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Phase I - Environmental Site Assessment

4055 & 4120 Russell Road
Ottawa, Ontario

Prepared For

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EXECUTIVE SUMMARY

Assessment

Paterson Group was retained by Avenue 31 Capital Inc. to conduct a Phase I – Environmental Site Assessment (Phase I ESA) for the properties addressed 4055 and 4120 Russell Road, in the City of Ottawa, Ontario. The purpose of this Phase I ESA was to research the past and current use of the sites and study area and to identify any environmental concerns with the potential to have impacted the subject properties.

Based on a review of historically available information, the subject properties were first developed with farmhouses and barns sometime around 1918 and sometime prior to 1948, for 4055 and 4120 Russell Road, respectively. Since that time, the subject properties have been used for residential, commercial, and agricultural purposes. In the mid-1900s, additional structures were constructed on 4055 Russell Road, which included residential dwellings, an auto service garage, and an additional farmhouse. By the 1990s, the farmhouse situated on 4120 Russell Road, as well as the majority of the buildings situated on 4055 Russell Road had been demolished. The neighbouring properties were historically developed for residential, commercial, and light industrial purposes. The potential for the importation of fill material on-site as a result of the demolition of the two (2) former farmhouses on 4055 and 4120 Russell Road, the historical presence of a former on-site auto service garage on 4055 Russell Road, and the historical aboveground fuel tank spill at 4055 Russell Road are all considered to represent APECs with respect to the subject sites.

Following the historical review, a site inspection was conducted. 4055 Russell Road is currently occupied by a residential dwelling and an abandoned farmhouse and barns, whereas 4120 Russell Road is currently vacant. Both sites are predominantly covered with dense vegetation. The fill material identified on the north portion of 4120 Russell Road is considered to represent an APEC on the subject property. Several PCAs were identified within the Phase I Study area, however, based on their separation distance and/or down-gradient or cross-gradient orientation, these PCAs are not considered to represent APECs on the subject property.

Recommendations

Based on the results of this assessment, it is our opinion that **a Phase II - Environmental Site Assessment will be required for the subject sites.**

Multiple asbestos containing building materials were determined to be present within the abandoned farmhouse situated on 4055 Russell Road. These materials include the drywall joint compound, cement wall board, vinyl sheet flooring, mastic adhesive, duct heat guard, window glazing, and roofing sealant. These materials were observed to be in poor condition at the time of the site inspection. An asbestos management and abatement program should be conducted prior to the demolition or renovation of the subject building.

Large growth patches of white coloured mould were observed within the basement of the abandoned farmhouse at 4055 Russell Road. Extensive water damage was observed within certain portions of the building which may have fostered an environment which promoted mould growth. It is recommended that an appropriate filter/mask be worn when entering the building.

1.0 INTRODUCTION

At the request of Avenue 31 Capital Inc., Paterson Group (Paterson) conducted a Phase I - Environmental Site Assessment (Phase I ESA) for 4055 and 4120 Russell Road, in the City of Ottawa, Ontario. The purpose of this Phase I ESA was to research the past and current use of the site and study area and to identify any environmental concerns with the potential to have impacted the subject property.

Paterson was engaged to conduct this Phase I ESA by Mr. Michel Pilon of Avenue 31 Capital Inc. Mr. Pilon can be reached by telephone at 613-903-7331.

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

This Phase I ESA report has been prepared in general accordance with the requirements of Ontario Regulation 153/04, as amended, under the Environmental Protection Act, and also complies with the requirements of CSA Z768-01. The conclusions presented herein are based on information gathered from a limited historical review and field inspection program. The findings of the Phase I ESA are based on a review of readily available geological, historical, and regulatory information, as well as 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

Addresses:	4055 Russell Road, Ottawa, Ontario. 4120 Russell Road, Ottawa, Ontario.
Legal Descriptions:	(4055 Russell Road) Part of Lots 3, 4, 5, Concession 6, Rideau Front; Part of Registered Plan 5R-5635; Formerly the Township of Gloucester, in the City of Ottawa. (4120 Russell Road) Part of Lot 5, Concession 6, Rideau Front; Part of Registered Plan 4R-24959; Formerly the Township of Gloucester, in the City of Ottawa.
Property Identification Numbers (PINs):	(4055 Russell Road) 04351-0393 (4120 Russell Road) 04161-0168, 04161-0166, 04161-0166, 04161-0158
Location:	The subject properties are located on the north (4055 Russell Road) and south (4120 Russell Road) side of Russell Road, approximately 50 m west of Hunt Club Road, in the City of Ottawa, Ontario.
Latitude and Longitude:	(4055 Russell Road) 45° 23' 09" N, 75° 35' 30" W (4120 Russell Road) 45° 22' 50" N, 75° 35' 27" W
Site Description:	
Configuration:	(4055 Russell Road) Irregular (4120 Russell Road) Irregular
Site Area:	(4055 Russell Road) 28.2 ha (approximate) (4120 Russell Road) 12.2 ha (approximate)
Zoning:	(4055 Russell Road) IH – Heavy Industrial Zone (4120 Russell Road) IH – Heavy Industrial Zone (4120 Russell Road) AG – Agricultural Zone

Current Use: (4055 Russell Road) The property is currently occupied by a residential dwelling and an abandoned farmhouse and associated barns.

(4120 Russell Road) The property is currently vacant.

Services: Both properties are located in a municipally serviced area. It should be noted that the occupied residential dwelling situated on 4055 Russell Road (addressed 3995 Russell Road) is supplied with municipal water services and contains a private septic system.

3.0 SCOPE OF INVESTIGATION

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

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

4.0 RECORDS REVIEW

4.1 General

Phase I ESA Study Area Determination

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

First Developed Use Determination

Based on a review of historical information, 4055 Russell Road was first developed with a farmhouse sometime around 1918 and 4120 Russell Road was first developed with a farmhouse sometime prior to 1948.

Plan of Survey

A sketch illustrating the subject lands, prepared by Annis, O'Sullivan, Vollebek Ltd., dated May 14, 2019 and amended September 17, 2019, was reviewed as part of this assessment. The subject sites are shown in their current configuration. A copy of the sketch is provided in Appendix 1.

Fire Insurance Plans

Fire insurance plans are not available for the general area of the subject sites.

City of Ottawa Street Directories

City of Ottawa street directories at the National Archives were reviewed in approximate 10-year intervals from 1970 to 2011 as part of this assessment. The property addressed 4055 Russell Road was listed as a residential property in the year 1999. No directory information was available for the subject site prior to this date. The property addressed 4120 Russell Road was not listed in the directories. The directories indicate that the neighbouring lands have been used for various commercial and industrial purposes between 1990 and 2011, the last year reviewed.

A review of the city street directories identified several off-site potentially contaminating activities (PCAs) within the Phase I study area. A summary of the PCAs identified within the Phase I study area is provided in the table below.

Table 1: City Street Directories – Potentially Contaminating Activities in the Phase I Study Area			
Address	Listed Activity (years listed)	Distance / Orientation From Subject Sites	APEC (Y/N)
4120 Belgreen Dr.	Manitoulin Transport, Motor Express Ottawa (1990-2011) Myers Transport Ltd., Transport Help (2000-2011) Canada Transport (1990)	175 m S of 4055 Russell Rd. 0 m N of 4120 Russell Rd.	N
4119 Belgreen Dr.	Deals 4 Wheels, Prestige Tire & Auto (2000-2011)	125 m S of 4055 Russell Rd. 200 m N of 4120 Russell Rd.	N
4117 Belgreen Dr.	Gloucester Auto Repairing (1990)	125 m S of 4055 Russell Rd. 200 m N of 4120 Russell Rd.	N
4110 Belgreen Dr.	Micron Precision (2011) Delta Printing (1990)	240 m S of 4055 Russell Rd. 110 m N of 4120 Russell Rd.	N
4095 Belgreen Dr.	ABD Ironworld Inc., Metalworld Inc. (2011) Ahirang Powder Coating (2011) A16 Auto Parts (2000) Capital Cutting & Coring (1990) Maheral Trucking Ltd. (1990)	290 m S of 4055 Russell Rd. 210 m N of 4120 Russell Rd.	N
4080 Belgreen Dr.	White's Paint & Copy (1990-2000)	400 m S of 4055 Russell Rd. 50 m N of 4120 Russell Rd.	N

Several industrial activities, contractor yards, and automotive service garages were identified on the south side of Belgreen Drive, immediately north of 4120 Russell Road. Based on their relatively recent age of construction, their separation distance, and/or their down-gradient or cross-gradient location relative to the subject property, these PCAs are not considered to result in areas of potential environmental concern (APECs) with respect to either subject property.

Based on their separation distances, the remaining PCAs identified within Phase I study area are not considered to pose a concern to the subject properties. PCAs identified within the Phase I study area are presented on Drawing PE4690-2 – Surrounding Land Use Plan in the Figures section of this report.

4.2 Environmental Source Information

Environment and Climate Change Canada

A search of the National Pollutant Release Inventory (NPRI) was conducted electronically on August 28, 2019. The subject sites were not listed in the NPRI database. No records of pollutant release were listed in the database for properties located within the Phase I study area.

PCB Inventory

A search of national PCB waste storage sites was conducted as part of this assessment. One (1) former PCB waste storage site (Ontario Hydro) was identified immediately to the north of 4055 Russell Road. Based on its cross-gradient location, the former PCB waste storage site is not considered to pose a concern to the subject properties.

Ontario Ministry of Environment (MECP) Waste Disposal Site Inventory

The Ontario Ministry of Environment and Climate Change document titled "Waste Disposal Site Inventory in Ontario, 1991" was reviewed as part of the historical research. This document includes all recorded active and closed waste disposal sites, industrial manufactured gas plants and coal tar distillation plants in the Province of Ontario.

One (1) former waste disposal site (Site No. A 460705 – closed 1981) was identified approximately 200 m west of 4120 Russell Road. Based on the date of closure, as well as the separation distance, the former waste disposal site is not considered to pose an environmental concern to the subject sites.

MECP Brownfields Environmental Site Registry

A search of the MECP Brownfields Environmental Site Registry was conducted electronically on August 28, 2019 for the subject site and neighbouring properties within the Phase I study area. No records of site condition (RSCs) were filed for the subject sites or any properties within the Phase I study area.

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 in the Phase I study area.

MECP Instruments

A request was submitted to the MECP Freedom of Information office for information with respect to certificates of approval, permits to take water, certificates of property use or any other similar MECP issued instruments for the subject sites. At the time of issuing this report, a response from the MECP had not been received.

MECP Submissions

A request was submitted to the MECP Freedom of Information office for information with respect to reports related to environmental conditions for the subject sites. At the time of issuing this report, a response from the MECP had not been received.

MECP Incident Reports

A request was submitted to the MECP Freedom of Information office for information with respect to records concerning environmental incidents, orders, offences, spills, discharges of contaminants or inspections maintained by the MECP for the subject sites or adjacent properties. At the time of issuing this report, a response from the MECP had not been received.

MECP Waste Management Records

A request was submitted to the MECP Freedom of Information office for information with respect to waste management records for the subject sites. At the time of issuing this report, a response from the MECP had not been received.

Technical Standards and Safety Authority (TSSA)

The TSSA Fuels Safety Branch in Toronto was contacted electronically on August 28, 2019 to inquire about current and former underground storage tanks, spills, and incidents for the subject site and neighbouring properties. The response from the TSSA indicated that the subject site is not listed in the TSSA registry.

The property addressed 4120 Belgreen Drive, located immediately north of 4120 Russell Road, contains records for two (2) active fuel tanks and one (1) active private gasoline fuel outlet. Based on the separation distance between the fuel outlet and the subject property, as well as its cross-gradient orientation, this site is not considered to pose an environmental concern to the subject property.

A copy of the correspondence with the TSSA is included in Appendix 2.

Areas of Natural and Scientific Interest (ANSI)

A search for areas of natural and scientific interests within the Phase I study area was conducted via the Ontario Ministry of Natural Resources and Forestry (MNR) website on August 28, 2019. The search did not reveal any areas of natural and scientific interest within the Phase I study area.

City of Ottawa Landfill Document

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

City of Ottawa Historical Land Use Inventory

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 should it contain any pertinent information.

Personal Interviews

Ms. Marlene Borsboom, the current property manager for 4055 Russell Road, was available on-site to respond to questions at the time of the site inspection. According to Ms. Borsboom, the farmhouse was abandoned in 2009 and no tenants have utilized the property since that time. Ms. Borsboom stated that the abandoned farmhouse was heated via an oil-fired furnace, but that the oil tank was emptied following the house’s abandonment. Ms. Borsboom also stated that both the occupied residence and the farmhouse each contain a private underground septic tank and that the occupied residence is currently supplied with municipal drinking water. Ms. Borsboom was unaware of any environmental issues pertaining to the subject site.

Previous Engineering Reports

4055 Russell Road

- ❑ “Phase I Environmental Assessment, 4055/3995 Russell Road, Gloucester, Ontario”, prepared by Oliver, Mangione, McCalla & Associates and dated February 12, 1999.

A 1999 Phase I ESA report identified eight (8) APECs on the subject property and, as a result, a Phase II ESA was recommended.

- ❑ “Phase II Environmental Site Assessment, 4055 and 3995 Russell Road, Ottawa, Ontario”, prepared by Trow Associates Inc. and dated October 2005.

The Phase II ESA, conducted in 2005, involved the advancement of eleven (11) test pits and five (5) boreholes, within the areas of environmental concern, to a maximum depth of 7.3 meters below ground surface. Eleven (11) soil samples were submitted for analysis of petroleum hydrocarbons (PHCs), pesticides, nitrate, metals, as well as benzene, toluene, ethylbenzene, and xylenes (BTEX) analysis. Five (5) groundwater samples, recovered from monitoring wells installed in each borehole, were submitted for analysis of PHCs, BTEX, metals, and volatile organic compounds (VOCs).

According to the analytical test results, the concentration of BTEX, pesticides, and metal parameters in the soil samples analysed were in compliance with the selected MOE and CCME soil quality criteria at that time. One (1) soil sample, collected at ground surface in the vicinity of staining observed around an aboveground diesel fuel tank (AST), located adjacent to a large storage shed in the vicinity of the on-site farmhouse, had concentration of PHC F₃ which exceeded the applicable federal and provincial soil quality criteria. Based on visual and olfactory observations made at the time of the sampling program, the lateral extent of PHC impact to soil in this area was suspected to be limited to a 1.0 m radius from the AST and extend to a depth of approximately 0.5 m below ground surface. The concentration of PHCs in all other soil samples were compliant with the selected CCME and MOE soil quality criteria. In addition, all groundwater parameter concentrations analysed were in compliance with the selected MOE criteria. The concentration of PHCs in the soil and groundwater samples analysed also comply with the current MECP Table 9 standards. The presence of the former AST spill is considered to be an APEC on the subject property.

- “Designated Substance Survey, 3995 Russell Road, Ottawa, Ontario”, prepared by Oliver, Mangione, McCalla & Associates and dated February 12, 1999.

In 2013, a designated substance survey was completed for the occupied residential dwelling (addressed 3995 Russell Road). The survey identified asbestos containing drywall joint compound and paper insulation on the basement ductwork as well as lead containing paints within the building. According to the current tenant, as well as representatives from the NCC, all asbestos containing materials have since been removed from the building.

- “Pre-Demolition Designated Substance Surveys for Ten Buildings Located at 4055 Russell Road, Ottawa, Ontario”, prepared by Golder Associates and dated September 16, 2019.

In 2019, a designated substance survey, completed for the abandoned farmhouse, identified asbestos containing drywall joint compound, cement wall board, vinyl sheet flooring, mastic adhesive, duct heat guard, window caulking, and roofing sealant. Lead based paints were also identified within the building.

4120 Russell Road

- “Limited Phase II Environmental Site Assessment, NCC Property Asset Numbers 243780 and 185, 4120 & 4224 Russell Road, Ottawa, Ontario”, prepared by Aqua Terre Solutions Inc. and dated December 16, 2002.

A limited Phase II ESA was conducted for 4120 Russell Road in 2002 in order to assess potential impacts resulting from a closed landfill located west of the subject site, as well as for potential impacts resulting from the former on-site farmhouse. Five (5) boreholes were advanced on the property to a maximum depth of 9.85 meters below ground surface. A total of eight (8) soil samples were submitted for analysis of BTEX, TPH, PHCs, VOCs, and metals parameters.

According to the analytical test results, three (3) soil samples contained a concentration of chromium and which exceeded the CCME criteria. One (1) of these samples also contained a concentration of zinc which exceeded the CCME criteria. Based on the depths of the recovered soil samples, the excess concentrations of chromium and zinc are considered to be naturally occurring, and do not pose a contaminant issue to the subject property. All remaining BTEX, TPH, PHCs, and VOC parameters in the soil samples analysed were in compliance with the MOE and CCME criteria. The results are also in compliance with the current MECP Table 3 standards.

A total of five (5) groundwater samples, recovered from monitoring wells installed in each borehole, were submitted for analysis of BTEX, TPH, VOCs, metals, pH levels, and general chemistry parameters.

According to the analytical results, one (1) groundwater sample contained a concentration of sodium which exceeded the MOE Table A potable groundwater criteria and the CCME criteria. Two (2) groundwater samples contained a concentration of benzene which exceeded the MOE Table A and CCME criteria. Three (3) groundwater samples contained a concentration of ethylbenzene which exceeded the MOE Table A and CCME criteria. One (1) groundwater sample contained a pH level which exceeded the CCME criteria. All remaining parameters analysed were in compliance with the MOE and CCME criteria. As a result of the limited 2002 Phase II ESA, a screening level risk assessment was recommended.

It should be noted that at the time, the aforementioned analytical test results for the recovered soil samples were compared to the more stringent MOE Table A agricultural land use, generic soil remediation criteria in a potable groundwater situation. Furthermore, the analytical test results for the recovered groundwater samples were compared to the more stringent MOE Table A potable groundwater criteria. Since the subject land is to be used for future commercial purposes in a non-potable groundwater situation, these test results have been compared to the now contemporary MECP Table 3 commercial standards. The analytical test results for all soil and groundwater samples recovered as part of the limited 2002 Phase II ESA are in compliance with the current MECP Table 3 commercial standards. It is also anticipated that the concentrations of benzene and ethylbenzene detected in the groundwater will have decreased over time via natural attenuation. As a result, the exceedances identified in the limited 2002 Phase II ESA are not considered to pose a concern to the subject property.

- “Screening Level Risk Assessment, 4120 & 4224 Russell Road, NCC Property Asset Numbers 243780 and 185, Ottawa, Ontario”, prepared by Trow Consulting Engineers Ltd. and dated March 2003.

A screening level risk assessment was completed for the subject property in 2003. As part of the assessment, a limited Phase II ESA was conducted to confirm the findings from the previous 2002 Phase II ESA. One (1) groundwater sample was obtained and submitted for BTEX analysis. According to the analytical results, all BTEX parameters complied with the MOE and CCME criteria.

4.3 Physical Setting Sources

Aerial Photographs

Historical air photos from the National Air Photo Library were reviewed in approximate ten (10) year intervals, commencing with the earliest available photograph. Based on the review, the following observations have been made:

- 1946 *(Poor Scale)* The property addressed 4055 Russell Road appears to be developed with two (2) separate farmhouses, each with associated barns and storage sheds. The property addressed 4120 Russell Road appears to be developed with a farmhouse with associated barns and storage sheds. Both properties, as well as the neighbouring lands appear to be used for agricultural purposes at this time.

- 1958 Three (3) new structures have been constructed on 4055 Russell Road at this time. According to previous engineering reports, one of these new structures, situated on the southeast portion of the property, is an auto service garage. The other two structures are reported to be residential dwellings.
- 1976 (City of Ottawa Website) No significant changes are apparent with respect to the subject site or neighbouring properties.
- 1994 The farmhouse situated on the north portion of 4055 Russell Road has been demolished at this time. The neighbouring properties to the north of 4120 Russell Road (west of 4055 Russell Road), have been developed with multiple light industrial buildings along Belgreen Drive. Additional residential dwellings and contractor storage yards can be seen to the west of 4055 Russell Road.
- 2011 (City of Ottawa Website) The auto service garage and residential dwelling situated on the south portion of 4055 Russell Road as well as the farmhouse situated on 4120 Russell Road appear to have been demolished at this time. Additional light industrial buildings have been constructed to the north of 4120 Russell Road. A stormwater management pond can be seen to the south of 4120 Russell Road.
- 2017 (City of Ottawa Website) The subject site and neighbouring properties are depicted as they appear today.

Copies of selected aerial photographs reviewed are included in Appendix 1.

Topographic Maps

Topographic mapping information was obtained from the Natural Resources Canada – The Atlas of Canada website. The maps indicate that the elevation of the subject site is approximately 70 m above sea level. The regional topography in the general area of the site slopes down to the northeast in the direction of Mer Bleue Bog. A copy of the referenced map is presented in the Figures section in this report.

Physiographic Maps

A Physiographic Map was reviewed from the Natural Resources Canada - The Atlas of Canada website. Based on this physiographic map, the site is located in the St. Lawrence Lowlands.

According to the mapping description provided: “The lowlands are plain-like areas that were all affected by the Pleistocene glaciations and are therefore covered by surficial deposits and other features associated with the ice sheets.” The subject site is located in the Central St. Lawrence Lowland, “where the land is rarely more than 150 m above sea level, except for the Montereian Hills, which consist of intrusive igneous rocks”.

Geological Maps

The Geological Survey of Canada website on the Urban Geology of the National Capital Area was consulted as part of this assessment. Based on available mapping information, the bedrock in the area of the subject site consists of shale of the Carlsbad Formation, with an overburden consisting of offshore marine sediments (erosional terraces) and ranging from 3 to 10 m in thickness.

Water Well Records

A search of the MECP’s website for all drilled well records within 250 m of the subject site was conducted on September 20, 2019. The search identified twenty-four (24) well records within the Phase I study area. The records pertain to wells used for domestic household, agricultural, and groundwater observation purposes, drilled in the area between 1949 and 2014. Based on the well records, the stratigraphy in the general area of the subject site consists of sand and gravel, underlain by silty clay and interbedded limestone and shale bedrock. The water table was encountered at an average depth of 4.5 to 5.0 m. Selected well records are appended in Appendix 2.

Water Bodies

A small watercourse is present in the south portion of 4055 Russell Road and transects the property in an east-west direction. This watercourse generally flows towards the northeast and feeds into Ramsay Creek, located approximately 650 m east of 4055 Russell Road.

A stormwater management pond is present approximately 50 m to the south of 4120 Russell Road. This pond drains into McEwan Creek, located approximately 150 m south of 4120 Russell Road, and generally flows towards the northeast where it eventually feeds into Ramsay Creek, approximately 650 m east of 4055 Russell Road.

5.0 SITE RECONNAISSANCE

5.1 General Requirements

The site inspection was conducted on September 3, 2019, between 9:30 AM and 10:30 AM. Weather conditions were sunny, with a temperature of approximately 20°C. Mr. Nick Sullivan, from the Environmental Department of Paterson Group, conducted the site inspection. In addition to the subject site, the uses of neighbouring properties within the Phase I study area were also assessed at the time of the site inspection.

5.2 Specific Observations at the Phase I Property

Site Features

The property addressed 4055 Russell Road is currently occupied by a residential dwelling as well as an abandoned farmhouse and associated barns. The majority of the subject property is covered with dense grass, light brush, and mature trees. The site topography is relatively flat, while the regional topography slopes gently down to the east. The site is at grade with respect to Russell Road and Highway 417.

The property addressed 4120 Russell Road is currently vacant and covered with dense grass, light brush, and immature trees. The site topography slopes down to the south and gently down to the east, while the regional topography slopes down to the east. The site is at grade with Russell Road as well as the adjacent properties to the north, and below grade with respect to Hunt Club Road.

Water drainage on the subject sites consists primarily of infiltration throughout the properties. No ponded water or stressed vegetation was observed on either subject property at the time of the site inspection.

A depiction of both subject sites is presented on Drawing PE4690-1 – Site Plan, in the Figures section of this report.

Buildings and Structures

The property addressed 4055 Russell Road is currently occupied by a residential dwelling as well as an abandoned farmhouse with associated barns, silos, and storage sheds.

The residential dwelling, which has a municipal address of 3995 Russell Road, is a two (2) storey residence with one (1) basement level, reportedly constructed in the 1960s. The building is constructed with a wood frame and a poured concrete foundation and is finished on the exterior with aluminum siding and a sloped shingled roof.

