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Phase I - Environmental Site Assessment

4055 & 4120 Russell Road
Ottawa, Ontario

Prepared For

Avenue 31 Capital Inc.

October 7, 2019

Report: PE4690-1

Paterson Group Inc.

Consulting Engineers
154 Colonnade Road South
Ottawa (Nepean), Ontario
Canada K2E 7J5

Tel: (613) 226-7381
Fax: (613) 226-6344
www.patersongroup.ca

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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, Vollebekk 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 (MNRF) 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 F_3 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 Monteregian Hills, which consist of intrusive igneous rocks”.

Geological Maps

The Geological Survey of Canada website on the Urban Geology of the National Capital Area was consulted as part of this assessment. Based on 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

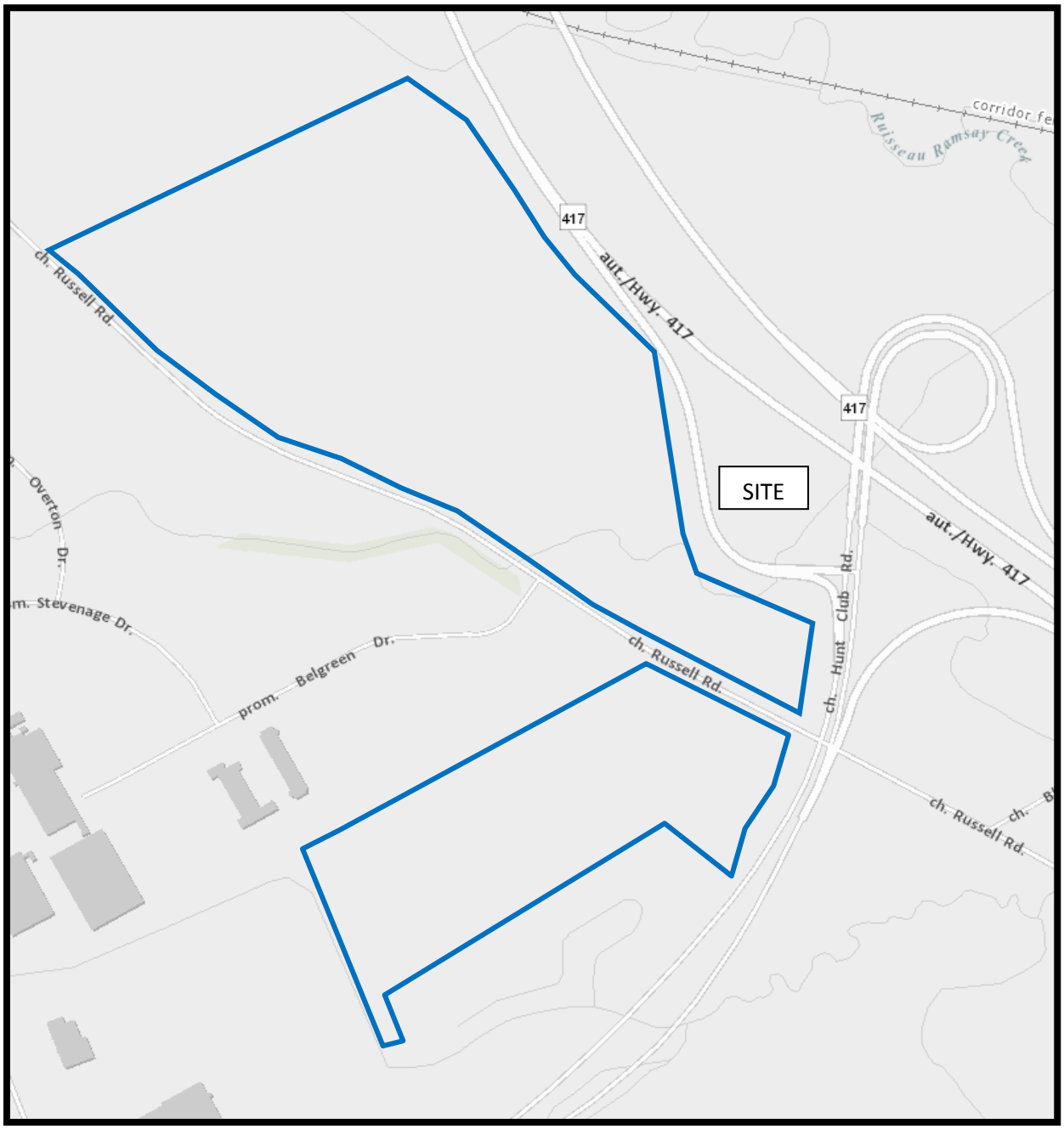


FIGURE 1

KEY PLAN

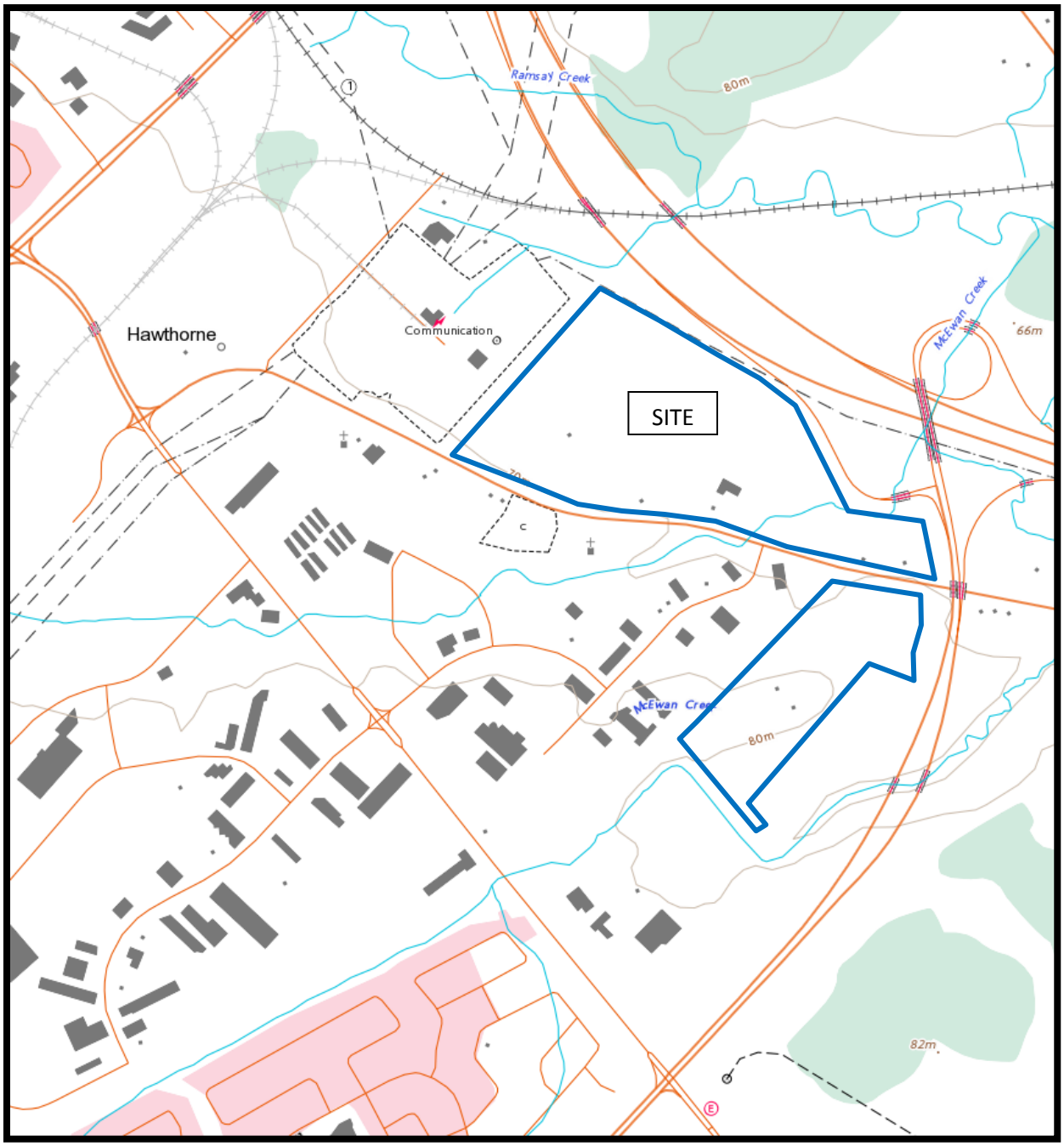
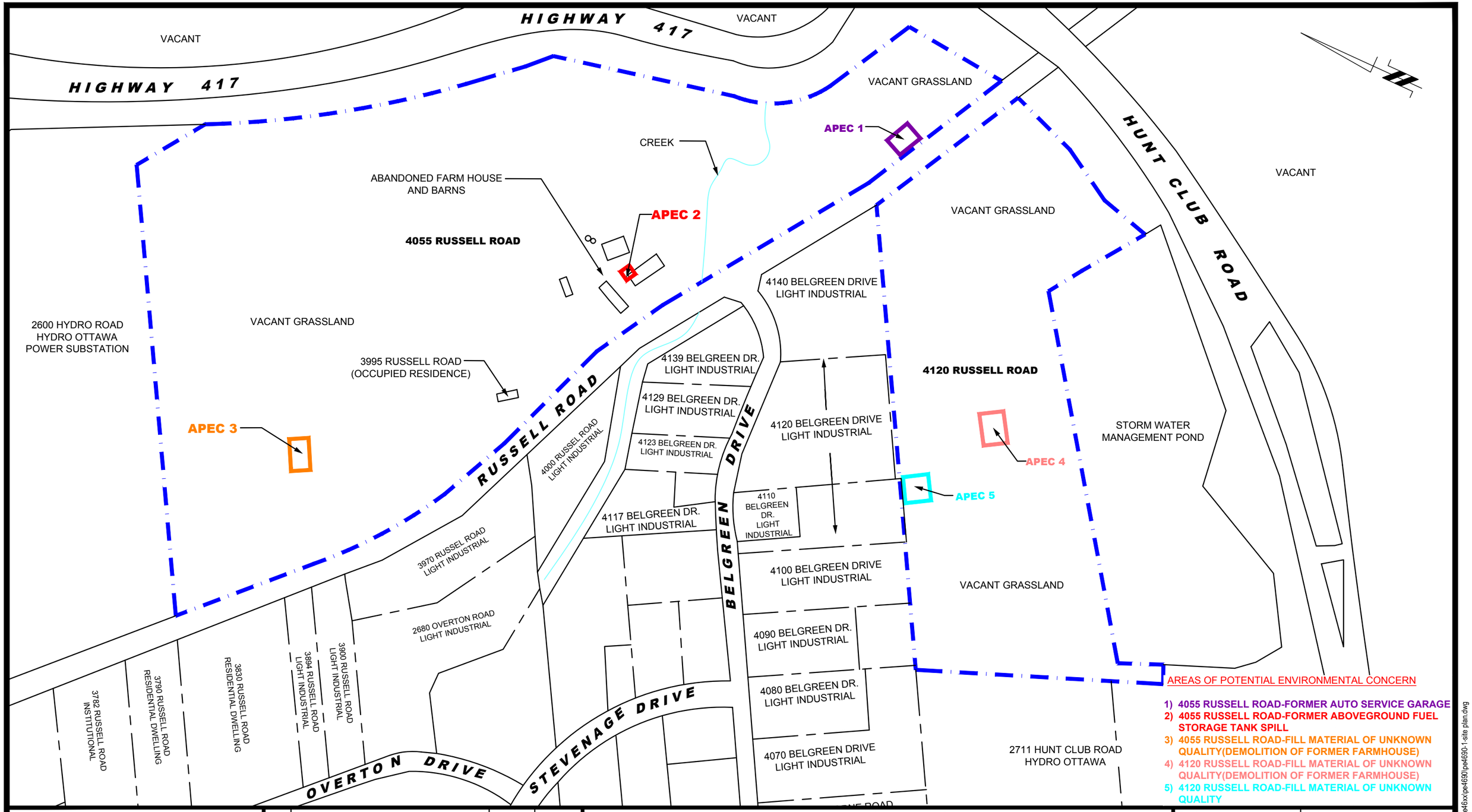


