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Phase I-Environmental Site Assessment

316, 320, 324, 326 and 332 Clifton Road
Ottawa, Ontario

Prepared For

Insight Ottawa Realty Corporation

January 9, 2019

Report: PE4500-1

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EXECUTIVE SUMMARY

Assessment

A Phase I-Environmental Site Assessment (ESA) was carried out for the properties addressed 316, 320, 324, 326 and 332 Clifton Road, in the City of Ottawa, Ontario. The purpose of the Phase I-ESA was to research the past and current use of the site and study area and to identify environmental concerns with the potential to have impacted the subject property.

Based on the available historical information sources, the Phase I Property was first developed for residential purposes between 1948 to 1953. The adjacent properties to the north, south and east were used for residential purposes, while adjacent property to the west was originally vacant, followed by use for commercial purposes (contractor yard). The property to the northeast, across Clifton Road, has been occupied by a transformer sub-station since as early as 1957. The land further to the north, on the south side of Scott Street, was occupied by commercial office space.

Paterson has filed records of site condition (RSCs) in the MECP's Environmental Site Registry for the residential and mixed-use redevelopment of the adjacent properties to the west and northwest. Based on information in our files, these properties are not considered to represent areas of potential environmental concern on the Phase I Property.

Off-site historical PCAs identified are not considered to result in APECs on the Phase I Property based on their separation distances and/or orientations with respect to the subject land.

Following the historical review, a site visit was conducted. Based on the findings of the site visit, no on-site PCAs were identified. At the time of the site visit, the current use of the adjacent and neighbouring properties within the Phase I ESA Study Area were observed from publicly accessible areas. No off-site PCAs with the potential to impact the Phase I Property were identified at the time of the site visit.

Based on the findings of the Phase I-ESA, it is our opinion that **a Phase II-ESA is not required for the Phase I Property.**

Recommendations

Based on the ages of the subject structures (1920's through 1960's) potentially asbestos containing materials (ACMs) observed at the time of the site visit include, vinyl floor tiles, linoleum flooring, hard plaster, decorative ceiling plasters, suspended ceiling tiles, drywall joint compound, lath and plaster, and interior and exterior parging. Based

on dates of construction, lead-based paints (LBPs) may be present within the structures on older or original painted surfaces beneath newer paints. All building materials and painted surfaces were observed to be in good condition at the time of the site visit and the potential for ACMs and LBPs is not considered to represent an immediate concern.

It is our understanding that the subject structures will be demolished in conjunction with future redevelopment. Prior to any demolition activities, a designated substance survey (DSS) must be conducted for the existing structures, in accordance with Ontario Regulation 490/09 under the Occupational Health and Safety Act.

1.0 INTRODUCTION

At the request of Insight Ottawa Realty Corporation, Paterson Group (Paterson) conducted a Phase I-Environmental Site Assessment (Phase I-ESA) of the properties located at 316, 320, 324, 326 and 332 Clifton Road in the City of Ottawa, Ontario. The purpose of this Phase I-ESA was to research the past and current use of the site and study area to identify any environmental concerns with the potential to have impacted the subject property.

Paterson was engaged to conduct this Phase I-ESA by Mr. Jeremy Silburt of Insight Ottawa Realty Corporation. Mr. Silburt can be contacted by telephone at 613-880-5491.

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

This Phase I-ESA report has been prepared in general accordance with 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:	316, 320, 324, 326 and 332 Clifton Road, Ottawa, ON
Legal Description:	Lots 18, 19, 20, 21, 22 and 23 on Registered Plan 369, City of Ottawa
Property Identification Numbers:	04021-0044, 04021-0045, 04021-0046, 04021-0047, and 04021-00148
Location:	The Phase I property is located on the west side of Clifton Road, north of Wilber Avenue, in the City of Ottawa. The subject site is shown on Figure 1 - Key Plan following the body of this report.
Latitude and Longitude:	45° 23' 47" N, 75° 44' 56" W
Site Description:	
Configuration:	Rectangular (approximate)
Site Area:	0.29 ha (approximate)
Zoning:	R3R – Residential Third Density Zone; Mature Neighbourhood Overly
Current Use:	The subject property is currently occupied by 5 single-family residential dwellings.
Services:	The Phase I Property 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 153/04 as amended under the Environmental Protection Act, and in compliance with the requirements of CSA Z768-01;
- ❒ Provide a preliminary environmental site evaluation based on our findings;
- ❒ Provide preliminary remediation recommendations and further investigative work if contamination is suspected or encountered.

4.0 RECORDS REVIEW

4.1 General

Phase I-ESA Study Area Determination

A radius of approximately 250 m was determined to be appropriate as a Phase I 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

The earliest aerial photograph from 1928 shows the Phase I Property was vacant, undeveloped land. The existing structures are present on a 1953 photograph, the next available photography for review. The subject site is therefore considered to have been first developed for residential purposes between 1948-1957.

Fire Insurance Plans

Fire insurance plans (FIPs) dated 1956 and 1957 cover the Phase I Property and majority of the Phase I Study Area. According to the FIPs, the Phase I Property was occupied by the existing residences. The review of the FIPs did not identify any on-site potentially contaminating activities (PCAs).

Immediately adjacent properties to the north, south and east (across Clifton Road) were also occupied by residential dwellings, while the adjacent property to the west was occupied by a contractor's yard. Otherwise, neighbouring land use in the Phase I Study Area consisted of a combination of residential, commercial and industrial properties.

Various off-site PCAs identified during the review of FIPs include: a transformer sub-station, rail lines, coal storage locations, as well as autobody and automotive repair garages. These off-site PCAs are not considered to represent areas of potential environmental concern (APECs) on the Phase I Property based on their respective separation distances and/or orientations in relation to the subject land as well as previous work that Paterson completed on the adjacent properties to the north. The locations of the PCAs identified in the Phase I-ESA area are depicted on Drawing PE4500-2 - Surrounding Land Use Plan.

It should be noted that the contractor yard at 319 McRae Avenue, immediately west of the Phase I Property, is not considered to be a potentially contaminating activity and does not represent an area of potential environmental concern (APEC) on the Phase I Property, based on information in our files, which is further discussed in the Previous Engineering Reports Section of this report.

City of Ottawa Street Directories

City directories were reviewed in approximately 10-year intervals from 1910 to 2010. The subject properties have been listed as residential properties since 1948. Neighbouring properties in the Phase I Study Area were listed primarily as residential dwellings, with some commercial or industrial land use. Potentially contaminating activities identified from the review of the City Directories are listed below in Table 1.

TABLE 1: Potentially Contaminating Activities
City Directories Review Summary

Listing	Address	Years Listed	Potentially Contaminating Activity	Represents an Area of Potential Environmental Concern
Carson's Body Shop Gas Bar/J's Gas Bar	1976 Scott Street	1972-1992	Retail fuel outlet	No
Westboro Motors	1976 Scott Street	2010	Automotive Service Garage	No
Independent Coal and Lumber Co.	25 Clifton Road	1941, 1951, 1961	Bulk Coal Storage Facility	No
Carson's Auto Body Shop	320 McRae Avenue	1959-2010	Automotive Service Garage	No
AutoRebex	320 McRae Avenue	1999-2010	Automotive Service Garage	No
Canadian Bank Note Company	145 Richmond Road	1990, 2000	Industrial Printing	No
Canadian General Electric Co.	175 Richmond Road	1955, 1961	Electronics Manufacturer	No
Guillevin International Pro Restaurant Equipment	175 Richmond Road	1980, 1990, 2000	Restaurant Equipment Manufacturers	No
Fuller Construction	199 Richmond Road	1951, 1961, 1970	Contractors Yard	No
Westboro Auto Imports	199 Richmond Road	1989	Automotive Service Garage	No
Sheera Car Care	201 Richmond Road	2000	Automotive Service Garage	No
Otto's Service Centre	225-245 Richmond Road	1961, 1970, 1980, 1989, 2000, 2010	Car Sales Lot and Automotive Service Garage	No
Ken Workman's Shell Service Station	225 Richmond Road	1951, 1961, 1970	Retail Fuel Outlet	No

TABLE 1: Potentially Contaminating Activities
City Directories Review Summary

Listing	Address	Years Listed	Potentially Contaminating Activity	Represents an Area of Potential Environmental Concern
Les Auto Body Repairs	314 Athlone Avenue	1961, 1970, 1980, 1989, 2000	Commercial Autobody Shop	No
Brebner Manufacturing and Repairs	360 Kirkwood Avenue	2000	Manufacturer Facility	No
Gifford Auto	359 McRae Avenue	1997, 2000	Automotive Service Garage	No
Frappier's Garage	345 Tweedsmuir	1959	Automotive Service Garage	No

The off-site PCAs noted above are not considered to represent areas of potential environmental concern (APECs) on the Phase I Property based on their separation distances, orientations with respect to the subject land and/or information contained in our files. The locations of the aforementioned PCAs, are depicted on Drawing PE4500-2 - Surrounding Land Use Plan.

Gervais Motors was listed at 1960 Scott Street in 1989. As further discussed in the Previous Engineering Reports section, this property is not considered to be a PCA based on information in our files and has therefore not been included in Table 1.

Chain of Title

A Chain of Title was not obtained for the Phase I Property as the information obtained from the records review is considered to satisfy the objectives of the records review, and a title search back to the date of the first developed use would not contribute to obtaining information about the environmental condition of the Phase One Property. As previously noted, based on a review of aerial photographs and city directories, the Phase I Property is considered to have been first developed for residential purposes as early as 1948.

Plan of Survey

Insight Ottawa Realty Corporation indicated that a survey plan of the Phase I Property is not currently available for review. The Phase I Property is shown in its current configuration on the City of Ottawa's electronic mapping site (geoOttawa).

Previous Engineering Reports

Paterson has completed subsurface investigations for the following properties in the immediate vicinity of the Phase I Property: 1960 Scott Street, 319 McRae Avenue and 320 McRae Avenue. Based on the findings of the investigations at 1960 Scott Street and 319 McRae, immediately west and northwest of the Phase I Property, no environmental concerns were identified with regards to the soil located immediately adjacent to the west of the subject land. It should also be noted that the groundwater beneath these properties was determined to be in compliance with the Ministry of the Environment, Conservation and Parks (MECP) Table 7 standards for a residential land use in shallow soil conditions. Records of Site Condition have been successfully filed in the MECP's Environmental Site Registry for both 319 McRae Avenue and 1960 Scott Street.

4.2 Environmental Source Information

Environment Canada

A search of the National Pollutant Release Inventory (NPRI) was conducted electronically on December 6, 2018. The subject site was not listed in the NPRI database. One (1) site with NPRI records was identified within the Phase I study area. This site is the Canadian Bank Note Company building located at 145 Richmond Road, approximately 130 m southeast of the Phase I Property.

The Canadian Bank Note Company includes a certificate air contaminant release form that indicates 10.891 tonnes of volatile organic compounds were released as emissions in 2010. Reports of this type appear available for this property for 2003 to 2010, however, no other details or figures were available. Based on its separation distance from the Phase I Property, this facility is not considered to represent an APEC on the subject land.

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

Requests were submitted to the MECP Freedom of Information office, at the time of the original Phase I site visit, 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 sites comprising the Phase I Property. A response had not been received from the MECP at the time this report was issued. Any pertinent information will be forwarded to the client upon receipt. A copy of the MECP search request is provided in Appendix 2.

MECP Coal Gasification Plant Inventory

The Ontario Ministry of Environment, Conservation and Parks 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 on the Phase I Property or within the Phase I Study Area.

MECP Incident Reports

Requests were 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 sites comprising the Phase I Property, or adjacent properties. A response had not been received from the MECP at the time this report was issued. Any pertinent information will be forwarded to the client upon receipt. A copy of the MECP search request is provided in Appendix 2.

MECP Waste Management Records

Requests were submitted to the MECP Freedom of Information office for information with respect to waste management records. A response had not been received from the MECP at the time this report was issued. Any pertinent information will be forwarded to the client upon receipt. A copy of the MECP search request is provided in Appendix 2.

MECP Submissions

Requests were submitted to the MECP Freedom of Information office for information with respect to reports related to environmental conditions that have been submitted to the MECP. A response had not been received from the MECP at the time this report was issued. Any pertinent information will be forwarded to the client upon receipt. A copy of the MECP search request is provided in Appendix 2.

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. The MECP document did not identify any landfill sites in the Phase I Study Area.

MECP Brownfields Environmental Site Registry

A search of the MECP Brownfields Environmental Site Registry (ESR) was conducted as part of this assessment for the site, neighbouring properties and the general area of the site. No Records of Site Condition (RSCs) were filed for the subject site.

Four RSCs were identified for the following properties within the Phase I study area: 309 Athlone Avenue, 1900 Scott Street, 1960 Scott Street and 319 McRae Avenue. Based on the separation distances of the properties at 309 Athlone Avenue and 1900 Scott Street with respect to the Phase I Property, in combination with the information in the ESR, these properties are not considered to represent an APEC on the subject land.

The RSC for 319 McRae Avenue, situated immediately southwest of the subject property, was filed by Paterson in December of 2014. As discussed previously, groundwater beneath this property was determined to be clean at the time of the Phase II ESA. No indications of contamination were noted along the eastern portion of the site, adjacent to the Phase I Property, at the time of the remediation.

The RSC for 1960 Scott Street, immediately northwest of the Phase I Property, was filed by Paterson in August of 2018. As noted previously, the groundwater beneath this property was also determined to be clean at the time of the Phase II ESA, and there were no indications of contamination on the southeastern portion of the site, in the vicinity of the northwestern portion of the Phase I Property, at the time of the remediation.