The abandoned farmhouse, situated on 4055 Russell Road, is a three (3) storey residence with one (1) basement level, reportedly constructed in 1918. The building is constructed with a wood frame and a rubble stone foundation and is finished on the exterior with brick, wood siding, and a sloped shingled roof. The associated storage sheds and barns consist of one (1) storey, slab-on-grade style structures, constructed with a wood frame and finished on the exterior with wood or aluminum siding and a sloped metal roof. Three (3) grain silos are also present on the subject site, which are constructed with concrete blocks and a domed metal roof.

No buildings or structures are currently present on the property addressed 4120 Russell Road.

Underground Utilities

Both the farmhouse and residence situated on the property addressed 4055 Russell Road each contain a septic tank on the east side of each building. The residence (3995 Russell Road) is currently serviced with underground potable water services, supplied by the municipality. A municipal storm water sewer line was identified on-site which transects the property in a north-south direction. The property addressed 4120 Russell Road does not contain any underground utilities that we are aware of.

Waste Materials

Non-hazardous domestic waste and recyclables is generated by the occupied residence on 4055 Russell Road. The waste is stored within plastic bins in an outdoor shed and is collected by the municipality on a regular basis. A small pile of non-hazardous waste, consisting predominantly of wood, metal, and ceramic, was identified adjacent to the abandoned farmhouse at 4055 Russell Road. No waste is currently being generated on 4120 Russell Road. No environmental concerns were identified with respect to the waste stored on-site.

Fuels and Chemical Storage

No above ground fuel storage tanks (ASTs) or signs of underground fuel storage tanks (USTs) were observed on the exterior of the subject property at the time of the site inspection. No hazardous chemicals, spills, stains, or abnormal odours were observed on the exterior of the properties at the time of the site inspection.

Potential Environmental Concerns

Unidentified Substances

There were no unidentified substances on the subject property at the time of site inspection.

Polychlorinated Biphenyls (PCBs)

Several pole mounted transformers were observed along the east side of Russell Road, adjacent to 4055 Russell Road. The transformers were noted to be in good condition at the time of the site inspection, as no leaks or signs of staining were observed. As a result, the transformers do not pose an environmental concern to the subject site.

Railway Lines

An active railway line was identified approximately 140 m north of 4055 Russell Road. The railway line is considered to be a potentially contaminating activity, however, based on its separation distance and downgradient location, the railway line is not considered to pose an area of potential environmental concern to the subject property.

Wastewater Drainage

Domestic wastewater, consisting of wash water and sewage, from the occupied residential dwelling on the property addressed 3995 Russell Road, is currently discharged into an underground holding tank on the east side of the residence. Roof drainage is currently discharged into the subject properties via infiltration. No ponded water was observed on either subject property at the time of the site inspection. No concerns with respect to wastewater drainage was identified during the site inspection.

Interior Assessment

A general description of the interior of the abandoned farmhouse situated on 4055 Russell Road is as follows:

- The floors consisted of hardwood, vinyl floor tiles, and stone.
- The walls consisted of brick, drywall, plaster, and rubble stone (basement).
- The ceilings consisted of drywall, and plaster.
- Lighting throughout the building consisted of incandescent fixtures.

A general description of the interior of the occupied residence situated on 4055 Russell Road (addressed 3995 Russell Road) is as follows:

- The floors consisted of concrete, ceramic tiles, hardwood, and vinyl tiles.
- The walls consisted of drywall and concrete block.
- The ceilings consisted of drywall.
- Lighting throughout the building consisted of incandescent and fluorescent light fixtures.

Potentially Hazardous Building Products

Asbestos-Containing Materials (ACMs)

In 2013, a designated substance survey was completed for the occupied residential dwellings (addressed 3995 Russell Road). The survey identified asbestos containing drywall joint compound and paper insulation on the basement ductwork as well as lead containing paints within the building. According to the current tenant, as well as representatives from the NCC, all asbestos containing materials have since been removed from the building.

In 2019, a designated substance survey, completed for the abandoned farmhouse, identified asbestos containing drywall joint compound, cement wall board, vinyl sheet flooring, mastic adhesive, duct heat guard, window glazing, and roofing sealant. These materials were observed to be in poor condition at the time of the site inspection.

Lead-Based Paint

The 2013 designated substance survey did not identify any lead-based paints within the occupied residential dwelling (3995 Russell Road). Painted surfaces were generally observed to be in good condition at the time of the site inspection.

The 2019 designated substance survey identified lead-based paints within the abandoned farmhouse on 4055 Russell Road. Painted surfaces were observed to be in poor condition at the time of the site inspection.

Polychlorinated Biphenyls (PCBs) and Transformer Oil

No concerns with respect to PCBs were identified at the time of the site inspection.

Urea Formaldehyde Foam Insulation (UFFI)

UFFI was not observed at the time of the site inspection, however, wall cavities were not inspected for insulation type.

Other Potential Environmental Concerns

Fuels and Chemical Storage

The residence at 3995 Russell Road contained one (1) aboveground oil tank in the basement, which connected to an oil-fired furnace. The tank, manufactured in 2002, is a single walled steel tank with a capacity for 935 L. The tank was noted to be situated within a plastic containment unit. Both the tank and the containment unit were noted to be in good condition at the time of the site inspection as no signs.

The abandoned farmhouse contained one (1) aboveground oil tank (935 L capacity) in the basement, which connected to an oil-fired furnace. The tank was noted to be in good condition at the time of the site inspection as no signs of leaks or staining were observed on the tank or the underlying floor. According to the property manager, the tank was emptied of fuel in 2009 and has not been in used since that time.

There was no evidence which indicated that any spills or leaks have ever occurred with respect to either aboveground fuel tank. As a result, the aboveground fuel tanks are not considered to represent an area of potential environmental concern to the subject property.

Sump Pits

One (1) sump pit was observed within the basement of the occupied residence at 3995 Russell Road. The water inside the pit appeared clear at the time of the site inspection and no unusual visual or olfactory observations were noted. No environmental concerns were identified with regard to the sump pit in the subject building.

Ozone Depleting Substances (ODSs)

Potential sources of ODSs observed on site include a refrigerator, fire extinguisher, and air conditioner unit within the occupied residential dwelling (3995 Russell Road). These appliances were noted to be in good condition at the time of the site inspection and should be regularly serviced by a licensed contractor on a regular basis.

Mould Growth

Large growth patches of white coloured mould were observed within the basement of the abandoned farmhouse at 4055 Russell Road. Extensive water damage was observed within certain portions of the building which may have fostered an environment which promoted mould growth. It is recommended that an appropriate filter/mask be worn when entering the building.

Neighbouring Properties

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

4055 Russell Road:

- North:* Hydro Ottawa power substation, followed by a railway line and Highway 417;
- South:* Russell Road and Hunt Club Road, followed by various industrial buildings and contractor storage yards;
- East:* Highway 417, followed by vacant grassland;
- West:* Russell Road, followed by various industrial buildings and contractor storage yards as well as a small cemetery.

Based on their relatively recent age of construction, their separation distance, as well as their cross-gradient location relative to the subject property, the industrial properties are not considered to pose an environmental concern with respect to 4055 Russell Road.

4120 Russell Road:

- North:* Various industrial buildings and contractor storage yards, followed by Belgreen Drive;
- South:* A stormwater management pond, followed by Hunt Club Road;
- East:* Russell Road, followed by 4055 Russell Road, and Highway 417;
- West:* Various industrial buildings and contractor storage yards.

Based on their relatively recent age of construction, their separation distance, as well as their down-gradient or cross-gradient location relative to the subject property, the neighbouring industrial properties to the north are not considered to pose an environmental concern with respect to 4120 Russell Road.

Property use within the Phase I study area is shown on Drawing PE4690-2 - Surrounding Land Use Plan.

6.0 REVIEW AND EVALUATION OF INFORMATION

6.1 Land Use History

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

Table 2: Land Use History			
4055 Russell Road			
Time Period	Land Use	Potentially Contaminating Activities	Areas of Potential Environmental Concern
Prior to 1918	Unknown	Unknown	Unknown
1918 - 2011	Residential / Agricultural	Fill of Unknown Quality	The potential for the importation of fill material on-site, as a result of the demolition of the former farmhouse, is considered to be an APEC with respect to the subject site.
1958 - early 1990s	Commercial	Automotive Service Garage	The former auto service garage is considered to represent an APEC with respect to the subject site.
2011 - Present	Residential	None	None

Table 3: Land Use History			
4120 Russell Road			
Time Period	Land Use	Potentially Contaminating Activities	Areas of Potential Environmental Concern
Prior to 1946	Unknown	Unknown	Unknown
1946 - mid-1990s	Residential / Agricultural	Fill of Unknown Quality	The potential for the importation of fill material on-site, as a result of the demolition of the former farmhouse, is considered to be an APEC with respect to the subject site.
Mid-1990s - present	Vacant	None	None

Potentially Contaminating Activities (PCAs)

Multiple existing and historical PCAs were identified on the subject sites. The potential for the importation of fill material on-site as a result of the demolition of the former farmhouses on 4055 and 4120 Russell Road, the historical presence of a former on-site auto service garage on 4055 Russell Road, the historical aboveground fuel tank spill at 4055 Russell Road, and the current presence of on-site fill material on 4120 Russell Road are all considered to be potentially contaminating activities.

Multiple existing PCAs were identified within the Phase I study area. Based on the nature of the activity, their separation distance, as well as their down-gradient or cross-gradient orientation with respect to the subject site, none of the off-site PCAs are considered to pose an environmental concern with respect to the subject sites.

Areas of Potential Environmental Concern (APECs)

As previously discussed, the potential for the importation of fill material on-site as a result of the demolition of the former farmhouses on 4055 and 4120 Russell Road, the historical presence of a former on-site auto service garage on 4055 Russell Road, the historical aboveground fuel tank spill at 4055 Russell Road, and the current presence of on-site fill material on 4120 Russell Road are all considered to represent APECs with respect to the subject sites.

Contaminants of Potential Concern (CPCs)

Based on the nature of the APECs identified on the subject site, the CPCs with respect to the subject property are considered to be benzene, toluene, ethylbenzene, and xylenes (BTEX), petroleum hydrocarbons (PHCs F1 - F4), volatile organic compounds (VOCs), polycyclic aromatic hydrocarbons (PAHs), and metals.

6.2 Conceptual Site Model

Geological and Hydrogeological Setting

Based on available mapping information from NRCAN, the bedrock in the area of the subject site consists of shale of the Carlsbad Formation, with an overburden consisting of offshore marine sediments (erosional terraces) and ranging from 3 to 10 m in thickness.

Based on the results of previous subsurface investigations on the subject site, the groundwater is expected to be encountered at depths ranging from approximately 0.5 to 3.5 m below the existing grade. Groundwater levels are expected to fluctuate throughout the year with seasonal variations.

Existing Buildings and Structures

The property addressed 4055 Russell Road is currently occupied by a residential dwelling as well as an abandoned farmhouse with associated barns, silos, and storage sheds.

No buildings or structures are currently present on the property addressed 4120 Russell Road.

Water Bodies

A small watercourse is present in the south portion of 4055 Russell Road and transects the property in an east-west direction. This watercourse generally flows towards the northeast and feeds into Ramsay Creek, located approximately 650 m east of 4055 Russell Road.

Drinking Water Wells

The subject sites are located within a municipally supplied area. Based on the available MECP Water Well Records, no drinking water wells are expected to be present within the Phase I study area. No wells were observed on the subject properties at the time of the site inspection.

Areas of Natural Significance

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

Neighbouring Land Use

Neighbouring land use within the Phase I study area consists of residential, commercial, and light industrial properties. Land use is shown on Drawing PE4690-2 – Surrounding Land Use Plan.

Potentially Contaminating Activities and Areas of Potential Environmental Concern

As per Section 6.1 of the Phase I ESA report, five (5) Potentially Contaminating Activities (PCAs) identified on the subject properties are considered to represent Areas of Potential Environmental Concern (APECs):

- A former on-site auto service garage, located on the southeast portion of 4055 Russell Road.
- A diesel fuel spill originating from a former above ground fuel storage tank, located adjacent to a storage shed on 4055 Russell Road.
- The potential for the importation of fill material as a result of the demolition of a former farmhouse in the northwest portion of 4055 Russell Road.
- The potential for the importation of fill material as a result of the demolition of a former farmhouse in the west-central portion of 4120 Russell Road.
- The presence of fill material of unknown quality in the north portion of 4120 Russell Road.

The PCAs identified on the subject sites are all considered to represent APECs with respect to their respective subject properties.

The following PCAs were identified off of the subject sites, yet within the Phase I study area:

- An existing private fuel facility, located at 4120 Belgreen Drive, immediately north of 4120 Russell Road.
- An existing autobody repair shop, located at 4119 Belgreen Drive, approximately 200 m north of 4120 Russell Road.
- A former autobody repair shop, located at 4117 Belgreen Drive, approximately 35 m north of 4120 Russell Road.

- A former printers, located at 4110 Belgreen Drive, approximately 115 m north of 4120 Russell Road.
- A metal treatment and coating facility, located at 4095 Belgreen drive, approximately 200 m north of 4120 Russell Road.
- A former printers, located at 4080 Belgreen drive, approximately 50 m north of 4120 Russell Road.
- An active railway line, located approximately 140 m north of 4055 Russell Road.

The majority of these sites were noted to be located in a down-gradient or cross-gradient orientation with respect to the subject site, while other sites are located at a significant distance from the subject property. As a result, the above list of PCAs within the Phase I study area are not considered to be APECs.

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 the PCAs identified on the subject sites are considered to represent on-site APECs, whereas the PCAs identified off of the subject sites, yet within the Phase I Study area, do not represent APECs with respect to the subject property. 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.

7.0 CONCLUSIONS

Assessment

Paterson Group was retained by Avenue 31 Capital Inc. to conduct a Phase I – Environmental Site Assessment (Phase I ESA) for the properties addressed 4055 and 4120 Russell Road, in the City of Ottawa, Ontario. The purpose of this Phase I ESA was to research the past and current use of the sites and study area and to identify any environmental concerns with the potential to have impacted the subject properties.

Based on a review of historically available information, the subject properties were first developed with farmhouses and barns sometime around 1918 and sometime prior to 1948, for 4055 and 4120 Russell Road, respectively. Since that time, the subject properties have been used for residential, commercial, and agricultural purposes. In the mid-1900s, additional structures were constructed on 4055 Russell Road, which included residential dwellings, an auto service garage, and an additional farmhouse. By the 1990s, the farmhouse situated on 4120 Russell Road, as well as the majority of the buildings situated on 4055 Russell Road had been demolished. The neighbouring properties were historically developed for residential, commercial, and light industrial purposes. The potential for the importation of fill material on-site as a result of the demolition of the two (2) former farmhouses on 4055 and 4120 Russell Road, the historical presence of a former on-site auto service garage on 4055 Russell Road, and the historical aboveground fuel tank spill at 4055 Russell Road are all considered to represent APECs with respect to the subject sites.

Following the historical review, a site inspection was conducted. 4055 Russell Road is currently occupied by a residential dwelling and an abandoned farmhouse and barns, whereas 4120 Russell Road is currently vacant. Both sites are predominantly covered with dense vegetation. The fill material identified on the north portion of 4120 Russell Road is considered to represent an APEC on the subject property. Several PCAs were identified within the Phase I Study area, however, based on their separation distance and/or down-gradient or cross-gradient orientation, these PCAs are not considered to represent APECs on the subject property.

8.0 RECOMMENDATIONS

Based on the results of this assessment, it is our opinion that **a Phase II - Environmental Site Assessment will be required for the subject sites.**

Multiple asbestos containing building materials were determined to be present within the abandoned farmhouse situated on 4055 Russell Road. These materials include the drywall joint compound, cement wall board, vinyl sheet flooring, mastic adhesive, duct heat guard, window glazing, and roofing sealant. These materials were observed to be in poor condition at the time of the site inspection. An asbestos management and abatement program should be conducted prior to the demolition or renovation of the subject building.

Large growth patches of white coloured mould were observed within the basement of the abandoned farmhouse at 4055 Russell Road. Extensive water damage was observed within certain portions of the building which may have fostered an environment which promoted mould growth. It is recommended that an appropriate filter/mask be worn when entering the building.

9.0 STATEMENT OF LIMITATIONS

This Phase I – Environmental Site Assessment report has been prepared in general accordance with O.Reg. 153/04, as amended, and meets the requirements of CSA Z768-01. The conclusions presented herein are based on information gathered from a limited historical review and field inspection program. The findings of the Phase I ESA are based on a review of readily available geological, historical, and regulatory information as well as 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 Avenue 31 Capital Inc. Permission and notification from Avenue 31 Capital Inc. and Paterson Group will be required to release this report to any other party.

Paterson Group Inc.



Nick Sullivan, B.Sc.



Mark S. D'Arcy, P.Eng.



Report Distribution:

- Avenue 31 Capital Inc.
- Paterson Group Inc.

10.0 REFERENCES

Federal Records

Air photos at the Energy Mines and Resources Air Photo Library.
National Archives.
Maps and photographs (Geological Survey of Canada surficial and subsurface 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.
MECP Water Well Inventory.
Office of Technical Standards and Safety Authority, Fuels Safety Branch.
Ministry of Natural Resources and Forestry: Areas of Natural Significance.
Chapman, L.J., and Putnam, D.F., 1984: ‘The Physiography of Southern Ontario, Third Edition’, Ontario Geological Survey Special Volume 2.

Municipal Records

City of Ottawa Document “Old Landfill Management Strategy, Phase I - Identification of Sites”, prepared by Golder Associates, 2004.
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.
Plan of Survey, prepared by Annis, O’Sullivan, Vollebekk Ltd., dated June 4, 2019

Public Information Sources

Google Earth.
Google Maps/Street View.

