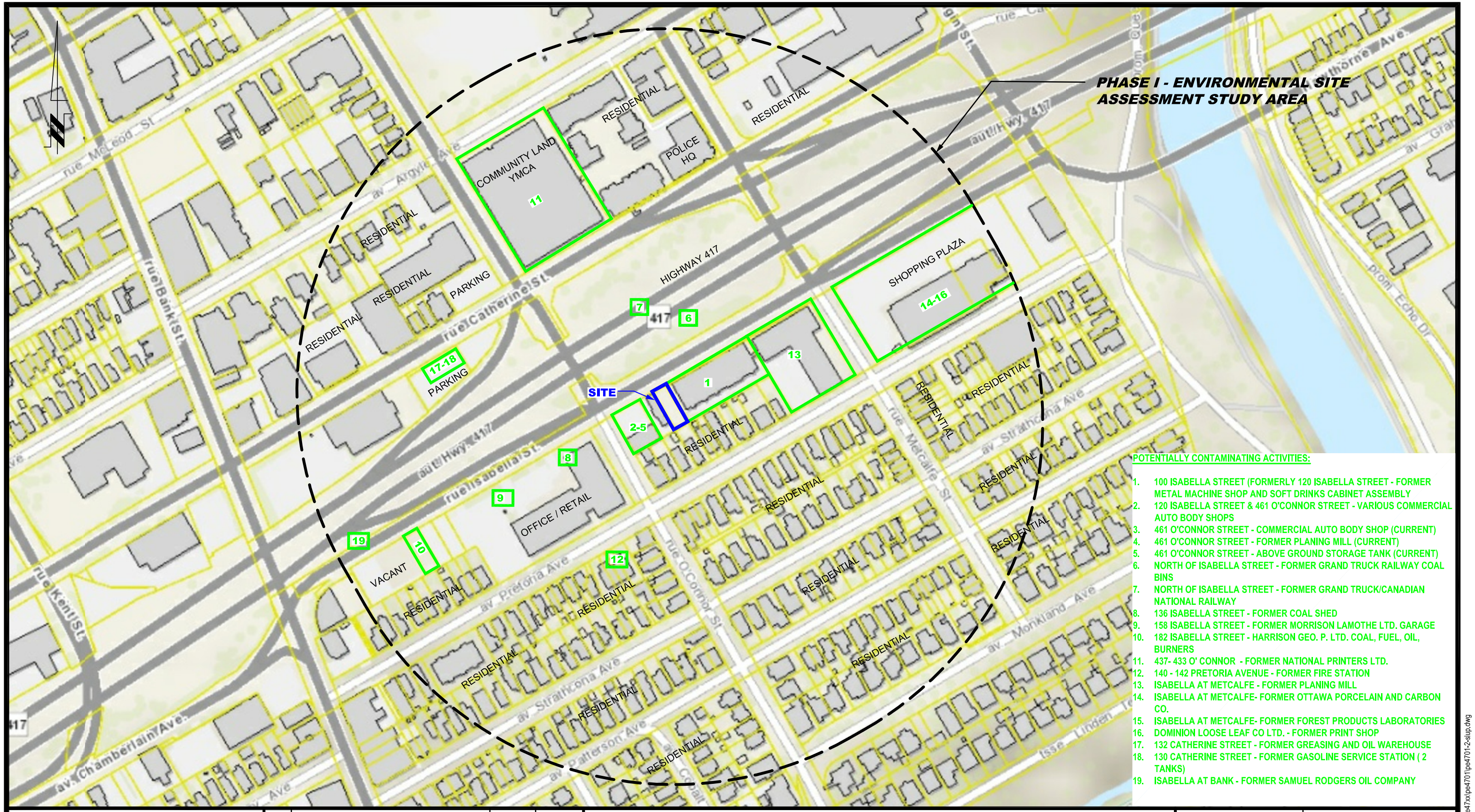
Title:

SITE PLAN

Scale: 1:150	Date: 08/2019
Drawn by: YA	Report No.: PE4701-1
Checked by: PP	Dwg. No.: PE4701-1
Approved by: MSD	Revision No.:

11x17

p:\autocad drawings\environmental\pe47xx\pe4701\pe4701-1-site plan.dwg



POTENTIALLY CONTAMINATING ACTIVITIES:

1. 100 ISABELLA STREET (FORMERLY 120 ISABELLA STREET - FORMER METAL MACHINE SHOP AND SOFT DRINKS CABINET ASSEMBLY
2. 120 ISABELLA STREET & 461 O'CONNOR STREET - VARIOUS COMMERCIAL AUTO BODY SHOPS
3. 461 O'CONNOR STREET - COMMERCIAL AUTO BODY SHOP (CURRENT)
4. 461 O'CONNOR STREET - FORMER PLANING MILL (CURRENT)
5. 461 O'CONNOR STREET - ABOVE GROUND STORAGE TANK (CURRENT)
6. NORTH OF ISABELLA STREET - FORMER GRAND TRUCK RAILWAY COAL BINS
7. NORTH OF ISABELLA STREET - FORMER GRAND TRUCK/CANADIAN NATIONAL RAILWAY
8. 136 ISABELLA STREET - FORMER COAL SHED
9. 158 ISABELLA STREET - FORMER MORRISON LAMOTHE LTD. GARAGE
10. 182 ISABELLA STREET - HARRISON GEO. P. LTD. COAL, FUEL, OIL, BURNERS
11. 437- 433 O' CONNOR - FORMER NATIONAL PRINTERS LTD.
12. 140 - 142 PRETORIA AVENUE - FORMER FIRE STATION
13. ISABELLA AT METCALFE - FORMER PLANING MILL
14. ISABELLA AT METCALFE- FORMER OTTAWA PORCELAIN AND CARBON CO.
15. ISABELLA AT METCALFE- FORMER FOREST PRODUCTS LABORATORIES
16. DOMINION LOOSE LEAF CO LTD. - FORMER PRINT SHOP
17. 132 CATHERINE STREET - FORMER GREASING AND OIL WAREHOUSE
18. 130 CATHERINE STREET - FORMER GASOLINE SERVICE STATION (2 TANKS)
19. ISABELLA AT BANK - FORMER SAMUEL RODGERS OIL COMPANY

patersongroup
consulting engineers

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

NO.	REVISIONS	DATE	INITIAL

2702021 ONTARIO INC.

PHASE I - ENVIRONMENTAL SITE ASSESSMENT
114 ISABELLA STREET

OTTAWA, ONTARIO

Title:

SURROUNDING LAND USE PLAN

Scale: 1:2500	Date: 08/2019
Drawn by: YA	Report No.: PE4701-1
Checked by: PP	Dwg. No.: **PE4701-2**
Approved by: MSD	Revision No.:

p:\autocad drawings\environmental\pe47xx\pe4701\pe4701-2-slup.dwg

11x17

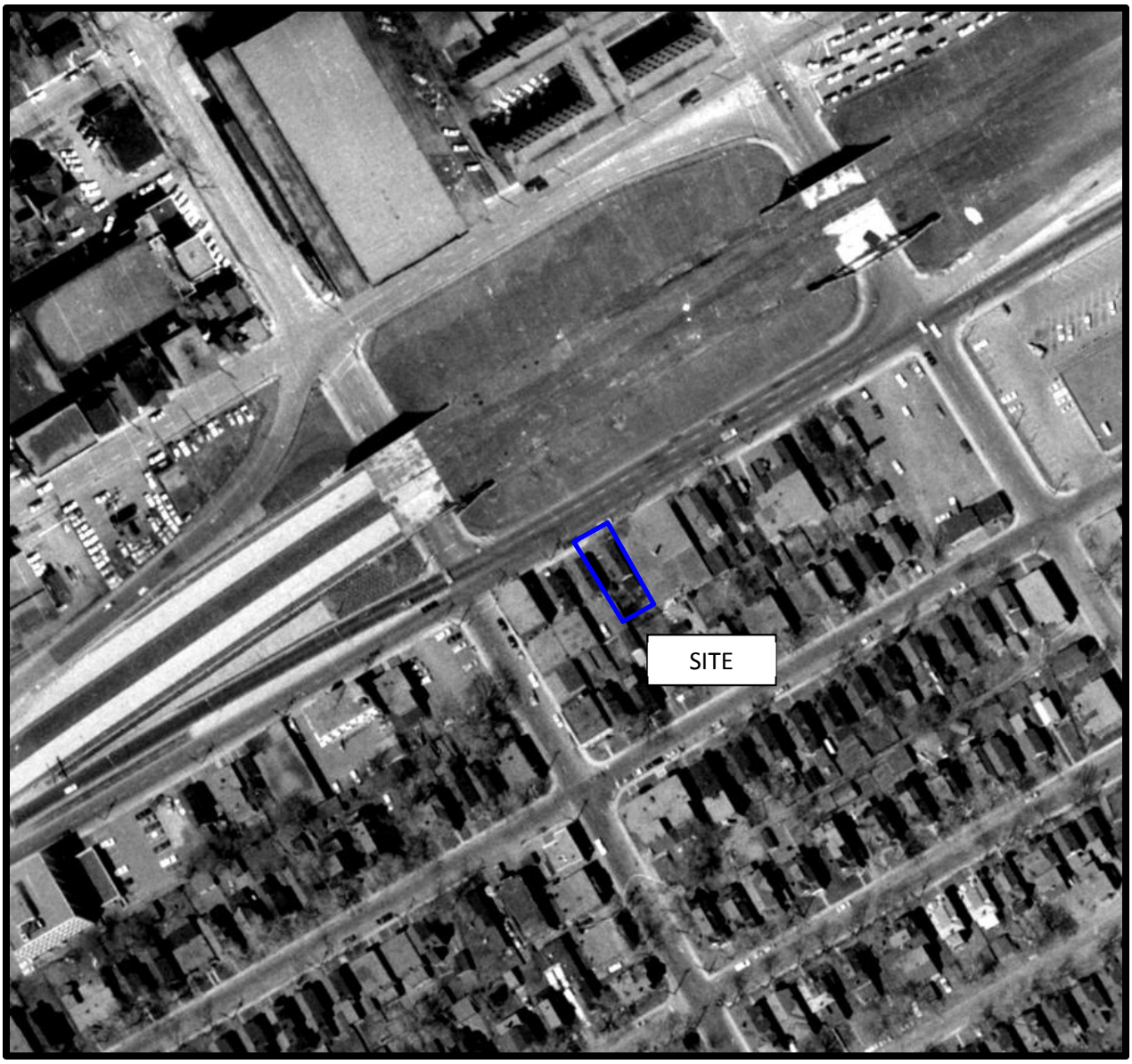
APPENDIX 1

AERIAL PHOTOGRAPHS

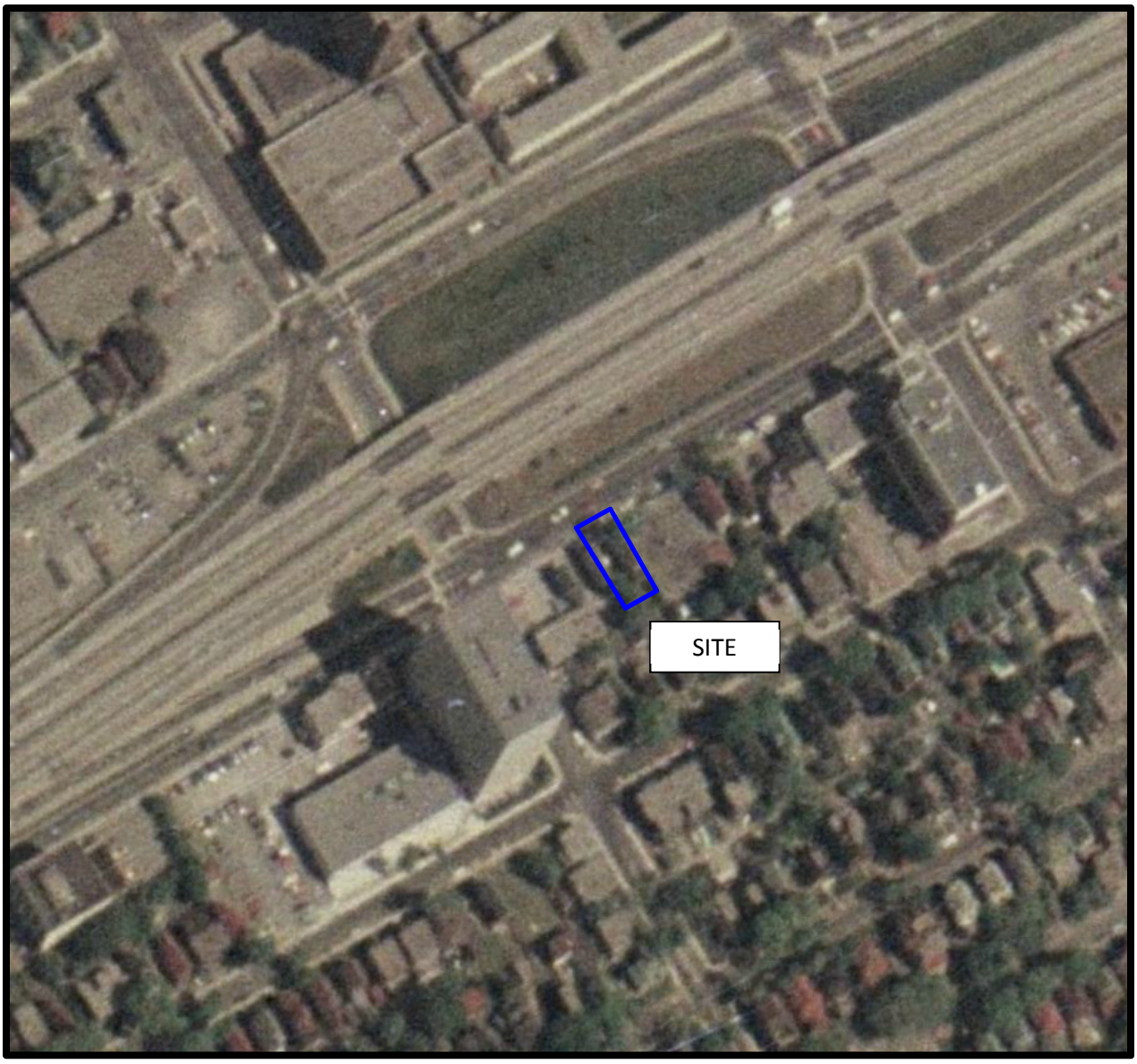
SITE PHOTOGRAPHS

AERIAL PHOTOGRAPH
1928

AERIAL PHOTOGRAPH
1958

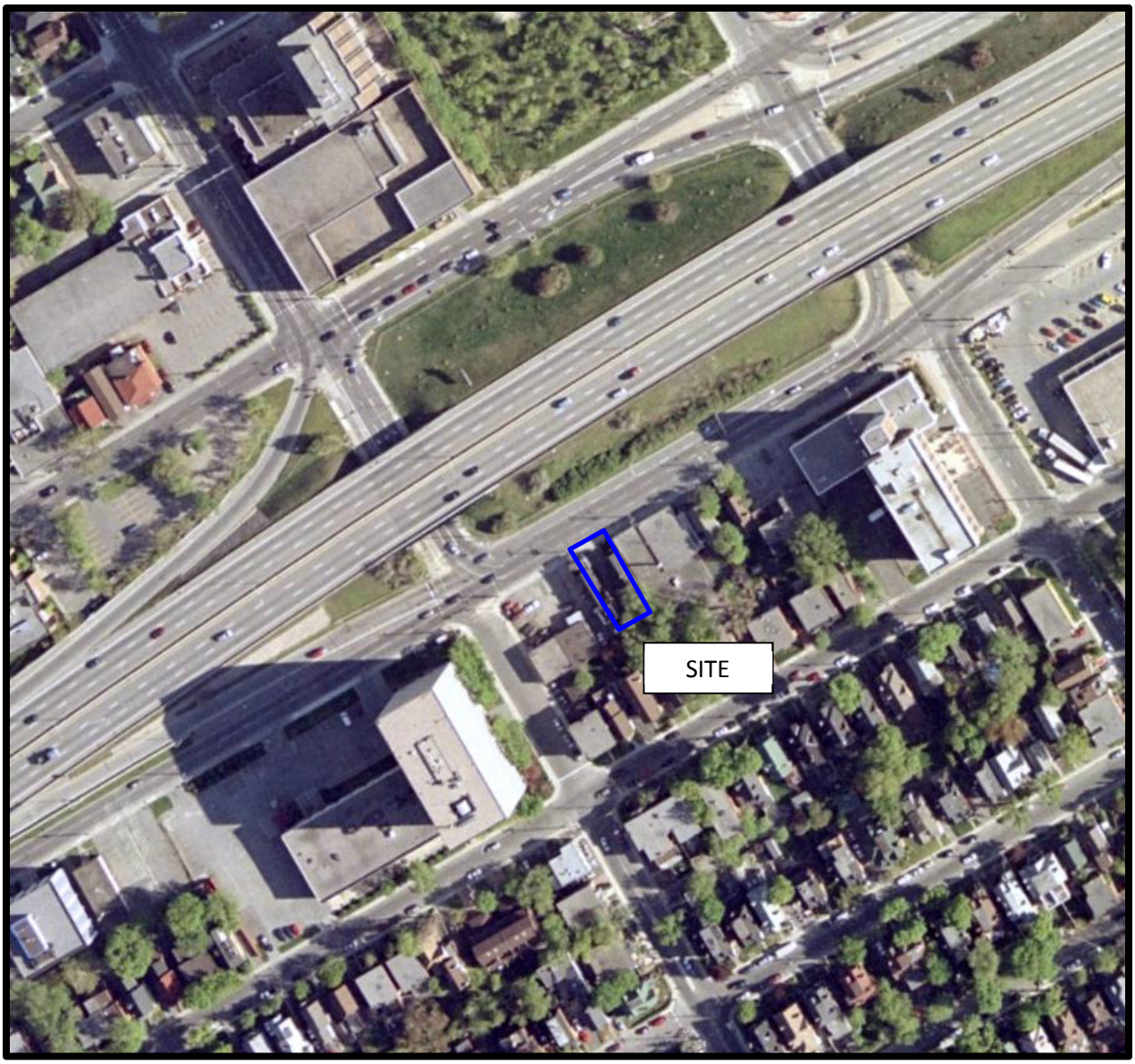


AERIAL PHOTOGRAPH
1965



AERIAL PHOTOGRAPH
1976

AERIAL PHOTOGRAPH
1991



AERIAL PHOTOGRAPH
2002

AERIAL PHOTOGRAPH
2011

AERIAL PHOTOGRAPH
2017

Site Photographs

PE4524-1 114 Isabella Street, Ottawa August 7, 2019

Photograph 1: Centre and rear of the site facing southeast.

Photograph 2: Site frontage and Isabella Street facing northwest.

APPENDIX 2

MECP FREEDOM OF INFORMATION REQUEST

CITY OF OTTAWA HLUI REQUEST

WATER WELL RECORDS

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

August 13, 2019

Philip Price
Paterson Group Inc.
154 Colonnade Road
Ottawa, ON K3E 7J5

Dear Philip Price:

RE: ***Freedom of Information and Protection of Privacy Act* Request**
Our File # A-2019-05291, Your Reference PE4701

This letter is in response to your request made pursuant to the *Freedom of Information and Protection of Privacy Act* relating to 114 Isabella 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 Sasha Naidu at 416-314-4075 or sasha.naidu@ontario.ca.

Yours truly,

for Janet Dadufalza
Manager, Access and Privacy

Office Use Only			
Application Number:	Ward Number:	Application Received: (dd/mm/yyyy):	
Client Service Centre Staff:		Fee Received:	$

Historic Land Use Inventory

Application Form

Notice of Public Record

All information and materials required in support of your application shall be made available to the public, as indicated by Section 1.0.1 of *The Planning Act*, R.S.O. 1990, C.P.13.

Municipal Freedom of Information and Protection Act

Personal information on this form is collected under the authority the *Planning Act*, RSO 1990, c. P. 13 and will be used to process this application. Questions about this collection may be directed by mail to Manager, Business Support Services, Planning Infrastructure and Economic Development Department, 110 Laurier Avenue West, Ottawa, K1P 1J1, or by phone at (613) 580-2424, ext. 24075

Background Information

***Site Address or Location:** *114 Isabella Street, Ottawa, ON*

** Mandatory Field*

Applicant/Agent Information:

Name:	*Paterson Group*		
Mailing Address:	*154 Colonnade Road, Ottawa ON*		
Telephone:	*613 226 7381*	Email Address:	*pprice@patersongroup.ca*

Registered Property Owner Information: ☐ Same as above

Name:	*2702021 Ontario Inc.*		
Mailing Address:	*110-150 Isabella Street, Ottawa ON*		
Telephone:	*613 324 2389*	Email Address:	*chris@chrisallard.ca*

Site Details

Legal Description and PIN: *041230086*

What is the land currently used for? *Vacant*

Lot frontage: _____ m Lot depth: _____ m Lot area: _____ m²

OR Lot area: (irregular lot) 350 m²

Does the site have Full Municipal Services: (•) Yes ( ) No

Required Fees

Please don't hesitate to visit the Historic Land Use Inventory website more information. Fees must be paid in full at the time of application submission.

Planning Fee $105.00

Submittal Requirements

The following are required to be submitted with this application:

1. **Consent to Disclose Information:** Consultants and other third parties may make requests for information on behalf of an individual or corporation. However, if the requester is not the owner of the property, **the requester must provide the City of Ottawa with a 'consent to disclose information' letter, signed by the property owner.** This will authorize the City of Ottawa to release any relevant information about the property or its owner(s) to the requester. Consent for disclosure is required in the event that personal information or proprietary company information is found concerning the property and its owner. All consents must clearly indicate the name of the property owner as well as the name of the requester, and must be signed and dated.