FIGURE 2

TOPOGRAPHIC MAP



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

OTTAWA, ONTARIO

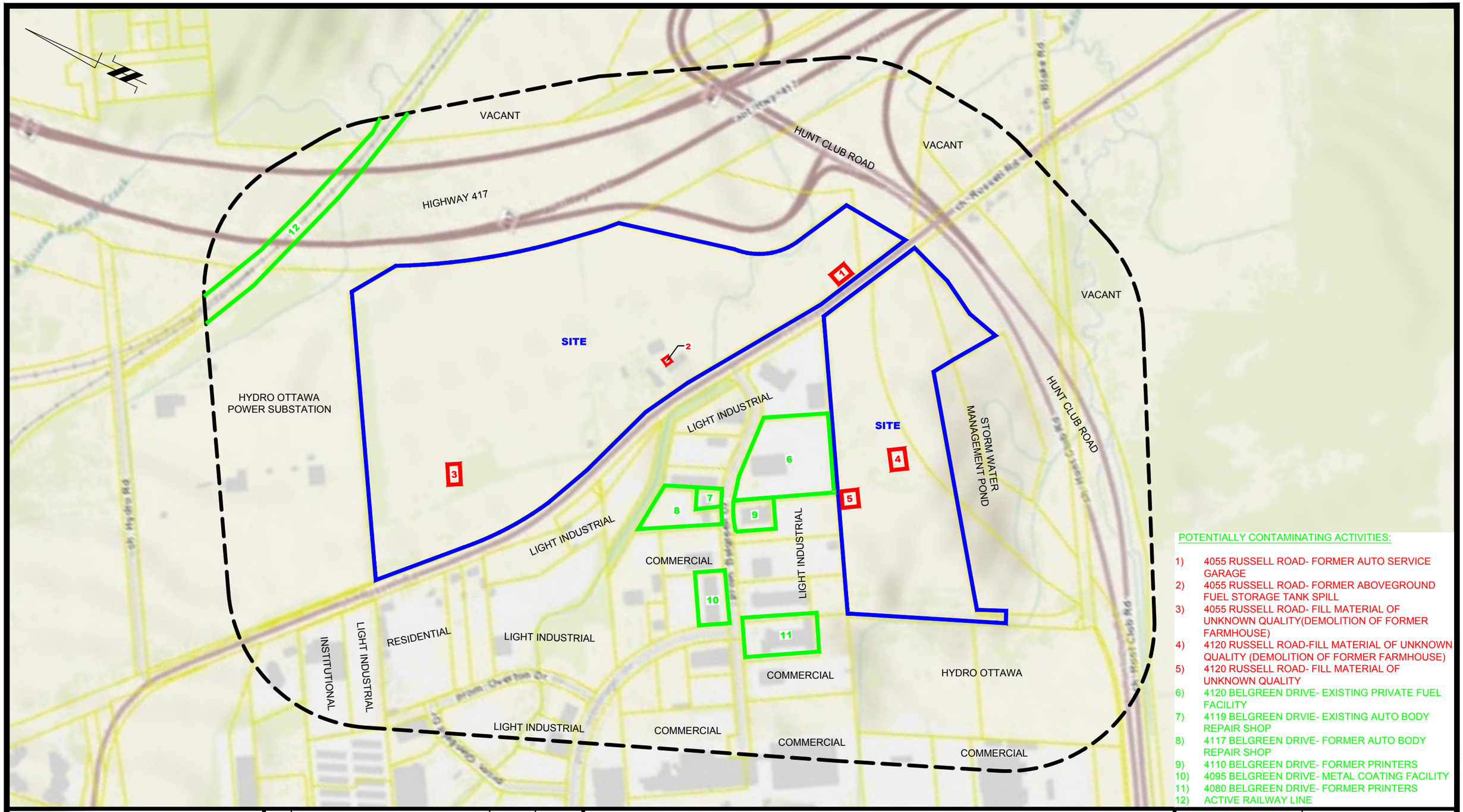
Title:

SITE PLAN

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.:

11x17

p:\autocad drawings\environmental\pe46xx\pe4690\pe4690-1-site plan.dwg



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 DRVIE- 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

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

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.:

11x17

p:\autocad drawings\environmental\pe4690\pe4690-2-surrounding land use plan.dwg

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 , Vollebekk Ltd.
May 14, 2019

Amended September 17, 2019 to add existing borehole information.

Scale 1 : 1500

60 45 30 15 0 30 60 Metres

Metric
DISTANCES SHOWN ON THIS PLAN ARE IN METRES AND CAN BE CONVERTED TO FEET BY DIVIDING BY 0.3048

NOTES:

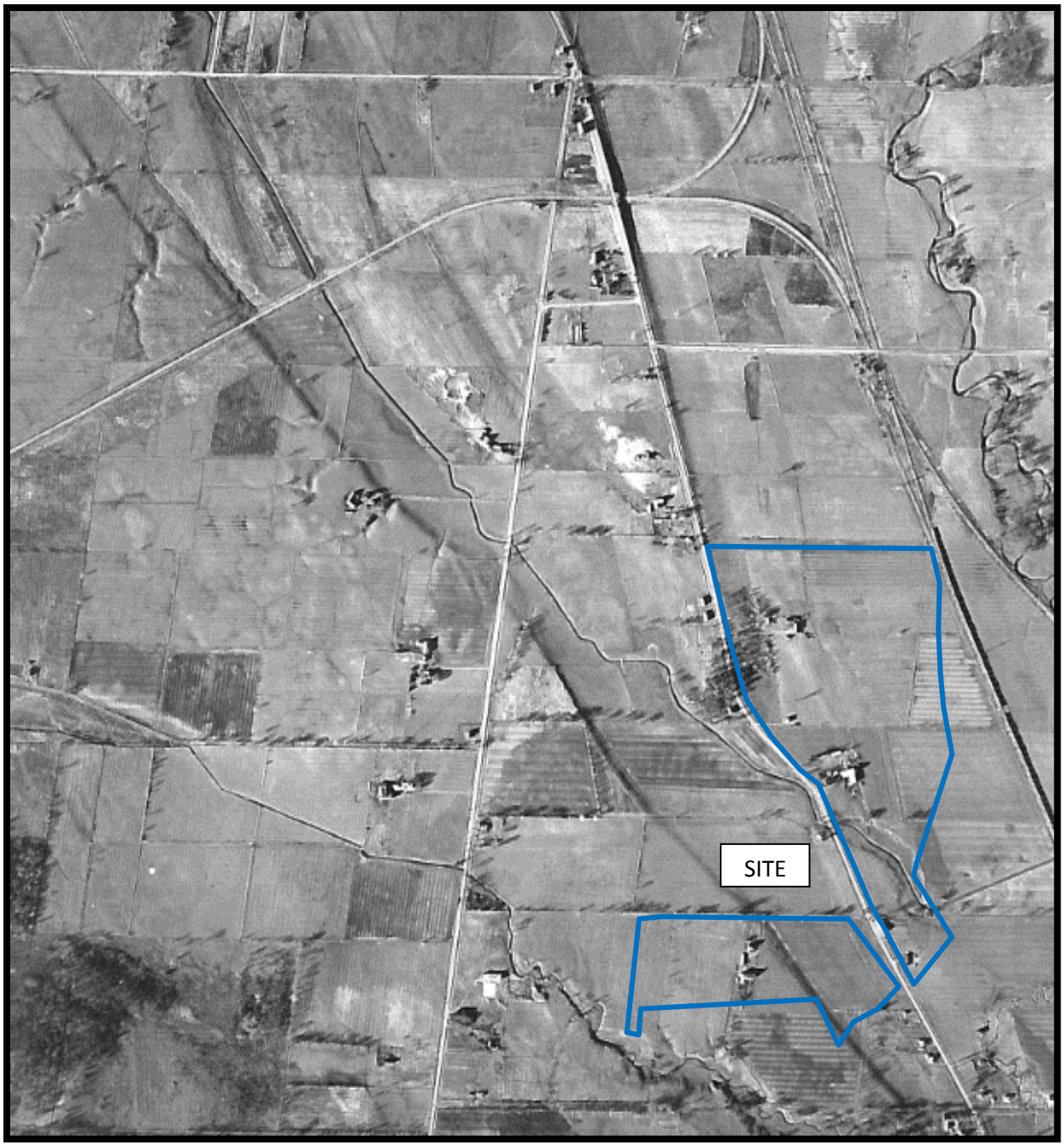
Boundary compiled from existing survey records.
Variations of this plan include aerial mapping or topographical information acquired from City of Ottawa databases.