PCB Inventory

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

Areas of Natural Heritage and Significance Interest

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 December 6, 2018. The search did not identify any provincially significant life sciences or earth sciences areas of natural heritage and scientific interest within the Phase I Study Area.

Technical Standards and Safety Authority (TSSA)

The TSSA, Fuels Safety Branch in Toronto was contacted electronically on December 7, 2018, to inquire about current and former underground storage tanks, spills and incidents for the site and neighbouring properties. According to the TSSA response dated December 7, 2018, no records were identified. A copy of the TSSA correspondence is included in Appendix 2.

City of Ottawa Landfill Document

The document entitled “Old Landfill Management Strategy, Phase I-Identification of Sites, City of Ottawa”, was reviewed. One landfill site was identified within the Phase I Study Area. The review of the report indicates that the landfill was located on McRae Avenue, between Scott Street and Richmond Road, served the City of Ottawa and was active prior to the 1940s. The report indicates that the waste is domestic, of unknown thickness and the footprint has not been identified.

Based on clean groundwater results beneath the adjacent properties to the northwest (1960 Scott Street) and west (319 McRae Avenue), in combination with the northerly groundwater flow direction in the area of the Phase I Property, the landfill is not considered to represent an APEC on the subject land.

City of Ottawa Historical Land Use Inventory (HLUI)

A requisition form was sent to the City of Ottawa to request information from the City’s Historical Land Use Inventory (HLUI 2005) database for the subject property. A response had not been received at the time this report was issued. A copy of the response will be forwarded to the client if it contains any pertinent information. The HLUI request form has been provided in Appendix 2.

4.3 Physical Setting Sources

Aerial Photographs

Historical air photos from the National Air Photo Library were reviewed in approximate 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 Phase I Property is vacant, undeveloped land. Adjacent and surrounding lands are also vacant, while Clifton Road is present immediately to the east of the subject land. Occasional residential dwellings can be seen further to the north, east and south of the Phase I Property.

1953 The Phase I Property has been developed with the existing residential structures. Residential development has occurred to the north, south and east of the Phase I Property, along Clifton Road. The property to the west remains vacant. Apparent commercial or industrial development has occurred further southwest, southeast and north of the Phase I Property.

1958 The Phase I Property appears to remain unchanged from the previous photograph. Commercial or light-industrial activity appears to be present on the adjacent property to the west. The property to the northeast, at the southeast corner of Scott Street and Clifton Road appears to have been developed, however the land use cannot be distinguished in this photo. No other significant changes appear to have been made to the surrounding land use, since the previous photograph.

1976 No significant changes appear to have been made to the Phase I Property or the surrounding lands. The present-day transformer sub-station east of the Phase I Property can be clearly seen at the southeast corner of Scott Street and Clifton Road.

1984 The Phase I Property remains unchanged from the previous photograph. The adjacent property to the west now has what appears to be shipping containers on it. No other significant changes appear to have been made to the neighbouring properties.

1989 No significant changes appear to have been made to the Phase I Property. The adjacent property to the northwest appears to now be occupied with smaller containers over the eastern portion of the land, with what appears to be a small commercial building on the southeastern portion of the land. There appears to have been additional residential development east of the site, across Clifton Road, south of the transformer sub-station. No other significant changes appear to have occurred on the adjacent and neighbouring properties.

1993 The Phase I Property remains unchanged from the previous photograph. The adjacent property to the northwest has been redeveloped with a new commercial building. Otherwise, no significant changes appear to have been made to the neighbouring properties.

2005 (City of Ottawa website) No significant changes appear to have been made to the Phase I Property or immediately adjacent properties. Residential dwellings have been developed along West Village Private, further east of the Phase I Property.

2015 (City of Ottawa website) The Phase I Property remains unchanged from the previous photograph. The adjacent property to the west has been developed with a multi-storey mixed-used building. Otherwise, adjacent and neighbouring properties remain unchanged from the previous photograph.

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

Topographic Maps

Topographic maps were obtained from Natural Resources Canada – The Atlas of Canada website and from the City of Ottawa website. The topographic maps indicate that the regional topography generally slopes down to the north, towards the Ottawa River. The topographic map depicts the Hydro corridor on the east side of McRae Avenue and a substation on the north side of Scott Street.

Based on the topographic maps, the closest body of water to the subject site is the Ottawa River, the closest point of which is located approximately 940m northwest of the Phase I Property. An illustration of the referenced topographic map is presented on Figure 2 – Topographic Map, appended to this report.

Physiographic Maps

The Ontario Geological Survey publication 'The Physiography of Southern Ontario, Third Edition' was reviewed as a part of this assessment. According to the publication and attached mapping, the site is situated within the Ottawa Valley Clay Plains physiographic region, described as "clay plains interrupted by ridges of rock or sand". Mapping shows the subject site as situated in an area of limestone and till plains.

Geological Maps

The Geological Survey of Canada website on the Urban Geology of the National Capital Area was consulted as part of this assessment. Based on this information, the bedrock in the area of the subject site consists of interbedded limestone and dolostone of the Gull River Formation. Overburden soils are shown as glacial till, with a drift thickness on the order of 2 to 5 m. The findings of the subsurface investigations conducted by Paterson in the immediate vicinity of the Phase I Property, confirm the reported subsurface conditions.

Water Well Records

The online interactive well record mapping system was accessed on December 6, 2018. No well records were identified for the Phase I Property. A total of 16 well records were identified within the Phase I Study Area. With the exception of two (2) domestic wells installed in 1948 and 1951, all of the wells in the area of the Phase I Property were utilized as test holes or groundwater monitoring wells.

Monitoring well records were identified for the properties addressed 1960 Scott Street, 309 Athlone Avenue, 145 Richmond Road, 160 Lanark Avenue (Mahoney Park) and further to the east along Scott Street. As previously discussed, the groundwater beneath 1960 Scott Street is clean based on information in our files. The remaining monitoring wells are not considered to represent a concern to the Phase I Property based on their separation distances of over 100m from the subject land.

Water Bodies and Areas of Natural Significance

No water bodies or Areas of Natural Significance are present on the Phase I Property. The closest water body is the Ottawa River, located approximately 940m northwest of the subject site. No areas of natural significance are known to exist within the Phase I Study Area.

5.0 INTERVIEWS

Mr. Jordan Stitt, the agent from REMAX Core Realty Inc., who is representing Mr. Jeremy Silburt (the prospective buyer) was interviewed at the time of the site visit as well as via email. The subject site is currently occupied by five (5) residential dwellings constructed between 1948 to 1957. The site is current under agreement of purchase and sale for a future residential development. Mr. Stitt is not aware of any potential environment concern with regard to the subject site.

6.0 SITE RECONNAISSANCE

6.1 General Requirements

The site visits were conducted on December 13, 2018 and January 8, 2019. Weather conditions were sunny, with a temperature of approximately -14° C and -2° C, respectively. Personnel from the Environmental Department of Paterson Group conducted the site visit. In addition to the site, the uses of neighbouring properties within the Phase I-ESA Study Area were also assessed at the time of the site visit, from publicly accessible areas.

6.2 Specific Observations at Phase I Property

Buildings and Structures

The five (5) parcels of land that make up the Phase I Property were all occupied with single-family dwellings.

316 Clifton Road is occupied by a two (2) storey single-family dwelling and a detached private garage. The dwelling was constructed circa 1953 with a poured concrete foundation, finished with a brick and stone style exterior and a peaked roof covered with shingles. The private garage is a wood frame structure with a poured slab-on-grade foundation and finished on the exterior with plywood and vinyl siding and a peaked roof covered with asphaltic shingles.

320 Clifton Road is occupied by a 2-storey residence and a detached private garage. The dwelling was constructed in 1949 with a poured concrete foundation, finished with vinyl siding exterior and a sloped shingle roof. The private garage is a wood frame structure with a poured slab-on-grade foundation and finished on the exterior with vinyl siding with a sloped shingle roof.

324 Clifton Road is occupied by a single storey dwelling and detached garage, constructed in 1953 with a poured concrete foundation, finished with a cream coloured stucco exterior and a peak covered shingle roof. The private garage is a wood frame structure with a poured slab-on-grade foundation and finished on the exterior with vinyl siding with a sloped shingle roof.

326 Clifton Road is occupied by a single-storey residence. The dwelling was constructed between 1947 to 1953 with a poured concrete foundation, finished with a white stucco exterior and a peak covered shingle roof.

332 Clifton Road is occupied by a 2-storey residence and a private garage. The dwelling was constructed in 1948 with a poured concrete foundation, finished with a red brick exterior and a peak covered shingle roof. The private garage is a wood frame structure with a poured slab-on-grade foundation and finished on the exterior with vinyl siding with a sloped shingle roof.

Site Features

The ground surface on the residential properties largely consisted of a landscaped lot with grass and trees, and asphaltic concrete laneways and parking areas. Site topography is generally flat, sloping slightly downwards to the east. Site drainage consists primarily of sheet flow to catch basins along Clifton Road, with some infiltration occurring in areas of permeable ground surface, such as the landscaped areas.

No exterior aboveground storage tanks (ASTs) or evidence of exterior underground storage tanks (USTs) were observed at the time of the site visit. No spills, staining, stressed vegetation, or visual or olfactory evidence of contamination was noted on the exterior of the subject site during the Phase I site visit.

No underground structures, drains, pits, or sumps were observed on the exterior of the Phase I Property during the site visit. No monitoring wells, potable wells or private sewage systems were observed onsite, nor are any expected to be present, as the site is located in a municipally-serviced area.

Waste generated on site consists of domestic waste and recycling generated from each of the subject buildings. Waste and recycling is collected at the curbside by the municipality on a weekly basis.

A pole mounted transformer was noted in front of 316 Clifton Road. No signs of transformer oil staining were noted beneath the transformer.

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

The above-noted site features are shown on Drawing PE4500-1 - Site Plan.

Interior Assessment

A general description of the interior of each residential dwelling is provided below:

316 Clifton Road

- Floor materials consist of hardwood, ceramic tiles, and vinyl tiles and poured concrete.
- Wall materials consist of lath and plater, gypsum boardand poured concrete.
- Ceiling materials consist of lath and plaster, several of which were finished with decorative plaster design.
- Lighting throughout the building is provided by incandescent fixtures.

The building is currently heated with natural gas-fired equipment located in the basement. Based on the age of the building (1953) in combination with observations made at the time of the site visit, it is very likely that the building was originally heated with fuel-oil, prior to conversion to natural gas. It should be noted however, that no evidence of ASTs or USTs, spills, or staining were observed in the basement.

One floor drain was observed throughout the basement level. The drain appeared to be dry. No other drains, or sumps were observed.

Chemical storage was limited to small quantities of commercially-available cleaning products and paint. All chemicals were properly stored in their original containers, with no evidence of spills or staining observed at the time of the site visit. No concerns associated with chemical storage were identified at the subject site.

Based on the date of construction, potentially asbestos-containing materials (ACMs) observed at the time of the site visit include vinyl floor tiles, drywall joint

compound, parging (interior and exterior) and plaster ceilings. Lead-based paints may also be present on older or original painted surfaces beneath newer lead-free paints. Building materials and painted surfaces were observed to be in good condition at the time of the site visit.

320 Clifton Road

- Floor materials consist of hardwood, linoleum, ceramic and vinyl tile, some carpet and poured concrete (basement).
- Wall materials consist of lath and plater, gypsum board, and poured concrete.
- Ceiling materials consist of gypsum board and plaster.
- Lighting throughout the building is provided by incandescent fixtures.

The building was previously heated with an oil burning furnace until 2001 and replaced with a natural gas fired furnace. A sub-floor was installed in the area of where the former AST was situated. As a result, the concrete floor could not be observed at the time of the site visit. However, no odours were noted in the basement.

One floor drain was observed in the basement level. The drain appeared to be dry. No other drains, or sumps were observed at the time of the site visit.

Chemical storage was limited to small quantities of commercially-available cleaning products and paint. All chemicals were properly stored in their original containers, with no evidence of spills or staining observed at the time of the site visit. No concerns associated with chemical storage were identified on this portion of the Phase I Property.

Based on the date of construction of the dwelling (1949), potentially asbestos-containing materials (ACMs) observed at the time of the site visit include vinyl floor tiles, drywall joint compound and plaster. Lead-based paints may also be present on older or original painted surfaces beneath newer lead-free paints. Building materials and painted surfaces were observed to be in good condition at the time of the site visit.

324 Clifton Road

- Floor materials consist of vinyl tile, hardwood, ceramic tile and poured concrete.
- Wall materials consist of lath and plater, gypsum board, parging, and poured concrete.
- Ceiling materials consist of lath and plaster, gypsum board, wood paneling and suspended ceiling tiles.
- Lighting throughout the building is provided by incandescent fixtures.

The building is currently heated with a natural gas fired furnace. Signs of an AST were observed in the basement; a non-painted wall area outlining the shape of an AST as well as the location of the former fill and vent pipes. No odour, spills, or staining were observed on the interior of the residential dwelling. The private garage is not heated.

A sump pit was observed in the basement of the dwelling. No odour or water was noted at the time of the site visit.

Chemical storage within the dwelling was limited to small quantities of commercially-available cleaning products in the basement. All chemicals were properly stored in their original containers, with no evidence of spills or staining observed at the time of the site visit. No concerns associated with chemical storage were identified on this portion of the Phase I Property.

Based on the date of construction of the dwelling (as early as 1953), potentially asbestos-containing materials (ACMs) observed at the time of the site visit include drywall joint compound, vinyl tiles and suspended ceiling tiles. Lead-based paints may also be present on older or original painted surfaces beneath newer lead-free paints. Building materials and painted surfaces were observed to be in good condition at the time of the site visit.

326 Clifton Road

- Floor materials consist of hardwood, linoleum, vinyl tile and poured concrete.
- Wall materials consist of lath and plater, gypsum board, parging, wood panels and poured concrete.