2. **Disclaimer:** Requesters must read and understand the conditions included in the attached disclaimer and submit a signed disclaimer to the City of Ottawa's Planning, Infrastructure and Economic Development Department. This disclaimer is related to the Historic Land Use Inventory and must be received by the City of Ottawa, signed and dated by the requestor, before the process can begin.
3. **A site plan or key plan of the property, its location and particular features.**
4. **Any significant dates or time frames that you would like researched.**

Disclaimer
For use with HLUI Database

CITY OF OTTAWA ("the City") is the owner of the Historical Land Use Inventory ("HLUI"), a database of information on the type and location of land uses within the geographic area of Ottawa, which had or have the potential to cause contamination in soil, groundwater or surface water.

The City, in providing information from the HLUI, to Paterson Group ("the Requester") does so only under the following conditions and understanding:

1. The HLUI may contain erroneous information given that such records and sources of information may be flawed. Changes in municipal addresses over time may have introduced error in such records and sources of information. The City is not responsible for any errors or omissions in the HLUI and reserves the right to change and update the HLUI without further notice. The City does not, however, make any commitment to update the HLUI. Accordingly, all information from the HLUI is provided on an "as is" basis with no representation or warranty by the City with respect to the information's accuracy or exhaustiveness in responding to the request.

2. City staff will perform a search of the HLUI based on the information given by the Requester. City staff will make every effort to be accurate, however, the City does not provide an assurance, guarantee, warranty, representation (express or implied), as to the availability, accuracy, completeness or currency of information which will be provided to the Requester. The HLUI in no way confirms the presence or absence of contamination or pollution of any kind. The information provided by the City to the Requester is provided on the assumption that it will not be relied upon by any person whatsoever. The City denies all liability to any such persons attempting to rely on any information provided from the HLUI database.

3. The City, its employees, servants, agents, boards, officials or contractors take no responsibility for any actions, claims, losses, liability, judgments, demands, expenses, costs, damages or harm suffered by any person whatsoever including negligence in compiling or disseminating information in the HLUI.

4. Copyright is reserved to the City.

5. Any use of the information provided from the HLUI which a third party makes, or any reliance on or decisions to be based on it, are the responsibilities of such third parties. The City, its employees, servants, agents, boards, officials or contractors accept no responsibility for any damages, if any, suffered by a third party as a result of decisions made as a result of an information search of the HLUI.

6. Any use of this service by the Requestor indicates an acknowledgement, acceptance and limits of this disclaimer.

7. All information collected under this request and all records provided in response to this request are subject to the provisions of the Municipal Freedom of Information and Protection of Privacy Act, R.S.O. 1990, c. M.56, as amended.