FIGURES

FIGURE 1 – KEY PLAN

FIGURE 2 – TOPOGRAPHIC MAP

DRAWING PE4690-1 – SITE PLAN

DRAWING PE4690-2 – SURROUNDING LAND USE PLAN

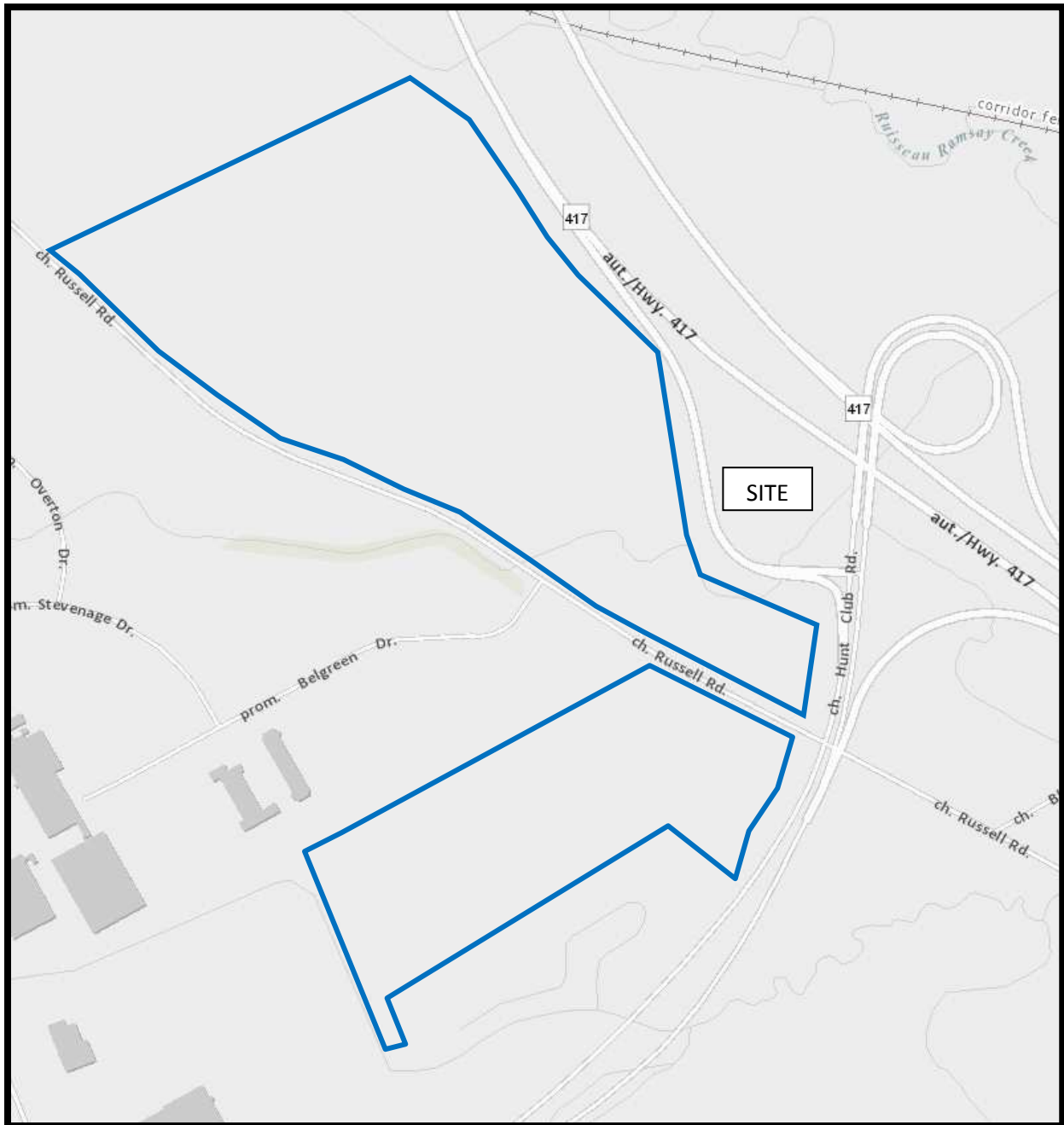


FIGURE 1
KEY PLAN

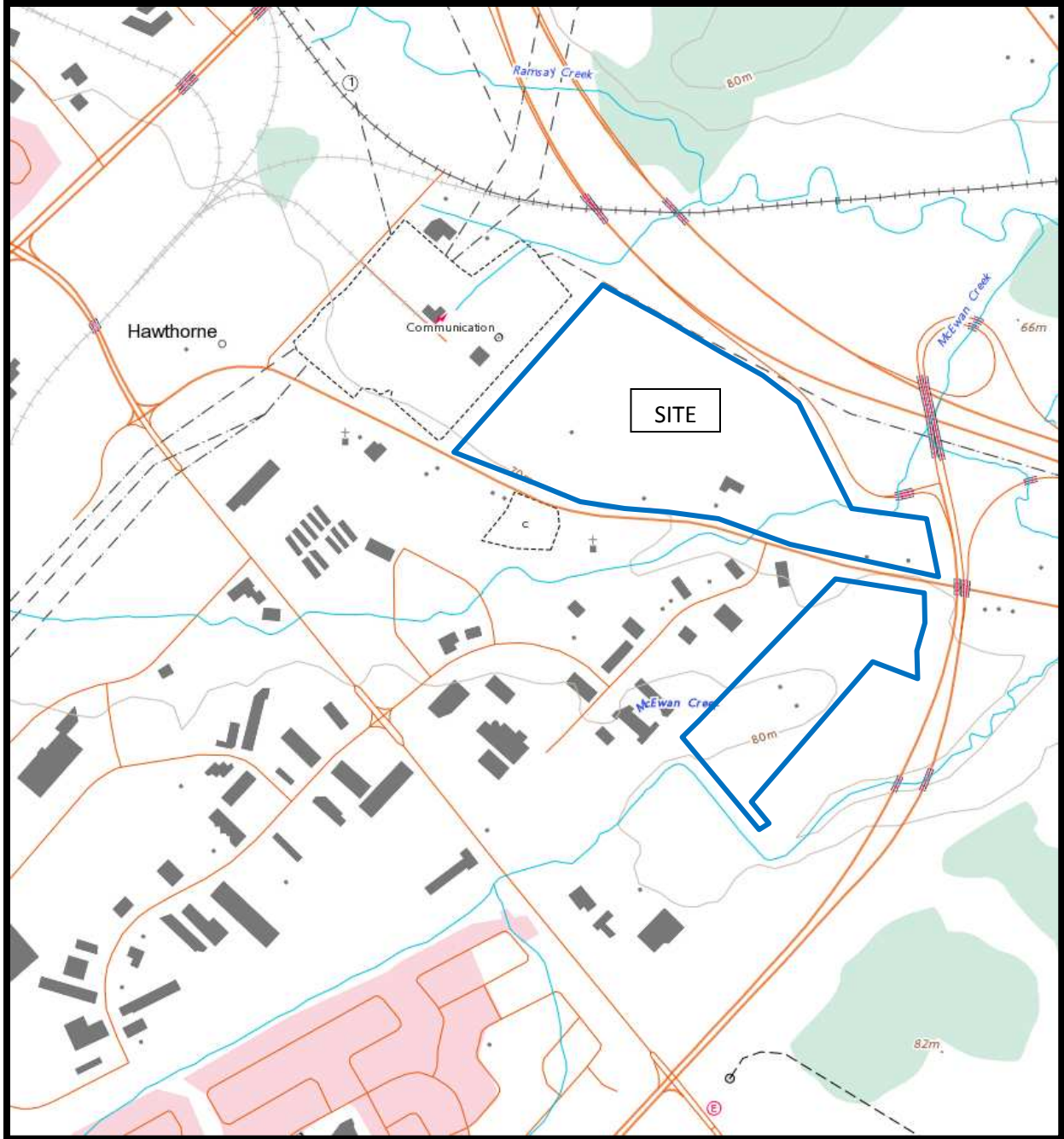
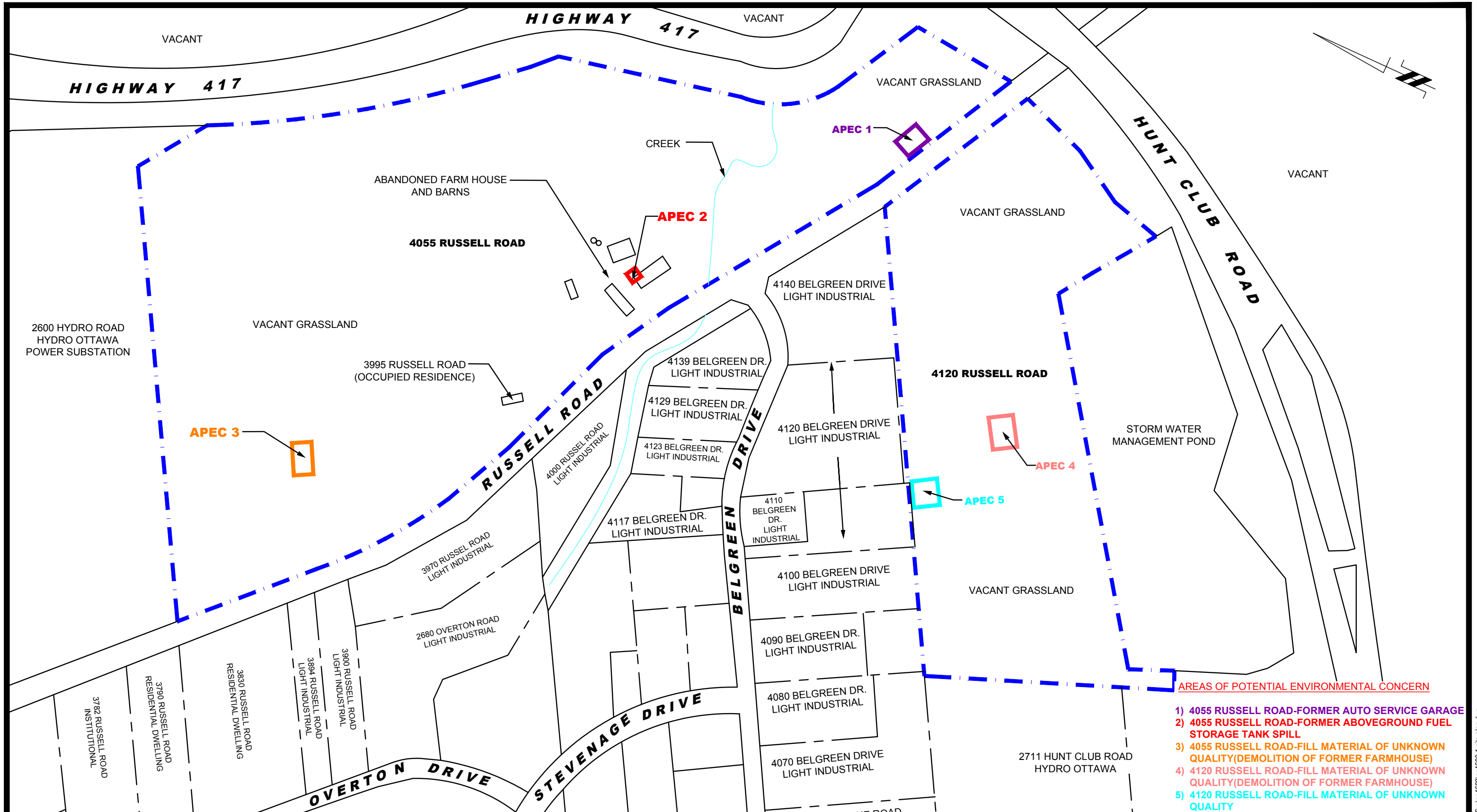


FIGURE 2
TOPOGRAPHIC MAP



AREAS OF POTENTIAL ENVIRONMENTAL CONCERN

- 1) 4055 RUSSELL ROAD-FORMER AUTO SERVICE GARAGE
- 2) 4055 RUSSELL ROAD-FORMER ABOVEGROUND FUEL STORAGE TANK SPILL
- 3) 4055 RUSSELL ROAD-FILL MATERIAL OF UNKNOWN QUALITY(DEMOLITION OF FORMER FARMHOUSE)
- 4) 4120 RUSSELL ROAD-FILL MATERIAL OF UNKNOWN QUALITY(DEMOLITION OF FORMER FARMHOUSE)
- 5) 4120 RUSSELL ROAD-FILL MATERIAL OF UNKNOWN QUALITY

patersongroup
consulting engineers

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

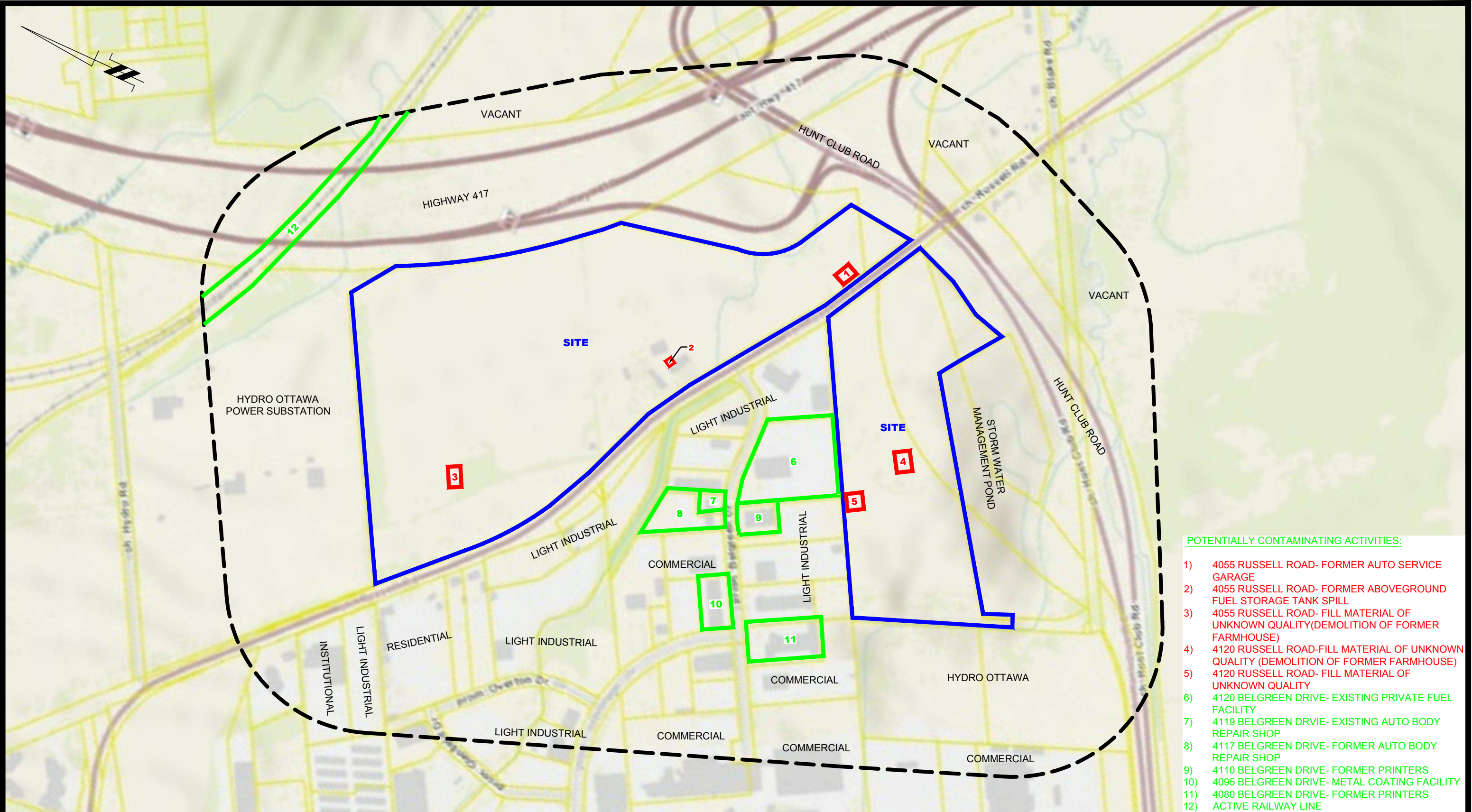
NO.	REVISIONS	DATE	INITIAL

AVENUE 31 CAPITAL INC.
PHASE I - ENVIRONMENTAL SITE ASSESSMENT
4055 AND 4120 RUSSELL ROAD

SITE PLAN

OTTAWA, ONTARIO

Scale:	1:750	Date:	10/2019
Drawn by:	YA	Report No.:	PE4690-1
Checked by:	NS	Dwg. No.:	PE4690-1
Approved by:	MSD	Revision No.:	



POTENTIALLY CONTAMINATING ACTIVITIES:

- 1) 4055 RUSSELL ROAD- FORMER AUTO SERVICE GARAGE
- 2) 4055 RUSSELL ROAD- FORMER ABOVEGROUND FUEL STORAGE TANK SPILL
- 3) 4055 RUSSELL ROAD- FILL MATERIAL OF UNKNOWN QUALITY (DEMOLITION OF FORMER FARMHOUSE)
- 4) 4120 RUSSELL ROAD- FILL MATERIAL OF UNKNOWN QUALITY (DEMOLITION OF FORMER FARMHOUSE)
- 5) 4120 RUSSELL ROAD- FILL MATERIAL OF UNKNOWN QUALITY
- 6) 4120 BELGREEN DRIVE- EXISTING PRIVATE FUEL FACILITY
- 7) 4119 BELGREEN DRIVE- EXISTING AUTO BODY REPAIR SHOP
- 8) 4117 BELGREEN DRIVE- FORMER AUTO BODY REPAIR SHOP
- 9) 4110 BELGREEN DRIVE- FORMER PRINTERS
- 10) 4095 BELGREEN DRIVE- METAL COATING FACILITY
- 11) 4080 BELGREEN DRIVE- FORMER PRINTERS
- 12) ACTIVE RAILWAY LINE

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consulting engineers

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NO.	REVISIONS	DATE	INITIAL

AVENUE 31 CAPITAL INC.
PHASE I - ENVIRONMENTAL SITE ASSESSMENT
4055 AND 4120 RUSSELL ROAD

OTTAWA, ONTARIO

Title: **SURROUNDING LAND USE PLAN**

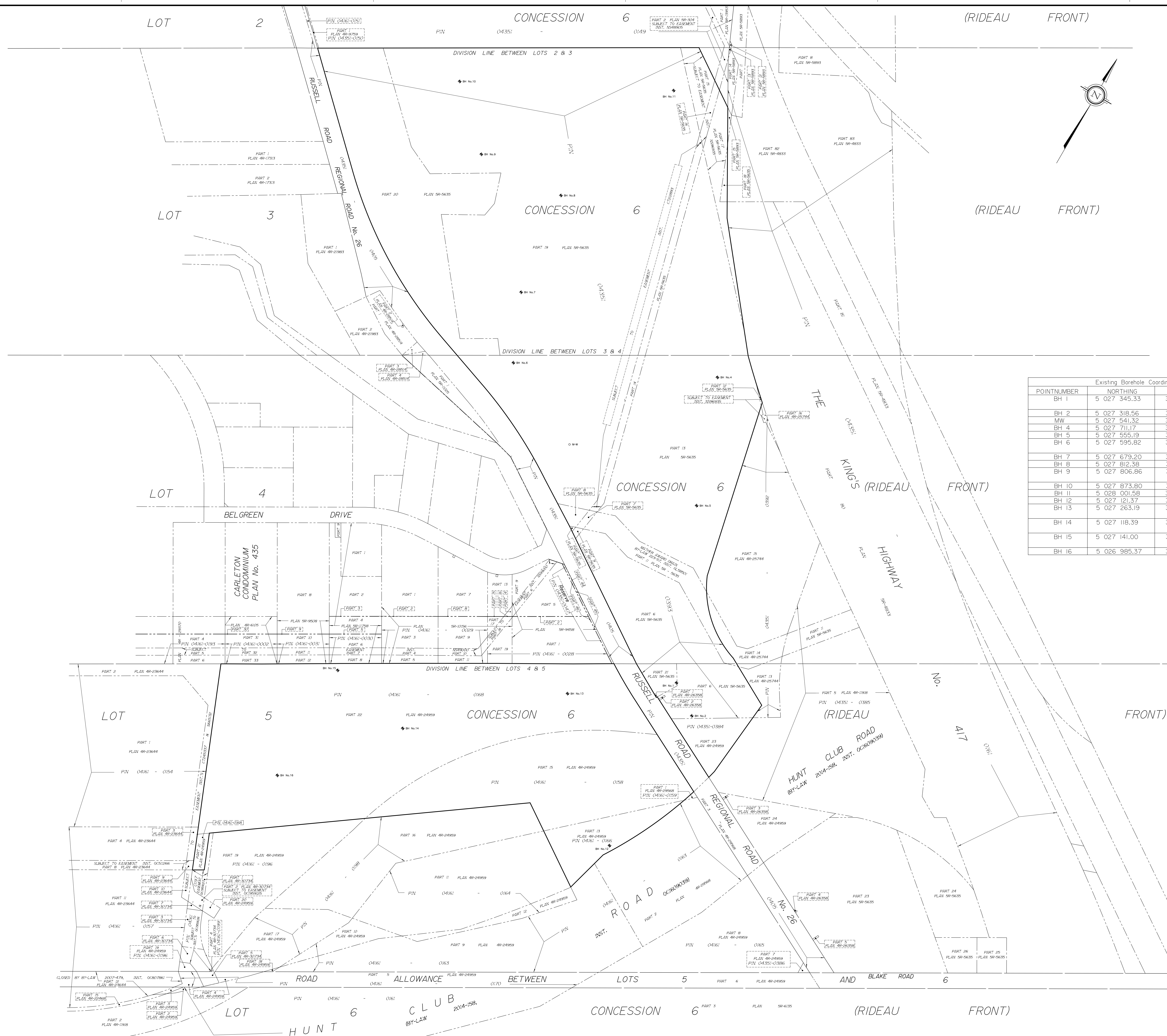
Scale:	1:6000	Date:	10/2019
Drawn by:	YA	Report No.:	PE4690-1
Checked by:	NS	Dwg. No.:	PE4690-2
Approved by:	MSD	Revision No.:	

APPENDIX 1

PLAN OF SURVEY

AERIAL PHOTOGRAPHS

SITE PHOTOGRAPHS



SKETCH ILLUSTRATING
 PARCELS PER PIN'S
 04161-0158, 04161-0166, 04161-0168,
 04161-0384 AND 04161-0393
 BEING

PART OF LOTS 3, 4, 5
 CONCESSION 6 (RIDEAU FRONT)
 Geographic Township of Gloucester
 CITY OF OTTAWA
 Prepared by Annis, O'Sullivan, Vollebek Ltd.
 May 14, 2019

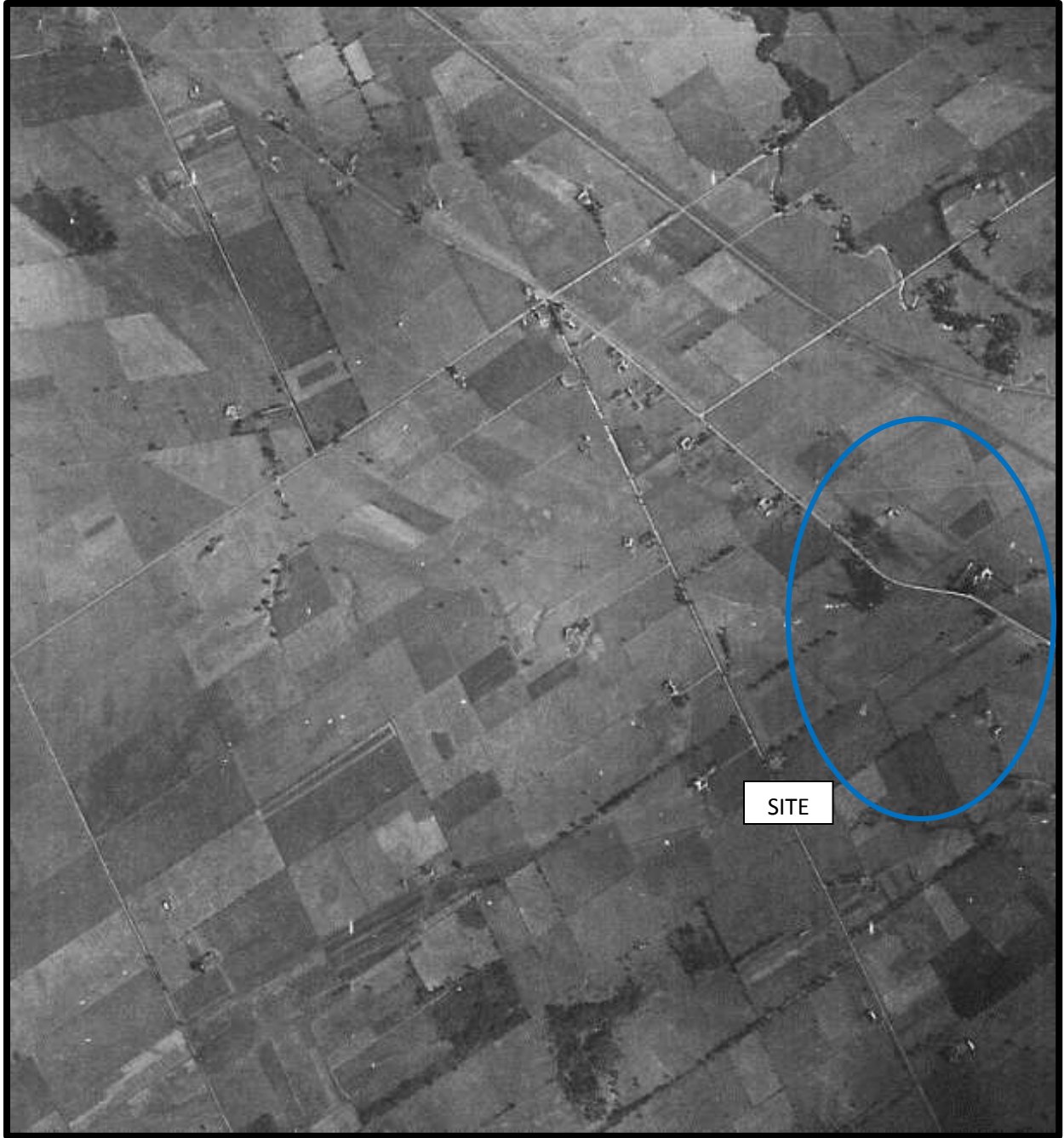
Amended September 17, 2019 to add existing borehole information.

Scale 1 : 1500

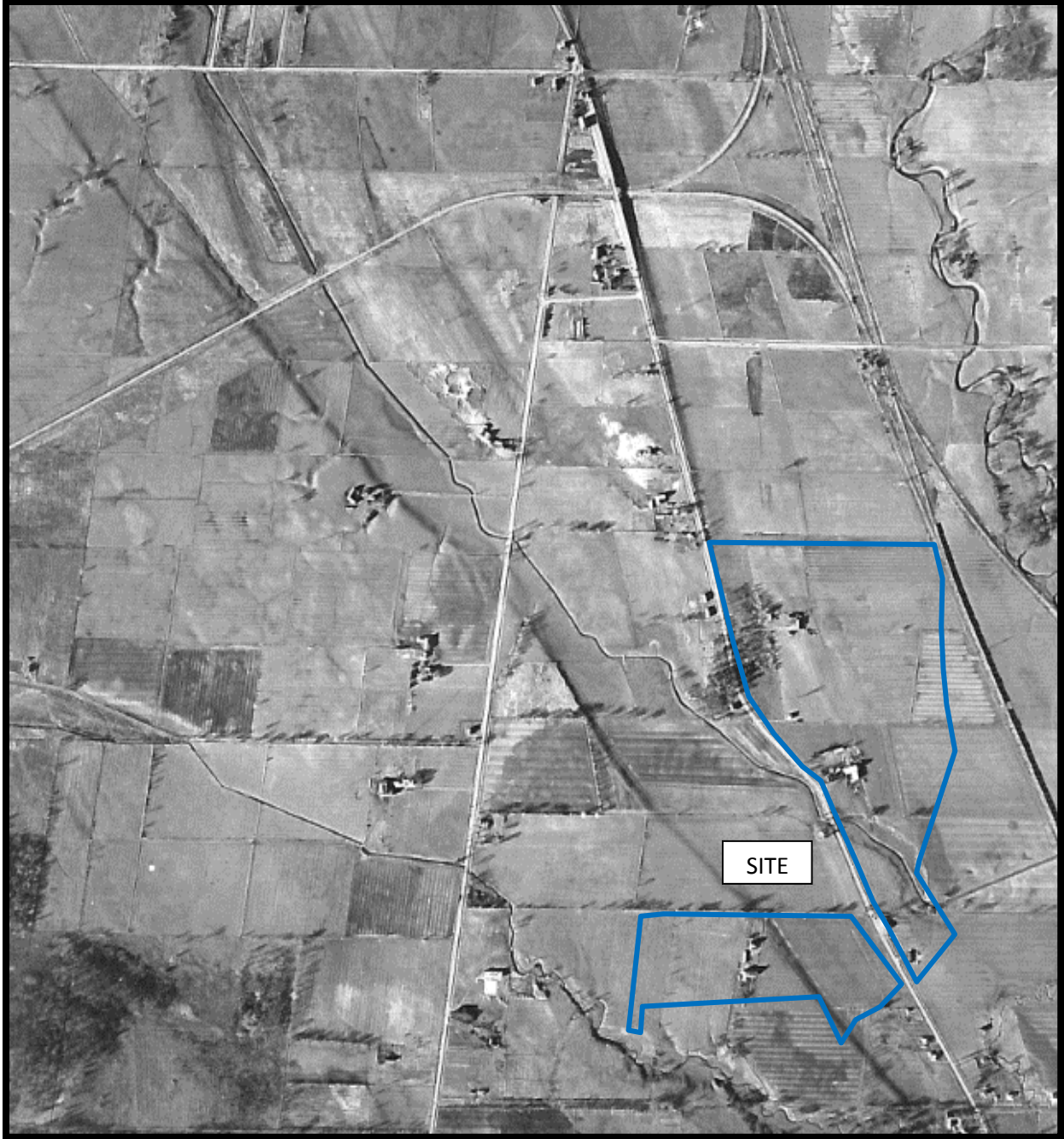
Distances shown on this plan are in metres and can be converted to feet by dividing by 0.3048

NOTES:
 Boundary compiled from existing survey records.
 Variations of this plan include aerial mapping or topographical information acquired from City of Ottawa databases.