- ❒ Ceiling materials consist of lath and plaster and gypsum board and suspended ceiling tile.
- ❒ Lighting throughout the building is provided by incandescent fixtures.

The building was previously heated with an oil burning furnace until 2008 and replaced with a natural gas fired furnace. Signs of an AST were observed in the basement, including above ground copper wires partially parged over, and parged holes of the former vent and fill pipes. Some minor dark staining, (approximately 0.3 m in diameter) accompanied by a white ring around it, was noted where the old oil burning furnace was situated. However, it is expected that the noted stain is primarily from the water condensation of the former oil furnace (precipitation of salt on the concrete floor). No odour was accompanied by the floor stain in the basement at the time of the site visit.

No drains or sumps were observed at the time of the site visit.

No chemical storage was observed except domestic cleaning products, which were property stored in their original containers, with no evidence of spills or staining observed at the time of the site visit.

Based on the date of construction of the dwelling (approximately 1950), potentially asbestos-containing materials (ACMs) observed at the time of the site visit include vinyl floor tiles, lath and plaster, suspended ceiling tiles, drywall joint compound and plaster. Lead-based paints may also be present on older or original painted surfaces beneath newer lead-free paints. Building materials and painted surfaces were observed to be in good condition at the time of the site visit.

<u>332 Clifton Road</u>

- ❒ Floor materials consist of hardwood, ceramic tile and poured concrete.
- ❒ Wall materials consist of lath and plater, gypsum board, parging and poured concrete.
- ❒ Ceiling materials consist of lath and plaster and gypsum board.
- ❒ Lighting throughout the building is provided by incandescent fixtures.

The building is currently heated with a natural gas fired furnace. Based on the age of the building (1948) it is possible the building was originally heated with

fuel-oil, prior to conversion to natural gas. No odour, spills, or staining were observed in the basement.

One floor drain was observed in the basement level. The drain appeared to be dry. No other drains, or sumps were observed at the time of the site visit.

Chemical storage within the dwelling was limited to small quantities of commercially-available cleaning products. All chemicals were properly stored in their original containers, with no evidence of spills or staining observed at the time of the site visit. No concerns associated with chemical storage were identified on this portion of the Phase I Property.

Based on the date of construction of the dwelling (1948), potentially asbestos-containing materials (ACMs) observed at the time of the site visit include gypsum board and plaster. Lead-based paints may also be present on older or original painted surfaces beneath newer lead-free paints. Building materials and painted surfaces were observed to be in good condition at the time of the site visit.

Neighbouring Properties

An inspection of 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 – Residential dwelling, followed by International Buddhist Progress Society of Ottawa;
- East – Clifton Road, followed by single-family residences;
- South – Residential condominium building roadway (Wilber Avenue), followed by single family residences;
- West – Residential condominium building, followed by McRae Avenue.

The current use of the adjacent properties is not considered to pose an environmental concern to the subject site. Potentially contaminating activities (PCAs) within the Phase I Study Area were identified, however based on the separations distances, orientation with respect to the subject site and previous environmental work conducted by Paterson, these properties do not represent areas of potential environmental concerns (APECs). PCAs within the study area are illustrated and presented in green text on Drawing PE4500-2 – Surrounding Land Use Plan in the Figures section of this report.

7.0 REVIEW AND EVALUATION OF INFORMATION

7.1 Land Use History

The Phase I Property was vacant, until developed with the existing residential dwellings between 1948 to 1953. The Phase I Property has always been used for residential purposes.

Potentially Contaminating Activities (PCAs)

Off-site PCAs identified within the Phase I Study Area are illustrated on Drawing PE4500-2 – Surrounding Land Use Plan in the Figures section of this report, following the text. Based on their separation distances and/or orientations with respect to the subject land, as well as previous work completed by Paterson Group, the PCAs are not considered to represent APECs on the Phase I Property.

Areas of Potential Environmental Concern (APECs)

No APECs were identified on the Phase I Property.

Contaminants of Potential Concern (CPCs)

No CPCs were identified on the Phase I Property.

7.2 Conceptual Site Model

Geological and Hydrogeological Setting

The Geological Survey of Canada website on the Urban Geology of the National Capital Area was consulted as part of this assessment. Based on this information, the bedrock in the area of the subject site consists of interbedded limestone and dolostone of the Gull River Formation. Overburden soils are shown as glacial till, with a drift thickness on the order of 2 to 5 m.

The findings of subsurface investigations conducted by Paterson in the immediate vicinity of the Phase I Property, confirm the reported subsurface conditions. Based on groundwater level measurements taken in conjunction with the aforementioned investigations, the long-term groundwater table in the area of the Phase I Property is interpreted to be present in the bedrock layer with a flow direction toward the north.

It is possible that the groundwater flow beneath the site may be slightly influenced by the recent construction of the multi-storey buildings with at least 2 levels of underground parking on the adjacent properties to the west and northwest.

Buildings and Structures

The subject site is currently occupied by five (5) residential dwellings and associated private garages. The buildings are considered to have been constructed between 1948 to 1953. No other buildings or structures are present on the Phase I Property.

Water Bodies and Areas of Natural Significance

There are no water bodies on the subject site or within the Phase I Study Area. The nearest water body is the Ottawa River, located approximately 940 m to the northwest of the Phase I Property.

No areas of natural significance were identified on the site or in the Phase I ESA Study Area.

Drinking Water Wells

The online interactive well record mapping system was accessed on December 7, 2018. No potable well records were identified for the Phase I Property. Two records of domestic wells, dated 1948 and 1951, were identified for properties within the Phase I Study Area. These wells are no longer considered to be in operation as the Phase I Property and surrounding properties are municipally serviced.

Monitoring Well Records

A total of 14 well records for test holes or groundwater monitoring wells were identified for other properties within the Phase I Study Area. Monitoring well records were identified for the properties addressed 1960 Scott Street, 309 Athlone Avenue, 145 Richmond Road, 160 Lanark Avenue (Mahoney Park) and further to the east along Scott Street. As previously discussed, the groundwater beneath 1960 Scott Street is clean based on information in our files. The remaining monitoring wells are not considered to represent a concern to the Phase I Property based on their separation distances of over 100m from the subject land.

Neighbouring Land Use

Neighbouring land use in the Phase I Study Area is primarily residential with some commercial land use.

Potentially Contaminating Activities (PCAs)

No existing on-site PCAs were identified on the Phase I Property. As noted previously, based on the findings of investigative work conducted by Paterson on the adjacent properties to the west and northwest, previously occupied by automotive service garages and/or contractor yards, these properties are not considered to be PCAs. A transformer sub-station situated to the northeast of the Phase I Property, across Clifton Road is the closest off-site PCA with respect to the Phase I Property. Based the nature of its operation in combination with its downgradient orientation and separation distance of approximately 35m, the substation is not considered to represent an APEC on the Phase I Property.

Other historical or existing off-site PCAs identified within the Phase I-ESA study area are presented on Drawing PE4500-2 – Surrounding Land Use Plan. Based on their separation distances and/or orientations with respect to the Phase I Property, the PCAs are not considered to represent APECs on the Phase I Property.

Areas of Potential Environmental Concern (APECs) and Contaminants of Potential Concern (CPCs)

As noted above, none of the aforementioned off-site PCAs identified within the Phase I Study Area are considered to have resulted in APECs on the Phase I Property. There are no CPCs on the Phase I Property.

Assessment of Uncertainty and/or Absence of Information

The information available for review as part of the preparation of this Phase I-ESA is considered to be sufficient to conclude that there are no PCAs in the Phase I Study Area that represent APECs on the subject site. The presence of PCAs was confirmed by a variety of independent sources, and as such, the conclusions of this report are not affected by uncertainty which may be present with respect to the individual sources.

8.0 CONCLUSIONS

Assessment

A Phase I-Environmental Site Assessment (ESA) was carried out for the properties addressed 316, 320, 324, 326 and 332 Clifton Road, in the City of Ottawa, Ontario. The purpose of the Phase I-ESA was to research the past and current use of the site and study area and to identify environmental concerns with the potential to have impacted the subject property.

Based on the available historical information sources, the Phase I Property was first developed for residential purposes between 1948 to 1953. The adjacent properties to the north, south and east were used for residential purposes, while the adjacent property to the west was originally vacant, followed by use for commercial purposes (contractor yard). The property to the northeast, across Clifton Road, has been occupied by a transformer sub-station since as early as 1957. Paterson has filed records of site condition (RSCs) in the MECP's Environmental Site Registry for the residential and mixed-use redevelopment of the adjacent properties to the west and northwest. Based on information in our files, these properties are not considered to represent areas of potential environmental concern on the Phase I Property.

Off-site historical PCAs identified are not considered to result in APECs on the Phase I Property based on their separation distances and/or orientations with respect to the subject land.

Following the historical review, a site visit was conducted. No concerns were identified on the subject site. The current use of the adjacent and neighbouring properties within the Phase I ESA Study Area were observed from publicly accessible areas. No off-site PCAs with the potential to impact the Phase I Property were identified at the time of the site visit.

Based on the findings of the Phase I-ESA, it is our opinion that **a Phase II-ESA is not required for the Phase I Property.**

Recommendations

Based on the ages of the subject structures (late 1940's through early 1950's) potentially asbestos containing materials (ACMs) observed at the time of the site visit include, vinyl floor tiles, linoleum flooring, hard plaster, decorative ceiling plasters, suspended ceiling tiles, drywall joint compound, and interior and exterior parging. Based on dates of construction, lead-based paints (LBPs) may be

present within the structures on older or original painted surfaces beneath newer paints. All building materials and painted surfaces were observed to be in good condition at the time of the site visit and the potential for ACMs and LBPs is not considered to represent an immediate concern.

It is our understanding that the subject structures will be demolished in conjunction with future redevelopment. Prior to any demolition activities, a designated substance survey (DSS) must be conducted for the existing structures, in accordance with Ontario Regulation 490/09 under the Occupational Health and Safety Act.

9.0 STATEMENT OF LIMITATIONS

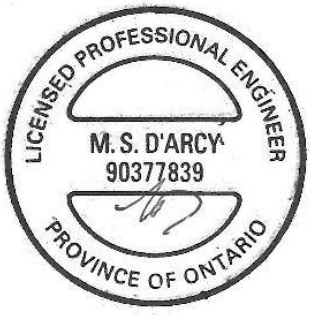
This Phase I-Environmental Site Assessment (ESA) report has been prepared in general accordance with O.Reg. 153/04, as amended, under the Environmental Protection Act and meets the requirements of CSA Z768-01. The conclusions presented herein are based on information gathered from a limited historical review and field inspection program. The findings of the Phase I-ESA are based on a review of readily available geological, historical and regulatory information and a cursory review made at the time of the field assessment. The historical research relies on information supplied by others, such as, local, provincial and federal agencies and was limited within the scope-of-work, time and budget of the project herein.

Should any conditions be encountered at the subject site and/or historical information that differ from our findings, we request that we be notified immediately in order to allow for a reassessment.

This report was prepared for the sole use of Insight Ottawa Realty Corporation. Permission and notification from Insight Ottawa Realty Corporation and Paterson will be required to release this report to any other party.

Paterson Group Inc.

Mandy Witteman, M.A.Sc.



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

Report Distribution:

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

Local Information Sources
Previous Engineering Reports.
Personal Interviews.