Signed: _____

Dated (dd/mm/yyyy): 07/08/2019

Per: Philip Price

(Please print name)

Title: Environmental Scientist

Company: Paterson Group

Ontario Ministry of the Environment

Well Ta ...nber below)
A051278
A051278

Well Record
Regulation 903 Ontario Water Resources Act

page 1 of 2

Instructions for Completing Form

- For use in the **Province of Ontario** only. This document is a permanent **legal** document. Please retain for future reference.
- All Sections **must** be completed in full to avoid delays in processing. Further instructions and explanations are available on the back of this form.
- Questions regarding completing this application can be directed to the Water Well Help Desk (Toll Free) at 1-888-396-9355.
- **All metre measurements shall be reported to 1/10th of a metre.**
- Please print clearly in blue or black ink only.

Ministry Use Only
MUN CON LOT

[redacted]

Address of Well Location (County/District/Municipality) | Township | Lot | Concession

RR#/Street Number/Name: 424 Metcalfe Street | City/Town/Village: Ottawa | Site/Compartment/Block/Tract etc.

GPS Reading: NAD 83 | Zone 18 | Easting 446180 | Northing 5028889 | Unit Make/Model | Mode of Operation: ☐ Undifferentiated ☑ Averaged ☐ Differentiated, specify

Log of Overburden and Bedrock Materials (see instructions)

General Colour	Most common material	Other Materials	General Description	Depth From	Depth To (Metres)
Brown/Grey	Fill - granular fill clay + silt.			0	1.3
Grey	Fill - Brick & concrete			1.3	1.9
Grey	Clay			1.9	3.9
Grey	Silty			3.9	4.5
	4 Monitoring well installations as a cluster as per ONT MOE Reg 903 (typical).				

Hole Diameter

Depth From	Depth To (Metres)	Diameter (Centimetres)
0	4.5	20

Water Record

Water found at ___ Metres / Kind of Water

- ___ m ☐ Fresh ☐ Sulphur ☐ Gas ☐ Salty ☑ Minerals ☐ Other:
- ___ m ☐ Fresh ☐ Sulphur ☐ Gas ☐ Salty ☐ Minerals ☐ Other:
- ___ m ☐ Fresh ☐ Sulphur ☐ Gas ☐ Salty ☐ Minerals ☐ Other:

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

Chlorinated ☐ Yes ☑ No

Construction Record

Inside diam centimetres	Material	Wall thickness centimetres	Depth From	Metres To
Casing				
51 mm	☐ Steel ☐ Fibreglass ☑ Plastic ☐ Concrete ☐ Galvanized	40	0	1.3
	☐ Steel ☐ Fibreglass ☐ Plastic ☐ Concrete ☐ Galvanized			
	☐ Steel ☐ Fibreglass ☐ Plastic ☐ Concrete ☐ Galvanized			
Screen				
Outside diam	Material	Slot No.		
58 mm	☐ Steel ☐ Fibreglass ☑ Plastic ☐ Concrete ☐ Galvanized	10	1.5	4.5
No Casing or Screen				
	☐ Open hole			

Test of Well Yield

Pumping test method	Draw Down Time (min)	Draw Down Water Level (Metres)	Recovery Time (min)	Recovery Water Level (Metres)
Pump intake set at - (metres)	Static Level			
Pumping rate - (litres/min)	1		1	
Duration of pumping ___hrs + ___min	2		2	
Final water level end of pumping ___metres	3		3	
Recommended pump type. ☐ Shallow ☐ Deep	4		4	
Recommended pump depth. ___metres	5		5	
Recommended pump rate. (litres/min)	10		10	
	15		15	
If flowing give rate - (litres/min)	20		20	
	25		25	
If pumping discontinued, give reason.	30		30	
	40		40	
	50		50	
	60		60	

Plugging and Sealing Record ☑ Annular space ☐ Abandonment

Depth set at - Metres From	Depth set at - Metres To	Material and type (bentonite slurry, neat cement slurry) etc.	Volume Placed (cubic metres)
0.5	1.3	Bentonite	20 Kg

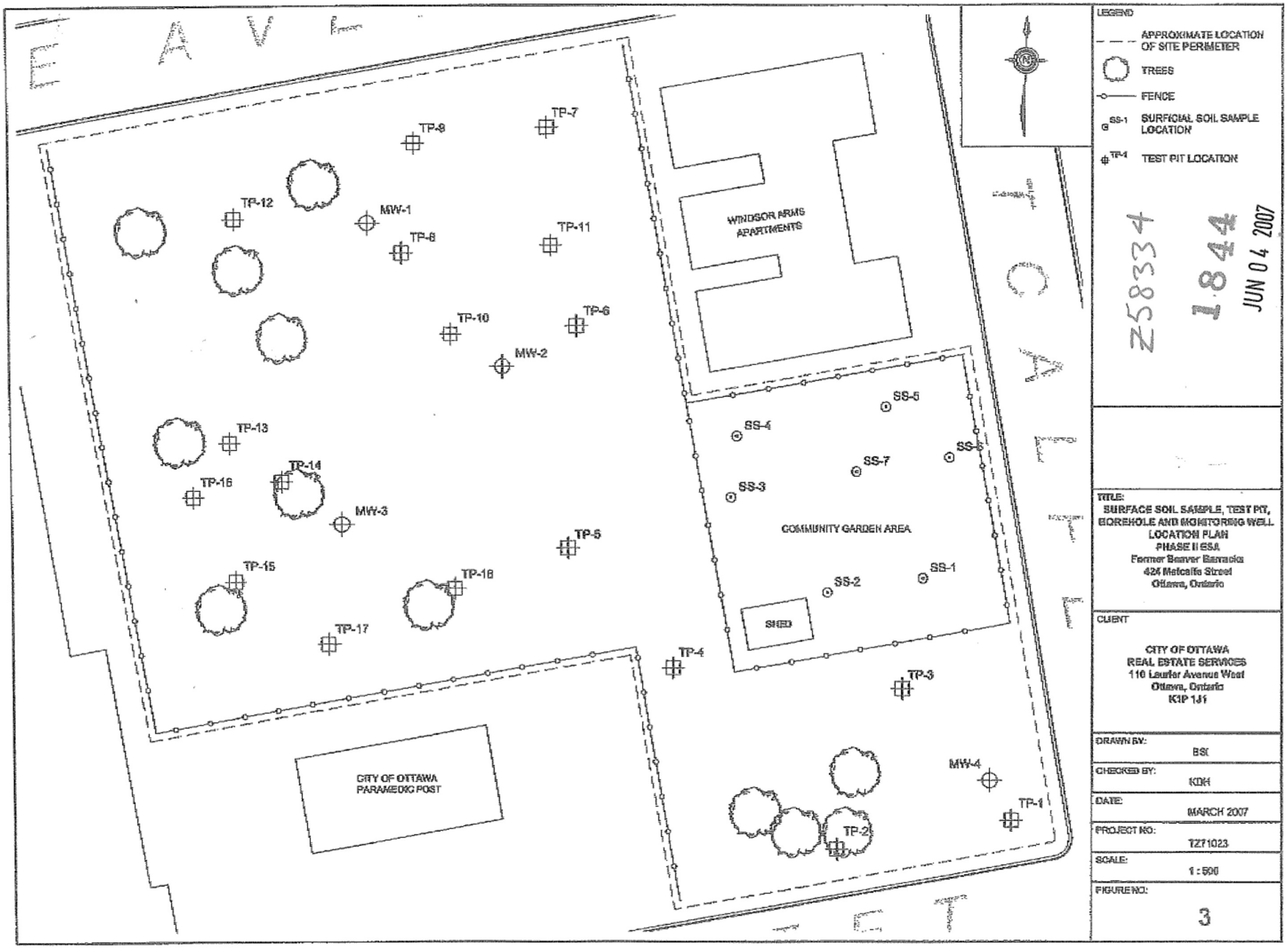
Method of Construction

☐ Cable Tool ☐ Rotary (air) ☐ Diamond ☑ Digging
☐ Rotary (conventional) ☐ Air percussion ☐ Jetting ☐ Other

Location of Well

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

Please see attached site plan.