POINTNUMBER	Existing Borehole	Coordinates - MTM Nad83 (Original)	NORTHING	EASTING	ELEVATION	DESCRIPTION
BH 1	5 027 345.33	376 243.75	70.27	69.48	Ground elev.	
BH 2	5 027 318.56	376 282.03	69.43	Ground elev. (no pipe)		
MW	5 027 541.32	375 971.25	71.57	Monitoring Well		
BH 4	5 027 711.17	376 092.45	67.49	Ground elev. (no pipe)		
BH 5	5 027 555.19	376 151.98	68.91	Ground elev.		
BH 6	5 027 595.82	375 856.28	71.49	Top pipe elev.		
			70.60	Ground elev.		
BH 7	5 027 679.20	375 819.38	71.39	Ground elev.		
BH 8	5 027 812.38	375 801.31	68.59	Ground elev.		
BH 9	5 027 806.86	375 686.31	71.66	Top pipe elev.		
			70.95	Ground elev.		
BH 10	5 027 873.80	375 615.31	70.69	Ground elev.		
BH 11	5 028 001.58	375 858.99	66.78	Ground elev.		
BH 12	5 027 121.37	376 274.22	70.67	Ground elev.		
BH 13	5 027 263.19	376 129.66	70.91	Top pipe elev.		
			70.20	Ground elev.		
BH 14	5 027 118.39	375 968.91	80.29	Top pipe elev.		
			79.45	Ground elev.		
BH 15	5 027 141.00	375 859.25	80.26	Top pipe elev.		
			79.23	Ground elev.		
BH 16	5 026 985.37	375 859.81	78.64	Ground elev.		



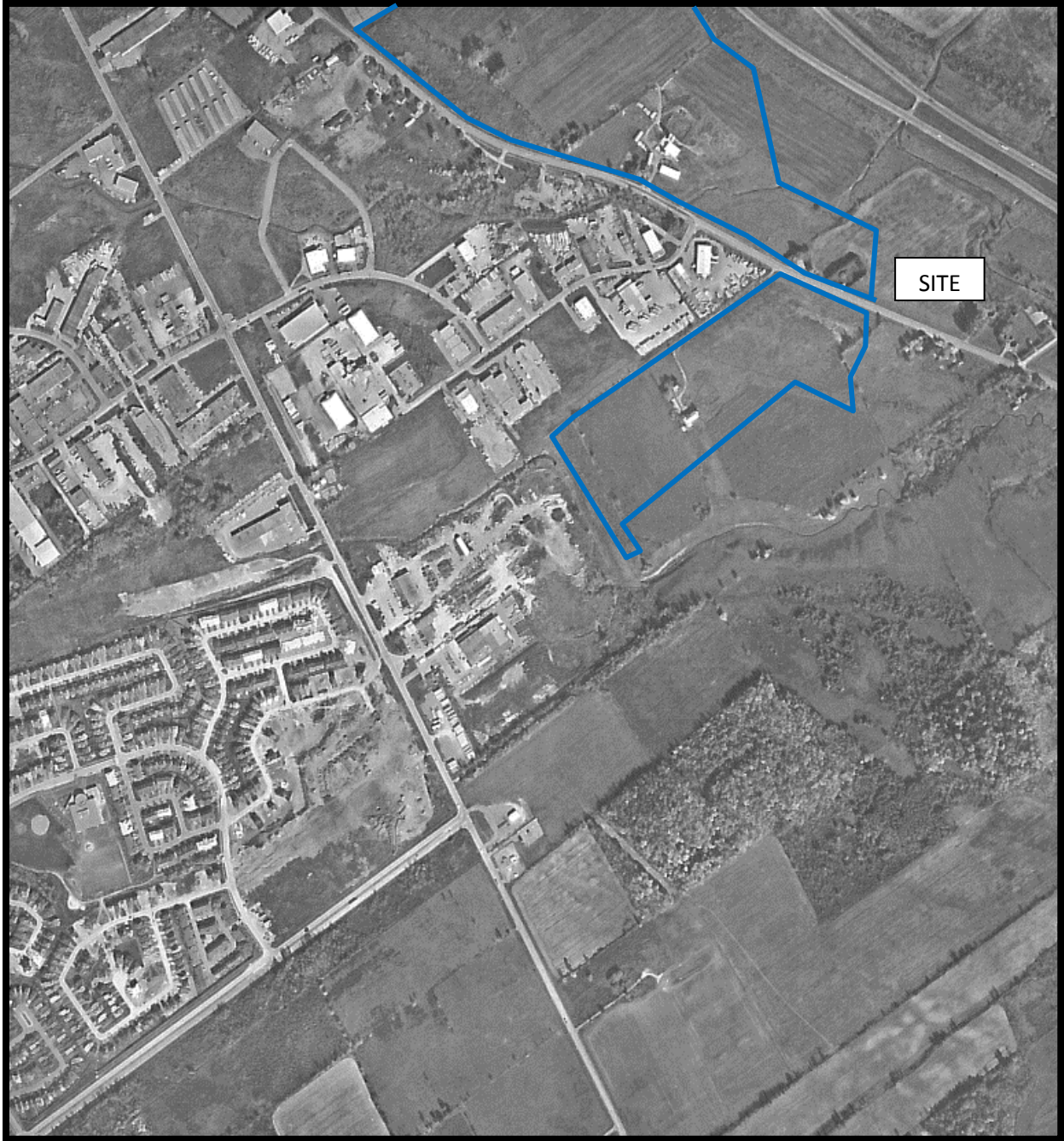
AERIAL PHOTOGRAPH
1946



AERIAL PHOTOGRAPH
1958



AERIAL PHOTOGRAPH
1976



AERIAL PHOTOGRAPH
1994



AERIAL PHOTOGRAPH
2011



AERIAL PHOTOGRAPH
2017

Site Photographs

PE4690

4055 & 4120 Russell Road, Ottawa, Ontario

September 3, 2019



Photograph 1: View of the southeast portion of 4120 Russell Road, facing northwest from Russell Road.



Photograph 2: View of the south portion of 4120 Russell Road, facing northeast from Hunt Club Road.

Site Photographs

PE4690

4055 & 4120 Russell Road, Ottawa, Ontario

September 3, 2019



Photograph 3: View of the central portion of 4055 Russell Road, facing north.



Photograph 4: View of the abandoned farmhouse, situated on 4055 Russell Road.

Site Photographs

PE4690

4055 & 4120 Russell Road, Ottawa, Ontario

September 3, 2019



Photograph 5: View of an empty oil tank, located in the basement of the abandoned farmhouse on 4055 Russell Road.



Photograph 6: View of an oil tank, located in the basement of the occupied residence situated on 4055 Russell Road (addressed 3995 Russell Road).

Site Photographs

PE4690

4055 & 4120 Russell Road, Ottawa, Ontario

September 3, 2019



Photograph 7: View of the private septic tank cap, located on the exterior the occupied residence situated on 4055 Russell Road (addressed 3995 Russell Road).

APPENDIX 2

MECP FREEDOM OF INFORMATION SEARCH REQUEST

MECP WATER WELL RECORDS

TSSA CORRESPONDENCE

Freedom of Information Request

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

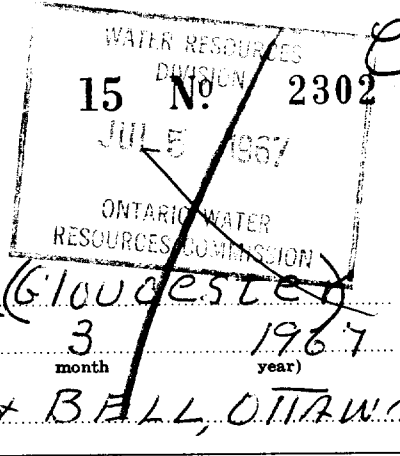
Requester Data			For Ministry Use Only	
Name, Company Name, Mailing Address and Email Address of Requester Nick Sullivan Paterson Group Inc. 154 Colonnade Road Ottawa, ON K2E 7J5 Email address: nsullivan@patersongroup.ca			FOI Request No.	Date Request Received
			Fee Paid <input type="checkbox"/> ACCT <input type="checkbox"/> CHQ <input type="checkbox"/> VISA/MC <input type="checkbox"/> CASH	
Telephone/Fax Nos. Tel. 613-226-7381 Fax 613-226-6344	Your Project/Reference No. PE4690	Signature/Print /Name of Requester Nick Sullivan	<input type="checkbox"/> CNR <input type="checkbox"/> ER <input type="checkbox"/> NOR <input type="checkbox"/> SWR <input type="checkbox"/> WCR <input type="checkbox"/> SAC <input type="checkbox"/> IEB <input type="checkbox"/> EAA <input type="checkbox"/> EMR <input type="checkbox"/> SWA	
Request Parameters				
Municipal Address / Lot, Concession, Geographic Township (Municipal address essential for cities, towns or regions) 4055 Russell Road, Ottawa, Ontario				
Present Property Owner(s) and Date(s) of Ownership National Capital Commission				
Previous Property Owner(s) and Date(s) of Ownership				
Present/Previous Tenant(s), (if applicable)				
Search Parameters			Specify Year(s) Requested	
<i>Files older than 2 years may require \$60.00 retrieval cost. There is no guarantee that records responsive to your request will be located.</i>				
Environmental concerns (General correspondence, occurrence reports, abatement)			all	
Orders			all	
Spills			all	
Investigations/prosecutions ➤ Owner AND tenant information must be provided			all	
Waste Generator number/classes			all	
Certificates of Approval ➤ Proponent information must be provided				
1985 and prior records are searched manually. Search fees in excess of \$300.00 could be incurred, depending on the types and years to be searched. Specify Certificates of Approval number(s) (if known). If supporting documents are also required, mark SD box and specify type e.g. maps, plans, reports, etc.				
			SD	Specify Year(s) Requested
air - emissions				1986-present
water - mains, treatment, ground level, standpipes & elevated storage, pumping stations (local & booster)				1986-present
sewage - sanitary, storm, treatment, stormwater, leachate & leachate treatment & sewage pump stations				1986-present
waste water - industrial discharges				1986-present
waste sites - disposal, landfill sites, transfer stations, processing sites, incinerator sites				1986-present
waste systems - PCB destruction, mobile waste processing units, haulers: sewage, non-hazardous & hazardous waste				1986-present
pesticides - licenses				1986-present

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

316/54.



822,
0755
JOHN WILLEMS



UTM 4 8 2 | 4 5 3 | 2 | 10 E

5 R | 5 0 2 6 | 0 1 9 N

The Ontario Water Resources Commission Act

Elev. 4 R | 0 2 2 5

WATER WELL RECORD

Basin 25 | CARLETON

OTTAWA
Township, Village, Town or City (GLOUCESTER)

Con. 6 RF Lot 2

Date completed 27 3 1967
(day month year)

Owner NATIONAL CAPITAL COMMISSION
(print in block letters)

Address CARLING + BELL, OTTAWA

Casing and Screen Record

Pumping Test

Inside diameter of casing 6 1/4"
Total length of casing 22'
Type of screen
Length of screen
Depth to top of screen
Diameter of finished hole 6"

Static level 18'
Test-pumping rate 4 G.P.M.
Pumping level 120'
Duration of test pumping 3 hrs.
Water clear or cloudy at end of test cloudy
Recommended pumping rate 4 1/2 G.P.M.
with pump setting of 130 feet below ground surface

Well Log

Water Record

Overburden and Bedrock Record	From ft.	To ft.	Depth(s) at which water(s) found	Kind of water (fresh, salty, sulphur)
<u>Earth</u>	<u>0</u>	<u>7</u>		
<u>Black limestone</u>	<u>7</u>	<u>150</u>	<u>100-150</u>	<u>Fresh</u>

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

Is well on upland, in valley, or on hillside? upland
Drilling or Boring Firm MCLEAN WATER SUPPLY LTD.

Address 1532 RAVEN AVE OTTAWA, ONT.

Licence Number 2657

Name of Driller or Borer H. SALLY

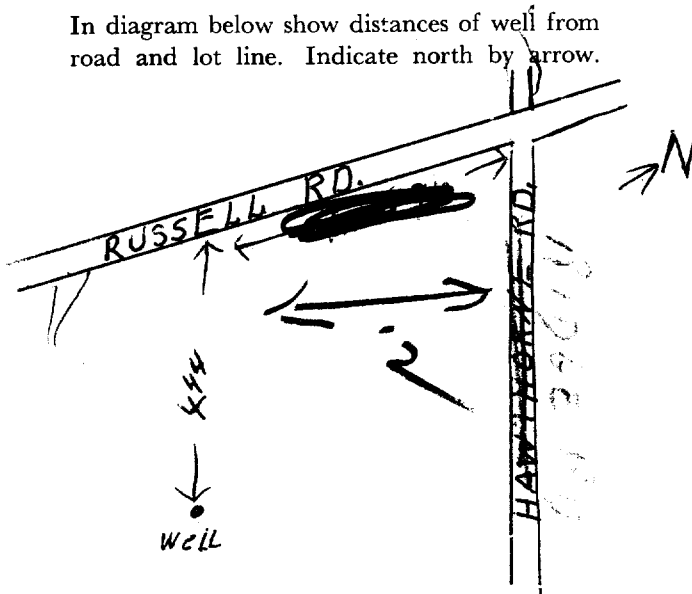
Address

Date APR. 3 1967

C. K. Schay
(Signature of Licensed Drilling or Boring Contractor)

Location of Well

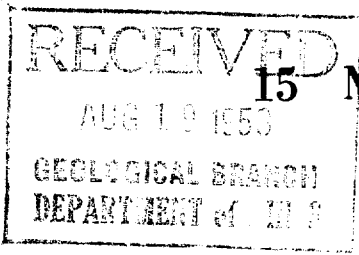
In diagram below show distances of well from road and lot line. Indicate north by arrow.



JOHN WILLEMS FARM

316/56

UTM 118 Z 4532210 E
5 R 5025650 N
Elev. 4 R 0538



15 No. 2303

The Well Drillers Act
Department of Mines, Province of Ontario

Water Well Record

Basin 215
Rideau Front
Com VI
lot 3

Locality (p, Village, Town or City)..... Gloucester
Town or City)..... Hawthorne
s..... Hurdman's Bridge, Ont.

Date Completed..... 4 (day) Aug. (month) 1953 (year) .. Cost of Well (excluding pump)..... 225.00

Pipe and Casing Record

Pumping Test

Casing diameter(s)..... 4"
Length(s) of casing..... 40'
Type of screen.....
Length of screen.....
Distance from top of screen to ground level.....
Is well a gravel-wall type?.....

Date..... Aug. 4, 1953
Static level..... 15'
Pumping level..... 30'
Pumping rate..... 4.0 gals per hr.
Duration of test..... 1 hr.
Distance from cylinder or bowls to ground level.....

Water Record

Kind (fresh or mineral)..... fresh
Quality (hard, soft, contains iron, sulphur, etc.)..... hard
Appearance (clear, cloudy, coloured)..... cloudy
For what purpose(s) is the water to be used?..... household
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
<u>90'</u>	<u>fresh</u>	<u>75'</u>

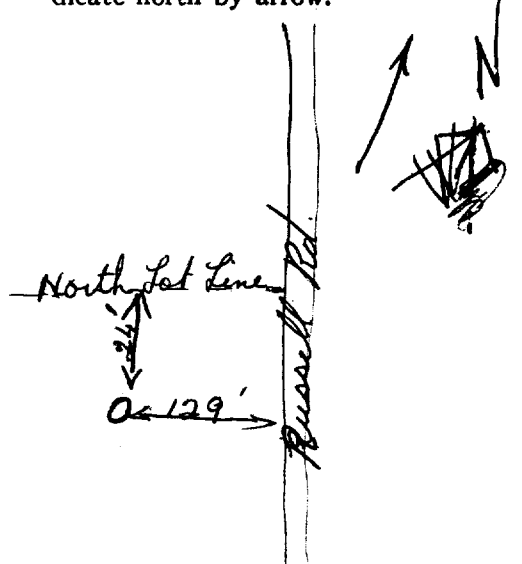
Well Log

Overburden and Bedrock Record

	From	To
<u>Clay</u>	<u>0 ft.</u>	<u>30ft.</u>
<u>Boulders gravel & quartz</u>		
<u>Sand</u>	<u>30'</u>	<u>40'</u>
<u>Limestone rock</u>	<u>40'</u>	<u>90'</u>

Location of Well

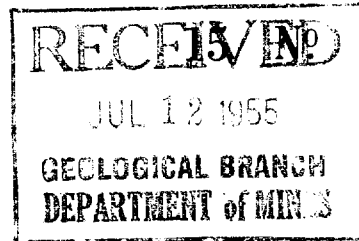
In diagram below show distances of well from road and lot line. Indicate north by arrow.



Situation: Is well on upland, in valley, or on hillside?..... upland
Drilling Firm..... L. H. Adams
Address..... Hurdman's Bridge, Ont.
Name of Driller..... L. W. Adams Address..... Ramsayville, Ont.
Date..... Aug. 4, 1953 Licence Number..... 4.11
Signature of Licensee..... L. W. Adams

316/54.

UTM ~~X~~ 18 2 4 5 3 4 1 9 54 E
5 R 5 10 2 5 5 4 10 N



2384

Elev. 4 R 0 2 3 10

The Water-well Drillers Act, 1954
Department of Mines

Basin R 2 F

Water-Well Record

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

Village, Town or City

Address Billings Bridge

(day) (month) (year)

Pipe and Casing Record

Pumping Test

Casing diameter(s) 4
Length(s) 33 feet
Type of screen
Length of screen

Static level 42 feet
Pumping rate 31 gal P.Hour
Pumping level 58 feet
Duration of test 30 min

Well Log

Water Record

Overburden and Bedrock Record	From ft.	To ft.	Depth (s) at which water (s) found	No. of feet water rises	Kind of water (fresh, salty, or sulphur)
<u>Red Sand</u>	<u>0</u>	<u>4</u>	<u>31</u>	<u>48'</u>	<u>fresh</u>
<u>blue Clay</u>	<u>4</u>	<u>27</u>			
<u>Gravel</u>	<u>27</u>	<u>31</u>			
<u>Bed rock black shale</u>	<u>31</u>	<u>90</u>			

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

HOUSE

Is water clear or cloudy?.....

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

hill side

Drilling firm

Address

Name of Driller James Kettles

Address Ramsayville

Licence Number 637

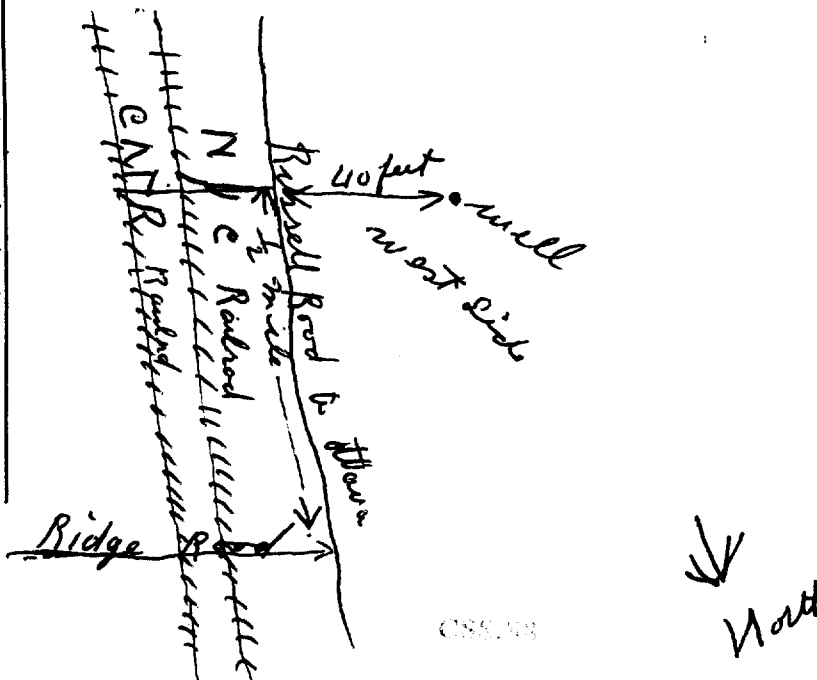
I certify that the foregoing statements of fact are true.

Date August 13 James Kettles

Signature of Licensee

Location of Well

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



UTM *AV 612* | 4 | 5 | 4 | 0 | 6 | 0 | E

15 R | 5 | 0 | 2 | 5 | 2 | 2 | 0 | N

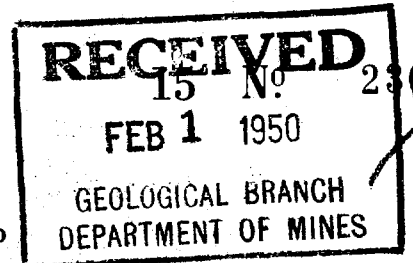
Elev. | 4 | R | 0 | 2 | 3 | 0

Basin | 2 | 5 | | | |

- 314/54



The Well Drillers Act
Department of Mines, Province of Ontario



Water Well Record

County or District *Carleton* Tp. *Gloucester* Con. *VI R.F.* Lot *5* Pt. Lot
Owner *[Redacted]* Address *Ramsayville* Acres *2*
Date Completed *Jan 15/49* Cost of Well (not including pump) *88.50*

Pipe and Casing Record

Pumping Test

Casing diameter(s) <i>4 inch</i>	Date <i>Jan 15/49</i>
Length(s) of casing(s) <i>30 ft.</i>	Developed Capacity
Length of screen <i>none</i>	Duration of Test <i>1/2 hr</i>
Type of screen	Pumping Rate <i>3 g.p.m.</i>
Type of pump <i>Beatty stock pump</i>	Drawdown
Capacity of pump	Static level of completed well <i>10'</i>
Depth of pump setting <i>2.3 ft.</i>	Is well a gravel-wall type? <i>no</i>

Water Record

Kind (fresh or mineral) <i>fresh</i>	Depth(s) to Water Horizon(s) <i>10 ft</i>	Kind of Water <i>fresh</i>	No. of Feet Water Rises <i>2 ft</i>
Quality (hard, soft, contains iron, sulphur etc.) <i>soft</i>	<i>36</i>		
Appearance (clear, cloudy, coloured) <i>clear</i>			
For what purpose(s) is the water to be used? <i>household</i>			
How far is well from possible source of contamination?			
What is source of contamination? <i>none</i>			
Enclose a copy of any mineral analysis that has been made of water			

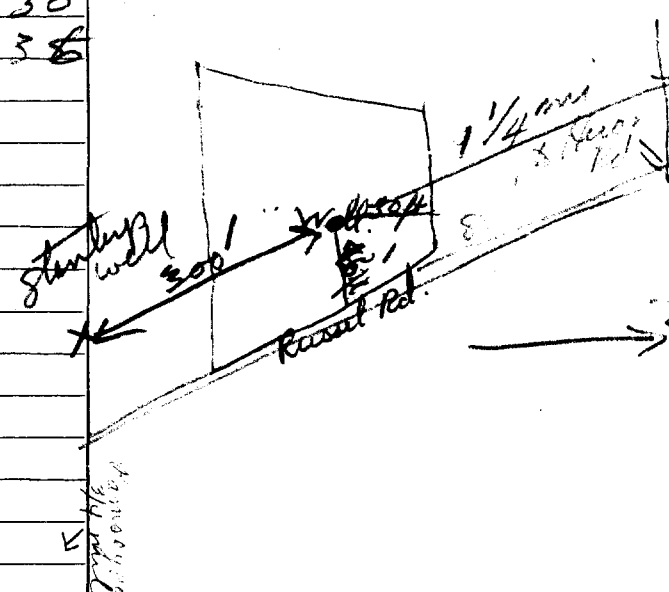
Well Log

Drift and Bedrock Record

	From	To
	0 ft.	ft.
<i>Blue Clay</i>	<i>0</i>	<i>30</i>
<i>Loess/bedrock</i>	<i>30</i>	<i>38</i>
<i>5 ft. of rock</i>		