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

FIGURES

FIGURE 1 – KEY PLAN

FIGURE 2 – TOPOGRAPHIC MAP

DRAWING PE4500-1 – SITE PLAN

DRAWING PE4500-2 – SURROUNDING LAND USE PLAN

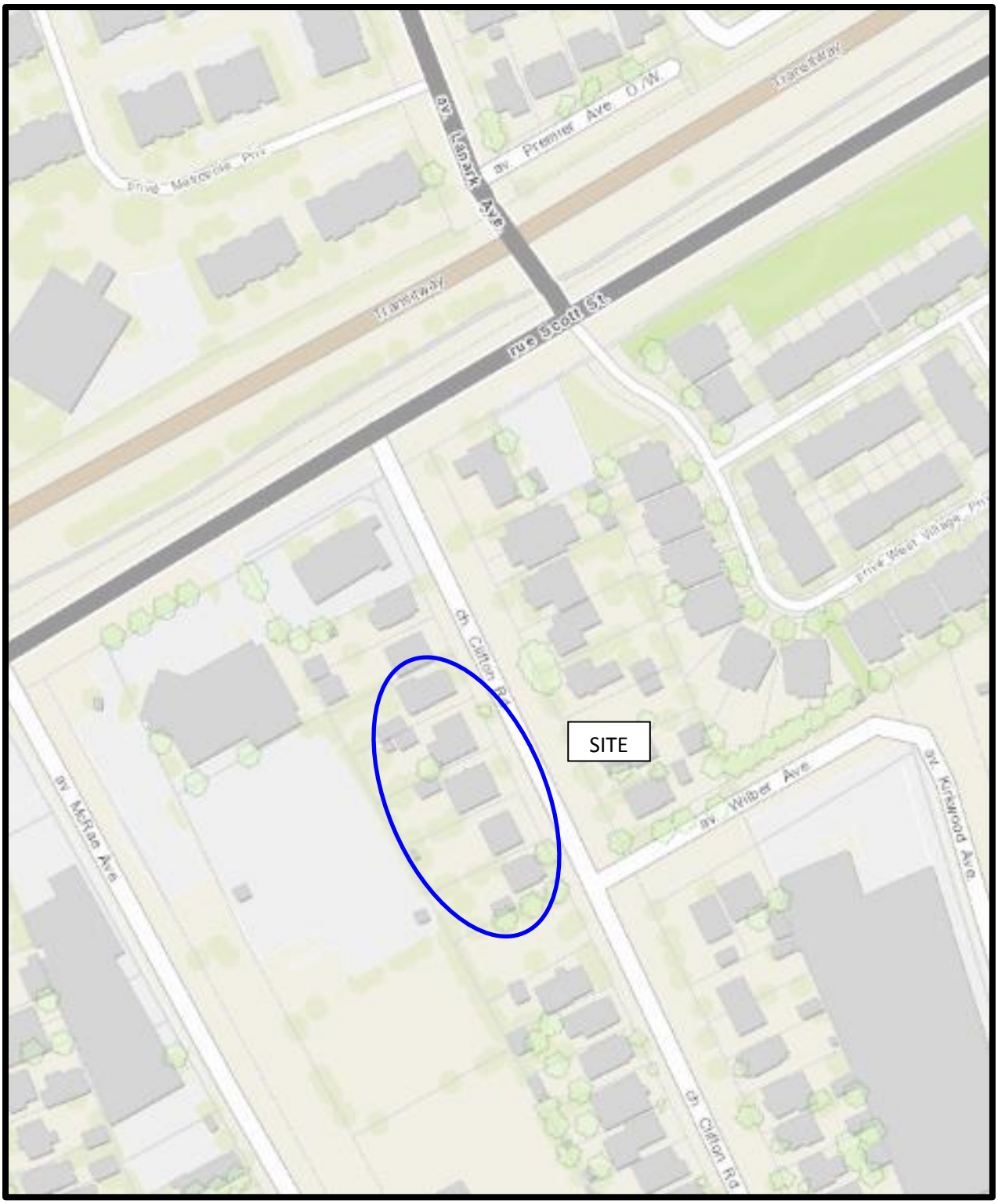


FIGURE 1

TOPOGRAPHIC MAP

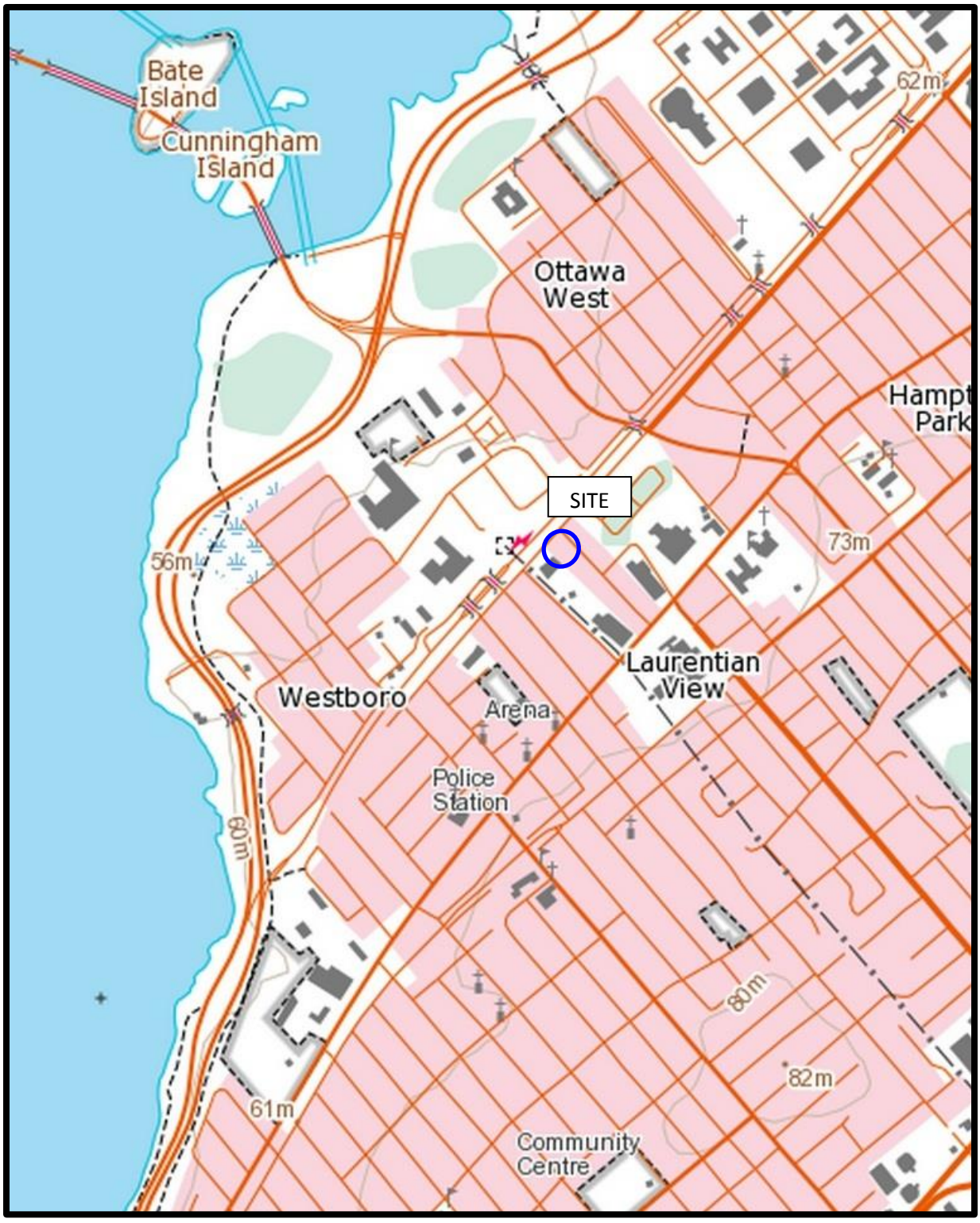


FIGURE 2

TOPOGRAPHIC MAP

#315 CLIFTON ROAD RESIDENTIAL

#319 CLIFTON ROAD RESIDENTIAL

#323 CLIFTON ROAD RESIDENTIAL

#327 CLIFTON ROAD RESIDENTIAL

#329 CLIFTON ROAD RESIDENTIAL

#185 WILBER AVENUE RESIDENTIAL

WILBER AVE.

CLIFTON ROAD

#312 CLIFTON ROAD RESIDENTIAL

#314 CLIFTON ROAD RESIDENTIAL

LANDSCAPED

#316 CLIFTON ROAD RESIDENTIAL

ASPHALTIC CONCRETE DRIVEWAY

#320 CLIFTON ROAD RESIDENTIAL

#324 CLIFTON ROAD RESIDENTIAL

#326 CLIFTON ROAD RESIDENTIAL

DECK

#332 CLIFTON ROAD RESIDENTIAL

GARAGE

GRASSED / TREED

PARKING LOT

#342 CLIFTON ROAD RESIDENTIAL

#346 CLIFTON ROAD RESIDENTIAL

#1960 SCOTT STREET
UNDER DEVELOPMENT
CURRENTLY VACANT

#319 MCRAE AVENUE
RESIDENTIAL / COMMERCIAL / OFFICES
(CHILD CARE, BANK, COFFEE SHOP,
GROCERY STORE, HEALTH AND
FITNESS CENTRE)

patersongroup
consulting engineers

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

NO.	REVISIONS	DATE	INITIAL
0			

INSIGHT OTTAWA REALTY CORPORATION

PHASE I - ENVIRONMENTAL SITE ASSESSMENT
316, 320, 324, 326 & 332 CLIFTON ROAD

OTTAWA, **ONTARIO**

Title:

SITE PLAN

Scale: 1:400	Date: 01/2019
Drawn by: MPG	Report No.: PE4500-1
Checked by: MW	Dwg. No.: PE4500-1
Approved by: MSD	Revision No.: 0

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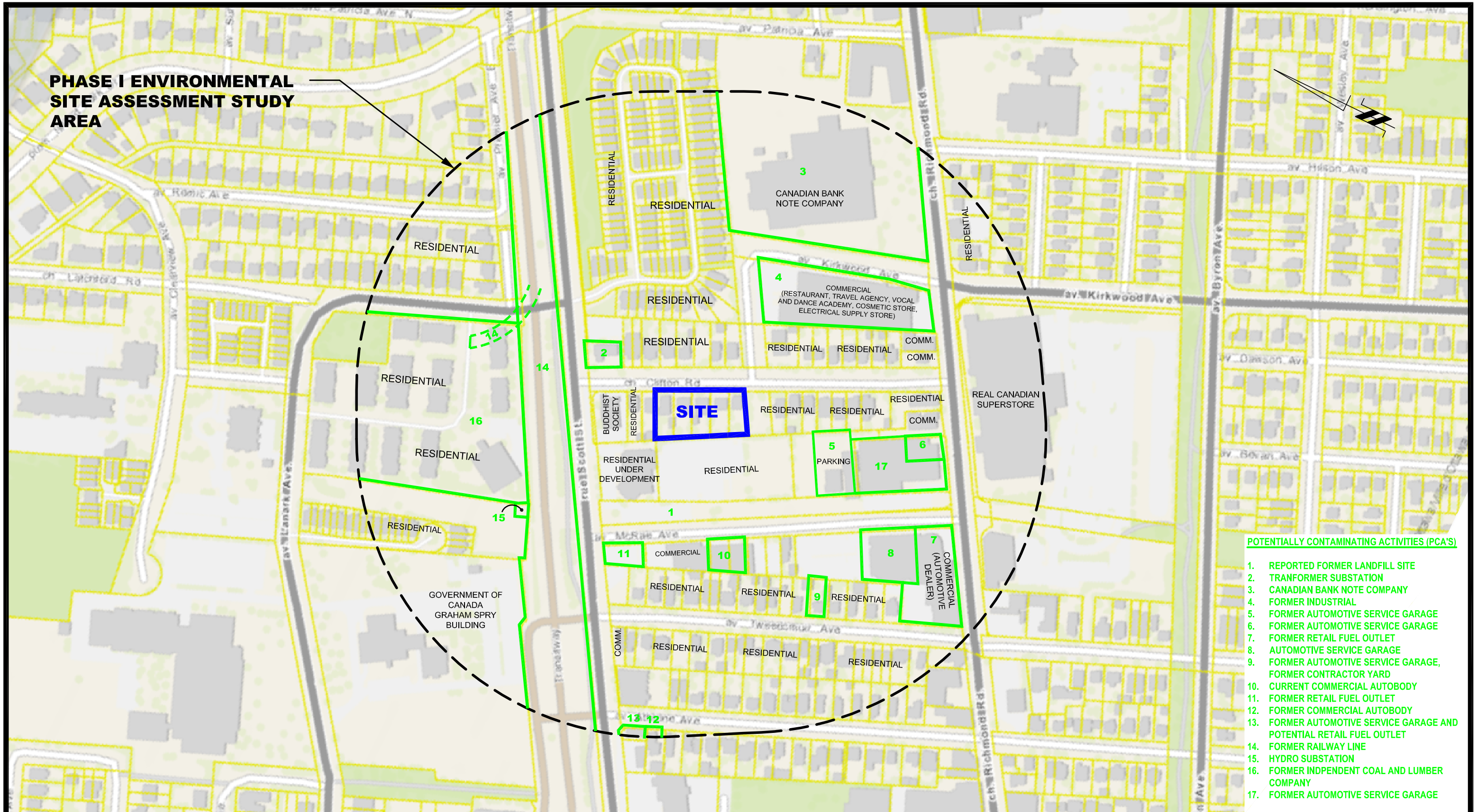

patersongroup
consulting engineers

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

NO.	REVISIONS	DATE	INITIAL
0			

INSIGHT OTTAWA REALTY CORPORATION

PHASE I - ENVIRONMENTAL SITE ASSESSMENT
316, 320, 324, 326 & 332 CLIFTON ROAD
OTTAWA, ONTARIO

Title:

SURROUNDING LAND USE PLAN

Scale: 1:3000	Date: 01/2019
Drawn by: MPG	Report No.: PE4500-1
Checked by: MW	Dwg. No.: PE4500-2
Approved by: MSD	Revision No.: 0