EAST
TP-8
TP-7
TP-12
MW-1
TP-9
TP-11
WINDSOR ARMS APARTMENTS
TP-10
TP-6
MW-2
TP-13
TP-14
TP-16
MW-3
TP-5
TP-15
TP-18
TP-17
SS-5
SS-4
SS-7
SS-6
SS-3
COMMUNITY GARDEN AREA
SS-2
SS-1
SHED
TP-4
TP-3
CITY OF OTTAWA PARAMEDIC POST
MW-4
TP-1
TP-2
LEGEND
APPROXIMATE LOCATION OF SITE PERIMETER
TREES
FENCE
SS-1 SURFICIAL SOIL SAMPLE LOCATION
TP-1 TEST PIT LOCATION
Z58334
1844
JUN 04 2007
TITLE:
SURFACE SOIL SAMPLE, TEST PIT, BOREHOLE AND MONITORING WELL LOCATION PLAN
PHASE II ESA
Former Beaver Barracks
424 Metcalfe Street
Ottawa, Ontario
CLIENT
CITY OF OTTAWA
REAL ESTATE SERVICES
110 Laurier Avenue West
Ottawa, Ontario
K1P 1J1
DRAWN BY: BSI
CHECKED BY: KDH
DATE: MARCH 2007
PROJECT NO: TZ71023
SCALE: 1:500
FIGURE NO: 3

Ontario Ministry of the Environment

Measurements recorded in: ☐ Metric ☑ Imperial

A 081085 (nd/or Print Below) A081085

Well Record

Regulation 903 Ontario Water Resources Act

6269 Page 1 of 1

Well Owner's Information

First Name	Last Name / Organization	E-mail Address	☐ Well Constructed by Well Owner
Properties	Provigo Ltée		

Mailing Address (Street Number/Name)	Municipality	Province	Postal Code	Telephone No. (inc. area code)
400 Ave Ste-Croix	St Laurent	Quebec	H4N3L4	5143838800

Well Location

Address of Well Location (Street Number/Name)	Township	Lot	Concession
64 Isabella			

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

UTM Coordinates	Zone	Easting	Northing	Municipal Plan and Sublot Number	Other
NAD 83	17	716052	4907824		

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
Brown	Fill		Loose	0	5'
Grey	Clay		Loose	5'	18'

Annular Space

Depth Set at (m/ft) From	To	Type of Sealant Used (Material and Type)	Volume Placed (m^3/ft^3)
0	1'	Concrete	0.0005 m^3
1'	7'	Benseal	0.0035 m^3
7'	18'	SAND	0.0055 m^3

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
1.0"	PVC	0.25	0	8'

Construction Record - Screen

Outside Diameter (cm/in)	Material (Plastic, Galvanized, Steel)	Slot No.	Depth (m/ft) From	Depth (m/ft) To
1.25"	PVC	10	8'	18'

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

Hole Diameter

Depth (m/ft) From	To	Diameter (cm/in)

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)

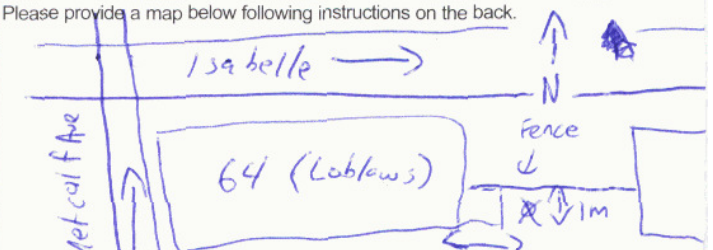
Well production (l/min / GPM)

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.



Ontario Ministry of the Environment

Well Record

Regulation 903 Ontario Water Resources Act

Well Tag No. (Place Sticker and/or Print Below) A 091016 A091016

Measurements recorded in: ☑ Metric ☐ Imperia

7177

Page 1 of 4

Well Owner's Information

First Name	Last Name / Organization	E-mail Address	☐ Well Constructed by Well Owner
Loblaws			

Mailing Address (Street Number/Name)	Municipality	Province	Postal Code	Telephone No. (inc. area code)
1 President choice circle 4th Fl. S. Tower	Brampton	ON	L6Y5S5	

Well Location

Address of Well Location (Street Number/Name)	Township	Lot	Concession
64 Isabella 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	446291	5028752		

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	Gravel	Sand	hard, dry	0	1.83
Grg	Clay		Wet, soft	1.83	4.88

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	1.5	Benseal	
1.5	4.88	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
3.45	PVC	.356	0	1.83

Construction Record - Screen

Outside Diameter (cm/in)	Material (Plastic, Galvanized, Steel)	Slot No.	Depth (m/ft) From	Depth (m/ft) To
4.21	PVC	10	1.83	4.88

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	Kind of Water: ☐ Fresh ☐ Untested

Hole Diameter

Depth (m/ft) From	To	Diameter (cm/in)

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)

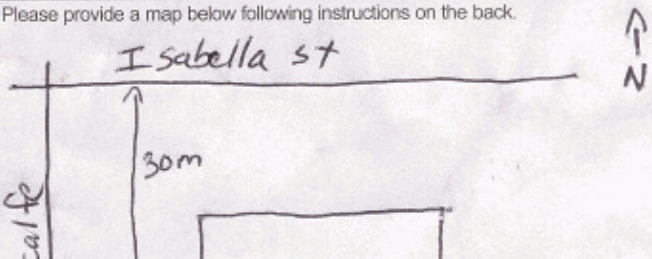
Well production (l/min / GPM)

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.



Ontario Ministry of the Environment

Measurements recorded in: ☑ Metric ☐ Imperial

Tag No. (Place Sticker and/or Print Below) A 091017 A09197

Well Record

Regulation 903 Ontario Water Resources Act

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Well Owner's Information

First Name	Last Name / Organization	E-mail Address	☐ Well Constructed by Well Owner
Loblaws			

Mailing Address (Street Number/Name)	Municipality	Province	Postal Code	Telephone No. (inc. area code)
1 President choice Circle 4th Fl. S, Tower	Brampton	ON	L6Y5S5	

Well Location

Address of Well Location (Street Number/Name)	Township	Lot	Concession
64 Isabella st			

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

UTM Coordinates	Zone	Easting	Northing	Municipal Plan and Sublot Number	Other
NAD 83	18	446301	5028805		

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	Gravel	Sand	hard, dry	0	1.83
Gry	clay		soft, dry	1.83	3.66
Gry	Clay		soft, wet	3.66	5.79

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	2.44	~~Sand~~ Bensal	
2.44	5.79	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
3.45	PVC	.356	0	~~2.74~~

Construction Record - Screen

Outside Diameter (cm/in)	Material (Plastic, Galvanized, Steel)	Slot No.	Depth (m/ft) From	Depth (m/ft) To
4.21	PVC	10	~~2.74~~	5.79

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	Other, specify

Hole Diameter

Depth (m/ft) From	Depth (m/ft) To	Diameter (cm/in)

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)

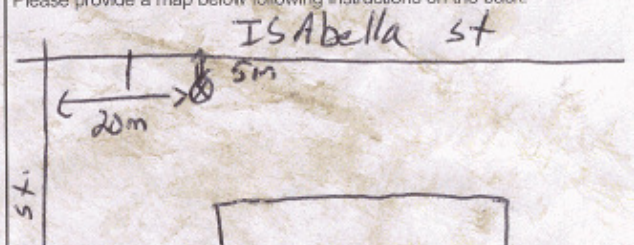
Well production (l/min / GPM)

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.



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)* A 091019

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Page 4 of 4

Well Owner's Information

First Name	Last Name / Organization	E-mail Address	☐ Well Constructed by Well Owner
Loblaws			

Mailing Address (Street Number/Name)	Municipality	Province	Postal Code	Telephone No. *(inc. area code)*
1 President choice circle 4th Fl. S Tower	Brampton	ON	L6T5S5	

Well Location

Address of Well Location (Street Number/Name)	Township	Lot	Concession
64 Isabella 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	446355	5028836		

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	Gravel	hard, dry	0	1.83
Gry	clay		soft, dry	1.83	3.66
Gry	clay		soft, wet	3.66	5.79

Annular Space

Depth Set at (m/ft) From	To	Type of Sealant Used *(Material and Type)*	Volume Placed (m^3/ft^3)
0	.31	Concrete / flushmount	

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
3.45	PVC	.356	0	2.74

Construction Record - Screen

Outside Diameter *(cm/in)*	Material (Plastic, Galvanized, Steel)	Slot No.	Depth (m/ft) From	Depth (m/ft) To
4.21	PVC	10	2.74	5.79

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	Hole Diameter Depth (m/ft) From	To	Diameter *(cm/in)*

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)*

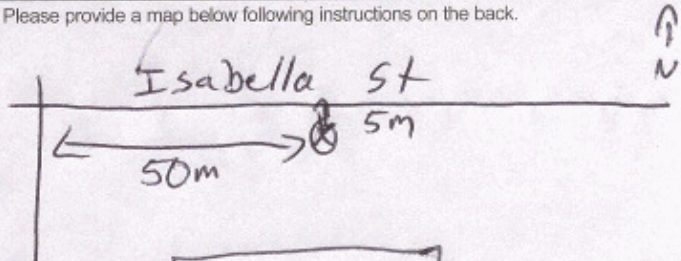
Well production *(l/min / GPM)*

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.