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? *Valley*

Drilling Firm *John W. Adams*

Address *Ramsayville Ont.*

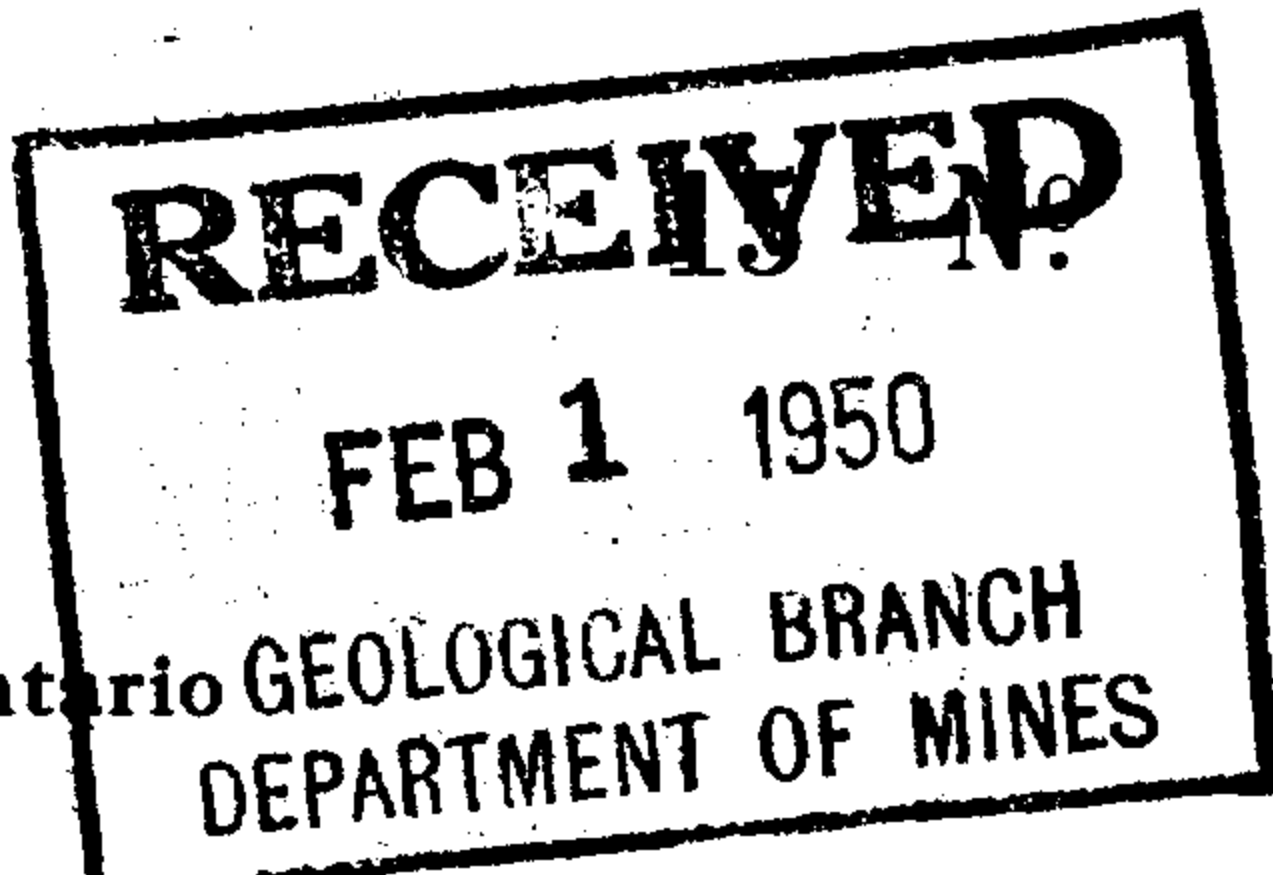
Recorded by *John W. Adams* Address *Ramsayville*

Date *Jan 1950* Licence Number *389*

31G/5h



ONTARIO



2306

UTM 18Z 4541410E

50251710N

Elev. 9R 0230

Basin 25 20

The Well Drillers Act

Department of Mines, Province of Ontario

Water Well Record

County or District: Carleton Tp. Gloucester Con. 5 Lot 5 Pt. Lot
Owner: [redacted] Address: Billings Bridge Acres 18.0
Date Completed: Jan 20/49 Cost of Well (not including pump) \$200.00

Pipe and Casing Record

Pumping Test

Casing diameter(s): 4 inch Length(s) of casing(s): 30 ft. Length of screen: none
Type of screen: Type of pump: Capacity of pump: Depth of pump setting:
Date: Developed Capacity: Duration of Test: Pumping Rate: Drawdown:
Static level of completed well: 15' HT. Is well a gravel-wall type? no

Water Record

Kind (fresh or mineral): fresh Quality (hard, soft, contains iron, sulphur etc.): soft
Appearance (clear, cloudy, coloured): clear For what purpose(s) is the water to be used?: Household and stock
How far is well from possible source of contamination?: 100 yds What is source of contamination?: Barnyard
Enclose a copy of any mineral analysis that has been made of water:
Depth(s) to Water Horizon(s): 15 ft, 58' HT Kind of Water: fresh No. of Feet Water Rises: 43 ft

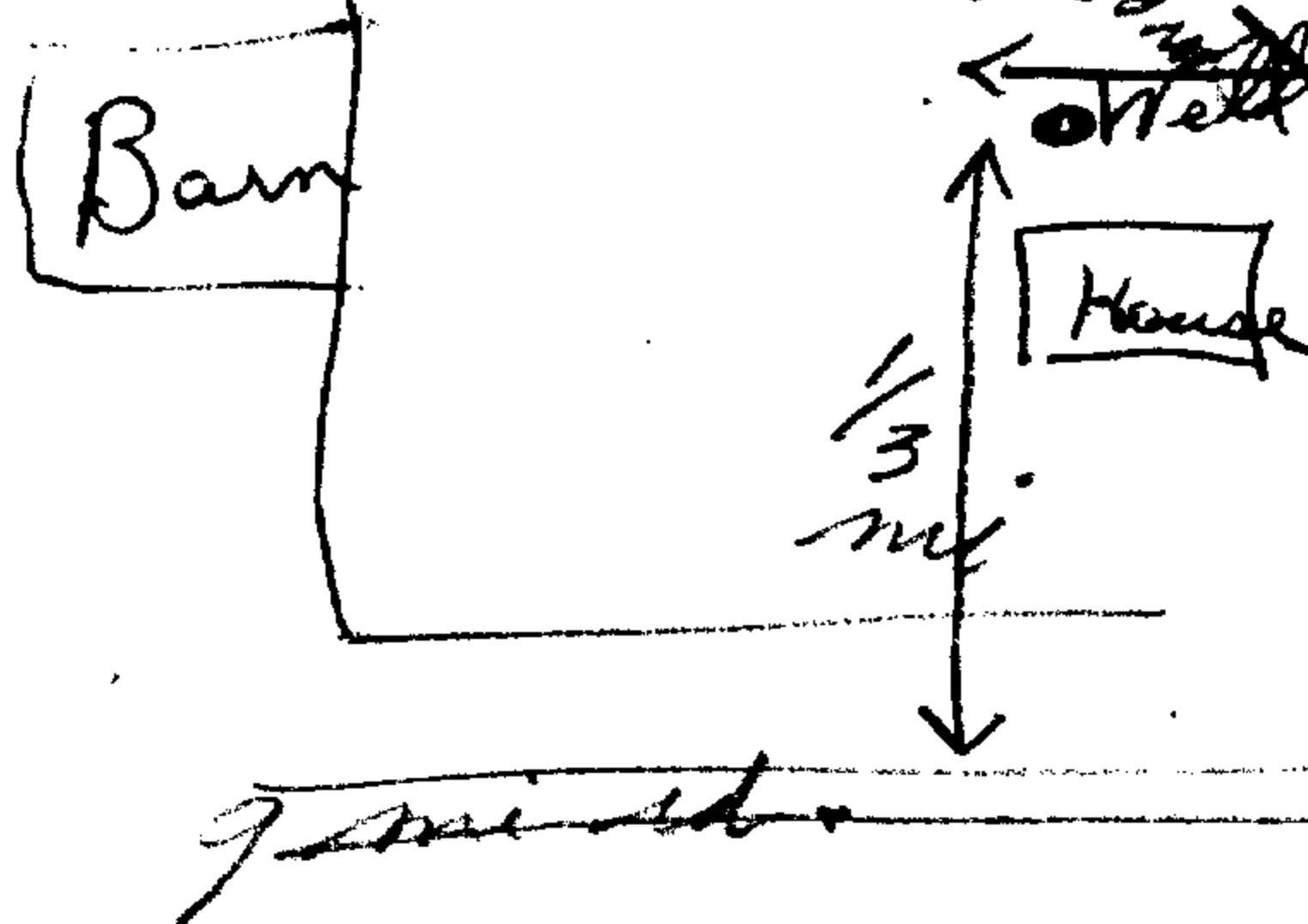
Well Log

Drift and Bedrock Record

28 ft of soft rock From 0 ft. To 30 ft. 58 ft.

Location of Well

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



Situation: Is well on upland, in valley, or on hillside? upland
Drilling Firm: John W. Adams Address: Ramsayville
Recorded by: John W. Adams Address: Ramsayville
Date: Jan 1950 Licence Number: 389

316/5h.



UTM *Ed* *18* Z | 4 | 5 | 4 | 1 | 0 | 0 | E

9 R | 5 | 0 | 2 | 5 | 1 | 9 | 0 | N

Elev. 9 R | 0 | 2 | 3 | 0

Basin | 2 | 5 | | | |

The Well Drillers Act

Department of Mines, Province of Ontario

RECEIVED 15 No 2397
FEB 1 1950
GEOLOGICAL BRANCH
DEPARTMENT OF MINES

Water Well Record

County or District... *Carleton* Tp... *Shouche* Con. *5* Lot *5* Pt. Lot *S. Ept.*
Owner... *[Redacted]* Address... *Ramsayville* Acres *1.00*
Date Completed... *Nov 18 49* Cost of Well (not including pump)... *200.00*

Pipe and Casing Record

Pumping Test

Casing diameter(s) *4 inch* Date *Nov 15 / 49*
Length(s) of casing(s) *35 ft* Developed Capacity
Length of screen Duration of Test *1 1/2 hr*
Type of screen Pumping Rate *20 g.p.m.*
Type of pump Drawdown
Capacity of pump Static level of completed well *12'*
Depth of pump setting Is well a gravel-wall type?

Water Record

Kind (fresh or mineral) *mineral*
Quality (hard, soft, contains iron, sulphur etc.) *soft*
Appearance (clear, cloudy, coloured) *clear*
For what purpose(s) is the water to be used? *household*
How far is well from possible source of contamination? *none*
What is 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
<i>10 ft</i> <i>80</i>	<i>soft</i>	<i>68 ft</i>

Well Log

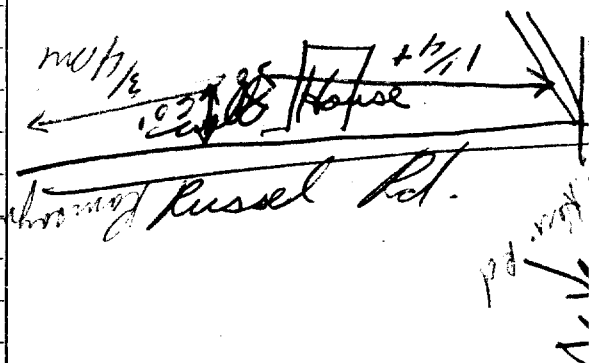
Drift and Bedrock Record

From To
0 ft.ft.

45 ft of Rock
Blue Clay 0 35
Limestone 35 80

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? *valley*
Drilling Firm *John W. Adams*
Address *Ramsayville*
Recorded by *J. W. Adams* Address *Ramsayville*
Date Licence Number *387*

316/54



UTM 18 4541810 E
9 5 2511310 N
Elev. 9 R 02311
Basin 25

RECEIVED
FEB 1 1950
GEOLOGICAL BRANCH
DEPARTMENT OF MINES

2308

The Well Drillers Act
Department of Mines, Province of Ontario

Water Well Record

County or District *Carleton* Tp. *Gloucester* Con. *6* Lot. *5* Pt. Lot. *S.E. Pt.*
Owner *[Redacted]* Address *Ramsayville* Acres *6 acres*
Date Completed *Dec 4/49* Cost of Well (not including pump) *\$200.00*

Pipe and Casing Record

Pumping Test

Casing diameter(s) *4 inch* Date *Nov 15/49*
Length(s) of casing(s) *35 ft* Developed Capacity
Length of screen Duration of Test *1/2 hr*
Type of screen Pumping Rate *20 g.p.m.*
Type of pump Drawdown
Capacity of pump Static level of completed well *12'*
Depth of pump setting Is well a gravel-wall type?

Water Record

Kind (fresh or mineral) *mineral*
Quality (hard, soft, contains iron, sulphur etc.) *soft*
Appearance (clear, cloudy, coloured) *clear*
For what purpose(s) is the water to be used? *household*
How far is well from possible source of contamination?
What is source of contamination? *none*
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
<i>72 ft</i>	<i>soft</i>	<i>68 ft</i>
<i>80'</i>		

Well Log

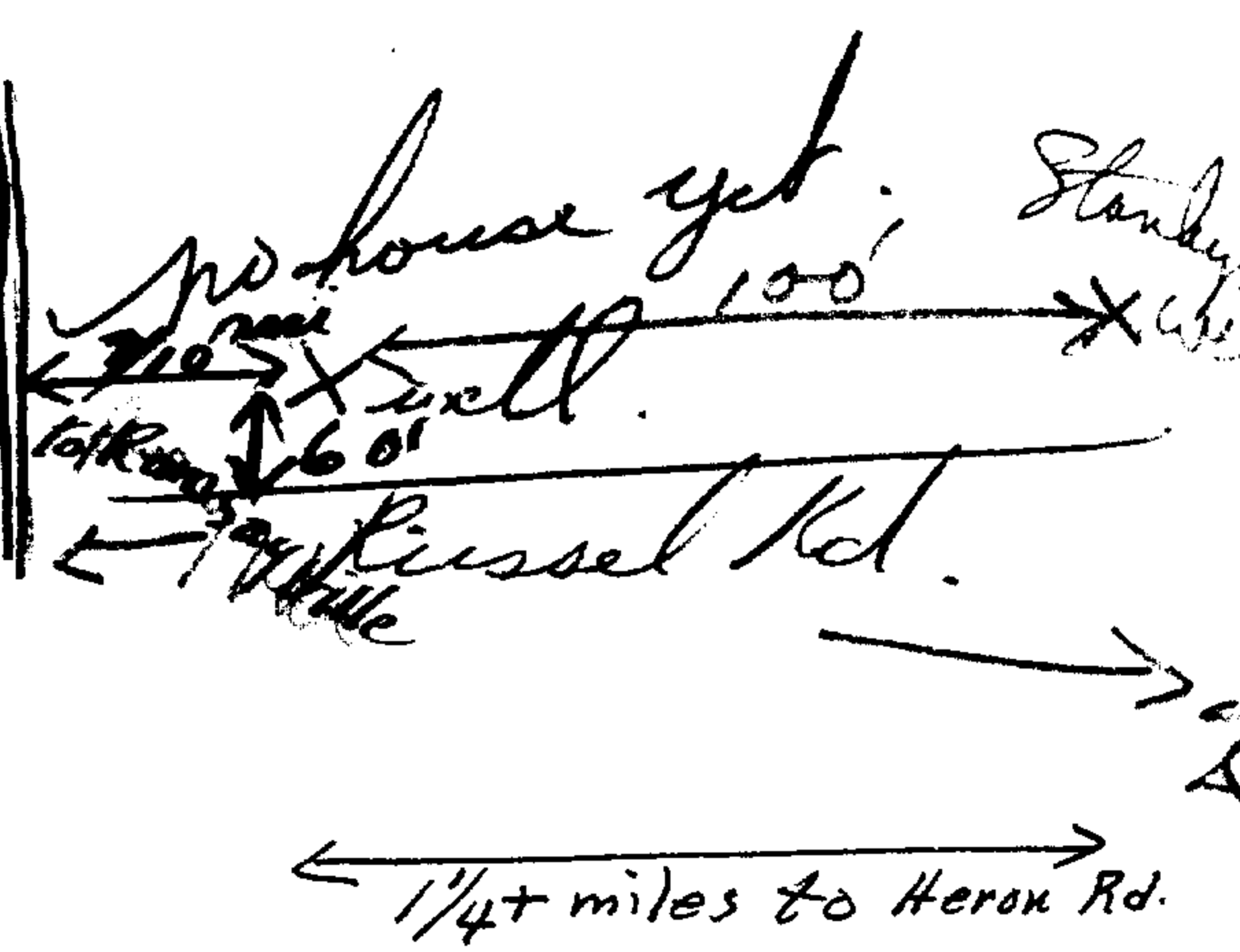
Drift and Bedrock Record

From To
0 ft.ft.

45 ft of rock
Blue clay 0 35
limestone 35 80

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? *in valley*
Drilling Firm *John N. Adams*
Address *J. N. Adams Ramsayville*
Recorded by *J. N. Adams* Address *Ont.*
Date Licence Number *384*

316/56



15 No. 2315

UTM 18Z 45142410E

5R 50252319 The Ontario Water Resources Commission Act

Elev. 4R 0222

WATER WELL RECORD

Basin 25 Carleton

Township, Village, Town or City ~~Ottawa~~ Gloucester

County or District 6 RP Lot Part 5

Date completed 12th May 1967 (day month year)

Address 322 Catherine St. - Ottawa, Ont.

Casing and Screen Record

Inside diameter of casing 6 3/16

Total length of casing 22

Type of screen -

Length of screen -

Depth to top of screen -

Diameter of finished hole 6

Pumping Test

Static level

Test-pumping rate G.P.M.

Pumping level **DRY**

Duration of test pumping

Water clear or cloudy at end of test

Recommended pumping rate G.P.M.

with pump setting of feet below ground surface

Well Log

Water Record

Overburden and Bedrock Record	From ft.	To ft.	Depth(s) at which water(s) found	Kind of water (fresh, salty, sulphur)
shale	0	200		

For what purpose(s) is the water to be used? **DRY office & garage**

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

Drilling or Boring Firm

J.B. DUFRESNE & CO. LIMITED

Address 1014 Maitland Ave.,

Ottawa 5, Ont.

Licence Number

Name of Driller or Borer R. Laniel

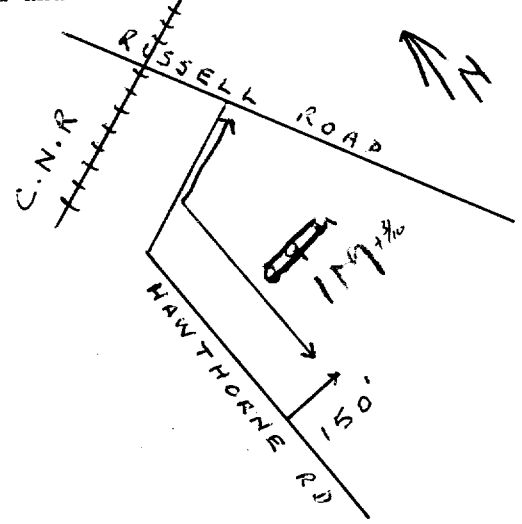
Address 6 Bellevue Cr. - Lucerne, Que.

Date May 12th 1967

(Signature of Licensed Drilling or Boring Contractor) for: J.B. Dufresne & Co. Limited

Location of Well

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



31G/5h.



WATER RESOURCES DIVISION
15 No. 2316
JUL 5 1967
ONTARIO WATER RESOURCES COMMISSION

UTM 18Z 4542210E

5R 50252910N

Elev. 4R 0222

WATER WELL RECORD

Basin 25 CARLETON
County or District

Township, Village, Town or City GLOUCESTER

Date completed 13 6 1967
(day month year)

Lot 5

Address 322 CATHERINE ST. OTTAWA, ONT.

Casing and Screen Record

Inside diameter of casing 10"
Total length of casing 14"
Type of screen —
Length of screen —
Depth to top of screen —
Diameter of finished hole 10"

Pumping Test

Static level 4'
Test-pumping rate 3 G.P.M.
Pumping level 12'
Duration of test pumping 7 hrs.
Water clear or cloudy at end of test CLEAR
Recommended pumping rate 3 G.P.M.
with pump setting of 50 feet below ground surface

Well Log

Water Record

Overburden and Bedrock Record

Black Muck
Black Shale

From ft.

To ft.

Depth(s) at which water(s) found

Kind of water (fresh, salty, sulphur)

0
5

5
60

20'

Fresh

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

Office

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

Drilling or Boring Firm MCLEAN WATER SUPPLY LTD.

Address 1532 RAVEN AVE. OTTAWA, ONT.

Licence Number 2675

Name of Driller or Borer L. GIBBONS

Address

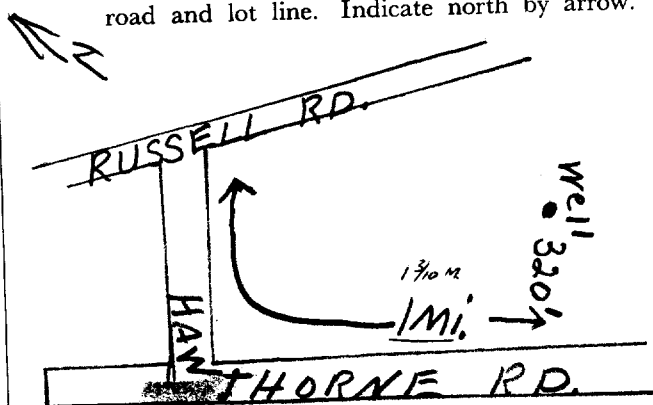
Date

A. S. Schauf
(Signature of Licensed Drilling or Boring Contractor)

Form 7 15M-60-4138

Location of Well

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





The Ontario Water Resources Act WATER WELL RECORD

1. PRINT ONLY IN SPACES PROVIDED
2. CHECK CORRECT BOX WHERE APPLICABLE

11

1528051

MUNICIPALITY 15002

CON. R.F.