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APPENDIX 1

AERIAL PHOTOGRAPHS

SITE PHOTOGRAPHS

AERIAL PHOTOGRAPH
1928

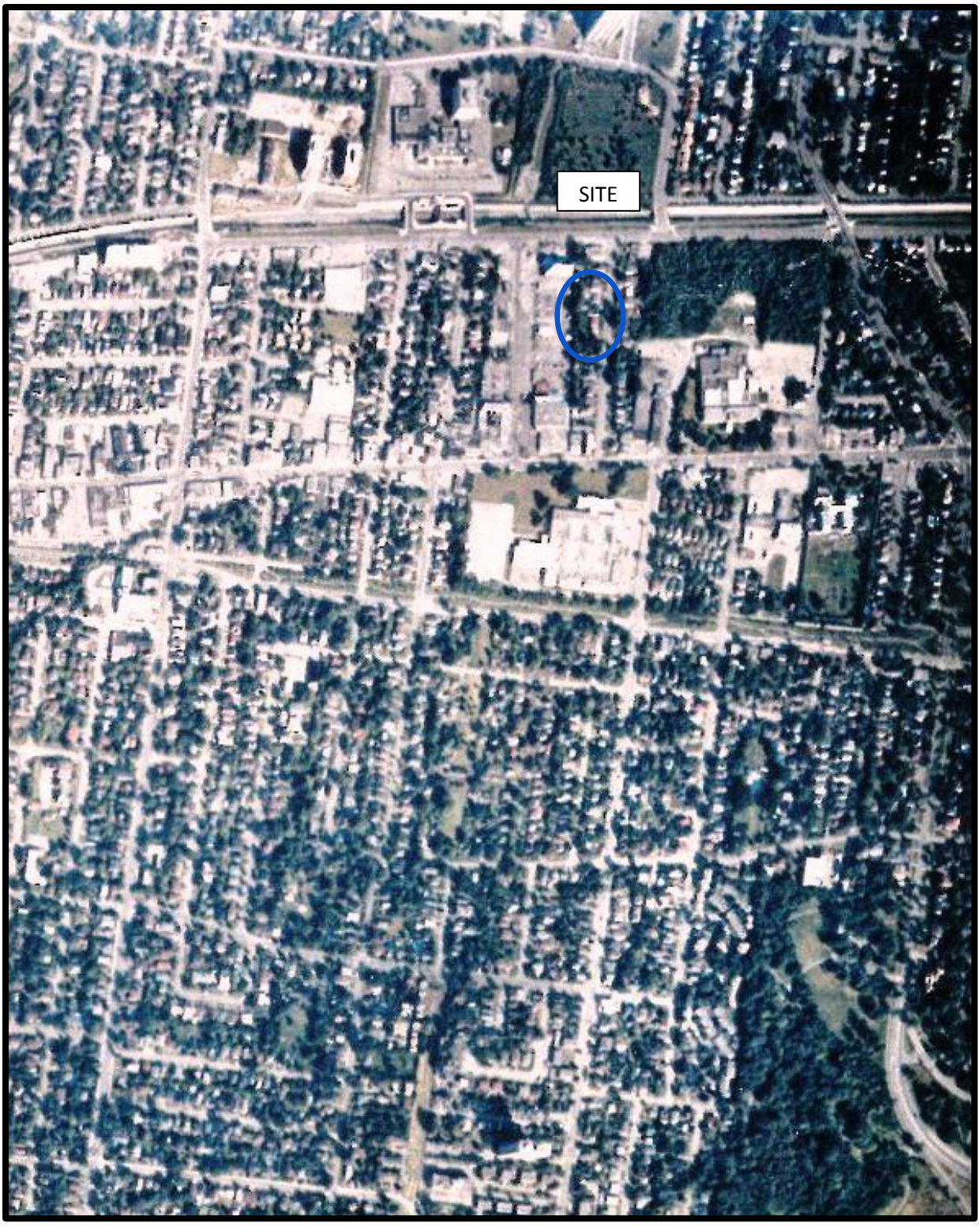
AERIAL PHOTOGRAPH
1953

AERIAL PHOTOGRAPH
1958

AERIAL PHOTOGRAPH
1976

AERIAL PHOTOGRAPH
1984

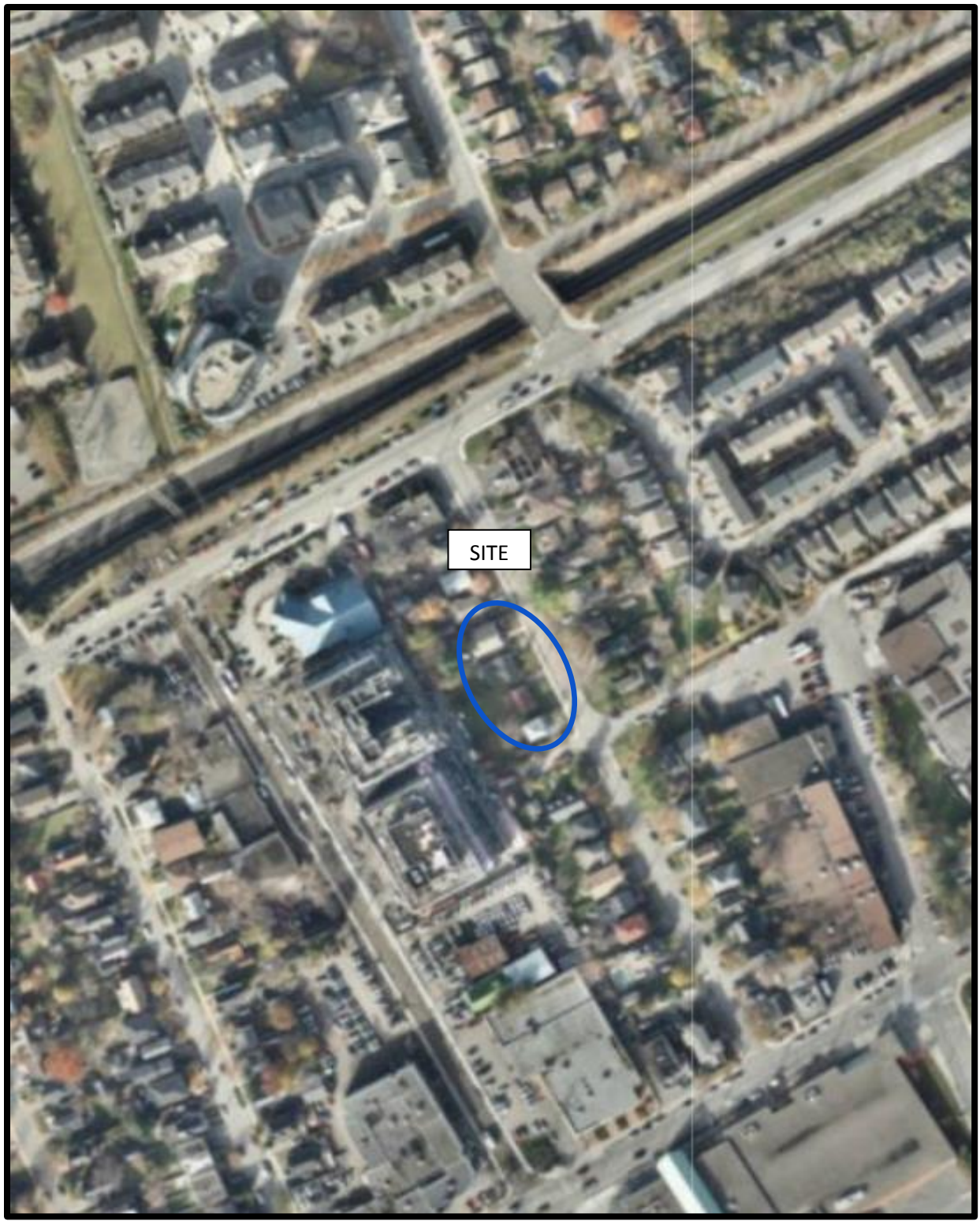
AERIAL PHOTOGRAPH
1989



AERIAL PHOTOGRAPH
1993

AERIAL PHOTOGRAPH
2005

patersongroup



AERIAL PHOTOGRAPH
2015

patersongroup

Site Photographs

PE4500 316, 320, 324, 326, 332 Clifton Road – Ottawa, ON January 8, 2019

Photograph 1: East face of subject building addressed 316 Clifton Road, looking west.

Photograph 2: East face of subject building addressed 320 Clifton Road, looking west.

Photograph 3: East face of subject building addressed 324 Clifton Road, looking west.

Photograph 4: East face of subject building addressed 328 Clifton Road, looking west.

Photograph 5: East face of subject building addressed 332 Clifton Road, looking west.

APPENDIX 2

MECP FREEDOM OF INFORMATION SEARCH

MECP WELL RECORDS

CITY OF OTTAWA HLUI SEARCH

TSSA CORRESPONDENCE

Ontario

Ministry of
Environment
and Energy

Freedom of Information Request

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

Requester Data

Name, Company Name, Mailing Address and Email Address of Requester

Mandy Witteman
Paterson Group Inc.
154 Colonnade Road
Ottawa, ON K2E 7J5
Email address: mwitteman@patersongroup.ca

Telephone/Fax Nos.

Tel. 613-226-7381
Fax 613-226-6344

Your Project/Reference No.

PE4500

Signature/Print /Name of Requester

Mandy Witteman

For Ministry Use Only

FOI Request No.

Date Request Received

Fee Paid

☐ ACCT ☐ CHQ ☐ VISA/MC ☐ CASH

☐ CNR ☐ ER ☐ NOR ☐ SWR ☐ WCR
☐ SAC ☐ IEB ☐ EAA ☐ EMR ☐ SWA

Request Parameters

Municipal Address / Lot, Concession, Geographic Township **(Municipal address essential for cities, towns or regions)**

316, 320, 324, 326 and 332 Clifton Road., Ottawa ON

Present Property Owner(s) and Date(s) of Ownership

Jeremy Silburt

Previous Property Owner(s) and Date(s) of Ownership

Present/Previous Tenant(s),(if applicable)

Unknown

Search Parameters *Files older than 2 years may require $60.00 retrieval cost. There is no guarantee that records responsive to your request will be located.*	**Specify Year(s) Requested**
Environmental concerns (General correspondence, occurrence reports, abatement)	all
Orders	all
Spills	all
Investigations/prosecutions ➤ Owner **AND** tenant information must be provided	all
Waste Generator number/classes	all

Certificates of Approval ➤ Proponent information must be provided

1985 and prior records are searched manually. **Search fees in excess of $300.00** could be incurred, depending on the types and years to be searched. Specify Certificates of Approval number(s) (if known). **If supporting documents are also required, mark SD box** and specify type e.g. maps, plans, reports, etc.

	SD	**Specify Year(s) Requested**
air - *emissions*		1986-present
water - *mains, treatment, ground level, standpipes & elevated storage, pumping stations (local & booster)*		1986-present
sewage - *sanitary, storm, treatment, stormwater, leachate & leachate treatment & sewage pump stations*		1986-present
waste water - *industrial discharges*		1986-present
waste sites - *disposal, landfill sites, transfer stations, processing sites, incinerator* sites		1986-present
waste systems - *PCB destruction, mobile waste processing units, haulers: sewage, non-hazardous & hazardous waste*		1986-present
pesticides - *licenses*		1986-present

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

02 441455 – unacceptable

UTM 18 | | E

19 R 4 5027 3610 N

Elev. 19 R 9 02010

Basin 25 6

~~Conc - I - Oct.~~

~~Lot - 32.~~

10?

ONTARIO

ASE 306

15 № 3972 C.

The Well Drillers Act

Department of Mines, Province of Ontario

Water Well Record

County or District Carleton Tp. ~~NEPEAN~~ OTTAWA Con. Lot

[redacted] Acres

ncluding pump) 180.00

Pipe and Casing Record		Pumping Test	
Casing diameter(s)	5	Date	February 26
Length(s) of casing(s)	10 ft	Developed Capacity	
Length of screen		Duration of Test	1 hr
Type of screen		Pumping Rate	200 g.h.
Type of pump		Drawdown	34
Capacity of pump		Static level of completed well	8 ft
Depth of pump setting	20 ft	Is well a gravel-wall type?	No.

Water Record

Kind (fresh or mineral) Fresh

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

Appearance (clear, cloudy, coloured) Clear

For what purpose(s) is the water to be used? For house and lawn garden etc.

How far is well from possible source of contamination? 25 feet

What is source of contamination? septic tank

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

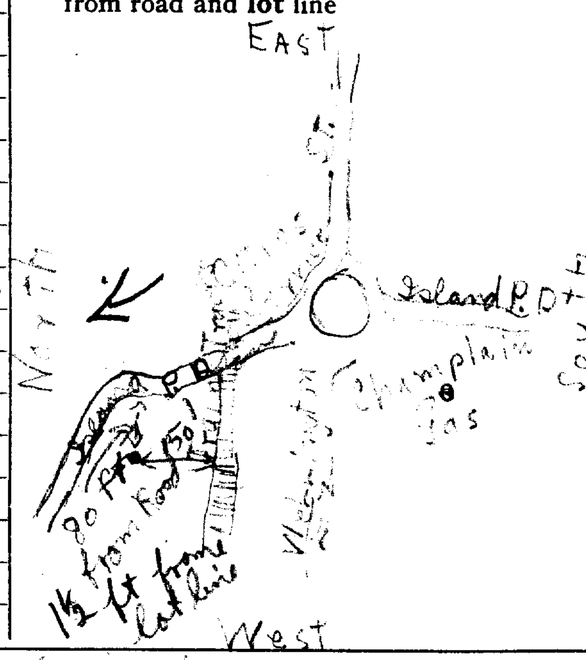
Depth(s) to Water Horizon(s)	Kind of Water	No. of Feet Water Rises
119 ft	Soft	~~100 ft~~ 110 feet

Well Log

Drift and Bedrock Record	From 0 ft.	To ft.
Sand		1
Blue Clay	2	5
White Limestone	6	50
Black slate	50	60
Blue Slate	60	125

Location of Well

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



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

Drilling Firm Mullyn Bro

Address Westboro R.R. #1

Recorded by John S. Murharvey Address Ottawa East

Date Feb 28/1948 Licence Number

UTM 18 Z 441400 E
9 R 5027460 N
Elev. 9 R 0200
Basin 25

9F
1433

263

ASE 306

15 № 3975

RECEIVED
AUG -8 1951
GEOLOGICAL BRANCH
DEPARTMENT OF MINES

ONTARIO

The Well Drillers Act
Department of Mines, Province of Ontario

Water Well Record

OTTAWA

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

[redacted]

Date Completed .... (day) (month) (year) Cost of Well (excluding pump) ....