Existing Borehole Coordinates - MTM Nad83 (Original)				
POINTNUMBER	NORTHING	EASTING	ELEVATION	DESCRIPTION
BH 1	5 027 345.33	376 243.75	70.27 69.48	Top pipe elev. 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 70.60	Top pipe elev. 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 70.95	Top pipe elev. 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 70.20	Top pipe elev. Ground elev.
BH 14	5 027 118.39	375 968.91	80.29 79.45	Top pipe elev. Ground elev.
BH 15	5 027 141.00	375 859.25	80.26 79.23	Top pipe elev. Ground elev.
BH 16	5 026 985.37	375 859.81	78.64	Ground elev.

ANNIS, O'SULLIVAN, VOLLEBEKK LTD.
14 Concourse Gate, Suite 500
Nepean, Ont. K2E 7S6
Phone: (613) 727-0850 / Fax: (613) 727-1079
Email: mail@aovltd.com
Ontario Land Surveyors

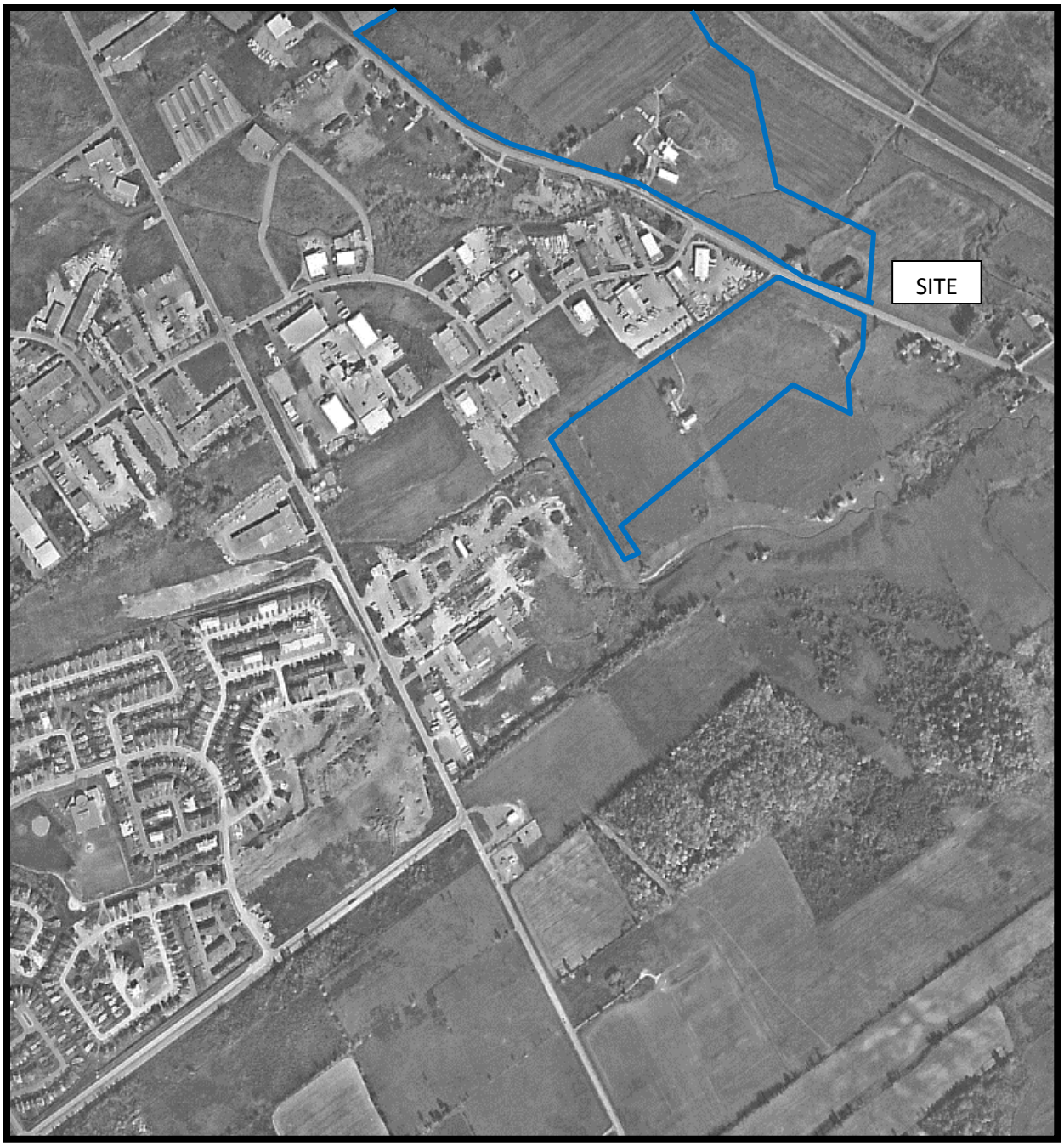
Job No. 17730-19 Russell Rd Pts 3, To 6, 06 RF, GL, O, 05

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.

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.

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).

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

Ontario Ministry of Environment and Energy

Freedom of Information Request

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

Requester Data			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 ☐ ACCT ☐ CHQ ☐ VISA/MC ☐ CASH	
Telephone/Fax Nos. Tel. 613-226-7381 Fax 613-226-6344	Your Project/Reference No. PE4690	Signature/Print /Name of Requester Nick Sullivan	☐ CNR ☐ ER ☐ NOR ☐ SWR ☐ WCR ☐ SAC ☐ IEB ☐ EAA ☐ EMR ☐ SWA	

Request Parameters

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

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

Certificates of Approval ➤ Proponent information must be provided

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

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

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

UTM | 18 | Z | 415412 | 15 | E
| 9 | R | 5012151 | 810 | N
Elev. | 9 | R | 012215 |
Basin | 25 | | | |

ONTARIO

The Water-well Drillers Act, 1954
Department of Mines

31G5h

15 No. 1549

GROUND WATER BRANCH
MAY 6 1958
ONTARIO WATER RESOURCES COMMISSION

Water-Well Record

VI RF 2 LOT 5

[redacted] Township, Village, Town or City... [redacted] Ont.
[redacted] Village, Town or City)... Ramsayville
[redacted] Address ... Ramsayville, Ont.

Date completed ... 1 ... 9 ... 1958
(day) (month) (year)

Pipe and Casing Record

Casing diameter(s) ... 4"
Length(s) ... 37'
Type of screen ...
Length of screen ...

Pumping Test

Static level ... 11'
Pumping rate ... 480 gph
Pumping level ... 13'
Duration of test ... 1 hour

Well Log

Overburden and Bedrock Record	From ft.	To ft.	Depth(s) at which water(s) found	No. of feet water rises	Kind of water (fresh, salty, or sulphur)
Black Loam	0	3	78'	67'	Fresh
Blue Clay	3	37			
Grey Shale Rock	37	78			

For what purpose(s) is the water to be used?
Domestic
Is water clear or cloudy? Clear
Is well on upland, in valley, or on hillside?
Valley
Drilling firm ... T. H. Adams
Address ... Hurdman's Bridge
Ottawa, Ont.
Name of Driller ...
Address ... T. H. E. S. A. M. E.

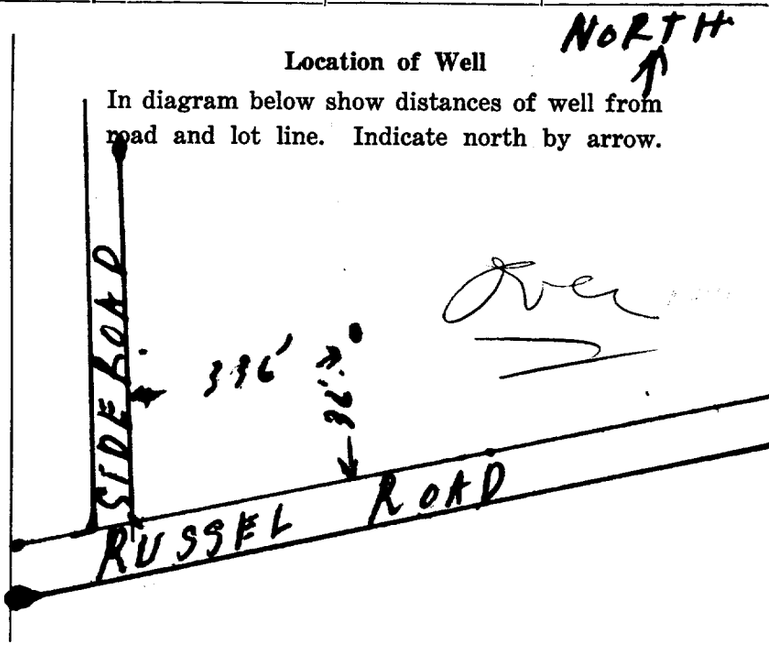
Licence Number 1957--42

I certify that the foregoing statements of fact are true.