Ontario Ministry of the Environment

Measurements recorded in: ☒ Metric ☐ Imperial

Well Tag No. (Place Sticker and/or Print Below) **A 087398** A087398

Well Record

Regulation 903 Ontario Water Resources Act

S-12093 Page 2 of 2

Well Owner's Information

First Name	Last Name / Organization	E-mail Address	☐ Well Constructed by Well Owner
[redacted]	National Capital Region YMCA-YWCA		

Mailing Address (Street Number/Name)	Municipality	Province	Postal Code	Telephone No. (inc. area code)
180 Argyle Avenue	Ottawa	ON	K2P 1B7	[redacted]

Well Location

Address of Well Location (Street Number/Name)	Township	Lot	Concession
180 Argyle Ave			

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	446041	5021897		

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	Top Soil			0	.61
BRN	Silt	Clay		.61	3.44
GRY	Clay			3.44	6.71

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	3.35	Benseal	
3.35	6.71	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
4.03	PVC	.358	0	3.66

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	3.66	6.71

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

Hole Diameter

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)

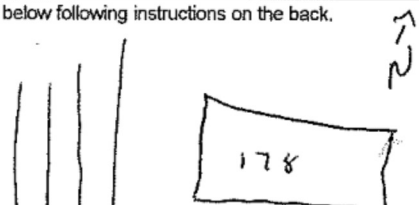
Well production (l/min / GPM)

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.



Ontario Ministry of the Environment

Measurements recorded in: ☑ Metric ☐ Imperia

Well Tag No. (Place Sticker and/or Print Below) **A 087399** A087399

Well Record

Regulation 903 Ontario Water Resources Act

18093 Page 2 of 2

Well Owner's Information

First Name	Last Name / Organization	E-mail Address	☐ Well Constructed by Well Owner
[redacted]	National Capital Region YMCA	-YWCA	

Mailing Address (Street Number/Name)	Municipality	Province	Postal Code	Telephone No. (inc. area code)
180 Argyle Avenue	Ottawa	ON	K2P 1B7	[redacted]

Well Location

Address of Well Location (Street Number/Name)	Township	Lot	Concession
180 Argyle Ave			

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

UTM Coordinates	Zone	Easting	Northing	Municipal Plan and Sublot Number	Other
NAD 8 3	18	446041	5028897		

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	Top Soil			0	.61
BRN	Silt	Clay		.61	2.44
GRY	Clay			2.44	6.71

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	3.35	Bensea!	
3.35	6.71	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
4.03	PVC	.358	0	3.66

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	3.66	6.71

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

Hole Diameter

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)

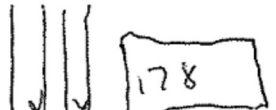
Disinfected? ☐ Yes ☐ No

	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.

N



Ontario Ministry of the Environment

Well Tag No. for Master Well *(Place Sticker and/or Print Below)*: A092457 **A 092457**

Master Well Record for Cluster Well Construction

Regulation 903 Ontario Water Resources Act

Page 1 of 3

[redacted]

Address of Well Location (Street Number/Name, RR): 203 Catherine St.
Township:
Lot:
Concession:
County/District/Municipality:
City/Town/Village: Ottawa
Province: Ontario
Postal Code:

UTM Coordinates: NAD 83 Zone 18 Easting 459287 Northing 5028711
GPS Unit Make: Garmin
Model: Etrex
Mode of Operation: ☐ Undifferentiated ☑ Averaged ☐ Differentiated, specify

Overburden and Bedrock Materials *(see instructions on the back of this form)*

General Colour	Most Common Material	Other Materials	General Description	Depth (Metres) From	To
BRN	Sand		soft	0	1.83
GRY	clay		soft	1.83	3.35
GRY	clay		soft, wet	3.35	6.1

Hole Details

Depth (Metres) From	To	Diameter (Centimetres)
0	6.1	8.25

Water Use

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

Method of Construction

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

Status of Well

☑ Test Hole ☐ Abandoned, Insufficient Supply
☐ Replacement Well ☐ Abandoned, Poor Water Quality
☐ Dewatering Well ☐ Other, specify
☐ Alteration (Construction) ☐ Abandoned, other, specify

Construction Details

Inside Diameter (Centimetres)	Material (steel, plastic, fibreglass, concrete, galvanized)	Wall Thickness	Depth (Metres) From	To
4.03	PVC Riser	.318	0	3.05
	PVC Screen		3.05	6.1

No Casing and Screen Used

Open Hole: ☐ Yes ☑ No

Static Water Level Test

Metres

Screen

☐ Galvanized ☐ Steel ☐ Fibreglass ☐ Concrete ☑ Plastic

Outside Diameter (Centimetres): 4.82
Slot No.: 10

Annular Space/Abandonment Sealing Record

Depth Set at (Metres) From	To	Type of Sealant Used (Material and Type)	Volume Used (Cubic Metres)
0	2.74	Bensal	
2.74	6.1	filter sand	

Water Details

Water found at Depth: Metres ☐ Gas — Kind of Water: ☐ Fresh ☐ Salty ☐ Sulphur ☐ Minerals
Water found at Depth: Metres ☐ Gas — Kind of Water: ☐ Fresh ☐ Salty ☐ Sulphur ☐ Minerals
Water found at Depth: Metres ☐ Gas — Kind of Water: ☐ Fresh ☐ Salty ☐ Sulphur ☐ Minerals

Disinfected ☐ Yes ☐ No If no, provide reason:
Date Master Well Completed (yyyy/mm/dd): 2010/08/26

Cluster Information *(Please also fill out the additional Cluster Well Information for Well Construction for each parcel of land and cluster.)*

Total Wells in Cluster: 7
Total Wells on this Property: 7
Please indicate Number of Cluster Well Information Log Sheets Submitted: 1

Location of Well Cluster

Detailed Map must be provided as an attachment no larger than legal size (8.5" x 14"). Sketches are not allowed.
☑ Check box to confirm detailed map is provided as per Section 11.1 (3)

Consent to [redacted] additional information concerning the cluster to

Well Contractor and Well Technician Information

Business Name of Well Contractor: Strata Soil Sampling
Well Contractor's Licence No.: 7241
Business Address (Street No./Name, number, RR): #2-147 West Beaver Creek
Municipality: Richmond Hill
Province: ON
Postal Code: L4B1C6
Business E-mail Address:
Bus. Telephone No. (inc. area code): (905) 764-9384
Name of Well Technician (Last Name, First Name): FENELON Dan
Well Technician's Licence No.: 5069
Signature of Technician:
Date Submitted (yyyy/mm/dd):

Ministry Use Only

Audit No.: M 03211
Well Contractor No.:
Date Received (yyyy/mm/dd): SEP 24 2010
Date of Inspection (yyyy/mm/dd):
Remarks:

1992 (11/2006)

Ministry's Copy

Ontario Ministry of the Environment

Well Tag No. for Master Well (Print Well Tag No.) A092457 **A 092457**

Cluster Well Information for Cluster Well Construction

Regulation 903 Ontario Water Resources Act

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[redacted]

Address of Well Location (Street Number/Name, RR): 203 Catherine St. | Lot | Concession | Township | County/District/Municipality

City/Town/Village: Ottawa | Province: Ontario | Postal Code | GPS Unit Make: Garmin | Model: Etrex | Unit Mode of Operation: ☐ Undifferentiated ☑ Averaged ☐ Differentiated, specify:

upon request

Signature of Technician/Contractor | Date (yyyy/mm/dd): 2010/08/2[illegible]