Pipe and Casing Record		Pumping Test	
Casing diameter(s)	5	Date	
Length(s) of casing(s)	24	Static level	20
Type of screen		Pumping level	30
Length of screen		Pumping rate	
Distance from top of screen to ground level		Duration of test	
Is well a gravel-wall type?		Distance from cylinder or bowls to ground level	

Water Record

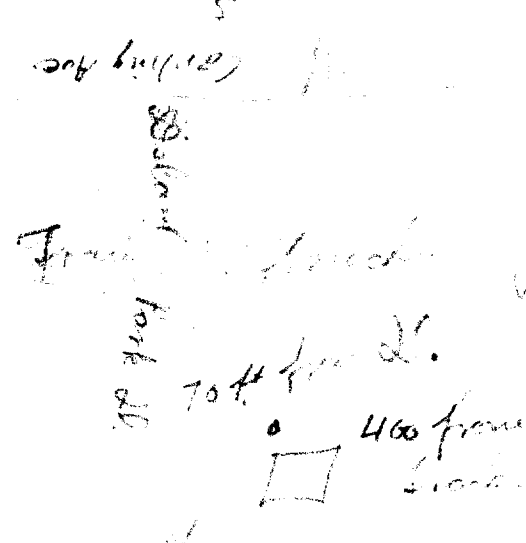
Kind (fresh or mineral) fresh
Quality (hard, soft, contains iron, sulphur, etc.)
Appearance (clear, cloudy, coloured) clear
For what purpose(s) is the water to be used? house
How far is well from possible source of contamination?
What is the source of contamination?
Enclose a copy of any mineral analysis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

Depth(s) to Water Horizon(s)	Kind of Water	No. of Feet Water Rises
	hard	
80		60

Well Log: Overburden and Bedrock Record	From 0 ft.	To ....ft.
Clay	1	4
Gravel	4	18
White Limestone	18	125

Location of Well

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



Situation: Is well on upland, in valley, or on hillside?
Drilling Firm Gordon S. Mulligan
Address Westboro R.R. 1
Name of Driller John Mewsbury Address Orleans Ont. R.R. 2
Date .... Licence Number ....

....
Signature of Licensee

FORM 5

Ontario Ministry of the Environment

Well Tag Number (Place sticker and print number below): A 029527

A029527

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 Management Coordinator at 416-235-6203.
- **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

Well Owner's Information and Location of Well Information

[redacted]

RR#/Street Number/Name	City/Town/Village	Site/Compartment/Block/Tract etc.
309 Athlone Avenue	Ottawa	

GPS Reading: NAD 83 | Zone 18 | Easting 441130 | Northing 5027223 | Unit Make/Model: Garmin GPS map 76 | 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 Metres From	Depth Metres To
	Asphalt concrete		Typical Monitoring well	0	.10
DK Brown	Silty sand	gravel	Installation	0.10	1.27
Brown	Sandy silt		(5 wells as a cluster)	1.27	1.52
Grey	Limestone	shale layers		1.52	4.70

Hole Diameter

Depth Metres From	Depth Metres To	Diameter Centimetres
0	4.70	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 Metres From	Depth Metres To
Casing				
50 mm	☐ Steel ☐ Fibreglass ☑ Plastic ☐ Concrete ☐ Galvanized	Schedule 40	0.9	1.25
	☐ Steel ☐ Fibreglass ☐ Plastic ☐ Concrete ☐ Galvanized			
	☐ Steel ☐ Fibreglass ☐ Plastic ☐ Concrete ☐ Galvanized			
Screen				
Outside diam: 58 mm	☐ Steel ☐ Fibreglass ☑ Plastic ☐ Concrete ☐ Galvanized	Slot No. #10	1.25	4.70
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)
0.9	1.25	Bentonite. 20 K.G.	20 kg.

Location of Well

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

Please see site plan (attached)

Method of Construction

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

Water Use

☐ Domestic ☐ Industrial ☐ Public Supply ☑ Other Sample
☐ Stock ☐ Commercial ☐ Not used
☐ Irrigation ☐ Municipal ☐ Cooling & air conditioning

Final Status of Well

☐ Water Supply ☐ Recharge well ☐ Unfinished ☐ Abandoned, (Other)
☑ Observation well ☐ Abandoned, insufficient supply ☐ Dewatering
☐ Test Hole ☐ Abandoned, poor quality ☐ Replacement well

Audit No. Z 31645

Date Well Completed (YYYY MM DD): 2005 08 25

Was the well owner's information package delivered? ☐ Yes ☑ No

Date Delivered (YYYY MM DD):

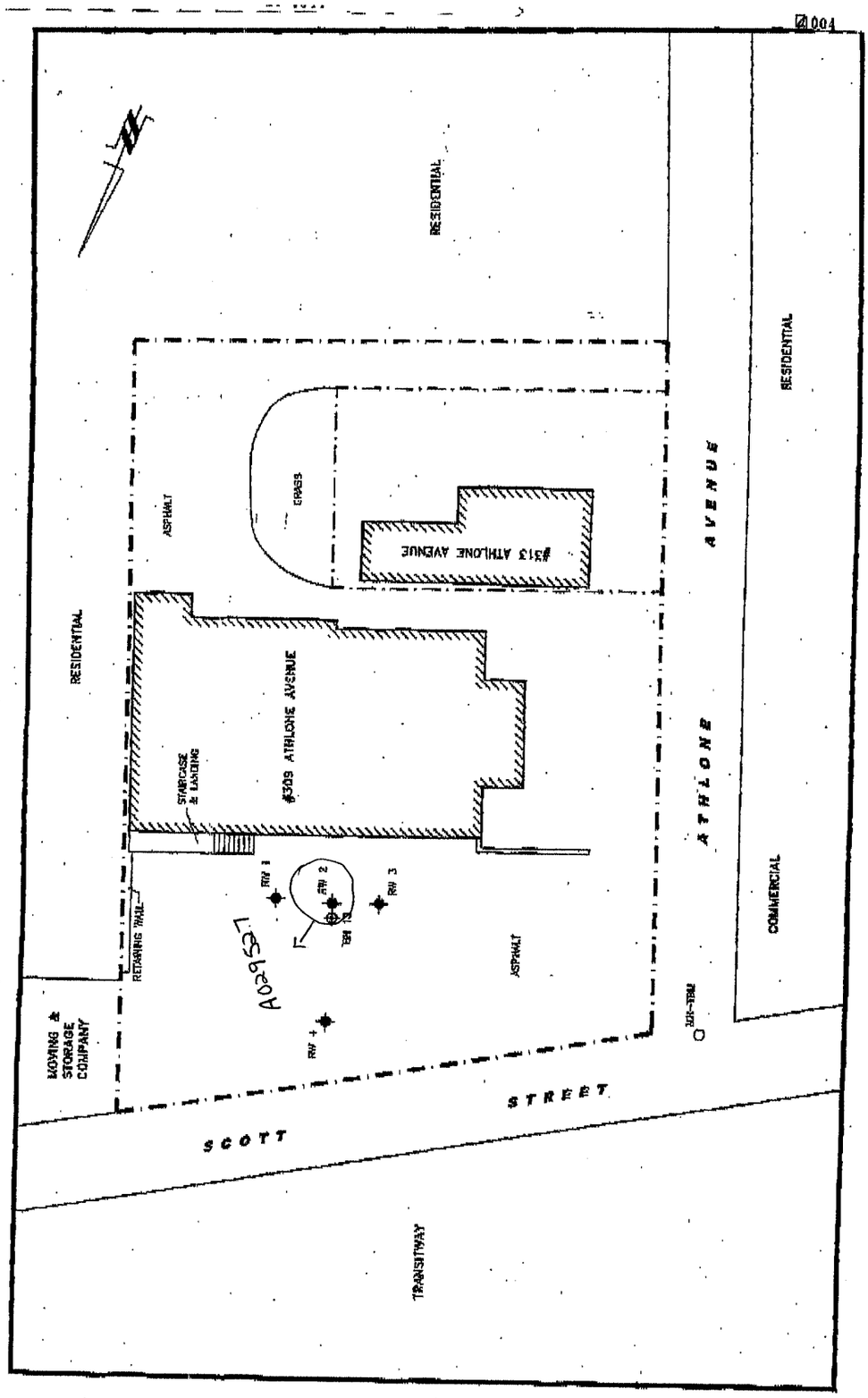
Well Contractor/Technician Information

Name of Well Contractor: George Downing Estate Drilling Ltd	Well Contractor's Licence No.: 1844
Business Address (street name, number, city etc.): 410 Main St. Grenville-Sur-La-Rouge, Qc J0V1B0	
Name of Well Technician (last name, first name): Downing, Bruce	Well Technician's Licence No.: T2173
Signature of Technician/Contractor: X [signature]	Date Submitted (YYYY MM DD): 2005 09 30

Ministry Use Only

Data Source	Contractor 1844
Date Received (YYYY MM DD): OCT 12 2005	Date of Inspection (YYYY MM DD)
Remarks	Well Record Number

0506E (09/03) Contractor's Copy ☐ Ministry's Copy ☑ Well Owner's Copy ☐ *Cette formule est disponible en français*



A029657

OCT 12 2005

Z31645

1844

Ontario Ministry of the Environment

Well Tag Number (Place sticker and print number below)

Well Record

Regulation 903 Ontario Water Resources Act

page ___ of ___

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 Management Coordinator at 416-235-6203.
- **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

Well Owner's Information and Location of Well Information

[redacted]

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

GPS Reading	NAD	Zone	Easting	Northing	Unit Make/Model	Mode of Operation
	83	18	441527	5027132	Mag	☐ Undifferentiated ☑ Averaged ☐ Differentiated, specify

Log of Overburden and Bedrock Materials (see instructions)

General Colour	Most common material	Other Materials	General Description	Depth Metres From	Depth Metres To

Hole Diameter

Depth Metres From	Depth Metres To	Diameter Centimetres

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 Metres From	Depth Metres To
Casing				
	☐ Steel ☐ Fibreglass ☐ Plastic ☐ Concrete ☐ Galvanized			
	☐ Steel ☐ Fibreglass ☐ Plastic ☐ Concrete ☐ Galvanized			
	☐ Steel ☐ Fibreglass ☐ Plastic ☐ Concrete ☐ Galvanized			
Screen				
Outside diam	☐ Steel ☐ Fibreglass ☐ Plastic ☐ Concrete ☐ Galvanized	Slot No.		
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	To	Material and type (bentonite slurry, neat cement slurry) etc.	Volume Placed (cubic metres)
2.5	20	Bentonite Slurry	2
1.5	2.5	Grout	3 Bags
0	1.5	Casing Cutt Off & Removed	

Location of Well

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

Method of Construction

☐ Cable Tool ☐ Rotary (air) ☐ Diamond ☐ Digging
☐ Rotary (conventional) ☐ Air percussion ☐ Jetting ☐ Other
☐ Rotary (reverse) ☐ Boring ☐ Driving

Water Use

☐ Domestic ☐ Industrial ☐ Public Supply ☐ Other
☐ Stock ☐ Commercial ☐ Not used
☐ Irrigation ☐ Municipal ☐ Cooling & air conditioning

Final Status of Well

☐ Water Supply ☐ Recharge well ☐ Unfinished ☐ Abandoned, (Other)
☐ Observation well ☐ Abandoned, insufficient supply ☐ Dewatering
☐ Test Hole ☐ Abandoned, poor quality ☐ Replacement well

Audit No. Z 28743

Date Well Completed YYYY MM DD

Was the well owner's information package delivered? ☐ Yes ☐ No

Date Delivered YYYY MM DD

Well Contractor/Technician Information

Name of Well Contractor: Drilling Village

Well Contractor's Licence No.: 6574

Business Address (street name, number, city etc.): Box 3291 - Carp Ont K0A1L0

Name of Well Technician (last name, first name):

Well Technician's Licence No.: 310

Signature of Technician/Contractor: X

Date Submitted: 2005 11 15

Ministry Use Only

Data Source

Contractor: 6574

Date Received: NOV 24 2005

Date of Inspection YYYY MM DD

Remarks: DWC VIA PHONE 2005/11/15

Well Record Number

0506E (09/03) Contractor's Copy ☐ Ministry's Copy ☐ Well Owner's Copy ☐

Cette formule est disponible en français

Ontario Ministry of the Environment

Well Tag No. for Master (OW) A 055104

A056104

Master Well Record for Cluster Well Construction

Regulation 903 Ontario Water Resources Act

Page 1 of 1

Master Well Owner's and Land Owner's Information

First Name	Last Name	
City of Ottawa	Public Works & Services	[redacted]

Mailing Address (Street Number/Name, RR)	Municipality	Province	Postal Code	Telephone No. (inc. area code)
100 Constellation Crescent	Ottawa	ON	K2G6J8	6135802424

Location and Construction of the Master Well in the Cluster

Address of Well Location (Street Number/Name, RR)	Township	Lot	Concession
See attached plan			

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

UTM Coordinates	Zone	Easting	Northing	GPS Unit Make	Model	Mode of Operation
NAD 83	18T	442331	5027949	Garmin	765	☐ Undifferentiated ☐ Averaged ☑ Differentiated, specify 3D

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

General Colour	Most Common Material	Other Materials	General Description	Depth (Metres) From	Depth (Metres) To
Gry	Asphalt			0	0.2
Grey	Concrete			0.2	0.5
Brn	Sand	Gravel, Cobbles		0.5	3.1
Gry	Limestone			3.1	5.3

BH 8

Hole Details

Depth (Metres) From	Depth (Metres) To	Diameter (Centimetres)
0	5.3	20.0

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
☐ 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	Depth (Metres) To
3.2	Plastic	Riser	0.2	0	2.3
		Screen	0.2	2.3	5.3

No Casing and Screen Used

Open Hole ☐ Yes ☐ No

Static Water Level Test

Metres

Screen

☐ Galvanized ☐ Steel ☐ Fibreglass ☐ Concrete ☑ Plastic

Outside Diameter (Centimetres)	Slot No.
3.6	.010

Water Details

Water found at Depth	Kind of Water
3.5 Metres ☐ Gas	☑ Fresh ☐ Salty ☐ Sulphur ☐ Minerals
Metres ☐ Gas	☐ Fresh ☐ Salty ☐ Sulphur ☐ Minerals
Metres ☐ Gas	☐ Fresh ☐ Salty ☐ Sulphur ☐ Minerals

Annular Space/Abandonment Sealing Record

Depth Set at (Metres) From	Depth Set at (Metres) To	Type of Sealant Used (Material and Type)	Volume Used (Cubic Metres)
0.2	1.8	Bentonite Holeplug	N/A