Date May 2, 1958 ... Thos. H. Adams
Signature of Licensee

Location of Well

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



Form 5

CSS.S8

31G/5h.

822.
0755
JOHN WILLEMS

WATER RESOURCES DIVISION
15 No. 2302
JUL 5 1967
ONTARIO WATER RESOURCES COMMISSION

UTM 18 Z 415121/10 E
15 R 5012601/19 N

The Ontario Water Resources Commission Act

Elev. 4 R 01215

WATER WELL RECORD

Basin 25 County or District CARLETON Township, Village, Town or City OTTAWA (Gloucester)

Con. 6 RF Lot 2 Date completed 27 (day) 3 (month) 1967 (year)

Owner NATIONAL CAPITAL (print in block letters) COMMISSION Address CARLING & BELL, OTTAWA

Casing and Screen Record

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"

Pumping Test

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 G.P.M.

with pump setting of 130 feet below ground surface

Well Log

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

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. R. Schaw

(Signature of Licensed Drilling or Boring Contractor)

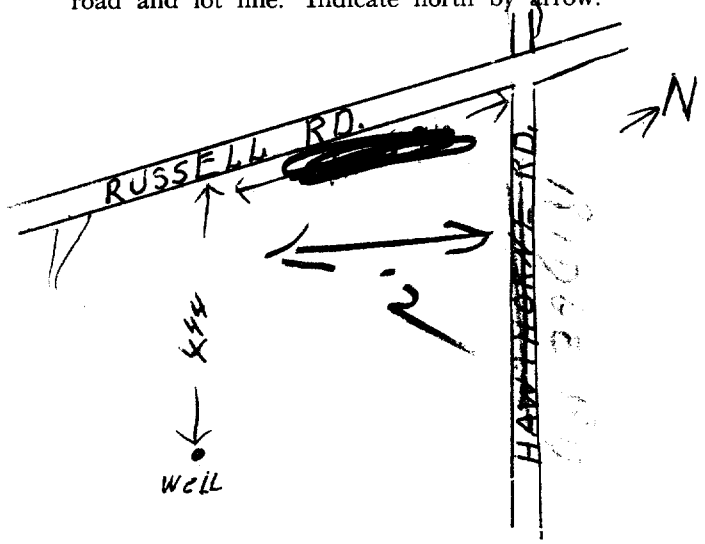
Form 7 15M-60-4138

OWRC COPY

JOHN WILLEMS FARM

Location of Well

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



31G/5h.

UTM 18 Z 415121210 E
5 R 5012516510 N

Elev. 4 R 0538

Basin 25

Rideau Front
Con VII
Lot 3

ONTARIO

The Well Drillers Act
Department of Mines, Province of Ontario

RECEIVED
AUG 19 1953
GEOLOGICAL BRANCH
DEPARTMENT of MINES

15 No. 2303

Water Well Record

[redacted] 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

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

Pumping Test

Date Aug. 4/53
Static level 15'
Pumping level 30'
Pumping rate 40 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

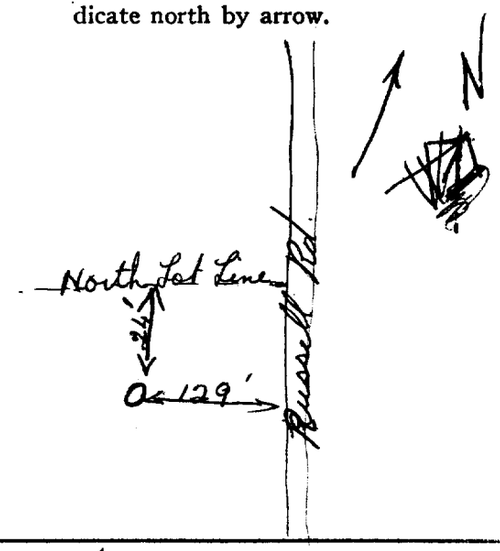
Depth(s) to Water Horizon(s)	Kind of Water	No. of Feet Water Rises
90'	fresh	75'

Well Log

Overburden and Bedrock Record	From	To
Clay	0 ft.	30 ft.
Boulders gravel & gritty Sand	30'	40'
Limestone rock	40'	90'

Location of Well

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



Situation: Is well on upland, in valley, or on hillside? upland
Drilling Firm L. H. Adams
Address Hurdman's Bridge Ont
Name of Driller L. W. Adams Address Ramsayville Ont.
Date Aug. 4/53 Licence Number 4

L. W. Adams
Signature of Licensee

31G/5h.

UTM | X | 18 | Z | 4 5 1 3 1 4 E | 5 1 0 1 2 5 5 1 4 0 N

Elev. | 4 | R | 0 1 2 3 1 0 |

Basin | 2 | 5 |

Con VI

Lot 3

ONTARIO

The Water-well Drillers Act, 1954
Department of Mines

RECEIVED
JUL 12 1955
GEOLOGICAL BRANCH
DEPARTMENT of MINES

2304

Water-Well Record

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

[redacted] Village, Town or City) .....

[redacted] Address ... Billings Bridge ...

(day) (month) (year)

Pipe and Casing Record

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

Pumping Test

Static level ... 42 feet ...
Pumping rate ... 3½ gal P. HOUR ...
Pumping level ... 58 feet ...
Duration of test ... 90 min ...

Well Log

Overburden and Bedrock Record	From ft.	To ft.	Depth(s) at which water(s) found	No. of feet water rises	Kind of water (fresh, salty, or sulphur)
Red Sand	0	8	31	48'	fresh
Blue Clay	8	27			
Gravel	27	31			
Bedrock Black Slate	31	90			

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? ... hillside ...

Drilling firm ...

Address ...

Name of Driller ... James Kettle ...

Address ... Ramsayville ...

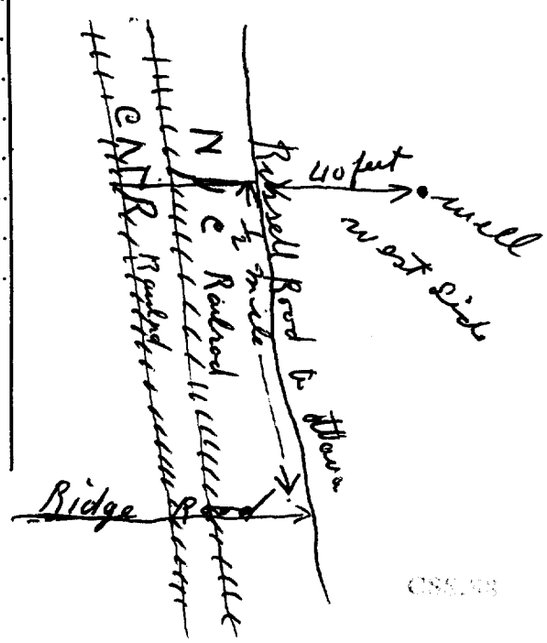
Licence Number ... 637 ...

I certify that the foregoing statements of fact are true.

Date ... August 13 ... James Kettle ...
Signature of Licensee

Location of Well

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



Form 5

— 316/5h. 103

UTM 18 Z 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

ONTARIO

The Well Drillers Act

Department of Mines, Province of Ontario

RECEIVED 15 No. 2305
FEB 1 1950
GEOLOGICAL BRANCH
DEPARTMENT OF MINES

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): $85.00

Pipe and Casing Record		Pumping Test	
Casing diameter(s)	4 inch	Date	Jan 15/49
Length(s) of casing(s)	30 ft.	Developed Capacity	—
Length of screen	none	Duration of Test	1/2 hr
Type of screen	—	Pumping Rate	3 g.p.m.
Type of pump	Beatty stock pump	Drawdown	—
Capacity of pump	—	Static level of completed well	10'
Depth of pump setting	23 ft.	Is well a gravel-wall type?	no

Water Record

Kind (fresh or mineral): fresh

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

Appearance (clear, cloudy, coloured): Clear

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

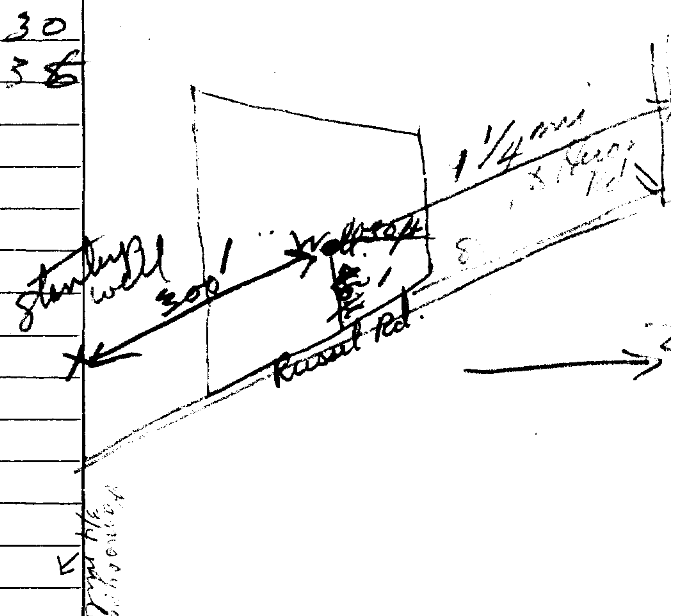
Depth(s) to Water Horizon(s)	Kind of Water	No. of Feet Water Rises
~~10 ft.~~ 36	fresh	24 ft

Well Log

Drift and Bedrock Record	From	To
	0 ft.	ft.
Blue Clay	0	30
Limestone Rock	30	35
5 ft of rock		

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. 101.