06

COUNTY OR DISTRICT	TOWNSHIP, BOROUGH, CITY, TOWN, VILLAGE	CON. BLOCK, TRACT SURVEY ETC	LOT
	STEVENAGE DR.	6	3
DATE COMPLETED			48-53
DAY 17			MO 06
			YR 94

LOG OF OVERBURDEN AND BEDROCK MATERIALS (SEE INSTRUCTIONS)

GENERAL COLOUR	MOST COMMON MATERIAL	OTHER MATERIALS	GENERAL DESCRIPTION	DEPTH - FEET	
				FROM	TO
BROWN	CLAY	STONES	Loose	0	5
Grey	CLAY	GRAVEL		5	10
Grey	CLAY		DENSE	20	20

31	32
----	----

41 WATER RECORD

WATER FOUND AT - FEET	KIND OF WATER
15	<input checked="" type="checkbox"/> FRESH <input checked="" type="checkbox"/> SALTY <input type="checkbox"/> SULPHUR <input type="checkbox"/> MINERALS <input type="checkbox"/> GAS
20-23	<input type="checkbox"/> FRESH <input type="checkbox"/> SALTY <input type="checkbox"/> SULPHUR <input type="checkbox"/> MINERALS <input type="checkbox"/> GAS
25-28	<input type="checkbox"/> FRESH <input type="checkbox"/> SALTY <input type="checkbox"/> SULPHUR <input type="checkbox"/> MINERALS <input type="checkbox"/> GAS
30-33	<input type="checkbox"/> FRESH <input type="checkbox"/> SALTY <input type="checkbox"/> SULPHUR <input type="checkbox"/> MINERALS <input type="checkbox"/> GAS

51 CASING & OPEN HOLE RECORD

INSIDE DIAM INCHES	MATERIAL	WALL THICKNESS INCHES	DEPTH - FEET	
10-11	<input type="checkbox"/> STEEL <input type="checkbox"/> GALVANIZED <input type="checkbox"/> CONCRETE <input type="checkbox"/> OPEN HOLE <input type="checkbox"/> PLASTIC	3/16	3	20
17-18	<input type="checkbox"/> STEEL <input type="checkbox"/> GALVANIZED <input type="checkbox"/> CONCRETE <input type="checkbox"/> OPEN HOLE <input type="checkbox"/> PLASTIC			
24-25	<input type="checkbox"/> STEEL <input type="checkbox"/> GALVANIZED <input type="checkbox"/> CONCRETE <input type="checkbox"/> OPEN HOLE <input type="checkbox"/> PLASTIC			

SCREEN

SIZE (S) OF OPENING (SLOT NO.)	DIAMETER	LENGTH
0.10	2" INCHES	10 FEET
MATERIAL AND TYPE	DEPTH TO TOP OF SCREEN	
PLASTIC	10 FEET	

61 PLUGGING & SEALING RECORD

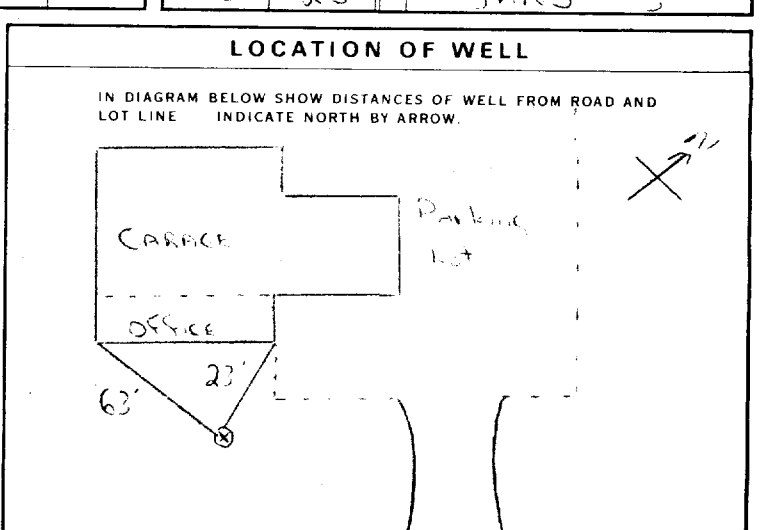
DEPTH SET AT - FEET	MATERIAL AND TYPE (CEMENT GROUT LEAD PACKER, ETC.)
3	CLAY
7	Hole Aug 7/8
10	SAND #3

71 PUMPING TEST

1 PUMP NOT TESTED

STATIC LEVEL	WATER LEVEL END OF PUMPING	WATER LEVELS DURING			
		15 MINUTES	30 MINUTES	45 MINUTES	60 MINUTES

PIEZOMETER INSTALLED



FINAL STATUS OF WELL

1 WATER SUPPLY
 2 OBSERVATION WELL
 3 TEST HOLE
 4 RECHARGE WELL
 5 ABANDONED, INSUFFICIENT SUPPLY
 6 ABANDONED POOR QUALITY
 7 UNFINISHED
 8 DEWATERING

WATER USE

1 DOMESTIC
 2 STOCK
 3 IRRIGATION
 4 INDUSTRIAL
 5 COMMERCIAL
 6 MUNICIPAL
 7 PUBLIC SUPPLY
 8 COOLING OR AIR CONDITIONING
 9 NOT USED
 OTHER: TESTING

METHOD OF CONSTRUCTION

1 CABLE TOOL
 2 ROTARY (CONVENTIONAL)
 3 ROTARY (REVERSE)
 4 ROTARY (AIR)
 5 AIR PERCUSSION
 6 BORING
 7 DIAMOND
 8 JETTING
 9 DRIVING
 DIGGING OTHER

DRILLERS REMARKS

149096

CONTRACTOR

NAME OF WELL CONTRACTOR: DANN WEDD LTD
 WELL CONTRACTOR'S LICENCE NUMBER: 6844
 ADDRESS: 466 Merivale RD, Unit 100 Ottawa ONT
 NAME OF WELL TECHNICIAN: Tim Harrison
 WELL TECHNICIAN'S LICENCE NUMBER: T-2251
 SIGNATURE OF TECHNICIAN/CONTRACTOR: [Signature]
 SUBMISSION DATE: DAY 05 MO 07 YR 94

OFFICE USE ONLY

DATA SOURCE: 6844
 DATE RECEIVED: JUL 15 1994
 DATE OF INSPECTION: [Blank]
 INSPECTOR: [Blank]
 REMARKS: [Blank]



Ministry
of the
Environment
Ontario

The Ontario Water Resources Act
WATER WELL RECORD

1. PRINT ONLY IN SPACES PROVIDED

2. CHECK CORRECT BOX WHERE APPLICABLE

11

1528052

MUNICIPALITY 15002

CON. RE

106

COUNTY OR DISTRICT: [REDACTED] TOWNSHIP, BOROUGH, CITY, TOWN, VILLAGE: CHESTER CON. BLOCK, TRACT, SURVEY ETC: 6 LOT: 3
 ADDRESS: 705 STEVENAGE DR. DATE COMPLETED: 16 MO 06 YR 94

LOG OF OVERBURDEN AND BEDROCK MATERIALS (SEE INSTRUCTIONS)

GENERAL COLOUR	MOST COMMON MATERIAL	OTHER MATERIALS	GENERAL DESCRIPTION	DEPTH - FEET	
				FROM	TO
BROWN	Clay	Gravel & stones	loose	0	5
GREY	Clay	Gravel	DENSE	5	16
GREY	Clay			16	20

31
32

41 WATER RECORD

WATER FOUND AT - FEET	KIND OF WATER
14	1 <input checked="" type="checkbox"/> FRESH 3 <input checked="" type="checkbox"/> SULPHUR 2 <input checked="" type="checkbox"/> SALTY 4 <input checked="" type="checkbox"/> MINERALS 6 <input checked="" type="checkbox"/> GAS

51 CASING & OPEN HOLE RECORD

INSIDE DIAM. INCHES	MATERIAL	WALL THICKNESS INCHES	DEPTH - FEET
2"	1 <input checked="" type="checkbox"/> STEEL 2 <input checked="" type="checkbox"/> GALVANIZED 3 <input checked="" type="checkbox"/> CONCRETE 4 <input checked="" type="checkbox"/> OPEN HOLE 5 <input checked="" type="checkbox"/> PLASTIC	3/16"	3" 20'

SCREEN

SIZE(S) OF OPENING (SLOT NO.): 0.10
 MATERIAL AND TYPE: PLASTIC
 DIAMETER: 2" INCHES
 LENGTH: 10 FEET
 DEPTH TO TOP OF SCREEN: 10 FEET

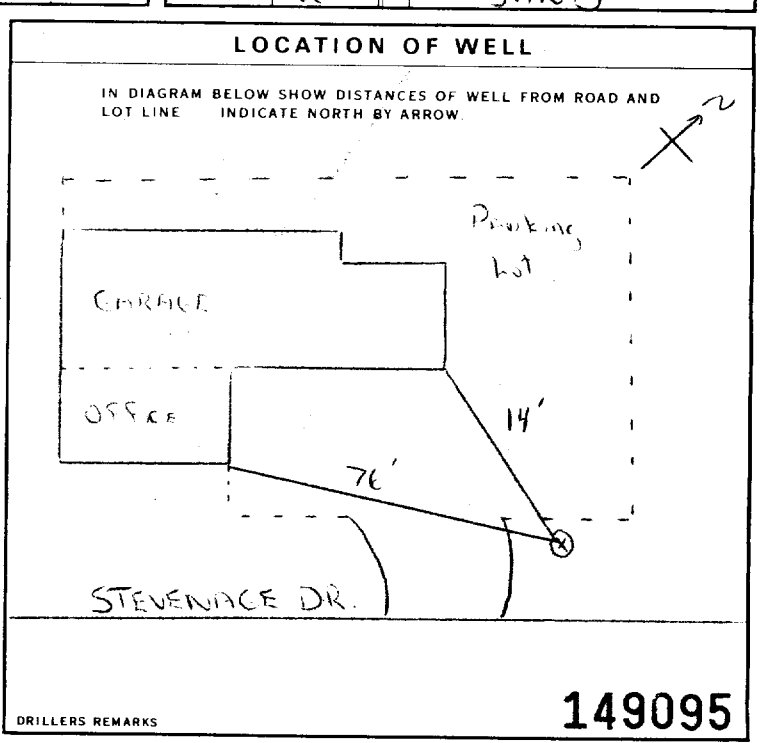
61 PLUGGING & SEALING RECORD

DEPTH SET AT - FEET	MATERIAL AND TYPE (CEMENT GROUT LEAD PACKER, ETC.)
0-7	CLAY
7-9	HOLE PLUG 7/8"
9-20	SAND

71 PUMPING TEST

1 PUMP UNTESTED
 2 PIEZOMETER INSTALLED

STATIC LEVEL: [REDACTED] WATER LEVEL END OF PUMPING: [REDACTED]
 WATER LEVELS DURING: 15 MINUTES: [REDACTED] 30 MINUTES: [REDACTED] 45 MINUTES: [REDACTED] 60 MINUTES: [REDACTED]



FINAL STATUS OF WELL

1 WATER SUPPLY 5 ABANDONED, INSUFFICIENT SUPPLY
 2 OBSERVATION WELL 6 ABANDONED POOR QUALITY
 3 TEST HOLE 7 UNFINISHED
 4 RECHARGE WELL DEWATERING

WATER USE

1 DOMESTIC 5 COMMERCIAL
 2 STOCK 6 MUNICIPAL
 3 IRRIGATION 7 PUBLIC SUPPLY
 4 INDUSTRIAL 8 COOLING OR AIR CONDITIONING
 OTHER TESTING 9 NOT USED

METHOD OF CONSTRUCTION

1 CABLE TOOL 5 BORING
 2 ROTARY (CONVENTIONAL) 7 DIAMOND
 3 ROTARY (REVERSE) 8 JETTING
 4 ROTARY (AIR) 9 DRIVING
 5 AIR PERCUSSION DIGGING OTHER

CONTRACTOR

NAME OF WELL CONTRACTOR: DANN WEBB E.A.D.
 ADDRESS: 864 Alameda Rd, Unit 100, Ottawa, ONT
 NAME OF WELL TECHNICIAN: Tom Harrison
 SIGNATURE OF TECHNICIAN/CONTRACTOR: [Signature]
 WELL CONTRACTOR'S LICENCE NUMBER: E844
 WELL TECHNICIAN'S LICENCE NUMBER: T-2251
 SUBMISSION DATE: 05 MO 07 YR 94

OFFICE USE ONLY

DATA SOURCE: 6844
 DATE RECEIVED: JUL 15 1994
 DATE OF INSPECTION: [REDACTED]
 INSPECTOR: [REDACTED]
 REMARKS: [REDACTED]

1. PRINT ONLY IN SPACES PROVIDED
2. CHECK CORRECT BOX WHERE APPLICABLE

11 1528053 15092 R.F. 106

COUNTY OR DISTRICT: OTTAWA-CARLETON TOWNSHIP, BOROUGH, CITY, TOWN, VILLAGE: LANCASTER CON. BLOCK TRACT. SURVEY ETC: 6 LOT: 3
 DATE COMPLETED: DAY 16 MO 06 YR 94
 705 STEVENAGE DR

LOG OF OVERBURDEN AND BEDROCK MATERIALS (SEE INSTRUCTIONS)

GENERAL COLOUR	MOST COMMON MATERIAL	OTHER MATERIALS	GENERAL DESCRIPTION	DEPTH - FEET	
				FROM	TO
BROWN	Clay	GRAVEL + BOLLERS	LOOSE	0	5
GREY	Clay		DENSE	5	12
GREY	Clay	GRAVEL		12	15
GREY	Clay			15	20

31 32

41 WATER RECORD

WATER FOUND AT - FEET	KIND OF WATER
10-13 15	1 <input checked="" type="checkbox"/> FRESH 2 <input checked="" type="checkbox"/> SALTY 3 <input checked="" type="checkbox"/> SULPHUR 4 <input checked="" type="checkbox"/> MINERALS 5 <input checked="" type="checkbox"/> GAS
15-18	1 <input checked="" type="checkbox"/> FRESH 2 <input checked="" type="checkbox"/> SALTY 3 <input checked="" type="checkbox"/> SULPHUR 4 <input checked="" type="checkbox"/> MINERALS 5 <input checked="" type="checkbox"/> GAS
20-23	1 <input type="checkbox"/> FRESH 2 <input type="checkbox"/> SALTY 3 <input type="checkbox"/> SULPHUR 4 <input type="checkbox"/> MINERALS 5 <input type="checkbox"/> GAS
25-28	1 <input type="checkbox"/> FRESH 2 <input type="checkbox"/> SALTY 3 <input type="checkbox"/> SULPHUR 4 <input type="checkbox"/> MINERALS 5 <input type="checkbox"/> GAS
30-33	1 <input type="checkbox"/> FRESH 2 <input type="checkbox"/> SALTY 3 <input type="checkbox"/> SULPHUR 4 <input type="checkbox"/> MINERALS 5 <input type="checkbox"/> GAS

51 CASING & OPEN HOLE RECORD

INSIDE DIAM INCHES	MATERIAL	WALL THICKNESS INCHES	DEPTH - FEET	
10-11 2	1 <input type="checkbox"/> STEEL 2 <input type="checkbox"/> GALVANIZED 3 <input type="checkbox"/> CONCRETE 4 <input type="checkbox"/> OPEN HOLE 5 <input type="checkbox"/> PLASTIC	3/16	FROM 3	TO 20
17-18	1 <input type="checkbox"/> STEEL 2 <input type="checkbox"/> GALVANIZED 3 <input type="checkbox"/> CONCRETE 4 <input type="checkbox"/> OPEN HOLE 5 <input type="checkbox"/> PLASTIC			20-23
24-25	1 <input type="checkbox"/> STEEL 2 <input type="checkbox"/> GALVANIZED 3 <input type="checkbox"/> CONCRETE 4 <input type="checkbox"/> OPEN HOLE 5 <input type="checkbox"/> PLASTIC			27-30

SCREEN

SIZE(S) OF OPENING (SLOT NO): 0.10	DIAMETER: 2" INCHES	LENGTH: 10 FEET
MATERIAL AND TYPE: PLASTIC	DEPTH TO TOP OF SCREEN: 10 FEET	

61 PLUGGING & SEALING RECORD

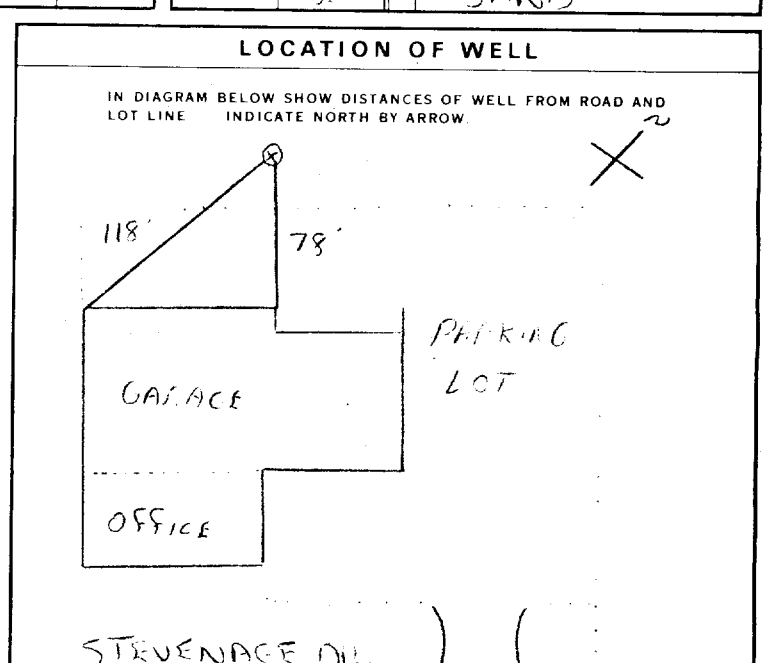
DEPTH SET AT - FEET	MATERIAL AND TYPE (CEMENT GROUT LEAD PACKER, ETC)
0-10 7	Clay
18-21 9	Half plug 3/4
26-29 9	SAND

71 PUMPING TEST

1 PUMP 2 BAUER TEST

STATIC LEVEL	WATER LEVEL END OF PUMPING	WATER LEVELS DURING			
18-21 DIEZOMETER	22-24 DIEZOMETER	15 MINUTES 26-28 DIEZOMETER	30 MINUTES 29-31 DIEZOMETER	45 MINUTES 32-34 DIEZOMETER	60 MINUTES 35-37 DIEZOMETER

IF FLOWING GIVE RATE: 39-41
PUMP INTAKE SET AT: 42
RECOMMENDED PUMP TYPE: SHALLOW DEEP
RECOMMENDED PUMP SETTING: 43-45
RECOMMENDED PUMPING RATE: 46-49



FINAL STATUS OF WELL

1 WATER SUPPLY 5 ABANDONED, INSUFFICIENT SUPPLY
 2 OBSERVATION WELL 6 ABANDONED POOR QUALITY
 3 TEST HOLE 7 UNFINISHED
 4 RECHARGE WELL 8 DEWATERING

WATER USE

1 DOMESTIC 5 COMMERCIAL
 2 STOCK 6 MUNICIPAL
 3 IRRIGATION 7 PUBLIC SUPPLY
 4 INDUSTRIAL 8 COOLING OR AIR CONDITIONING
 OTHER TESTING 9 NOT USED

METHOD OF CONSTRUCTION

1 CABLE TOOL 6 BORING
 2 ROTARY (CONVENTIONAL) 7 DIAMOND
 3 ROTARY (REVERSE) 8 JETTING
 4 ROTARY (AIR) 9 DRIVING
 5 AIR PERCUSSION DIGGING OTHER

DRILLERS REMARKS: 149092

CONTRACTOR

NAME OF WELL CONTRACTOR: DANN WEBB EAO. WELL CONTRACTOR'S LICENCE NUMBER: 6844
 ADDRESS: 808 MERIVALE RD Unit 100, Ottawa ONT.
 NAME OF WELL TECHNICIAN: Tim Harrison WELL TECHNICIAN'S LICENCE NUMBER: T-2251
 SIGNATURE OF TECHNICIAN/CONTRACTOR: [Signature] SUBMISSION DATE: DAY 05 MO 07 YR 94

OFFICE USE ONLY

DATA SOURCE: 58 CONTRACTOR: 59-62 DATE RECEIVED: 63-68 80
 6844 JUL 15 1994
 DATE OF INSPECTION: INSPECTOR:
 REMARKS:

1. PRINT ONLY IN SPACES PROVIDED
2. CHECK CORRECT BOX WHERE APPLICABLE

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MUNICIPALITY 15002

CON. R.F.

06

COUNTY OR DISTRICT: OTTAWA-CARLETON TOWNSHIP, BOROUGH, CITY, TOWN, VILLAGE: GLOUCESTER CON. BLOCK TRACT SURVEY ETC: 6 LOT: 3
 ADDRESS: 205 STEVENAGE DR. DATE COMPLETED: DAY 10 MO 02 YR 94

GENERAL COLOUR	MOST COMMON MATERIAL	OTHER MATERIALS	GENERAL DESCRIPTION	DEPTH - FEET	
				FROM	TO
BROWN	CLAY	GRAVEL & STONES	Loose	0	5
GREY	CLAY		SOFT	5	15
GREY	CLAY	GRAVEL & BOULDERS	DENSE	15	20
	BOULDER		HARD	20	20'2"

31
32

41 WATER RECORD

WATER FOUND AT - FEET: 16
 KIND OF WATER: FRESH SALTY SULPHUR MINERALS GAS

51 CASING & OPEN HOLE RECORD

INSIDE DIAM. INCHES	MATERIAL	WALL THICKNESS INCHES	DEPTH - FEET	
			FROM	TO
2	STEEL	3/16	6	20

SCREEN

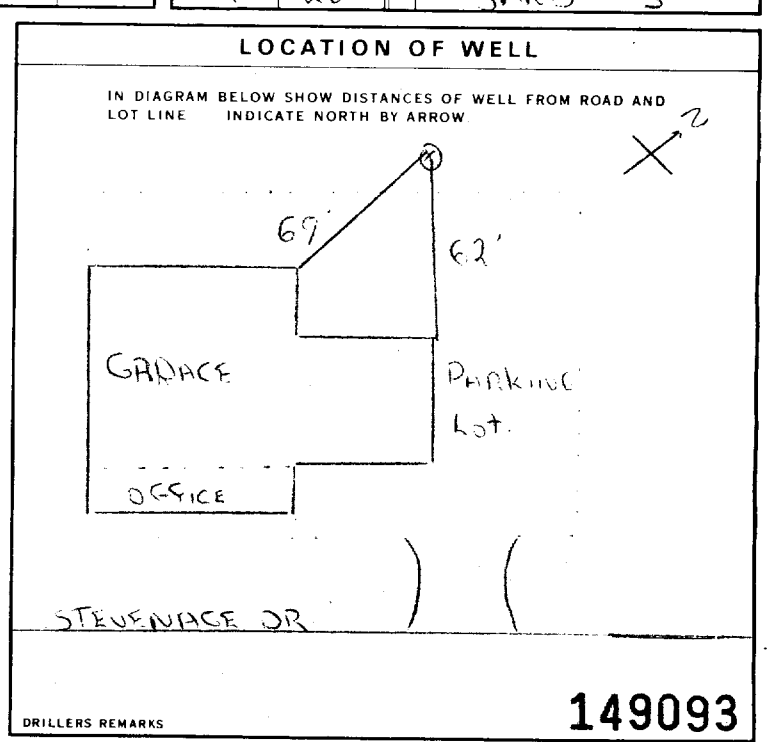
SIZE(S) OF OPENING (SLOT NO.): 0.10
 DIAMETER: 2" INCHES
 LENGTH: 10' FEET
 MATERIAL AND TYPE: PLASTIC
 DEPTH TO TOP OF SCREEN: 100" FEET

61 PLUGGING & SEALING RECORD

DEPTH SET AT - FEET		MATERIAL AND TYPE (CEMENT GROUT LEAD PACKER, ETC.)
FROM	TO	
6	7	CLAY
7	9	Hole PVC 7/8"
9	20	SAND *3

71 PUMPING TEST

PUMPING TEST METHOD: PUMP WATER TESTED
 PUMPING RATE: 10 GPM
 DURATION OF PUMPING: 17-18 HOURS
 STATIC LEVEL: 22-24 FEET
 WATER LEVELS DURING: 15 MINUTES: 26-28 FEET, 30 MINUTES: 28-31 FEET, 45 MINUTES: 32-34 FEET, 60 MINUTES: 35-37 FEET
 IF FLOWING GIVE RATE: 38-41 GPM
 PUMP INTAKE SET AT: 42 FEET
 WATER AT END OF TEST: 42 FEET
 RECOMMENDED PUMP TYPE: SHALLOW DEEP
 RECOMMENDED PUMP SETTING: 43-45 FEET
 RECOMMENDED PUMPING RATE: 46-49 GPM



FINAL STATUS OF WELL

1 WATER SUPPLY
 2 OBSERVATION WELL
 3 TEST HOLE
 4 RECHARGE WELL
 5 ABANDONED, INSUFFICIENT SUPPLY
 6 ABANDONED POOR QUALITY
 7 UNFINISHED
 8 DEWATERING

WATER USE

1 DOMESTIC
 2 STOCK
 3 IRRIGATION
 4 INDUSTRIAL
 5 OTHER TESTING
 6 COMMERCIAL
 7 MUNICIPAL
 8 PUBLIC SUPPLY
 9 COOLING OR AIR CONDITIONING
 10 NOT USED

METHOD OF CONSTRUCTION

1 CABLE TOOL
 2 ROTARY (CONVENTIONAL)
 3 ROTARY (REVERSE)
 4 ROTARY (AIR)
 5 AIR PERCUSSION
 6 BORING
 7 DIAMOND
 8 JETTING
 9 DRIVING
 10 DIGGING OTHER

CONTRACTOR

NAME OF WELL CONTRACTOR: DANN WEBB
 ADDRESS: 868 MERIDIAN RD. UNIT 100, OTTAWA, ONT.
 NAME OF WELL TECHNICIAN: TIM HARRISON
 SIGNATURE OF TECHNICIAN/CONTRACTOR: [Signature]
 WELL CONTRACTOR'S LICENCE NUMBER: 6844
 WELL TECHNICIAN'S LICENCE NUMBER: T-2251
 SUBMISSION DATE: DAY 05 MO 07 YR 94

OFFICE USE ONLY

DATA SOURCE: 6844
 CONTRACTOR: 6844
 DATE RECEIVED: JUL 15 1994
 DATE OF INSPECTION: _____
 INSPECTOR: _____
 REMARKS: _____

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MUNICIPALITY 15.002

CON. R.F.

106

COUNTY OR DISTRICT: [REDACTED] TOWNSHIP, BOROUGH, CITY, TOWN, VILLAGE: CHESTER COY. BLOCK TRACT SURVEY ETC: 6 LOT: 25-27: 3

DATE COMPLETED: 48-53: DAY 17 MO 06 YR 94

ADDRESS: 205 STEVENAGE DR.