Disinfected ☐ Yes ☐ No If no, provide reason:

Date Master Well Completed (yyyy/mm/dd): 2007/10/15

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	Please indicate Number of Cluster Well Information Log Sheets Submitted
5	1
Total Wells on this Property	

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 release additional information concerning the cluster to the Director upon request

Signature of Technician/Contractor	Date (yyyy/mm/dd)

Master Well Owner's/Land Owner's consent to use Cluster Form

[redacted]

Well Contractor and Well Technician Information

Business Name of Well Contractor	Well Contractor's Licence No.
DST Consulting	6838

Business Address (Street No./Name, number, RR)	Municipality
605 Hewitson St	Thunder Bay

Province	Postal Code	Business E-mail Address
Ontario	P7B5V5	dstgroup.com

Bus. Telephone No. (inc. area code)	Name of Well Technician (Last Name, First Name)
8076232929	Finke C. Alan

Well Technician's Licence No.	Signature of Technician	Date Submitted (yyyy/mm/dd)
2544		Oct 2007

Ministry Use Only

Audit No.	Well Contractor No.
M 00136	
Date Received (yyyy/mm/dd) NOV 22 2007	Date of Inspection (yyyy/mm/dd)
Remarks C 66100	

7992 (11/2006)

Ministry's Copy

Ontario

Ministry of the Environment

Well Tag No. for Master Well *(Print Well Tag No.)*: A056104

Cluster Well Information for Cluster Well Construction

Regulation 903 Ontario Water Resources Act

Page 1 of 1

[redacted]

Property Owner's Information

First Name	Last Name	Mailing Address (Street No./Name, RR)	Municipality
CITY OF OTTAWA	DEPARTMENT OF PUBLIC WORKS	100 CONSTELLATION CRESENT. 6th FLOOR	OTTAWA

Province	Postal Code	E-mail Address	Telephone No. (inc. area code)
ON	K2G6J8	carol.Holmes@ottawa.ca	6135802424

Cluster Well Information

Address of Well Location (Street Number/Name, RR)	Lot	Concession	Township	County/District/Municipality
SEE ATTACHED PLAN				

City/Town/Village	Province	Postal Code	GPS Unit Make	Model	Unit Mode of Operation
OTTAWA	Ontario		GARMIN	765	☐ Undifferentiated ☐ Averaged ☑ Differentiated, specify: 3D

Consent to release additional information to the Director upon request

Signature of Technician/Contractor	Date *(yyyy/mm/dd)*

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)*
BH2	18T	441487	5027448	5.2	20.0	BORING	PLASTIC	0-2.2	2.2	5.2	BENTONITE HOLEPLUG	4.0			
BH5	18T	441712	5027576	5.0	20.0	"	"	0-2.0	2.0	5.0	"	4.2			
BH6	18T	442213	5027874	5.1	20.0	"	"	0-2.1	2.1	5.1	"	4.1			
BH10	18T	442457	5028009	5.2	20.0	"	"	0-2.2	2.2	5.2	"	4.3			
BH4	18T	441569	5027494	3.1	20.0	"	"	0-1.7	~~1.7~~	3.1	"	~~4.1~~			

Well Contractor and Well Technician Information

Business Name of Well Contractor	Business Address (Street Number/Name, RR)	Municipality	Province
DST CONSULTING	605 HEWITSON ST	THUNDER BAY	ONTARIO

Postal Code	Business Telephone No. *(inc. area code)*	Well Contractor's Licence No.	Business E-mail Address
P7B5V5	8076232929	6838	dstgroup.com

Name of Well Technician (First Name, Last Name)	Well Technician's Licence No.	Date Submitted *(yyyy/mm/dd)*	Signature of Technician
ALAN FINKE	2544	OCT 2007	

Date 1st Well in Cluster Constructed *(yyyy/mm/dd)*	Date Last Well in Cluster Constructed *(yyyy/mm/dd)*
2007/10/12	2007/10/16

Ministry Use Only

Date Received *(yyyy/mm/dd)*	Date Inspected *(yyyy/mm/dd)*
NOV 22 2007	
Audit No. C 00100	**Remarks** MOD136

1991 (11/2006)

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Ontario Ministry of the Environment

Well Record for Well Cluster - Part 1 of 3

(Only for Multiple Test Holes or Dewatering Wells)

Regulation 903 Ontario Water Resources Act

All measurements recorded in: ☑ Metric ☐ Imperial

Follow instructions on the front and back of this form. Print or Type

Well Tag No. of Deepest Well: *(Print Well Tag No.)* N/A

Well # on Drawing of Deepest Well:

Page 1 of 1

Well Cluster Location Information

Address of Well Location (Street Number(s)/Name(s), RR, if available)	Lot(s)	Concession(s)	Geographic Township	County/District/Upper Tier Municipality
145 Richmond RD	–	–	CITY of Ottawa	CITY of Ottawa

City, Town, Village or Hamlet	Province	GPS Unit Make	Model	Unit Mode of Operation
OTTAWA	Ontario	Ganmin	MAP76	☐ Undifferentiated ☒ Averaged ☐ Differentiated, specify:

Mandatory Attachments/Additional Information

☒ Land Owner Consent Form must be attached.

☒ Detailed Drawing of All Well Locations must be attached.

I, the person constructing the well, will promptly submit to the Director, on request, any additional information in my custody or control related to any well in the well cluster that I have constructed.

Signature of Technician/Contractor — Date (yyyy/mm/dd): 2011 11 15

Well Details

Well # on Drawing	UTM Coordinates Zone	Easting	Northing	Hole Depth (m/ft)	Hole Diameter (cm/in)	Method of Construction	Casing Material; Diameter (cm/in)	Casing (m/ft) From	Casing (m/ft) To	Screen Interval (m/ft) From	Screen Interval (m/ft) To	Annular Space Material (m/ft) From	Annular Space Material (m/ft) To	Annular Space Material: Material:	Overburden/Bedrock or Abandonment Filing Material Intervals (m/ft)	Static Water Level (m/ft)	Date of Completion (yyyy/mm/dd)
#1	18	448152	5027320	4.9m	N/A	–	–	–	–	–	–	–	–	–	Gravel 0-0.61m Bentonite 0.61-4.9m	4.4m	2011 11 02
#2	18	448152	5027389	4.6m	N/A	–	–	–	–	–	–	–	–	–	Gravel 0-0.61m Bentonite 0.61m-4.6m	4.6m	2011 11 02
#3	18	448160	5027350	2.43m	N/A	–	–	–	–	–	–	–	–	–	Gravel 0-0.61m Bentonite 0.61m-2.43m	2.43m	2011 11 02

Well Contractor and Well Technician Information

Business Name of Well Contractor	Business Address (Street Number/Name, RR)	Municipality	Province
G&T Drilling LTD	276 Drive-in RD	Nepean	On

Postal Code	Bus. Telephone No.	Well Contractor's Licence No.	Business E-mail Address
K7R3L1	613 354 4760	7085	Getdrilling@mycando.ca

Name of Well Technician (First Name, Last Name)	Well Technician's Licence No.	Signature of Well Technician	Date Submitted (yyyy/mm/dd)
Tim Harrison	2251		2011 11 15

Date First Well in Cluster Constructed or Abandoned (yyyy/mm/dd)	Date Last Well in Cluster Completed (yyyy/mm/dd)
2011 01 02	2011 11 02

Well Abandonment

Person Abandoning the Wells:

Name — (Print or Type) - See instruction 11 on the back of this form

Ministry Use Only

Date Received (yyyy/mm/dd)	Audit No.
JAN 31 2012	C 16367

Comments:

MINISTRY'S COPY

Well ID

Well ID Number: 7224472
Well Audit Number: *C22336*
Well Tag Number: *A147202*

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

Well Location

Address of Well Location	
Township	NEPEAN TOWNSHIP
Lot	
Concession	
County/District/Municipality	OTTAWA-CARLETON
City/Town/Village	
Province	ON
Postal Code	n/a
UTM Coordinates	NAD83 — Zone 18 Easting: 441521.00 Northing: 5027205.00
Municipal Plan and Sublot Number	
Other	

Overburden and Bedrock Materials Interval

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

Annular Space/Abandonment Sealing Record

Depth From	Depth To	Type of Sealant Used (Material and Type)	Volume Placed

Method of Construction & Well Use

Method of Construction	Well Use

Status of Well

Construction Record - Casing

Inside Diameter	Open Hole or material	Depth From	Depth To

Construction Record - Screen

Outside Diameter	Material	Depth From	Depth To

Well Contractor and Well Technician Information

Well Contractor's Licence Number: 6964

Results of Well Yield Testing

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

Draw Down & Recovery

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

Water Details

Water Found at Depth	Kind

Hole Diameter

Depth From	Depth To	Diameter

Audit Number: C22336

Date Well Completed: January 24, 2014

Date Well Record Received by MOE: July 24, 2014

Updated: February 2, 2018
RateRate
Sharefacebook twitter Print
Tags

- Environment and energy,
- Drinking water,

Well ID

Well ID Number: 7240886
Well Audit Number: *Z198253*
Well Tag Number: *A173740*

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

Well Location

Address of Well Location	205 LANARK AVE.
Township	NEPEAN TOWNSHIP
Lot	
Concession	
County/District/Municipality	OTTAWA-CARLETON
City/Town/Village	OTTAWA
Province	ON
Postal Code	n/a
UTM Coordinates	NAD83 — Zone 18 Easting: 441131.00 Northing: 5027480.00
Municipal Plan and Sublot Number	
Other	

Overburden and Bedrock Materials Interval

General Colour	Most Common Material	Other Materials	General Description	Depth From	Depth To
BRWN	LOAM	STNS	SOFT	0 m	1.32 m
GREY	LMSN	LYRD		1.32 m	12.19 m

Annular Space/Abandonment Sealing Record

Depth From	Depth To	Type of Sealant Used (Material and Type)	Volume Placed
0 m	.31 m	CONCRETE/FLUSHMOUNT	
.31 m	8.84 m	BENTONITE	
8.84 m	12.19 m	FILTER SAND	

Method of Construction & Well Use

Method of Construction	Well Use
Air Percussion	Monitoring and Test Hole

Status of Well

Test Hole

Construction Record - Casing

Inside Diameter	Open Hole or material	Depth From	Depth To
4.03 cm	PLASTIC	0 m	9.14 m

Construction Record - Screen

Outside Diameter	Material	Depth From	Depth To
4.82 cm	PLASTIC	9.14 m	12.19 m

Well Contractor and Well Technician Information

Well Contractor's Licence Number: 7241

Results of Well Yield Testing

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

Draw Down & Recovery

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

Water Details

Water Found at Depth	Kind

Hole Diameter

Depth From	Depth To	Diameter
0 m	1.83 m	11.43 cm
1.83 m	12.19 m	7.62 cm

Audit Number: Z198253

Date Well Completed: April 17, 2015

Date Well Record Received by MOE: May 05, 2015

Updated: February 2, 2018
RateRate

Well ID

Well ID Number: 7265948
Well Audit Number: *Z229830*
Well Tag Number: *A190916*

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

Well Location

Address of Well Location	160 LANARK AVENUE
Township	NEPEAN TOWNSHIP
Lot	
Concession	
County/District/Municipality	OTTAWA-CARLETON
City/Town/Village	Ottawa
Province	ON
Postal Code	n/a
UTM Coordinates	NAD83 — Zone 18 Easting: 441305.00 Northing: 5027564.00
Municipal Plan and Sublot Number	
Other	

Overburden and Bedrock Materials Interval

General Colour	Most Common Material	Other Materials	General Description	Depth From	Depth To
BRWN	SAND	FILL	SOFT	0 m	1.22 m
BRWN	SAND		SOFT	1.22 m	2.13 m
BRWN	SILT		PCKD	2.13 m	2.44 m
GREY	LMSN		PCKD	2.44 m	5.79 m

Annular Space/Abandonment Sealing Record

Depth From	Depth To	Type of Sealant Used (Material and Type)	Volume Placed
0 m	.31 m	FLUSHMOUNT/ CONCRETE	
.31 m	2.44 m	BENTONITE	
2.44 m	5.79 m	SAND	

Method of Construction & Well Use

Method of Construction	Well Use
Air Percussion	Monitoring and Test Hole

Status of Well

Monitoring and Test Hole

Construction Record - Casing

Inside Diameter	Open Hole or material	Depth From	Depth To
5.2 cm	PLASTIC	0 m	2.74 m

Construction Record - Screen

Outside Diameter	Material	Depth From	Depth To
6.03 cm	PLASTIC	2.74 m	5.29 m

Well Contractor and Well Technician Information

Well Contractor's Licence Number: 7241

Results of Well Yield Testing

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

Draw Down & Recovery

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

Water Details

Water Found at Depth	Kind

Hole Diameter

Depth From	Depth To	Diameter
0 m	2.44 m	11.43 cm
2.44 m	5.79 m	7.62 cm

Audit Number: Z229830

Date Well Completed: June 09, 2016

Date Well Record Received by MOE: July 04, 2016

Updated: February 2, 2018
RateRate

Well ID

Well ID Number: 7265949
Well Audit Number: *Z229802*
Well Tag Number: *A190915*

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

Well Location

Address of Well Location	160 LANARK AVENUE
Township	NEPEAN TOWNSHIP
Lot	
Concession	
County/District/Municipality	OTTAWA-CARLETON
City/Town/Village	Ottawa
Province	ON
Postal Code	n/a
UTM Coordinates	NAD83 — Zone 18 Easting: 441323.00 Northing: 5027536.00
Municipal Plan and Sublot Number	
Other	