UTM 18 Z 454141410 E

18 (R14) 5025171 0 N

Elev. 9 R 0230

Basin 25 (20)

ONTARIO

The Well Drillers Act

Department of Mines, Province of Ontario

2306

Water Well Record

County or District Carleton Tp. Gloucester Con. VII R.F. H.T. Lot 5 Pt. Lot

Owner [redacted] Address Billings Bridge Acres 180

Date Completed Jan 20/49 Cost of Well (not including pump) $200.00

Pipe and Casing Record

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

Pumping Test

Date

Developed Capacity

Duration of Test

Pumping Rate

Drawdown

Static level of completed well 15' H.T.

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

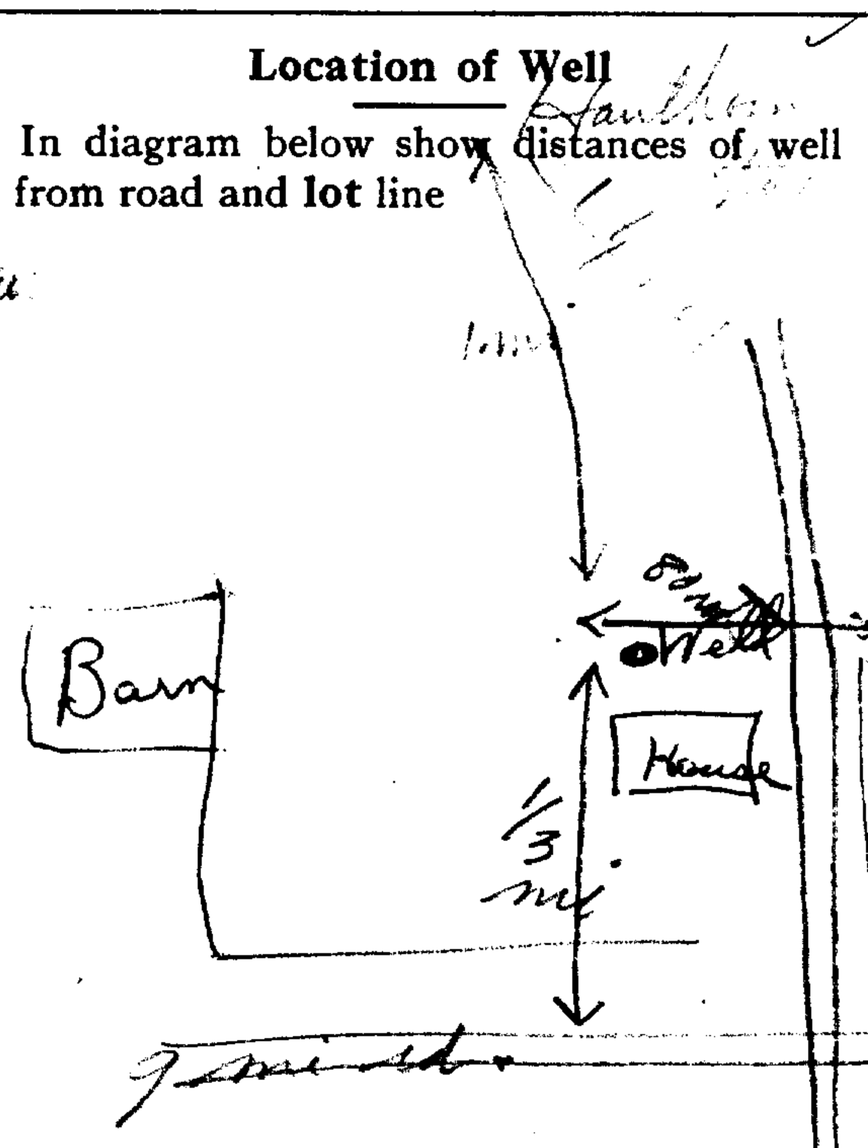
Depth(s) to Water Horizon(s)	Kind of Water	No. of Feet Water Rises
~~15 ft~~ 58 H.T.	fresh	~~43 ft~~

Well Log

Drift and Bedrock Record	From	To
Overburden	0 ft.	~~30~~ ft.
28 ft of soft rock	30	58 H.T.

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 379

316/5h. 102

UTM 18 Z | 4 | 5 | 4 | 1 | 1 | 0 | 1 | 0 | E
9 R | 5 | 0 | 2 | 5 | 1 | 1 | 9 | 1 | 0 | N

Elev. 9 R | 0 | 2 | 3 | 1 | 0

Basin | 2 | 5 | | 1 | 1 |

ONTARIO

The Well Drillers Act

Department of Mines, Province of Ontario

RECEIVED
FEB 1 1950
GEOLOGICAL BRANCH
DEPARTMENT OF MINES

15 No 2397

Water Well Record

County or District Carleton Tp. Gloucester Con. VI R.F. Lot 5 Pt. Lot S. Ept.

Owner [redacted] Address Ramsayville Acres 1 acre

Date Completed Nov 18 49 Cost of Well (not including pump) $200.00

Pipe and Casing Record

Casing diameter(s) 4 inch

Length(s) of casing(s) 35 ft

Length of screen

Type of screen

Type of pump

Capacity of pump

Depth of pump setting

Pumping Test

Date Nov 15/49

Developed Capacity

Duration of Test 1/2 hr

Pumping Rate 20 g.p.m.

Drawdown

Static level of completed well 12'

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

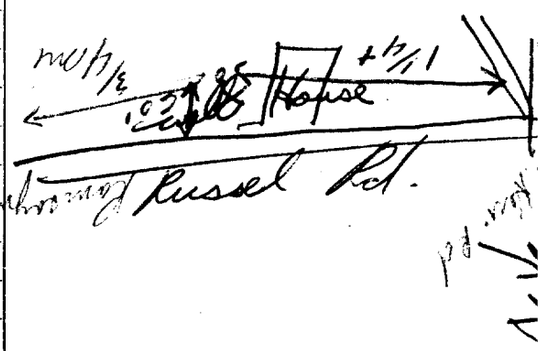
Depth(s) to Water Horizon(s)	Kind of Water	No. of Feet Water Rises
~~rock~~ 80	soft.	6 8 ft

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 Jr. Adams

Address Ramsayville Ont

Recorded by J. W. Adams Address Ramsayville

Date Licence Number 387

31G/5h

104

UTM 18Z 454180 E

9R 5R 0251310 N

Elev. 9R 0231

Basin 25

ONTARIO

The Well Drillers Act

Department of Mines, Province of Ontario

15 No 2308

Water Well Record

County or District Carleton Tp. Gloucester Con. VI R.F. 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

Casing diameter(s) 4 inch

Length(s) of casing(s) 35 ft

Length of screen

Type of screen

Type of pump

Capacity of pump

Depth of pump setting

Pumping Test

Date Nov 15/49

Developed Capacity

Duration of Test 1/2 hr

Pumping Rate 20 g p m

Drawdown

Static level of completed well 12'

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

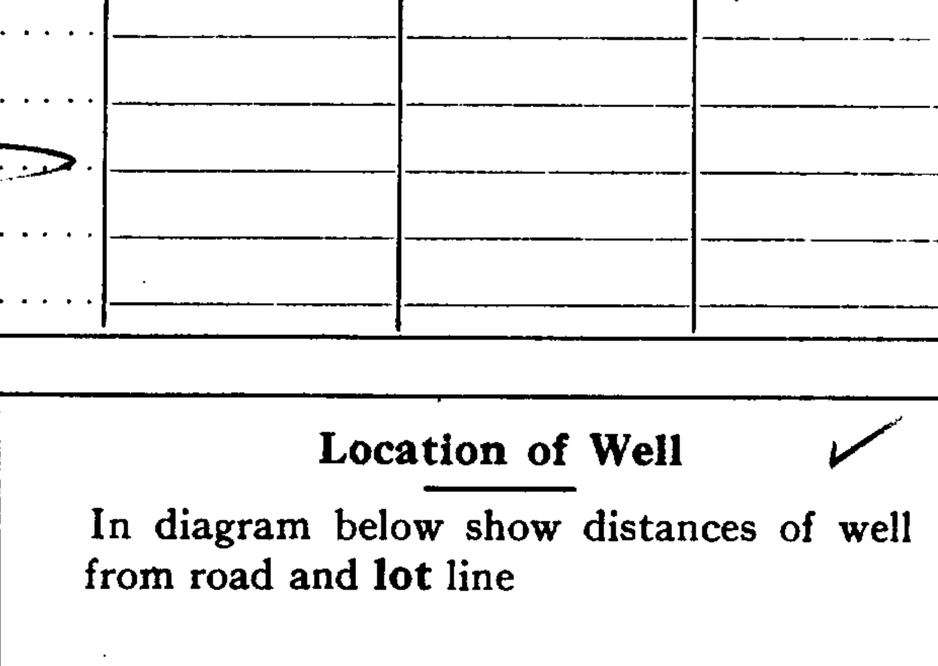
Depth(s) to Water Horizon(s)	Kind of Water	No. of Feet Water Rises
12 ft 80'	soft	68 ft

Well Log

Drift and Bedrock Record	From	To
	0 ft.	....ft.
45 ft of rock.		
Blue Clay	0	35
Loose Rock	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 N. Adams

Address J. W. Adams Ramsayville

Recorded by J. W. Adams Address Ont.

Date Licence Number 384

31G/5h.