LOG OF OVERBURDEN AND BEDROCK MATERIALS (SEE INSTRUCTIONS)					
GENERAL COLOUR	MOST COMMON MATERIAL	OTHER MATERIALS	GENERAL DESCRIPTION	DEPTH - FEET	
				FROM	TO
BROWN	CLAY	SAND & GRAVEL	SOFT	3"	5'
BROWN	GRAVEL	CLAY	PACKED	5'	10'
GREY	CLAY	STONES	DENSE	10'	20'

31

32

41 WATER RECORD

WATER FOUND AT - FEET	KIND OF WATER
10-13	1 <input checked="" type="checkbox"/> FRESH 2 <input checked="" type="checkbox"/> SALTY 3 <input type="checkbox"/> SULPHUR 4 <input type="checkbox"/> MINERALS 5 <input type="checkbox"/> GAS
15-18	1 <input checked="" type="checkbox"/> FRESH 2 <input checked="" type="checkbox"/> SALTY 3 <input type="checkbox"/> SULPHUR 4 <input type="checkbox"/> MINERALS 5 <input type="checkbox"/> GAS
20-23	1 <input type="checkbox"/> FRESH 2 <input type="checkbox"/> SALTY 3 <input type="checkbox"/> SULPHUR 4 <input type="checkbox"/> MINERALS 5 <input type="checkbox"/> GAS
25-28	1 <input type="checkbox"/> FRESH 2 <input type="checkbox"/> SALTY 3 <input type="checkbox"/> SULPHUR 4 <input type="checkbox"/> MINERALS 5 <input type="checkbox"/> GAS
30-33	1 <input type="checkbox"/> FRESH 2 <input type="checkbox"/> SALTY 3 <input type="checkbox"/> SULPHUR 4 <input type="checkbox"/> MINERALS 5 <input type="checkbox"/> GAS

51 CASING & OPEN HOLE RECORD

INSIDE DIAM INCHES	MATERIAL	WALL THICKNESS INCHES	DEPTH - FEET
10-11	1 <input type="checkbox"/> STEEL 2 <input type="checkbox"/> GALVANIZED 3 <input type="checkbox"/> CONCRETE 4 <input type="checkbox"/> OPEN HOLE 5 <input type="checkbox"/> PLASTIC	3/16	3' 20'
17-18	1 <input type="checkbox"/> STEEL 2 <input type="checkbox"/> GALVANIZED 3 <input type="checkbox"/> CONCRETE 4 <input type="checkbox"/> OPEN HOLE 5 <input type="checkbox"/> PLASTIC		20-23
24-25	1 <input type="checkbox"/> STEEL 2 <input type="checkbox"/> GALVANIZED 3 <input type="checkbox"/> CONCRETE 4 <input type="checkbox"/> OPEN HOLE 5 <input type="checkbox"/> PLASTIC		27-30

SCREEN

SIZE(S) OF OPENING (SLOT NO): 0.10

DIAMETER: 2 INCHES

LENGTH: 10 FEET

MATERIAL AND TYPE: PLASTIC

DEPTH TO TOP OF SCREEN: 10 FEET

61 PLUGGING & SEALING RECORD

DEPTH SET AT - FEET	MATERIAL AND TYPE (CEMENT GROUT LEAD PACKER, ETC.)
3	CLAY
7	Hole Plug 3/8"
10	SAND #3

71 PUMPING TEST

PUMPING TEST METHOD: PUMP BAUER

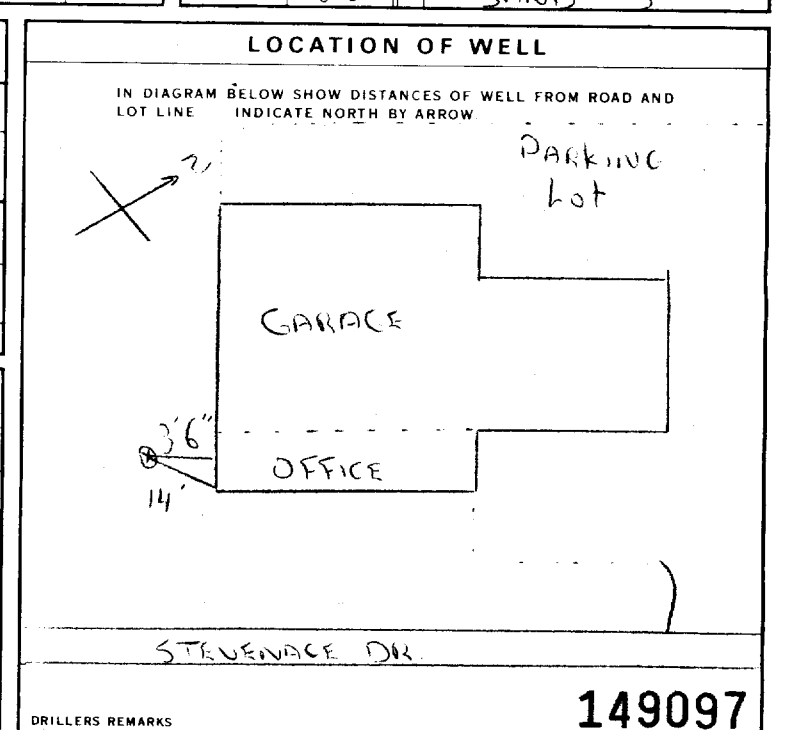
WATER LEVEL END OF PUMPING: DIEZOMETER

WATER LEVELS DURING:

15 MINUTES	30 MINUTES	45 MINUTES	60 MINUTES
20-21	22-24	29-31	35-37
FEET	FEET	FEET	FEET

PUMP INTAKE SET AT: INSTALLED

RECOMMENDED PUMP TYPE: SHALLOW DEEP



FINAL STATUS OF WELL

1 WATER SUPPLY 5 ABANDONED, INSUFFICIENT SUPPLY

2 OBSERVATION WELL 6 ABANDONED POOR QUALITY

3 TEST HOLE 7 UNFINISHED

4 RECHARGE WELL 8 DEWATERING

WATER USE

1 DOMESTIC 5 COMMERCIAL

2 STOCK 6 MUNICIPAL

3 IRRIGATION 7 PUBLIC SUPPLY

4 INDUSTRIAL 8 COOLING OR AIR CONDITIONING

9 OTHER TESTING 9 NOT USED

METHOD OF CONSTRUCTION

1 CABLE TOOL 6 BORING

2 ROTARY (CONVENTIONAL) 7 DIAMOND

3 ROTARY (REVERSE) 8 JETTING

4 ROTARY (AIR) 9 DRIVING

5 AIR PERCUSSION DIGGING OTHER

CONTRACTOR

NAME OF WELL CONTRACTOR: DANN WELLS EAD

ADDRESS: 668 MERIVICK RD, UNIT 100 OHAWA ONT

NAME OF WELL TECHNICIAN: Tim Harrison

SIGNATURE OF TECHNICIAN/CONTRACTOR: [Signature]

WELL CONTRACTOR'S LICENCE NUMBER: 6844

WELL TECHNICIAN'S LICENCE NUMBER: T-2251

SUBMISSION DATE: DAY 05 MO 07 YR 94

OFFICE USE ONLY

DATA SOURCE: 6844

DATE RECEIVED: JUL 15 1994

DATE OF INSPECTION: [Blank]

INSPECTOR: [Blank]

REMARKS: [Blank]

Master Well Owner's and Land Owner's Information

First Name: Coors Tek Inc. (Daw Engineering) Last Name: _____ E-mail Address: _____
 Mailing Address (Street Number/Name, RR): 3429 Hawthorne Road Municipality: Ottawa Province: ON Postal Code: K1G4G2 Telephone No. (inc. area code): 6137365110

Location and Construction of the Master Well in the Cluster

Address of Well Location (Street Number/Name, RR): 3429 Hawthorne Road Township: _____ Lot: _____ Concession: _____
 County/District/Municipality: _____ City/Town/Village: Ottawa Province: **Ontario** Postal Code: K1G4G2

UTM Coordinates: NAD 83 | Zone: 18 Easting: 4532645 Northing: 1024850 GPS Unit Make: Garmin Model: Etrex Mode of Operation: Undifferentiated Averaged Differentiated, specify _____

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

General Colour	Most Common Material	Other Materials	General Description	Depth (Metres)	
				From	To
Brown	Coarse gravel		- med sand trace silt	0	8.3
DK Grey	Fill - clay + sand + gravel		soft	8.3	11.28
	Wood chips		c. 8.84		

MW7-08 Hole Details

Depth (Metres)		Diameter (Centimetres)
From	To	
0	11.28	20

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 HSA
 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 _____

No Casing and Screen Used Yes No

Static Water Level Test 15.11 Metres

Screen

Galvanized Steel Fibreglass Concrete Plastic

Outside Diameter (Centimetres): 5.8 Slot No.: 10

Water Details

Water found at Depth 5.1 Metres Gas Fresh Salty Sulphur Minerals
 Water found at Depth _____ Metres Gas Fresh Salty Sulphur Minerals
 Water found at Depth _____ Metres Gas Fresh Salty Sulphur Minerals

Disinfected Yes No If no, provide reason: Monitoring well Date Master Well Completed (yyyy/mm/dd): 2008/07/04

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: 9 Please indicate Number of Cluster Well Information Log Sheets Submitted: _____
 Total Wells on this Property: unknown

Location of Well Cluster

Detailed Map must be provided as an attachment no larger than legal size (8.5" x 11"). 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

Construction Details

Inside Diameter (Centimetres)	Material (steel, plastic, fibreglass, concrete, galvanized)	Wall Thickness	Depth (Metres)	
			From	To
<u>5.1</u>	<u>PVC</u>	<u>Sched 40</u>	<u>0</u>	<u>4.27</u>

Annular Space/Abandonment Sealing Record

Depth Set at (Metres) From	To	Type of Sealant Used (Material and Type)	Volume Used (Cubic Metres)
<u>0</u>	<u>3.6</u>	<u>Benbowite hole plug</u>	<u>66 kgs</u>

Well Contractor and Well Technician Information

Business Name of Well Contractor: George Downing Estate Drilling Well Contractor's Licence No.: 11844
 Business Address (Street No./Name, number, RR): 410 Rue Principale Grenville-sur-la-Rouge Municipality: _____
 Province: QC Postal Code: J0V1B0 Business E-mail Address: downing@xplornet.com
 Bus. Telephone No. (inc. area code): 8192426469 Name of Well Technician (Last Name, First Name): Downing, Bruce
 Well Technician's Licence No.: 2173 Signature of Technician: Bruce Downing Date Submitted (yyyy/mm/dd): 2008/09/23

Audit No.: **M 02888** Well Contractor No.: _____
 Date Received (yyyy/mm/dd): NOV 26 2008 Date of Inspection (yyyy/mm/dd): _____
 Remarks: _____

Well **A 068579** (Print Well Tag No.)
A 068579

Property Owner's Information

First Name: DEW Engineering / Coors Tek Inc. Last Name: Coors Tek Inc. Mailing Address (Street No./Name, RR): 3429 Hawthorne Road Municipality: Ottawa
 Province: ONTARIO Postal Code: K1G1G1G2 E-mail Address: Telephone No. (inc. area code): 613-736-5110

Cluster Well Information

Address of Well Location (Street Number/Name, RR): 3429 Hawthorne Road Lot: Concession: Township: County/District/Municipality:
 City/Town/Village: Ottawa Province: Ontario Postal Code: K1G1G1G2 GPS Unit Make: Garmin Model: Etrex Unit Mode of Operation: Undifferentiated Averaged Differentiated, specify:

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

Well # on Sketch	UTM Coordinates		Full Depth of Hole (metres)	Hole Diameter (cm)	Method of Construction	Casing Material	Casing Length (metres)	Screen Interval (metres)		Annular Space Sealant Used	Static Water Level (metres)	Abandonment Sealant Used	Comments	Date of Completion (yyyy/mm/dd)
	Zone	Easting						Northing	From					
MW 1-08	18	45337	15025023	6.0	20	HSA	PVC	3.0	3.0	6.0	Bentonite	2.13		2008/07/04
MW 2-08	18	45339	15024942	6.7				4.5	4.5	6.7	Holyslug	4.5		2008/06/24
MW 3-08	18	45341	15024895	2.1				2.1	-	-				2008/06/23
MW 4-08	18	45333	15025039	3.1				2.4	2.4	3.1				2008/07/07
MW 5-08	18	45334	15024858	2.3				1.5	1.5	2.3				2008/07/02
MW 6-08	18	45334	15024835	1.4				1.4	-	-				2008/07/02
MW 8-08	18	45326	15025000	1.9				1.5	1.5	1.9				2008/06/24
MW 9-08	18	45332	15024899	6.7				3.0	3.0	6.7		3.9		2008/07/08

Well Contractor and Well Technician Information

Business Name of Well Contractor: George Downing Estate Drilling Ltd. Business Address (Street Number/Name, RR): 410 Rue Principale Grenville-sur-la-Rouge Municipality: Oc Province: Oc
 Postal Code: J0V1B0 Business Telephone No. (inc. area code): 819-242-6469 Well Contractor's Licence No.: 1844 Business E-mail Address: downing@explornet.com
 Name of Well Technician (First Name, Last Name): Bruce Downing Well Technician's Licence No.: 2173 Date Submitted (yyyy/mm/dd): Signature of Technician: *Bruce Downing*

Date 1st Well in Cluster Constructed (yyyy/mm/dd): 2008/07/04 Date Last Well in Cluster Constructed (yyyy/mm/dd):
Ministry Use Only
 Date Received (yyyy/mm/dd): NOV 26 2008 Date Inspected (yyyy/mm/dd):
 Audit No.: C 03068 Remarks: m02888

Address of Well Location (Street Number/Name, RR) **Hunt Club Rd & Hawthorn** Township **Ottawa** Lot **1** Concession **1**
 County/District/Municipality **Ottawa** City/Town/Village **Ottawa** Province **Ontario** Postal Code **K1H 1R1**

UTM Coordinates **18QUR024804** Zone **18QUR** Easting **024804** Northing **804** GPS Unit Make **Garmin** Model **Etrex** Mode of Operation: Undifferentiated Averaged Differentiated, specify

Overburden and Bedrock Materials (see instructions on the back of this form)				
General Colour	Most Common Material	Other Materials	General Description	Depth (Metres) From To
Blk	TOP soil		soft, dry	0 31
Brn	Sand	silt clay	soft, dry	31 1.22
Gry	limestone		hard, dry	1.22 6.1

Hole Details		
Depth (Metres) From	To	Diameter (Centimetres)
0	1.22	8.25
1.22	6.1	5.71

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 **Direct Push**

Status of Well
 Test Hole Abandoned, Insufficient Supply
 Replacement Well Abandoned, Poor Water Quality
 Dewatering Well Other, specify **monitoring**
 Alteration (Construction) Abandoned, other, specify

No Casing and Screen Used Yes No **Static Water Level Test** Yes No **Metres**

Screen
 Galvanized Steel Fibreglass Concrete Plastic
 Outside Diameter (Centimetres) **4.21** Slot No. **10**

Construction Details					
Inside Diameter (Centimetres)	Material (steel, plastic, fibreglass, concrete, galvanized)	Material	Wall Thickness	Depth (Metres) From To	
3.45	PVC	Riser	.356	0	1.5
	PVC	screen		1.5	6.1

Water Details
 Water found at Depth Metres Gas Fresh Salty Sulphur Minerals
 Water found at Depth Metres Gas Fresh Salty Sulphur Minerals
 Water found at Depth Metres Gas Fresh Salty Sulphur Minerals

Annular Space/Abandonment Sealing Record			
Depth Set at (Metres) From	To	Type of Sealant Used (Material and Type)	Volume Used (Cubic Metres)
0	1.30	Benseal	
1.30	6.1	Sand	

Disinfected Yes No If no, provide reason: **2009/09/28** Date Master Well Completed (yyyy/mm/dd)

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

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

Consent to release additional information concerning the cluster to the Director upon request
 Signature of Technician/Contractor **[Signature]** Date (yyyy/mm/dd)

Well Contractor and Well Technician Information
 Business Name of Well Contractor **Strata Soil Sampling** Well Contractor's Licence No. **7241**
 Business Address (Street No./Name, number, RR) **2-147 west Beaver Creek** Municipality **Richmond Hill**
 Province **ON** Postal Code **L4B1C6** Business E-mail Address **wrecords@stratasoil.com**
 Bus. Telephone No. (inc. area code) **9057649304** Name of Well Technician (Last Name, First Name) **Muir, Mike**
 Well Technician's Licence No. **3448** Signature of Technician **[Signature]** Date Submitted (yyyy/mm/dd) **2009/10/15**

Master Well Owner's/Land Owner's consent to use Cluster Form
 Signature **[Signature]** Date (yyyy/mm/dd) **2009/09/28**
Ministry Use Only
 Audit No. **M 05246** Well Contractor No.
 Date Received (yyyy/mm/dd) **OCT 27 2009** Date of Inspection (yyyy/mm/dd)
 Remarks

A081867

Address of Well Location (Street Number/Name, RR) **Hunt Club Road & Hawthorn**
 City/Town/Village **Ottawa** Province **Ontario** Postal Code
 Concession Township County/District/Municipality
 GPS Unit Make **GARMIN** Model **Etrex** Unit Mode of Operation Undifferentiated Averaged
 Differentiated, specify: _____

Consent to Release Additional Information to the Director upon request
 Signature of Technician/Contractor _____ Date (yyyy/mm/dd) _____

Well # on Sketch	UTM Coordinates		Full Depth of Hole (metres)	Hole Diameter (cm)	Method of Construction	Casing Material	Casing Length (metres)	Screen Interval (metres)		Annular Space Sealant Used	Static Water Level (metres)	Abandonment Sealant Used	Comments	Date of Completion (yyyy/mm/dd)
	Zone	Easting						Northing	From					
2	1845	35535	024874	5.18	8.25	Direct Push	PVC	2.13	2.13	5.18	Benseal			2009/09/21
3	1845	40775	025380	6.1	8.25	Direct Push	PVC	3.1	3.1	6.1	Benseal			2009/09/15

Well Contractor and Well Technician Information
 Business Name of Well Contractor **Strata Soil Sampling** Business Address (Street Number/Name, RR) **2-147 West Beaver Creek Dr** Municipality **Richmond Hill** Province **ON**
 Postal Code **L4B 1K6** Business Telephone No. (inc. area code) **905 764 9304** Well Contractor's Licence No. **72411** Business E-mail Address **wreords@stratasoil.com**
 Name of Well Technician (First Name, Last Name) **Mike Maier** Well Technician's Licence No. **3448** Date Submitted (yyyy/mm/dd) **2009/10/15** Signature of Technician

Date 1st Well in Cluster Constructed (yyyy/mm/dd) **2009/09/28** Date Last Well in Cluster Constructed (yyyy/mm/dd) **2009/09/28**

Ministry Use Only
 Date Received (yyyy/mm/dd) **OCT 27 2009** Date Inspected (yyyy/mm/dd) _____
 Audit No. **C 00241** Remarks **MOS246**

Measurements recorded in: Metric Imperial

Address of Well Location (Street Number/Name) **4070 Belgreen Rd** Township _____ Lot _____ Concession _____

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

UTM Coordinates Zone Easting Northing Municipal Plan and Sublot Number Other

NAD 83 **184533345025414**

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

General Colour	Most Common Material	Other Materials	General Description	Depth (m/ft)	
				From	To
Brn	Gravel	Sand	hard, dry	0	1.22
Gry	Clay	Silt / Gravel	hard, wet	1.22	3.66

Annular Space

Depth Set at (m/ft)	Type of Sealant Used (Material and Type)	Volume Placed (m ³ /ft ³)
0 - 0.31	Concrete / Flush mount	
0.31 - 1.22	Benseal	
1.22 - 3.66	Sand	

Results of Well Yield Testing

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

If pumping discontinued, give reason: _____

Pump intake set at (m/ft) _____

Pumping rate (l/min / GPM) _____

Duration of pumping _____ hrs + _____ min

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

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

Recommended pump depth (m/ft) _____

Recommended pump rate (l/min / GPM) _____

Well production (l/min / GPM) _____

Disinfected? Yes No

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

Method of Construction

Cable Tool Diamond Public Commercial Not used
 Rotary (Conventional) Jetting Domestic Municipal Dewatering
 Rotary (Reverse) Driving Livestock Test Hole Monitoring
 Boring Digging Irrigation Cooling & Air Conditioning
 Air percussion Industrial
 Other, specify **Direct Push** Other, specify _____

Construction Record - Casing

Inside Diameter (cm/in)	Open Hole OR Material (Galvanized, Fibreglass, Concrete, Plastic, Steel)	Wall Thickness (cm/in)	Depth (m/ft)		Status of Well
			From	To	
4.03	PVC	.368	0	2.74	<input type="checkbox"/> Water Supply <input type="checkbox"/> Replacement Well <input checked="" type="checkbox"/> Test Hole <input type="checkbox"/> Recharge Well <input type="checkbox"/> Dewatering Well <input checked="" type="checkbox"/> Observation and/or Monitoring Hole <input type="checkbox"/> Alteration (Construction) <input type="checkbox"/> Abandoned, Insufficient Supply <input type="checkbox"/> Abandoned, Poor Water Quality <input type="checkbox"/> Abandoned, other, specify _____ <input type="checkbox"/> Other, specify _____

Construction Record - Screen

Outside Diameter (cm/in)	Material (Plastic, Galvanized, Steel)	Slot No.	Depth (m/ft)	
			From	To
4.82	PVC	10	2.74	3.66

Water Details

Water found at Depth (m/ft)	Kind of Water: <input type="checkbox"/> Fresh <input type="checkbox"/> Untested <input type="checkbox"/> Gas <input type="checkbox"/> Other, specify _____	Depth (m/ft)	Diameter (cm/in)
0		0 - 3.66	8.25

Well Contractor and Well Technician Information

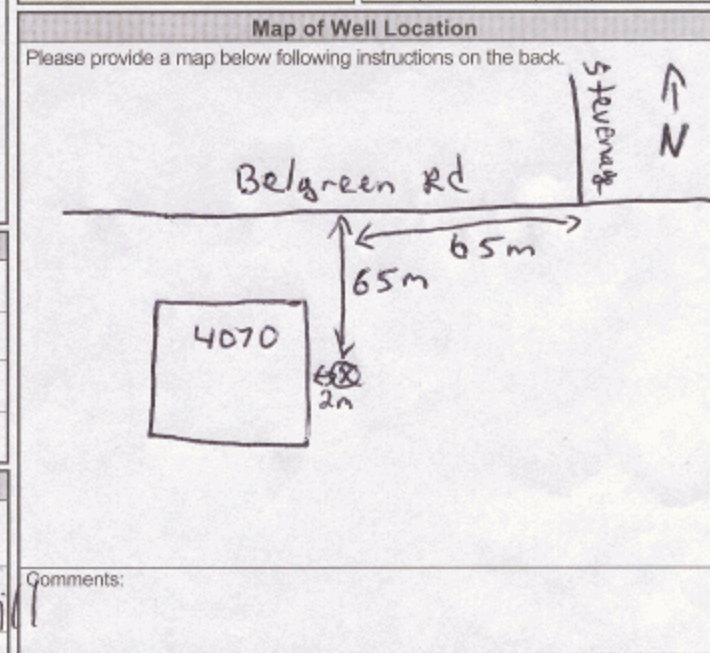
Business Name of Well Contractor: **Strata Soil Sampling** Well Contractor's Licence No.: **7241**

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

Province: **ON** Postal Code: **L4B1C6** Business E-mail Address: _____

Bus. Telephone No. (inc. area code): **(905) 764-9304** Name of Well Technician (Last Name, First Name): **Robinson Tracy**

Well Technician's Licence No.: **3158** Signature of Technician and/or Contractor: _____ Date Submitted: **20090103**



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Well owner's information package delivered: Yes No

Date Package Delivered: **Y1Y1Y1 M1M1 D1D1**

Date Work Completed: **20091223**

Audit No.: **Z 100163**

Received: **JAN 21 2010**

Address of Well Location (Street Number/Name) **4070 Belgreen Road** Township _____ Lot _____ Concession _____
 County/District/Municipality _____ City/Town/Village **Ottawa** Province **Ontario** Postal Code _____
 UTM Coordinates Zone Easting Northing _____ Municipal Plan and Sublot Number _____ Other _____
 NAD 83 **18 453336 5025410**

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

General Colour	Most Common Material	Other Materials	General Description	Depth (m/ft)	
				From	To
GRY	Gravel/Concrete		Hard	0	0.31
GRY	Clay	silt/gravel	hard, dry	0.31	3.1
GRY	clay	silt/gravel	hard, wet	3.1	3.66

Annular Space

Depth Set at (m/ft)	Type of Sealant Used (Material and Type)	Volume Placed (m³/ft³)
0 - 1.83	Benseal	
1.83 - 3.66	sand	

Method of Construction

Cable Tool Diamond Public Commercial Not used
 Rotary (Conventional) Jetting Domestic Municipal Dewatering
 Rotary (Reverse) Driving Livestock Test Hole Monitoring
 Boring Digging Irrigation Cooling & Air Conditioning
 Air percussion Industrial Other, specify _____
 Other, specify **DIRECT PUSH**