Well # on Sketch	UTM Coordinates Zone	Easting	Northing	Full Depth of Hole (metres)	Hole Diameter (cm)	Method of Construction	Casing Material	Casing Length (metres)	Screen Interval (metres) From	To	Annular Space Sealant Used	Static Water Level (metres)	Abandonment Sealant Used	Comments	Date of Completion (yyyy/mm/dd)
2	18	445949	5028739	6.1	8.25	Direct Push	PVC	3.05	3.05	6.1	Bensea]				2010/08/26
3	18	445919	5028762	6.1	8.25	Direct Push	PVC	3.05	3.05	6.1	Bensea]				2010/08/2[illegible]
4	18	445911	5028728	6.1	8.25	Direct Push	PVC	3.05	3.05	6.1	Bensea]				2010/08/26
5	18	445945	5028740	6.1	8.25	Direct Push	PVC	3.05	3.05	6.1	Bensea]				2010/08/26
6	18	445941	5028724	2.74	5.71	Direct Push	PVC	1.22	1.22	2.74	Bensea]				2010/08/27
7	18	445944	5028715	2.74	5.71	Direct Push	PVC	1.22	1.22	2.74	Bensea]				2010/08/27

Well Contractor and Well Technician Information

Business Name of Well Contractor: Strata Soil Sampling Inc. | Business Address (Street Number/Name, RR): #2-147 West Beaver Creek | Municipality: Richmond Hill | Province: ON

Postal Code: L4B 1C6 | Business Telephone No. (inc. area code): (905) 764-9304 | Well Contractor's Licence No.: 7241 | Business E-mail Address:

Name of Well Technician (First Name, Last Name): JOHN FERELUS | Well Technician's Licence No.: 3069 | Date Submitted (yyyy/mm/dd): | Signature of Technician:

Date 1st Well in Cluster Constructed (yyyy/mm/dd): 2010/08/26 | Date Last Well in Cluster Constructed (yyyy/mm/dd): 2010/08/27

Ministry Use Only

Date Received (yyyy/mm/dd): SEP 24 2010 | Date Inspected (yyyy/mm/dd):

Audit No.: c08532 | Remarks: M03211

1991 (11/2006)

Ministry's Copy

A 092457

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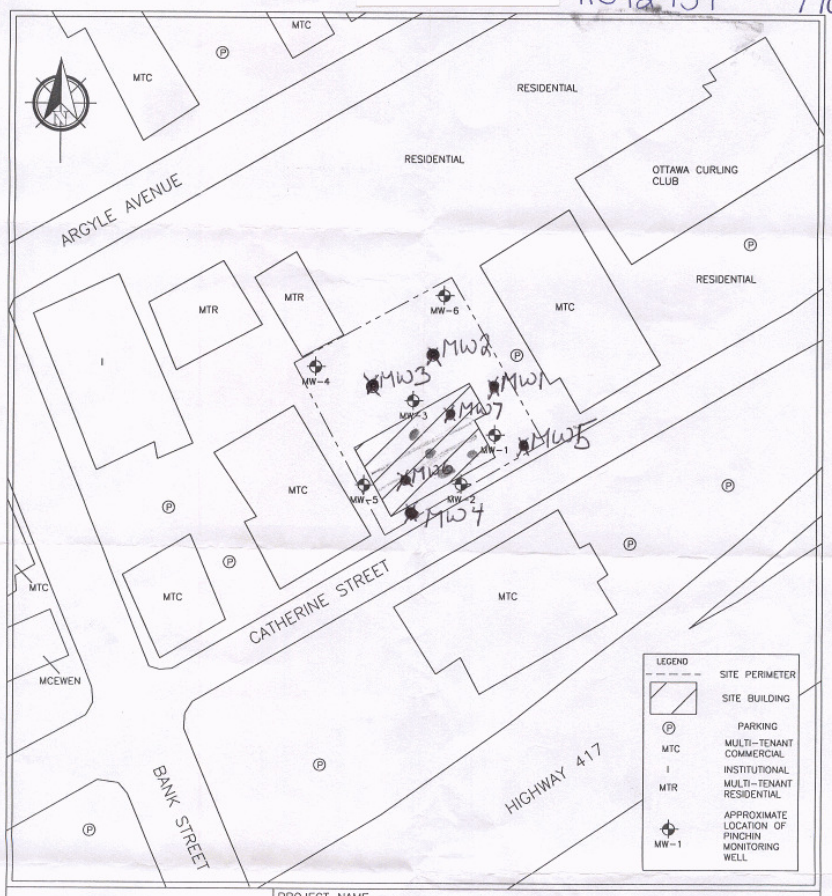
A092457

7761



PROJECT NAME	PHASE II ENVIRONMENTAL SITE ASSESSMENT		
CLIENT NAME	HUNTINGTON PROPERTIES INC.		
PROJECT LOCATION	203 CATHERINE STREET, OTTAWA, ONTARIO		
DRAWING NAME	GENERALIZED SITE AND MONITORING WELL LOCATION PLAN		DRAWING NO.
SCALE	PROJECT NO.	DATE	FIG. 2
NTS	59603.002	JULY 2010	

PINCHIN ENVIRONMENTAL

SEP 2 4 2010

C-7241 M03211 C08532.

Ontario Ministry of the Environment

Well Tag No. for Master Well *(Place Sticker and/or Print Below)*: A092457 **A 092457**

Master Well Record for Cluster Well Construction

Regulation 903 Ontario Water Resources Act

Page 1 of 3

[redacted]

Address of Well Location (Street Number/Name, RR): 203 Catherine St.
Township:
Lot:
Concession:
County/District/Municipality:
City/Town/Village: Ottawa
Province: Ontario
Postal Code:

UTM Coordinates: NAD 83 Zone 18 Easting 459287 Northing 5028711
GPS Unit Make: Garmin
Model: Etrex
Mode of Operation: ☐ Undifferentiated ☑ Averaged ☐ Differentiated, specify

Overburden and Bedrock Materials *(see instructions on the back of this form)*

General Colour	Most Common Material	Other Materials	General Description	Depth (Metres) From	To
BRN	Sand		soft	0	1.83
GRY	clay		soft	1.83	3.35
GRY	clay		soft, wet	3.35	6.1

Hole Details

Depth (Metres) From	To	Diameter (Centimetres)
0	6.1	8.25

Water Use

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

Method of Construction

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

Status of Well

☑ Test Hole ☐ Abandoned, Insufficient Supply
☐ Replacement Well ☐ Abandoned, Poor Water Quality
☐ Dewatering Well ☐ Other, specify
☐ Alteration (Construction) ☐ Abandoned, other, specify

Construction Details

Inside Diameter (Centimetres)	Material (steel, plastic, fibreglass, concrete, galvanized)	Wall Thickness	Depth (Metres) From	To
4.03	PVC Riser	.318	0	3.05
	PVC Screen		3.05	6.1

No Casing and Screen Used

Open Hole: ☐ Yes ☑ No

Static Water Level Test

Metres

Screen

☐ Galvanized ☐ Steel ☐ Fibreglass ☐ Concrete ☑ Plastic

Outside Diameter (Centimetres): 4.82
Slot No.: 10

Annular Space/Abandonment Sealing Record

Depth Set at (Metres) From	To	Type of Sealant Used (Material and Type)	Volume Used (Cubic Metres)
0	2.74	Bensal	
2.74	6.1	filter sand	

Water Details

Water found at Depth: Metres ☐ Gas — Kind of Water: ☐ Fresh ☐ Salty ☐ Sulphur ☐ Minerals
Water found at Depth: Metres ☐ Gas — Kind of Water: ☐ Fresh ☐ Salty ☐ Sulphur ☐ Minerals
Water found at Depth: Metres ☐ Gas — Kind of Water: ☐ Fresh ☐ Salty ☐ Sulphur ☐ Minerals

Disinfected ☐ Yes ☐ No If no, provide reason:
Date Master Well Completed (yyyy/mm/dd): 2010/08/26

Cluster Information *(Please also fill out the additional Cluster Well Information for Well Construction for each parcel of land and cluster.)*

Total Wells in Cluster: 7
Total Wells on this Property: 7
Please indicate Number of Cluster Well Information Log Sheets Submitted: 1