UTM | 18 | Z | 415412410 | E
| 5 | R | 5012521319 | N
Elev. | 4 | R | 012212 |

Basin | 25 | County or District Carleton

Con. 6 RP Lot Part 5

15 - No. 2315

The Ontario Water Resources Commission Act

WATER WELL RECORD

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

Date completed 12th (day) May (month) 1967 (year)

[redacted] ress 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

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

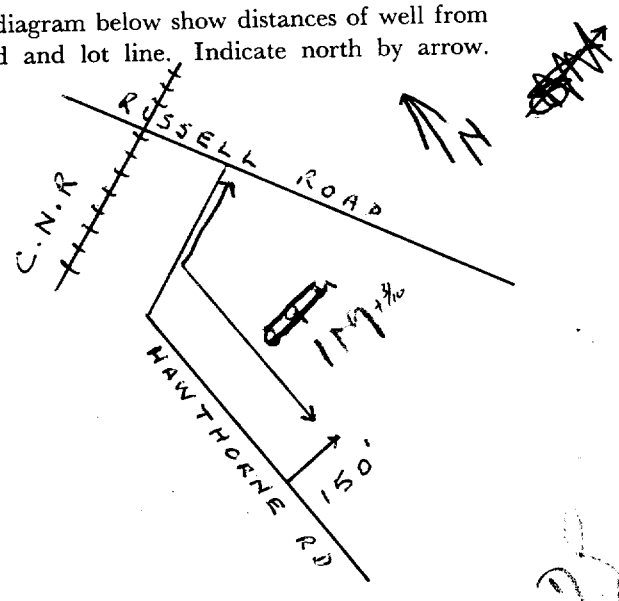
R. Laniel
(Signature of Licensed Drilling or Boring Contractor)
for: J.B. Dufresne & Co. Limited

Form 7 15M-60-4138

OWRC COPY

Location of Well

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



C58.58

31G/5h.

UTM 18 Z 4514210 E
5 R 5021521910 N

Elev. 4 R 012121

Basin 25 CARLETON County or District

Township, Village, Town or City GLOUCESTER

Lot 5 Date completed 13 (day) 6 month 1967 year)

[redacted] ress 322 CATHERINE ST. OTTAWA, ONT.

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

The Ontario Water Resources Commission Act

WATER WELL RECORD

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

Overburden and Bedrock Record	From ft.	To ft.	Water Record: Depth(s) at which water(s) found	Water Record: Kind of water (fresh, salty, sulphur)
Black Muck	0	5		
Black Shale	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

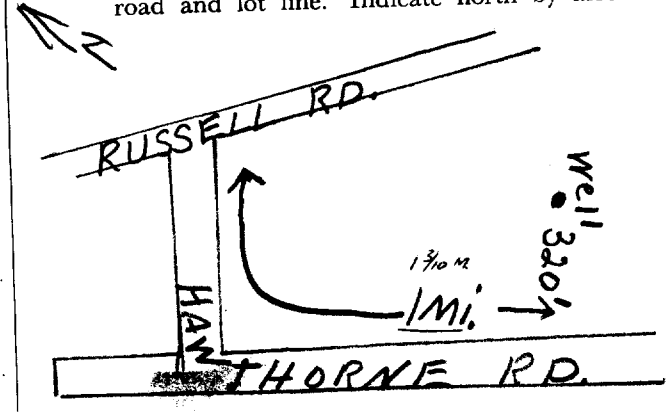
(Signature of Licensed Drilling or Boring Contractor)

Form 7 15M-60-4138

OWRC COPY

Location of Well

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



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 (1 2) — 1528051 — MUNICIP (10-14) 15002 — CON. (15-22) RF — (23-24) 06

COUNTY OR DISTRICT	TOWNSHIP, BOROUGH, CITY, TOWN, VILLAGE	CON.	BLOCK, TRACT, SURVEY, ETC.	LOT (25-27)
[redacted]	[redacted]		6	3

[redacted] 705 STEVENAGE DR. — DATE COMPLETED (48-53): DAY 17 MO 06 YR 94

(1 2) (10 12) (17 18) — NG (24) — RC. (25) — ELEVATION (26) — RC. (30) — BASIN CODE (31) — (II) (III) (IV) (47)

LOG OF OVERBURDEN AND BEDROCK MATERIALS (SEE INSTRUCTIONS)

GENERAL COLOUR	MOST COMMON MATERIAL	OTHER MATERIALS	GENERAL DESCRIPTION	DEPTH - FEET FROM	DEPTH - FEET TO
BROWN	CLAY	STONES	LOOSE	0	5
GREY	CLAY	GRAVEL		5	16
GREY	CLAY		DENSE	16	20

31 (1 2) (10 14 15 21 32 43 54 65 75 80)

32 (1 2) (10 14 15 21 32 43 54 65 75 80)

41 WATER RECORD

WATER FOUND AT - FEET	KIND OF WATER
15 (10-13)	1 ☐ FRESH 3 ☐ SULPHUR 2 ☐ SALTY 4 ☐ MINERALS 5 ☐ GAS (14) — NOT TESTED
(15-18)	1 ☐ FRESH 3 ☐ SULPHUR 2 ☐ SALTY 4 ☐ MINERALS 5 ☐ GAS (19) — NOT TESTED
(20-23)	1 ☐ FRESH 3 ☐ SULPHUR 2 ☐ SALTY 4 ☐ MINERALS 6 ☐ GAS (24)
(25-28)	1 ☐ FRESH 3 ☐ SULPHUR 2 ☐ SALTY 4 ☐ MINERALS 6 ☐ GAS (29)
(30-33)	1 ☐ FRESH 3 ☐ SULPHUR 2 ☐ SALTY 4 ☐ MINERALS 6 ☐ GAS (34) (80)

51 CASING & OPEN HOLE RECORD

INSIDE DIAM INCHES	MATERIAL	WALL THICKNESS INCHES	DEPTH - FEET FROM	DEPTH - FEET TO
2" (10-11)	1 ☐ STEEL 2 ☐ GALVANIZED 3 ☐ CONCRETE 4 ☐ OPEN HOLE 5 ☐ PLASTIC (12)	3/16"	3'	20' (13-16)
(17-18)	1 ☐ STEEL 2 ☐ GALVANIZED 3 ☐ CONCRETE 4 ☐ OPEN HOLE 5 ☐ PLASTIC (19)			(20-23)
(24-25)	1 ☐ STEEL 2 ☐ GALVANIZED 3 ☐ CONCRETE 4 ☐ OPEN HOLE 5 ☐ PLASTIC (26)			(27-30)

SCREEN

SIZE(S) OF OPENING (SLOT NO.) (31-33)	DIAMETER (34-38)	LENGTH (39-40)
0.10	2" INCHES	10 FEET
MATERIAL AND TYPE: PLASTIC	DEPTH TO TOP OF SCREEN (41-44): 10 FEET	(30)

61 PLUGGING & SEALING RECORD

DEPTH SET AT - FEET FROM	DEPTH SET AT - FEET TO	MATERIAL AND TYPE (CEMENT GROUT LEAD PACKER, ETC.)
3 (10-13)	7 (14-17)	CLAY
7 (18-21)	10 (22-25)	Hole Plug 1/4"
10 (26-29)	20 (30-33) (80)	SAND #3

71 PUMPING TEST

PUMPING TEST METHOD (10): 1 ☐ PUMP 2 ☐ BAILER — PUMPING RATE (11-14): NOT TESTED GPM — DURATION OF PUMPING (15-16) HOURS (17-18) MINS

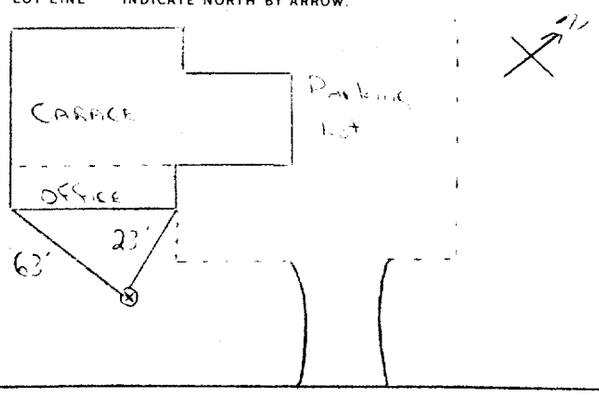
STATIC LEVEL	WATER LEVEL END OF PUMPING	WATER LEVELS DURING (23): 1 ☐ PUMPING 2 ☐ RECOVERY			
(19-21)	(22-24)	15 MINUTES (26-28)	30 MINUTES (29-31)	45 MINUTES (32-34)	60 MINUTES (35-37)
PIEZOMETER FEET	FEET	FEET	FEET	FEET	FEET

IF FLOWING, GIVE RATE (38-41)	PUMP INTAKE SET AT	WATER AT END OF TEST (42)
GPM	INSTALLED FEET	1 ☐ CLEAR 2 ☐ CLOUDY

RECOMMENDED PUMP TYPE	RECOMMENDED PUMP SETTING (43-45)	RECOMMENDED PUMPING RATE (46-49)
☐ SHALLOW ☐ DEEP (50-53)	FEET	GPM

LOCATION OF WELL

IN DIAGRAM BELOW SHOW DISTANCES OF WELL FROM ROAD AND LOT LINE. INDICATE NORTH BY ARROW.