Construction Record - Casing

Inside Diameter (cm/in)	Open Hole OR Material (Galvanized, Fibreglass, Concrete, Plastic, Steel)	Wall Thickness (cm/in)	Depth (m/ft)		Status of Well
			From	To	
4.03	PVC	0.368	0	2.13	<input checked="" type="checkbox"/> Test Hole <input type="checkbox"/> Recharge Well <input type="checkbox"/> Dewatering Well <input checked="" type="checkbox"/> Observation and/or Monitoring Hole <input type="checkbox"/> Alteration (Construction) <input type="checkbox"/> Abandoned, Insufficient Supply <input type="checkbox"/> Abandoned, Poor Water Quality <input type="checkbox"/> Abandoned, other, specify _____ <input type="checkbox"/> Other, specify _____

Construction Record - Screen

Outside Diameter (cm/in)	Material (Plastic, Galvanized, Steel)	Slot No.	Depth (m/ft)	
			From	To
4.82	PVC	10	2.13	3.66

Water Details

Water found at Depth (m/ft)	Kind of Water: <input type="checkbox"/> Fresh <input type="checkbox"/> Untested	Hole Diameter	
		Depth (m/ft)	Diameter (cm/in)
	<input type="checkbox"/> Gas <input type="checkbox"/> Other, specify _____	From To	
	<input type="checkbox"/> Gas <input type="checkbox"/> Other, specify _____	0 3.66	8.25

Well Contractor and Well Technician Information

Business Name of Well Contractor: **Strata Soil Sampling** Well Contractor's Licence No.: **7241**
 Business Address (Street Number/Name): **42-147 West Beaver Creek** Municipality: **Richmond Hill**
 Province: **ON** Postal Code: **L4B1C6** Business E-mail Address: _____

Bus. Telephone No. (inc. area code): **(905) 709-9241** Name of Well Technician (Last Name, First Name): **Robinson Trevis**
 Well Technician's Licence No.: **3159** Signature of Technician and/or Contractor: _____ Date Submitted: **20100103**

Results of Well Yield Testing

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

If pumping discontinued, give reason: _____

Pump intake set at (m/ft): _____

Pumping rate (l/min / GPM): _____

Duration of pumping _____ hrs + _____ min

Final water level end of pumping (m/ft): _____

If flowing give rate (l/min / GPM): _____

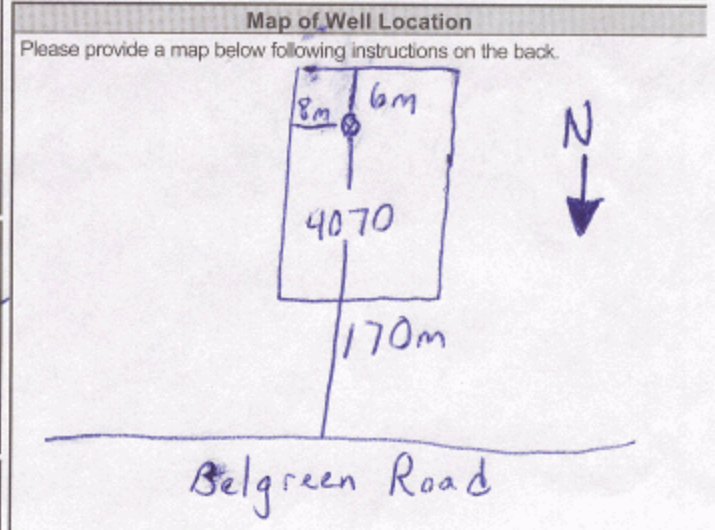
Recommended pump depth (m/ft): _____

Recommended pump rate (l/min / GPM): _____

Well production (l/min / GPM): _____

Disinfected? Yes No

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



Comments: _____

Well owner's information package delivered: Yes No

Date Package Delivered: **20091233**

Date Work Completed: **20091233**

Ministry Use Only

Audit No.: **Z100162**

Received: **JAN 21 2010**

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

RR#/Street Number/Name: 3968 Russell Rd Ottawa Carleton
 City/Town/Village: Ottawa Carleton Site/Compartment/Block/Tract etc.: 3 6
 GPS Reading: 3968 Russell Rd
 NAD: 813 Zone: 18 Easting: 453131 Northing: 5025786 Unit Make/Model: Spot Track 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	To
<u>Brown Grey</u>	<u>Top Soil</u>			<u>0</u>	<u>70</u>
	<u>Clay + Stone</u>			<u>70</u>	<u>544</u>

Hole Diameter

Depth From	Metres To	Diameter Centimetres

Water Record

Water found at 36.00m Kind of Water: 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	To
<u>91</u>	<input type="checkbox"/> Steel <input type="checkbox"/> Fibreglass <input checked="" type="checkbox"/> Plastic <input type="checkbox"/> Concrete <input type="checkbox"/> Galvanized	<u>7</u>	<u>0</u>	<u>513</u>
Casing				
	<input type="checkbox"/> Steel <input type="checkbox"/> Fibreglass <input type="checkbox"/> Plastic <input type="checkbox"/> Concrete <input type="checkbox"/> Galvanized			
Screen				
Outside diam	<input type="checkbox"/> Steel <input type="checkbox"/> Fibreglass <input type="checkbox"/> Plastic <input type="checkbox"/> Concrete <input type="checkbox"/> Galvanized	Slot No.		
No Casing or Screen				
	<input type="checkbox"/> Open hole			

Test of Well Yield

Pumping test method: Pump

Pumping test method	Draw Down		Recovery	
	Time min	Water Level Metres	Time min	Water Level Metres
Pump intake set at - (metres) <u>220</u>	Static Level	<u>421</u>		
Pumping rate - (litres/min) <u>13</u>	1	<u>421</u>	1	<u>427</u>
Duration of pumping <u>1</u> hrs + _____ min	2	<u>421</u>	2	<u>427</u>
Final water level end of pumping <u>cm 427</u> metres	3	<u>421</u>	3	<u>427</u>
Recommended pump type <u>shallow</u> <input type="checkbox"/> Deep	4	<u>422</u>	4	<u>427</u>
Recommended pump depth <u>cm 480</u> metres	5	<u>422</u>	5	<u>427</u>
Recommended pump rate <u>13</u> (litres/min)	10	<u>423</u>	10	<u>427</u>
If flowing give rate - <u>13</u> (litres/min)	15	<u>423</u>	15	<u>427</u>
If pumping discontinued, give reason.	20	<u>423</u>	20	<u>427</u>
	25	<u>424</u>	25	<u>427</u>
	30	<u>424</u>	30	<u>427</u>
	40	<u>425</u>	40	<u>426</u>
	50	<u>426</u>	50	<u>426</u>
	60	<u>427</u>	60	<u>425</u>

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)
<u>0</u>	<u>300</u>	<u>Clay</u>	<u>45</u>

Method of Construction

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

Water Use

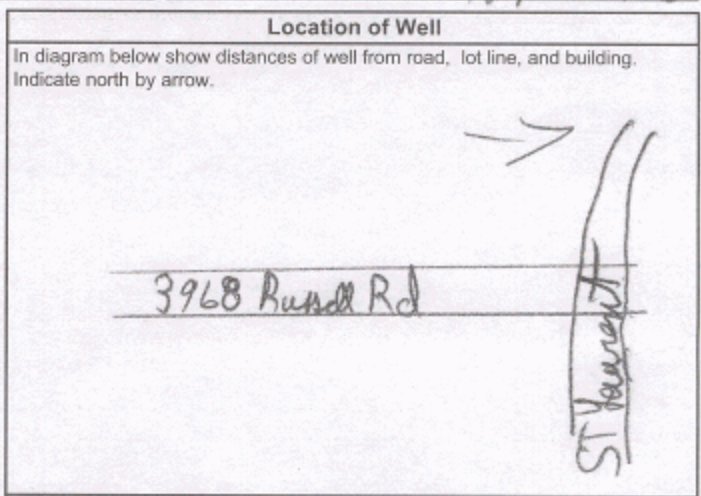
Domestic Industrial Public Supply Other
 Stock Commercial Not used
 Irrigation Municipal Cooling & air conditioning

Final Status of Well

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

Well Contractor/Technician Information

Name of Well Contractor: Geys Forge Well Contractor's Licence No.: 2199
 Business Address (street name, number, city etc.): Box 208 Clarence Creek
 Name of Well Technician (last name, first name): Geys Forge Well Technician's Licence No.: T-2986
 Signature of Technician/Contractor: Geys Forge Date Submitted: 2010/06/12



Audit No. **Z 40785** Date Well Completed: 2010/06/12

Was the well owner's information package delivered? Yes No Date Delivered: _____

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Data Source: _____ Contractor: _____
 Date Received: _____ Date of Inspection: _____
 Remark: **JUL 08 2010** Well Record Number: _____

Measurements recorded in: Metric Imperial

A 165631

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Well Owner's Information

First Name: _____ Last Name / Organization: **Najax Corporation** E-mail Address: _____ Well Constructed by Well Owner

Mailing Address (Street Number/Name): **3280 Wharfon Way** Municipality: **Mississauga, ON** Province: **ON** Postal Code: **L4X2C5** Telephone No. (inc. area code): _____

Well Location

Address of Well Location (Street Number/Name): **4139 Belgreen** Township: _____ Lot: _____ Concession: _____

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

UTM Coordinates: Zone: **18** Easting: **453075** Northing: **5025724** Municipal Plan and Sublot Number: _____ Other: _____

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

General Colour	Most Common Material	Other Materials	General Description	Depth (m/ft) From	Depth (m/ft) To
Brown/Gray	Gravel	Fill	Soft	0	.61
Gray	Fill			.61	1.22
Gray	Fill			1.22	1.63
Gray	Shale			1.63	4.27

Annular Space

Depth Set at (m/ft) From	Depth Set at (m/ft) To	Type of Sealant Used (Material and Type)	Volume Placed (m³/ft³)
0	.31	Concrete / Flushment	
.31	1.22	Bentonite	
1.22	2.44	Grout Slurry	
2.44	4.27	Sand	

Results of Well Yield Testing

After test of well yield, water was: <input type="checkbox"/> Clear and sand free <input type="checkbox"/> Other, specify _____	Draw Down		Recovery	
	Time (min)	Water Level (m/ft)	Time (min)	Water Level (m/ft)
If pumping discontinued, give reason: Pump intake set at (m/ft) Pumping rate (l/min / GPM) Duration of pumping hrs + min Final water level end of pumping (m/ft) If flowing give rate (l/min / GPM) Recommended pump depth (m/ft) Recommended pump rate (l/min / GPM) Well production (l/min / GPM) Disinfected? <input type="checkbox"/> Yes <input type="checkbox"/> No	Static Level			
	1		1	
	2		2	
	3		3	
	4		4	
	5		5	
10		10		
15		15		
20		20		
25		25		
30		30		
40		40		
50		50		
60		60		

Method of Construction

Cable Tool Diamond Jetting Driving Digging Air percussion Other, specify _____

Well Use

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

Construction Record - Casing

Inside Diameter (cm/in)	Open Hole OR Material (Galvanized, Fibreglass, Concrete, Plastic, Steel)	Wall Thickness (cm/in)	Depth (m/ft)		Status of Well
			From	To	
3.45	PVC	.356	0	2.74	<input type="checkbox"/> Water Supply <input type="checkbox"/> Replacement Well <input checked="" type="checkbox"/> Test Hole <input type="checkbox"/> Recharge Well <input type="checkbox"/> Dewatering Well <input checked="" type="checkbox"/> Observation and/or Monitoring Hole <input type="checkbox"/> Alteration (Construction) <input type="checkbox"/> Abandoned, Insufficient Supply <input type="checkbox"/> Abandoned, Poor Water Quality <input type="checkbox"/> Abandoned, other, specify _____ <input type="checkbox"/> Other, specify _____

Construction Record - Screen

Outside Diameter (cm/in)	Material (Plastic, Galvanized, Steel)	Slot No.	Depth (m/ft)	
			From	To
4.21	PVC	10	2.74	4.27

Water Details

Water found at Depth (m/ft)	Kind of Water: <input type="checkbox"/> Fresh <input type="checkbox"/> Untested <input type="checkbox"/> Gas <input type="checkbox"/> Other, specify _____	
0	1.83	8.25
1.83	4.27	5.71

Hole Diameter

Depth (m/ft) From	Depth (m/ft) To	Diameter (cm/in)
0	1.83	8.25
1.83	4.27	5.71

Well Contractor and Well Technician Information

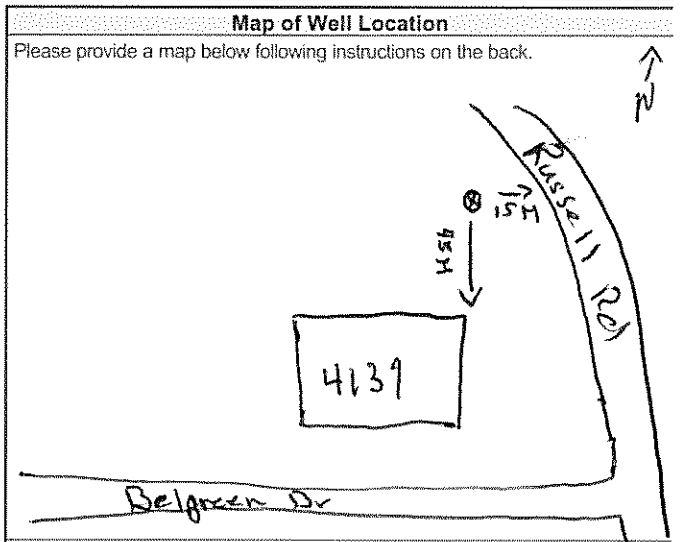
Business Name of Well Contractor: **Strata Drilling Group** Well Contractor's Licence No.: **7241**

Business Address (Street Number/Name): **165 Shields Court** Municipality: **Markham**

Province: **ON** Postal Code: **L3R8N2** Business E-mail Address: **Wrecords@strataoil.com**

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

Well Technician's Licence No.: **3616** Signature of Technician and/or Contractor: _____ Date Submitted: **2014 08 29**



Comments: _____

Well owner's information package delivered: Yes No

Date Package Delivered: _____

Date Work Completed: **2014 07 16**

Ministry Use Only

Audit No: **Z 193888**

SEP 08 2014

Measurements recorded in: Metric Imperial

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Well Owner's Information

First Name _____ Last Name / Organization **Wajax Corporation** E-mail Address _____ Well Constructed by Well Owner

Mailing Address (Street Number/Name) **3280 Wharton Way** Municipality **Mississauga** Province **ON** Postal Code **L4X 1R6** Telephone No. (inc. area code) _____

Well Location

Address of Well Location (Street Number/Name) **4139 Belgreen Dr** Township _____ Lot _____ Concession _____

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

UTM Coordinates Zone **18** Easting **453685** Northing **5025632** Municipal Plan and Sublot Number _____ Other _____

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

General Colour	Most Common Material	Other Materials	General Description	Depth (m/ft)	
				From	To
Brown	top Soil	Gravel	Soft	0	2.44
Grey	Shale Rock		Hard	2.44	5.18

Annular Space			
Depth Set at (m/ft)	Type of Sealant Used (Material and Type)	Volume Placed (m³/ft³)	
From	To		
0	31	Freshmortar/Concrete	
31	3.35	Grout/slurry	
3.35	5.18	SAND	

Method of Construction	Well Use
<input type="checkbox"/> Cable Tool <input checked="" type="checkbox"/> Diamond <input type="checkbox"/> Rotary (Conventional) <input type="checkbox"/> Jetting <input type="checkbox"/> Rotary (Reverse) <input type="checkbox"/> Driving <input type="checkbox"/> Boring <input type="checkbox"/> Digging <input type="checkbox"/> Air percussion <input checked="" type="checkbox"/> Other, specify Direct Push	<input type="checkbox"/> Public <input type="checkbox"/> Commercial <input type="checkbox"/> Not used <input type="checkbox"/> Domestic <input type="checkbox"/> Municipal <input type="checkbox"/> Dewatering <input type="checkbox"/> Livestock <input checked="" type="checkbox"/> Test Hole <input checked="" type="checkbox"/> Monitoring <input type="checkbox"/> Irrigation <input type="checkbox"/> Cooling & Air Conditioning <input type="checkbox"/> Industrial <input type="checkbox"/> Other, specify _____

Construction Record - Casing				Status of Well	
Inside Diameter (cm/in)	Open Hole OR Material (Galvanized, Fibreglass, Concrete, Plastic, Steel)	Wall Thickness (cm/in)	Depth (m/ft)		
			From	To	
3.45	Pvc	.356	0	3.66	<input type="checkbox"/> Water Supply <input type="checkbox"/> Replacement Well <input checked="" type="checkbox"/> Test Hole <input type="checkbox"/> Recharge Well <input type="checkbox"/> Dewatering Well <input checked="" type="checkbox"/> Observation and/or Monitoring Hole <input type="checkbox"/> Alteration (Construction) <input type="checkbox"/> Abandoned, Insufficient Supply <input type="checkbox"/> Abandoned, Poor Water Quality <input type="checkbox"/> Abandoned, other, specify _____ <input type="checkbox"/> Other, specify _____

Construction Record - Screen					
Outside Diameter (cm/in)	Material (Plastic, Galvanized, Steel)	Slot No.	Depth (m/ft)		
			From	To	
4.21	Pvc	10	3.66	5.18	

Water Details		Hole Diameter	
Water found at Depth (m/ft)	Kind of Water: <input type="checkbox"/> Fresh <input type="checkbox"/> Untested <input type="checkbox"/> Gas <input type="checkbox"/> Other, specify _____	Depth (m/ft)	Diameter (cm/in)
From	To	From	To
8.5	5.18	5.71	8.25
0	8.5	8.25	

Well Contractor and Well Technician Information

Business Name of Well Contractor **Strata Drilling Group** Well Contractor's Licence No. **72411**

Business Address (Street Number/Name) **165 Shields Court.** Municipality **Markham**

Province **ON** Postal Code **L2R 8V2** Business E-mail Address **wrcan@stratasoil.com**

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

Well Technician's Licence No. **3616** Signature of Technician and/or Contractor Date Submitted **20140725**

Results of Well Yield Testing				
After test of well yield, water was: <input type="checkbox"/> Clear and sand free <input type="checkbox"/> Other, specify _____	Draw Down		Recovery	
	Time (min)	Water Level (m/ft)	Time (min)	Water Level (m/ft)
If pumping discontinued, give reason: _____	Static Level			
	1		1	
	Pump intake set at (m/ft)		2	
	2		2	
	Pumping rate (l/min / GPM)		3	
	3		3	
Duration of pumping _____ hrs + _____ min		4		
4		4		
Final water level end of pumping (m/ft)		5		
5		5		
If flowing give rate (l/min / GPM)		10		
10		10		
15		15		
20		20		
25		25		
30		30		
40		40		
50		50		
60		60		

Map of Well Location

Please provide a map below following instructions on the back.

Comments: _____

Well owner's information package delivered <input type="checkbox"/> Yes <input type="checkbox"/> No	Date Package Delivered _____	Ministry Use Only Audit No. 2188258 SEP 08 2014 Received _____
Date Work Completed 2014/07/21		

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- [Driving and Roads](#)

Map: Well records

This map allows you to search and view well record information from reported wells in Ontario.

Full dataset is available in the [Open Data catalogue](#).

Recommended for you

[How to use a Ministry of the Environment map](#)

[Technical documentation: Metadata record](#)

[Go Back to Map](#)

Well ID

Well ID Number: 7228356

Well Audit Number: Z188356

Well Tag Number:

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

Well Location

Address of Well Location	4139 BELGREEN
Township	GLOUCESTER TOWNSHIP
Lot	
Concession	
County/District/Municipality	OTTAWA-CARLETON
City/Town/Village	Ottawa
Province	ON
Postal Code	n/a
UTM Coordinates	NAD83 — Zone 18 Easting: 453690.00 Northing: 5025854.00
Municipal Plan and Sublot Number	
Other	

Overburden and Bedrock Materials Interval

General Colour	Most Common Material	Other Materials	General Description	Depth From	Depth To
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Annular Space/Abandonment Sealing Record

Depth From	Depth To	Type of Sealant Used (Material and Type)	Volume Placed
0 m	.61 m	BENTONITE	
.61 m	2.13 m	GROUT SLURRY	

Method of Construction & Well Use

Method of Construction	Well Use
Other Method	

HAND PULLED

Monitoring and Test Hole

Status of Well

Abandoned-Other

Construction Record - Casing

Inside Diameter	Open Hole or material	Depth From	Depth To
4.03 cm	PLASTIC	0 m	.31 m

Construction Record - Screen

Outside Diameter	Material	Depth From	Depth To
4.82 cm	PLASTIC	.31 m	2.13 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
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Hole Diameter

Depth From	Depth To	Diameter
0 m	2.13 m	4.82 cm

Audit Number: Z188356

Date Well Completed:

Date Well Record Received by MOE: September 30, 2014

Updated: March 7, 2019

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Tags

- [Environment and energy](#),
- [Drinking water](#)



[Ministry of the Environment, Conservation and Parks](#)

The Ministry of the Environment, Conservation and Parks works to protect and sustain the quality of Ontario's air, land, and water. We also coordinate Ontario's actions on climate change in the name of healthier communities, ecological protection and economic prosperity.

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Nick Sullivan

From: Public Information Services <publicinformationsservices@tssa.org>
Sent: August-28-19 2:09 PM
To: Nick Sullivan
Subject: RE: Records Search Request (PE4690) - Record Fuels

Hello,

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

Inst Number	Context	Address	City	Province	Postal Code	Inststatusname	Segment1
9336633	FS Facility	4120 BELGREEN DR	GLOUCESTER	ON	K1G 3N2	Active	FS PRIVATE FUEL OUTLET - SELF SERVE
64552885	FS Facility	4120 BELGREEN DR	OTTAWA	ON	K1G 3N2	Active	FS GASOLINE STATION - CARD/KEYLOCK
10762134	FS Liquid Fuel Tank	4120 BELGREEN DR	GLOUCESTER	ON	K1G 3N2	Active	FS LIQUID FUEL TANK
64552886	FS Liquid Fuel Tank	4120 BELGREEN DR	OTTAWA	ON	K1G 3N2	Active	FS LIQUID FUEL TANK

Effective November 1, 2017 TSSA requires that any requests for the release of public information, must complete the release for public information form. The release for public information form can be found at https://www.tssa.org/en/about-tssa/release-of-public-information.aspx?_mid_=392. Please complete the form (1 address per form) and email the completed form to publicinformationsservices@tssa.org or through mail along with a fee of \$56.50 (including HST) per location. The fee is payable with credit card (Visa or MasterCard) or with a Cheque made payable to TSSA.

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

Thank you,

Roxana



Public Information Agent

Facilities and Business Services
345 Carlingview Drive
Toronto, Ontario M9W 6N9

Tel: +1-416-734-6222 | Fax: +1-416-734-3568 | E-Mail: publicinformationsservices@tssa.org
www.tssa.org



From: Nick Sullivan <nsullivan@Patersongroup.ca>
Sent: August 28, 2019 11:12 AM
To: Public Information Services <publicinformationsservices@tssa.org>
Subject: Records Search Request (PE4690)

Good afternoon,

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

Belgreen Drive: 4140, 4120, 4100, 4090, 4080, 4070;
Overton Drive: 2680;
Russell Road: 4120, 4055;
Hydro Road: 2600.

Thank you very much!

Nick Sullivan, B.Sc.

patersongroup
solution oriented engineering
over 60 years servicing our clients

154 Colonnade Road South
Ottawa, Ontario, K2E 7J5
Tel: (613) 226-7381 Ext. 208
Cell: (613) 913-3608

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

APPENDIX 3

QUALIFICATIONS OF ASSESSORS

Nick Sullivan, B.Sc.



Geotechnical
Engineering

Environmental
Engineering

Hydrogeology

Geological
Engineering

Materials Testing

Building Science

Archaeological
Services

POSITION

Junior Environmental Scientist

EDUCATION

McMaster University, B.Sc. 2016
Earth & Environmental Science

Niagara College, Cert. 2017
Environmental Management & Assessment

EXPERIENCE

2018 – Present

Paterson Group Inc.

Consulting Engineers
Geotechnical and Environmental Division
Junior Environmental Scientist

SELECT LIST OF PROJECTS

Phase I & II Environmental Site Assessments - Ottawa & Brockville
Contaminated Soil and Groundwater Sampling - Ottawa & Kingston
Geotechnical Investigations of Soil and Rock Stratigraphy - Ottawa
Supervising of Environmental Remediation Programs - Ottawa
Designated Substance Surveys - Ottawa
Outdoor Education Interpreter - Canadian Parks & Wilderness Society
Invasive Species Management - Credit Valley Conservation Authority
Public Trail Assessments - Niagara Peninsula Conservation Authority

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