Location of Well Cluster

Detailed Map must be provided as an attachment no larger than legal size (8.5" x 14"). Sketches are not allowed.
☑ Check box to confirm detailed map is provided as per Section 11.1 (3)

Consent to [redacted] additional information concerning the cluster to

Well Contractor and Well Technician Information

Business Name of Well Contractor: Strata Soil Sampling
Well Contractor's Licence No.: 7241
Business Address (Street No./Name, number, RR): #2-147 West Beaver Creek
Municipality: Richmond Hill
Province: ON
Postal Code: L4B1C6
Business E-mail Address:
Bus. Telephone No. (inc. area code): (905) 764-9384
Name of Well Technician (Last Name, First Name): FENELON Dan
Well Technician's Licence No.: 5069
Signature of Technician:
Date Submitted (yyyy/mm/dd):

Ministry Use Only

Audit No.: M 03211
Well Contractor No.:
Date Received (yyyy/mm/dd): SEP 24 2010
Date of Inspection (yyyy/mm/dd):
Remarks:

1992 (11/2006)

Ministry's Copy

Ontario Ministry of the Environment

Well Tag No. for Master Well (Print Well Tag No.) A092457 **A 092457**

Cluster Well Information for Cluster Well Construction

Regulation 903 Ontario Water Resources Act

7761 Page 1 of 3

[redacted]

Address of Well Location (Street Number/Name, RR): 203 Catherine St. | Lot | Concession | Township | County/District/Municipality

City/Town/Village: Ottawa | Province: Ontario | Postal Code | GPS Unit Make: Garmin | Model: Etrex | Unit Mode of Operation: ☐ Undifferentiated ☑ Averaged ☐ Differentiated, specify:

upon request

Signature of Technician/Contractor | Date (yyyy/mm/dd): 2010/08/2[illegible]

Well # on Sketch	UTM Coordinates Zone	Easting	Northing	Full Depth of Hole (metres)	Hole Diameter (cm)	Method of Construction	Casing Material	Casing Length (metres)	Screen Interval (metres) From	To	Annular Space Sealant Used	Static Water Level (metres)	Abandonment Sealant Used	Comments	Date of Completion (yyyy/mm/dd)
2	18	445949	5028739	6.1	8.25	Direct Push	PVC	3.05	3.05	6.1	Bensea]				2010/08/26
3	18	445919	5028762	6.1	8.25	Direct Push	PVC	3.05	3.05	6.1	Bensea]				2010/08/2[illegible]
4	18	445911	5028728	6.1	8.25	Direct Push	PVC	3.05	3.05	6.1	Bensea]				2010/08/26
5	18	445945	5028740	6.1	8.25	Direct Push	PVC	3.05	3.05	6.1	Bensea]				2010/08/26
6	18	445941	5028724	2.74	5.71	Direct Push	PVC	1.22	1.22	2.74	Bensea]				2010/08/27
7	18	445944	5028715	2.74	5.71	Direct Push	PVC	1.22	1.22	2.74	Bensea]				2010/08/27

Well Contractor and Well Technician Information

Business Name of Well Contractor: Strata Soil Sampling Inc. | Business Address (Street Number/Name, RR): #2-147 West Beaver Creek | Municipality: Richmond Hill | Province: ON

Postal Code: L4B 1C6 | Business Telephone No. (inc. area code): (905) 764-9304 | Well Contractor's Licence No.: 7241 | Business E-mail Address:

Name of Well Technician (First Name, Last Name): JOHN FERELUS | Well Technician's Licence No.: 3069 | Date Submitted (yyyy/mm/dd): | Signature of Technician:

Date 1st Well in Cluster Constructed (yyyy/mm/dd): 2010/08/26 | Date Last Well in Cluster Constructed (yyyy/mm/dd): 2010/08/27

Ministry Use Only

Date Received (yyyy/mm/dd): SEP 24 2010 | Date Inspected (yyyy/mm/dd):

Audit No.: c08532 | Remarks: M03211

1991 (11/2006)

Ministry's Copy

A 092457

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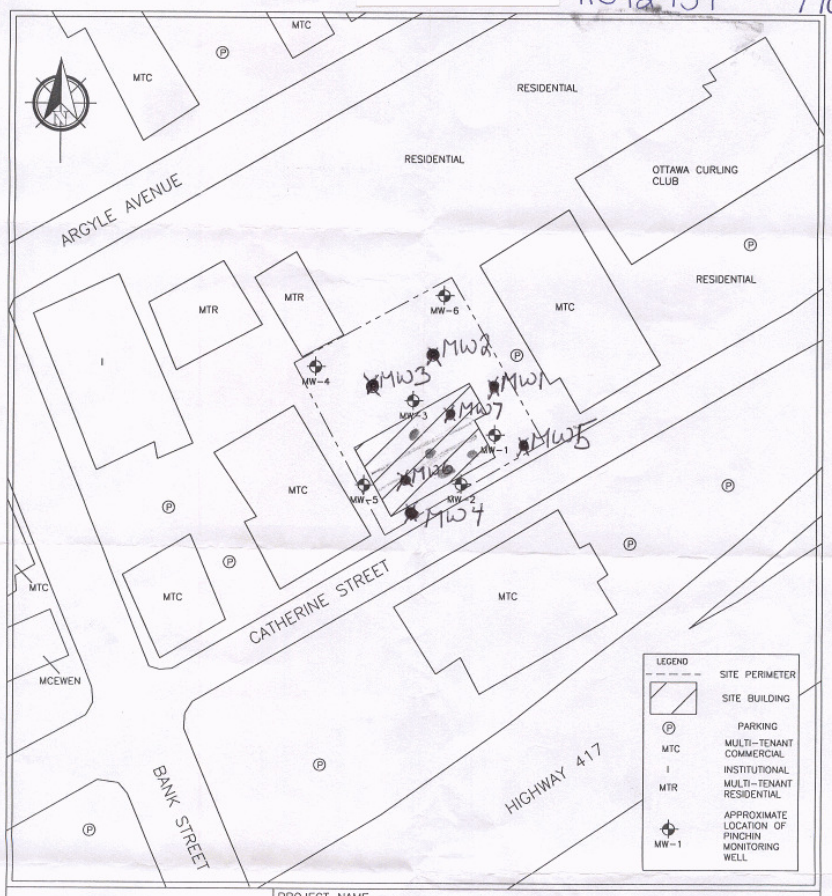

PROJECT NAME	PHASE II ENVIRONMENTAL SITE ASSESSMENT		
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PINCHIN ENVIRONMENTAL

SEP 2 4 2010

C-7241 M03211 C08532.

Philip Price

From: Public Information Services <publicinformationservices@tssa.org>
Sent: July-31-19 10:33 AM
To: Philip Price
Subject: Re: TSSA Records Search, PE4701 - Ottawa, ON (No Record)

Hello,

Thank you for your inquiry.

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

For a further search in our archives please complete our release of public information form found at https://www.tssa.org/en/about-tssa/release-of-public-information.aspx?_mid_=392 and email the completed form to publicinformationservices@tssa.org or through mail along with a fee of $56.50 (including HST) per location. The fee is payable with credit card (Visa or MasterCard) or with a Cheque made payable to TSSA.

Although TSSA believes the information provided pursuant to your request is accurate, please note that TSSA does not warrant this information in any way whatsoever.

Thank you and have a great day,

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: Philip Price <PPrice@Patersongroup.ca>
Sent: July 31, 2019 9:28 AM
To: Public Information Services <publicinformationservices@tssa.org>
Subject: TSSA Records Search, PE4701 - Ottawa, ON

Good morning,

Could you please conduct a search of your records for underground/aboveground storage tanks, historical spills and other incidents/infractions for the following addresses for properties located in Ottawa, Ontario:

100 Isabella Street
114 Isabella Street
118 Isabella Street
120 Isabella Street

480 Metcalfe Street

460 O’Conner Street

113 Pretoria Ave
109 Pretoria Ave
111 Pretoria Ave
119 Pretoria Ave

Thank you very much,

Philip Price

Philip Price

patersongroup
solution oriented engineering
over 60 years servicing our clients

154 Colonnade Road South
Ottawa, Ontario, K2E 7J5
Tel: (613) 226-7381 Ext. 250
Cell: (343) 999 7255

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