DRILLERS REMARKS: 149096

FINAL STATUS OF WELL (56)

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

WATER USE (55-56)

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

METHOD OF CONSTRUCTION (57)

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

CONTRACTOR

NAME OF WELL CONTRACTOR: DANN WEBB EAD — WELL CONTRACTOR'S LICENCE NUMBER: 6844

ADDRESS: 468 Merivale RD., Unit 100 Ottawa ONT

NAME OF WELL TECHNICIAN: T. Hawkshaw — WELL TECHNICIAN'S LICENCE NUMBER: T-2251

SIGNATURE OF TECHNICIAN/CONTRACTOR — SUBMISSION DATE: DAY 05 MO 07 YR 94

OFFICE USE ONLY

DATA SOURCE (58) — CONTRACTOR (59-62): 6844 — DATE RECEIVED (63-68): JUL 15 1994 (80)

DATE OF INSPECTION — INSPECTOR — REMARKS

MINISTRY OF THE ENVIRONMENT COPY

FORM NO. 0506 (11/86) FORM 9

Ministry of the Environment
Ontario

The Ontario Water Resources Act

WATER WELL RECORD

1. PRINT ONLY IN SPACES PROVIDED
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11 (1 2) — 1528052 — MUNICIP. 15002 (10 14) — CON. RF (15 22 23 24) 06

COUNTY OR DISTRICT	TOWNSHIP, BOROUGH, CITY, TOWN, VILLAGE	CON. BLOCK, TRACT, SURVEY, ETC.	LOT (25-27)
[redacted]	GLOUCESTER	6	3

[redacted] 765 STEVENAGE DR. — DATE COMPLETED (48-53): DAY 16 MO 06 YR 94

ING — RC — ELEVATION — RC — BASIN CODE (II III IV)

LOG OF OVERBURDEN AND BEDROCK MATERIALS (SEE INSTRUCTIONS)

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

31

32 (1 2 10 14 15 21 32 43 54 65 75 80)

41 WATER RECORD

WATER FOUND AT - FEET	KIND OF WATER
14	1 ☐ FRESH 2 ☐ SALTY 3 ☐ SULPHUR 4 ☐ MINERALS 5 ☐ GAS — UNITS
	1 ☐ FRESH 2 ☐ SALTY 3 ☐ SULPHUR 4 ☐ MINERALS 6 ☐ GAS
	1 ☐ FRESH 2 ☐ SALTY 3 ☐ SULPHUR 4 ☐ MINERALS 6 ☐ GAS
	1 ☐ FRESH 2 ☐ SALTY 3 ☐ SULPHUR 4 ☐ MINERALS 6 ☐ GAS
	1 ☐ FRESH 2 ☐ SALTY 3 ☐ SULPHUR 4 ☐ MINERALS 6 ☐ GAS

51 CASING & OPEN HOLE RECORD

INSIDE DIAM INCHES	MATERIAL	WALL THICKNESS INCHES	DEPTH - FEET FROM	DEPTH - FEET TO
2"	1 ☐ STEEL 2 ☐ GALVANIZED 3 ☐ CONCRETE 4 ☐ OPEN HOLE 5 ☒ PLASTIC	3/16"	3'	20'
	1 ☐ STEEL 2 ☐ GALVANIZED 3 ☐ CONCRETE 4 ☐ OPEN HOLE 5 ☐ PLASTIC			
	1 ☐ STEEL 2 ☐ GALVANIZED 3 ☐ CONCRETE 4 ☐ OPEN HOLE 5 ☐ PLASTIC			

SCREEN

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

61 PLUGGING & SEALING RECORD

DEPTH SET AT - FEET FROM	DEPTH SET AT - FEET TO	MATERIAL AND TYPE (CEMENT GROUT LEAD PACKER, ETC.)
0	7	CLAY
7	9	HOLE PLUG 3/8"
9	20	SAND

71 PUMPING TEST

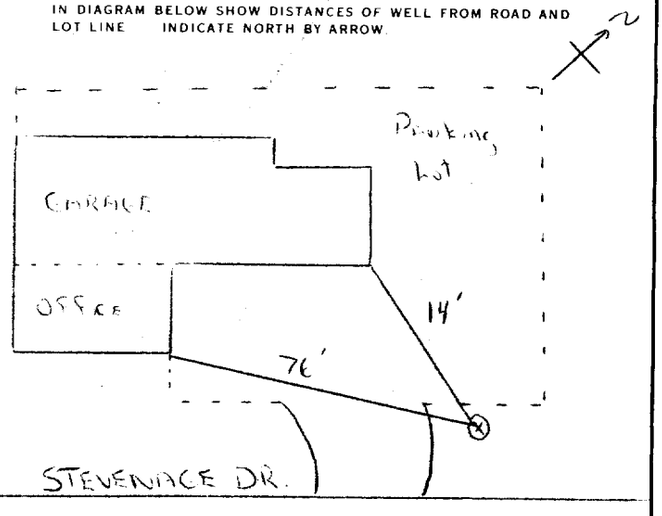
PUMPING TEST METHOD	PUMPING RATE	DURATION OF PUMPING
1 ☐ PUMP 2 ☐ BAILER — UNTESTED	GPM	HOURS MINS

STATIC LEVEL	WATER LEVEL END OF PUMPING	WATER LEVELS DURING	1 ☐ PUMPING 2 ☐ RECOVERY
FEET	FEET	15 MINUTES / 30 MINUTES / 45 MINUTES / 60 MINUTES	
PIEZOMETER		INSTALLED	

IF FLOWING, GIVE RATE	PUMP INTAKE SET AT	WATER AT END OF TEST
GPM	FEET	1 ☐ CLEAR 2 ☐ CLOUDY
RECOMMENDED PUMP TYPE: ☐ SHALLOW ☐ DEEP	RECOMMENDED PUMP SETTING FEET	RECOMMENDED PUMPING RATE GPM

LOCATION OF WELL

IN DIAGRAM BELOW SHOW DISTANCES OF WELL FROM ROAD AND LOT LINE. INDICATE NORTH BY ARROW.



DRILLERS REMARKS: 149095

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 ☐ DEWATERING
WATER USE	1 ☐ DOMESTIC 2 ☐ STOCK 3 ☐ IRRIGATION 4 ☐ INDUSTRIAL 5 ☐ COMMERCIAL 6 ☐ MUNICIPAL 7 ☐ PUBLIC SUPPLY 8 ☐ COOLING OR AIR CONDITIONING ☒ OTHER TESTING 9 ☐ 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 ☐ DIGGING ☐ OTHER

CONTRACTOR

NAME OF WELL CONTRACTOR: DANN WELL F.A.D. — WELL CONTRACTOR'S LICENCE NUMBER: 6844

ADDRESS: 864 Meadowlea Rd, Unit 100, Ottawa ONT

NAME OF WELL TECHNICIAN: Tim Marrison — WELL TECHNICIAN'S LICENCE NUMBER: T-2251

SIGNATURE OF TECHNICIAN/CONTRACTOR — SUBMISSION DATE: DAY 05 MO 07 YR 94

OFFICE USE ONLY

DATA SOURCE — CONTRACTOR: 6844 — DATE RECEIVED: JUL 15 1994

DATE OF INSPECTION — INSPECTOR

REMARKS

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Ministry of the Environment
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The Ontario Water Resources Act

WATER WELL RECORD

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11 (1 2) — 1528053 — MUNICIP. 1,5,0,6,2 (10–14) — CON. R.F. 106 (15–22 23 24)

COUNTY OR DISTRICT	TOWNSHIP, BOROUGH, CITY, TOWN, VILLAGE	CON	BLOCK, TRACT, SURVEY, ETC	LOT (25-27)
OTTAWA-CARLETON	GLOUCESTER		6	3

[redacted] 705 STEVENAGE DR.

DATE COMPLETED (48-53): DAY 16 MO 06 YR 94

(2 10 12 17 18 24 RC 25 ELEVATION 26 BC 30 BASIN CODE 31 II III IV 47)

LOG OF OVERBURDEN AND BEDROCK MATERIALS (SEE INSTRUCTIONS)

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

31 (1 2 10 14 15 21 32 43 54 65 75 80)
32 (1 2 10 14 15 21 32 43 54 65 75 80)

41 WATER RECORD

WATER FOUND AT - FEET	KIND OF WATER
15 (10-15)	1 ☐ FRESH 2 ☐ SALTY 3 ☐ SULPHUR 4 ☐ MINERALS 5 ☐ GAS 6 ☐ — (14) NOT TESTED
(15-18)	1 ☐ FRESH 2 ☐ SALTY 3 ☐ SULPHUR 4 ☐ MINERALS 5 ☐ GAS 6 ☐ — (19)
(20-23)	1 ☐ FRESH 2 ☐ SALTY 3 ☐ SULPHUR 4 ☐ MINERALS 5 ☐ GAS 6 ☐ — (24)
(25-28)	1 ☐ FRESH 2 ☐ SALTY 3 ☐ SULPHUR 4 ☐ MINERALS 5 ☐ GAS 6 ☐ — (29)
(30-33)	1 ☐ FRESH 2 ☐ SALTY 3 ☐ SULPHUR 4 ☐ MINERALS 5 ☐ GAS 6 ☐ — (34) (35)

51 CASING & OPEN HOLE RECORD

INSIDE DIAM INCHES	MATERIAL	WALL THICKNESS INCHES	DEPTH - FEET FROM	DEPTH - FEET TO
2" (10-11)	1 ☐ STEEL 2 ☐ GALVANIZED 3 ☐ CONCRETE 4 ☐ OPEN HOLE 5 ☒ PLASTIC (12)	3/16"	3"	20' (13-16)
(17-18)	1 ☐ STEEL 2 ☐ GALVANIZED 3 ☐ CONCRETE 4 ☐ OPEN HOLE 5 ☐ PLASTIC (19)			(20-23)
(24-25)	1 ☐ STEEL 2 ☐ GALVANIZED 3 ☐ CONCRETE 4 ☐ OPEN HOLE 5 ☐ PLASTIC (26)			(27-30)

SCREEN

SIZE(S) OF OPENING (SLOT NO.) (31-33)	DIAMETER (34-38)	LENGTH (39-40)
0.10	2" INCHES	10 FEET
MATERIAL AND TYPE: PLASTIC	DEPTH TO TOP OF SCREEN (41-44): 10 FEET	(10)

61 PLUGGING & SEALING RECORD

DEPTH SET AT - FEET FROM	DEPTH SET AT - FEET TO	MATERIAL AND TYPE (CEMENT GROUT LEAD PACKER ETC.)
0 (10-13)	7 (14-17)	CLAY
7 (18-21)	9 (22-25)	HOLE PLUG 3/4
9 (26-29)	20 (30-33) (80)	SAND

71 PUMPING TEST

PUMPING TEST METHOD (10)	PUMPING RATE (11-14)	DURATION OF PUMPING (15-16 HOURS, 17-18 MINS)
1 ☐ PUMP 2 ☐ BAILER — NOT	TEST GPM	