Overburden and Bedrock Materials Interval

General Colour	Most Common Material	Other Materials	General Description	Depth From	Depth To
BRWN	LOAM		SOFT	0 m	.31 m
BRWN	SAND	GRVL	LOOS	.31 m	2.13 m
GREY	LMSN		WTHD	2.13 m	5.79 m

Annular Space/Abandonment Sealing Record

Depth From	Depth To	Type of Sealant Used (Material and Type)	Volume Placed
0 m	.31 m	FLUSHMONT/ CONCRETE	
.31 m	2.59 m	BENTONITE	
2.59 m	5.79 m	FILTER SAND	

Method of Construction & Well Use

Method of Construction	Well Use
Air Percussion	Monitoring and Test Hole

Status of Well

Monitoring and Test Hole

Construction Record - Casing

Inside Diameter	Open Hole or material	Depth From	Depth To
5.2 cm	PLASTIC	0 m	2.74 m

Construction Record - Screen

Outside Diameter	Material	Depth From	Depth To
6.03 cm	PLASTIC	2.74 m	5.79 m

Well Contractor and Well Technician Information

Well Contractor's Licence Number: 7241

Results of Well Yield Testing

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

Draw Down & Recovery

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

Water Details

Water Found at Depth	Kind

Hole Diameter

Depth From	Depth To	Diameter
0 m	3.1 m	11.43 cm
3.1 m	5.79 m	7.62 cm

Audit Number: Z229802

Date Well Completed: June 09, 2016

Date Well Record Received by MOE: July 04, 2016

Updated: February 2, 2018
RateRate

Well ID

Well ID Number: 7265950
Well Audit Number: *Z229801*
Well Tag Number: *A190913*

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

Well Location

Address of Well Location	60 LANARK AVENUE
Township	NEPEAN TOWNSHIP
Lot	
Concession	
County/District/Municipality	OTTAWA-CARLETON
City/Town/Village	Ottawa
Province	ON
Postal Code	n/a
UTM Coordinates	NAD83 — Zone 18 Easting: 441296.00 Northing: 5027526.00
Municipal Plan and Sublot Number	
Other	

Overburden and Bedrock Materials Interval

General Colour	Most Common Material	Other Materials	General Description	Depth From	Depth To
BRWN	LOAM		SOFT	0 m	.31 m
BRWN	SAND	GRVL	LOOS	.31 m	1.22 m
GREY	LMSN		WTHD	1.22 m	4.88 m

Annular Space/Abandonment Sealing Record

Depth From	Depth To	Type of Sealant Used (Material and Type)	Volume Placed
0 m	.31 m	FLUSHMOUNT/ CONCRETE	
.31 m	1.62 m	BENTONITE	
1.68 m	4.88 m	FILTER SAND	

Method of Construction & Well Use

Method of Construction	Well Use
Air Percussion	Monitoring and Test Hole

Status of Well

Monitoring and Test Hole

Construction Record - Casing

Inside Diameter	Open Hole or material	Depth From	Depth To
5.2 cm	PLASTIC	0 m	1.83 m

Construction Record - Screen

Outside Diameter	Material	Depth From	Depth To
6.03 cm	PLASTIC	1.83 m	4.88 m

Well Contractor and Well Technician Information

Well Contractor's Licence Number: 7241

Results of Well Yield Testing

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

Draw Down & Recovery

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

Water Details

Water Found at Depth	Kind

Hole Diameter

Depth From	Depth To	Diameter
0 m	1.52 m	11.43 cm
1.52 m	4.88 m	7.62 cm

Audit Number: Z229801

Date Well Completed: June 09, 2016

Date Well Record Received by MOE: July 04, 2016

Updated: February 2, 2018
RateRate

Well ID

Well ID Number: 7290746
Well Audit Number: *Z256707*
Well Tag Number: *A190915*

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

Well Location

Address of Well Location	160 LANARK AVENUE
Township	OTTAWA CITY
Lot	
Concession	
County/District/Municipality	OTTAWA-CARLETON
City/Town/Village	Ottawa
Province	ON
Postal Code	n/a
UTM Coordinates	NAD83 — Zone 18 Easting: 441300.00 Northing: 5027544.00
Municipal Plan and Sublot Number	
Other	

Overburden and Bedrock Materials Interval

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

Annular Space/Abandonment Sealing Record

Depth From	Depth To	Type of Sealant Used (Material and Type)	Volume Placed
5.79 m	0 m	GROUTED 3/8 BENTONITE	

Method of Construction & Well Use

Method of Construction	Well Use

Status of Well

Abandoned-Other

Construction Record - Casing

Inside Diameter	Open Hole or material	Depth From	Depth To

Construction Record - Screen

Outside Diameter	Material	Depth From	Depth To

Well Contractor and Well Technician Information

Well Contractor's Licence Number: 1558

Results of Well Yield Testing

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

Draw Down & Recovery

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

Water Details

Water Found at Depth	Kind

Hole Diameter

Depth From	Depth To	Diameter

Audit Number: Z256707

Date Well Completed: May 04, 2017

Date Well Record Received by MOE: July 24, 2017

Updated: February 2, 2018
RateRate
Sharefacebook twitter Print
Tags

- Environment and energy,
- Drinking water,

Well ID

Well ID Number: 7290747
Well Audit Number: *Z256708*
Well Tag Number: *A190916*

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

Well Location

Address of Well Location	160 LANARK AVENUE
Township	OTTAWA CITY
Lot	
Concession	
County/District/Municipality	OTTAWA-CARLETON
City/Town/Village	Ottawa
Province	ON
Postal Code	n/a
UTM Coordinates	NAD83 — Zone 18 Easting: 441294.00 Northing: 5027544.00
Municipal Plan and Sublot Number	
Other	

Overburden and Bedrock Materials Interval

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

Annular Space/Abandonment Sealing Record

Depth From	Depth To	Type of Sealant Used (Material and Type)	Volume Placed
5.79 m	0 m	GROUTED 3/8 BENTONITE HOLEPLUG	

Method of Construction & Well Use

Method of Construction	Well Use

Status of Well

Abandoned-Other

Construction Record - Casing

Inside Diameter	Open Hole or material	Depth From	Depth To

Construction Record - Screen

Outside Diameter	Material	Depth From	Depth To

Well Contractor and Well Technician Information

Well Contractor's Licence Number: 1558

Results of Well Yield Testing

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

Draw Down & Recovery

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

Water Details

Water Found at Depth	Kind

Hole Diameter

Depth From	Depth To	Diameter

Audit Number: Z256708

Date Well Completed: May 04, 2017

Date Well Record Received by MOE: July 24, 2017

Updated: February 2, 2018
RateRate
Sharefacebook twitter Print
Tags

- Environment and energy,
- Drinking water,

Well ID

Well ID Number: 7290748
Well Audit Number: *Z256705*
Well Tag Number: *A190913*

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

Well Location

Address of Well Location	160 LANARK AVENUE
Township	OTTAWA CITY
Lot	
Concession	
County/District/Municipality	OTTAWA-CARLETON
City/Town/Village	Ottawa
Province	ON
Postal Code	n/a
UTM Coordinates	NAD83 — Zone 18 Easting: 441302.00 Northing: 5027549.00
Municipal Plan and Sublot Number	
Other	

Overburden and Bedrock Materials Interval

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

Annular Space/Abandonment Sealing Record

Depth From	Depth To	Type of Sealant Used (Material and Type)	Volume Placed
5.79 m	0 m	GROUTED 3/8 BENTONITE HOLEPLUG	

Method of Construction & Well Use

Method of Construction	Well Use

Status of Well

Abandoned-Other

Construction Record - Casing

Inside Diameter	Open Hole or material	Depth From	Depth To

Construction Record - Screen

Outside Diameter	Material	Depth From	Depth To

Well Contractor and Well Technician Information

Well Contractor's Licence Number: 1558

Results of Well Yield Testing

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

Draw Down & Recovery

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

Water Details

Water Found at Depth	Kind

Hole Diameter

Depth From	Depth To	Diameter

Audit Number: Z256705

Date Well Completed: May 04, 2017

Date Well Record Received by MOE: July 24, 2017

Updated: February 2, 2018
RateRate
Sharefacebook twitter Print
Tags

- Environment and energy,
- Drinking water,

Well ID

Well ID Number: 7290749
Well Audit Number: *Z256709*
Well Tag Number: *A155785*

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

Well Location

Address of Well Location	160 LANARK AVENUE
Township	OTTAWA CITY
Lot	
Concession	
County/District/Municipality	OTTAWA-CARLETON
City/Town/Village	OTTAWA
Province	ON
Postal Code	n/a
UTM Coordinates	NAD83 — Zone 18 Easting: 441276.00 Northing: 5027574.00
Municipal Plan and Sublot Number	
Other	

Overburden and Bedrock Materials Interval

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

Annular Space/Abandonment Sealing Record

Depth From	Depth To	Type of Sealant Used (Material and Type)	Volume Placed
7.92 m	0 m	GROUTED 3/8 BENTONITE HOLEPLUG	

Method of Construction & Well Use

Method of Construction	Well Use

Status of Well

Abandoned-Other

Construction Record - Casing

Inside Diameter	Open Hole or material	Depth From	Depth To

Construction Record - Screen

Outside Diameter	Material	Depth From	Depth To

Well Contractor and Well Technician Information

Well Contractor's Licence Number: 1558

Results of Well Yield Testing

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

Draw Down & Recovery

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

Water Details

Water Found at Depth	Kind

Hole Diameter

Depth From	Depth To	Diameter

Audit Number: Z256709

Date Well Completed: May 05, 2017

Date Well Record Received by MOE: July 24, 2017

Updated: February 2, 2018
RateRate
Sharefacebook twitter Print
Tags

- Environment and energy,
- Drinking water,

Well ID

Well ID Number: 7265890
Well Audit Number: *C26623*
Well Tag Number: *A200790*

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

Well Location

Address of Well Location	
Township	NEPEAN TOWNSHIP
Lot	
Concession	
County/District/Municipality	OTTAWA-CARLETON
City/Town/Village	
Province	ON
Postal Code	n/a
UTM Coordinates	NAD83 — Zone 18 Easting: 441274.00 Northing: 5027306.00
Municipal Plan and Sublot Number	
Other	

Overburden and Bedrock Materials Interval

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

Annular Space/Abandonment Sealing Record

Depth From	Depth To	Type of Sealant Used (Material and Type)	Volume Placed

Method of Construction & Well Use

Method of Construction	Well Use

Status of Well

Construction Record - Casing

Inside Diameter	Open Hole or material	Depth From	Depth To

Construction Record - Screen

Outside Diameter	Material	Depth From	Depth To

Well Contractor and Well Technician Information

Well Contractor's Licence Number: 7328

Results of Well Yield Testing

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

Draw Down & Recovery

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

Water Details

Water Found at Depth	Kind

Hole Diameter

Depth From	Depth To	Diameter

Audit Number: C26623

Date Well Completed: May 06, 2016

Date Well Record Received by MOE: July 04, 2016

Updated: February 2, 2018
RateRate
Sharefacebook twitter Print
Tags

- Environment and energy,
- Drinking water,

patersongroup

Consulting Engineers

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

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

www.patersongroup.ca

December 3, 2018
File: PE4500-HLUI

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

Subject: **Authorization Letter, HLUI Search**
Phase I-Environmental Site Assessment
316, 320, 324, 326 and 332 Clifton Road
Ottawa, Ontario

Dear Sir or Madame,

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

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

Name of Company/Property Owner: Insight Ottawa Realty Corp.

Name of Representative: Jeremy Silburt

Authorization of Representative:

Date: 1/8/2019

DocuSigned by:
Jeremy Silburt
0ABC6A0F00534A7...

Mandy Witteman

From: Public Information Services <publicinformationservices@tssa.org>
Sent: December-07-18 11:36 AM
To: Karyn Munch
Subject: RE: Search Request - PE4500

Good morning Karyn,

Thank you for your request for confirmation of public information.

We confirm that there are no records in our database of any fuel storage tanks at the subject addresses.

For a further search in our archives please complete our release of public information form found at https://www.tssa.org/en/about-tssa/release-of-public-information.aspx?_mid_=392 and email the completed form to publicinformationservices@tssa.org 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.

Enjoy your weekend!

Kind regards,

Sarah

Sarah Quibell | Public Information Agent
Facilities
345 Carlingview Drive
Toronto, Ontario M9W 6N9
Tel: +1-877-682-8772 | Fax: +1-416-231-6183 | E-Mail: squibell@tssa.org
www.tssa.org

From: Karyn Munch <KMunch@Patersongroup.ca>
Sent: December 7, 2018 11:06 AM
To: Public Information Services <publicinformationservices@tssa.org>
Subject: Search Request - PE4500

Good morning,

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

316, 320, 324, 326, 327, 328, 329, 332, 342 Clifton Road
185 Wilbur Avenue

Thank-you very much.

Best Regards,

Karyn Munch, P.Eng.

patersongroup
solution oriented engineering

154 Colonnade Road South
Ottawa, Ontario, K2E 7J5
Tel: (613) 226-7381 Ext. 217
Fax: (613) 226-6344
Email: kmunch@patersongroup.ca

APPENDIX 3

QUALIFICATIONS OF ASSESSORS

Mandy Witteman, E.I.T.

patersongroup

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

POSITION

Environmental Engineer

EDUCATION

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

MEMBERSHIPS & AWARDS

Alberta Professional Engineers and Geoscience Association
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

2014 – 2013
Carleton University
Department of Civil & Environmental Engineering
Research Engineer

2013 - 2009
Carleton University
Department of Civil & Environmental Engineering
Research Assistant and Teachers Assistant

2008 – 2009
SLR Consulting Limited
Contaminated Sites
Junior Environmental Engineer

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