STATIC LEVEL (19-21)	WATER LEVEL END OF PUMPING (22-24)	WATER LEVELS DURING (25): 1 ☐ PUMPING 2 ☐ RECOVERY
FEET	FEET — PIEZOMETER	

15 MINUTES (26-28)	30 MINUTES (29-31)	45 MINUTES (32-34)	60 MINUTES (35-37)
FEET	FEET	FEET	FEET

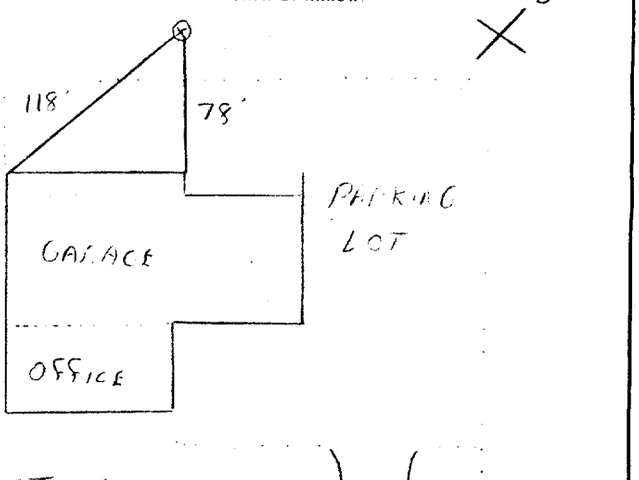
IF FLOWING GIVE RATE (38-41)	PUMP INTAKE SET AT	WATER AT END OF TEST (42)
GPM	FEET — INSTALLED	1 ☐ CLEAR 2 ☐ CLOUDY

RECOMMENDED PUMP TYPE	RECOMMENDED PUMP SETTING (43-45)	RECOMMENDED PUMPING RATE (46-49)
☐ SHALLOW ☐ DEEP	FEET	GPM

(50-53)

LOCATION OF WELL

IN DIAGRAM BELOW SHOW DISTANCES OF WELL FROM ROAD AND LOT LINE. INDICATE NORTH BY ARROW.



DRILLERS REMARKS: 149092

FINAL STATUS OF WELL (54)

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

WATER USE (55-56)

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

METHOD OF CONSTRUCTION (57)

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

CONTRACTOR

NAME OF WELL CONTRACTOR: DAWN WEBB EAD. — WELL CONTRACTOR'S LICENCE NUMBER: 6844

ADDRESS: 868 MICHENER RD Unit 100, Ottawa ONT.

NAME OF WELL TECHNICIAN: Tim HARRISON — WELL TECHNICIAN'S LICENCE NUMBER: T-2251

SIGNATURE OF TECHNICIAN/CONTRACTOR

SUBMISSION DATE: DAY 05 MO 07 YR 94

OFFICE USE ONLY

DATA SOURCE (58) — CONTRACTOR (59-62): 6844 — DATE RECEIVED (63-68) (80): JUL 15 1994

DATE OF INSPECTION — INSPECTOR

REMARKS

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Ministry of the Environment
Ontario

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WATER WELL RECORD

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COUNTY OR DISTRICT	TOWNSHIP, BOROUGH, CITY, TOWN, VILLAGE	CON.	BLOCK	TRACT	SURVEY	ETC.	LOT (25-27)
OTTAWA-CARLETON	GLOUCESTER		6				3

[redacted] 205 STEVENAGE DR. — DATE COMPLETED (48-53): DAY 16 MO 06 YR 94

(7 10 12 17 18) — NG (24) — RC. (25) — ELEVATION (26) — RC (30) — BASIN CODE (31) — II III IV (47)

LOG OF OVERBURDEN AND BEDROCK MATERIALS (SEE INSTRUCTIONS)

GENERAL COLOUR	MOST COMMON MATERIAL	OTHER MATERIALS	GENERAL DESCRIPTION	DEPTH - FEET FROM	DEPTH - FEET TO
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 (1 2) — 32 (10 14 15 21 32 43 54 65 75 80)

41 WATER RECORD

WATER FOUND AT - FEET	KIND OF WATER
16' (10-13)	1 FRESH 2 SALTY 3 SULPHUR 4 MINERALS 5 GAS 6 — NOT TESTED (14)
(15-18)	(19)
(20-23)	(24)
(25-28)	(29)
(30-33)	(34) (80)

51 CASING & OPEN HOLE RECORD

INSIDE DIAM INCHES	MATERIAL	WALL THICKNESS INCHES	DEPTH - FEET FROM	DEPTH - FEET TO
2" (10-11)	1 STEEL 2 GALVANIZED 3 CONCRETE 4 OPEN HOLE 5 ☒ PLASTIC (12)	3/16" (13,16)	6"	20
(17-18)	(19)			(20-23)
(24-25)	(26)			(27-30)

SCREEN

SIZE(S) OF OPENING (SLOT NO.) (31-33)	DIAMETER (34-38)	LENGTH (39-40)
0.10	2" INCHES	10' FEET
MATERIAL AND TYPE: PLASTIC	DEPTH TO TOP OF SCREEN (41-44): 10' FEET	(80)

61 PLUGGING & SEALING RECORD

DEPTH SET AT - FEET FROM	TO	MATERIAL AND TYPE (CEMENT GROUT LEAD PACKER ETC.)
6' (10-13)	7' (14-17)	CLAY
7' (18-21)	9' (22-25)	Hole Plug 3/8"
9' (26-29)	20' (30-33) (80)	SAND #3

71 PUMPING TEST

PUMPING TEST METHOD (10)	PUMPING RATE (11-14)	DURATION OF PUMPING (15-16 HOURS, 17-18 MINS)
1 ☐ PUMP 2 ☐ BAILER — NOT	TESTED GPM	

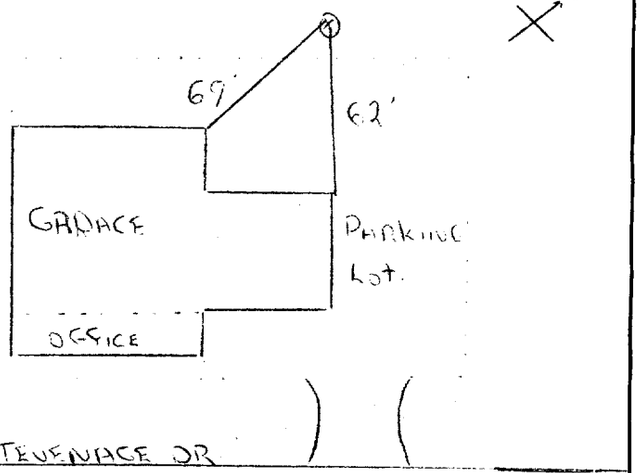
STATIC LEVEL (19-21)	WATER LEVEL END OF PUMPING (22-24)	WATER LEVELS DURING (25) 1 ☐ PUMPING 2 ☐ RECOVERY	15 MINUTES (26-29)	30 MINUTES (26-29)	45 MINUTES (32-34)	60 MINUTES (35-37)
PIEZOMETER FEET	FEET		FEET	FEET	FEET	FEET

IF FLOWING GIVE RATE (38-41)	PUMP INTAKE SET AT	WATER AT END OF TEST (42)	RECOMMENDED PUMP TYPE	RECOMMENDED PUMP SETTING (43-45)	RECOMMENDED PUMPING RATE (46-49)
INSTALLED GPM	FEET	1 ☐ CLEAR 2 ☐ CLOUDY	☐ SHALLOW ☐ DEEP	FEET	GPM

(50-53)

LOCATION OF WELL

IN DIAGRAM BELOW SHOW DISTANCES OF WELL FROM ROAD AND LOT LINE. INDICATE NORTH BY ARROW.



DRILLERS REMARKS: 149093

FINAL STATUS OF WELL (54)

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

WATER USE (55-56)

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

METHOD OF CONSTRUCTION (57)

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

CONTRACTOR

NAME OF WELL CONTRACTOR: DANN LEE DRILLING — WELL CONTRACTOR'S LICENCE NUMBER: 6844

ADDRESS: 868 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): 6844 — DATE RECEIVED (63-68): JUL 15 1994 (80)

DATE OF INSPECTION — INSPECTOR — REMARKS

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FORM NO. 0506 (11/86) FORM 9

Ministry of the Environment
Ontario

The Ontario Water Resources Act

WATER WELL RECORD

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COUNTY OR DISTRICT	TOWNSHIP, BOROUGH, CITY, TOWN, VILLAGE	CON. BLOCK, TRACT, SURVEY, ETC.	LOT (25-27)
OTTAWA-CARLETON	GLOUCESTER	6	3

[redacted] 205 STEVENAGE DR. — DATE COMPLETED (48-53): DAY 17 MO 06 YR 94

(10 12 17 18 — 24 — RC 25 — ELEVATION 26 — RC 30 — BASIN CODE 31 — II III IV — 47)

LOG OF OVERBURDEN AND BEDROCK MATERIALS (SEE INSTRUCTIONS)

GENERAL COLOUR	MOST COMMON MATERIAL	OTHER MATERIALS	GENERAL DESCRIPTION	DEPTH - FEET FROM	DEPTH - FEET TO
BROWN	CLAY	SAND & GRAVEL	SOFT	3"	5'
BROWN	GRAVEL	CLAY	PACKED	5'	10'
GREY	CLAY	STONES	DENSE	10'	20

31 (1 2 — 10 — 14 15 — 21 — 32 — 43 — 54 — 65 — 75 — 80)

32 (1 2 — 10 — 14 15 — 21 — 32 — 43 — 54 — 65 — 75 — 80)

41 WATER RECORD

WATER FOUND AT - FEET	KIND OF WATER
15'	1 ☐ FRESH 2 ☐ SALTY — 3 ☐ SULPHUR 4 ☐ MINERALS 5 ☐ GAS
	1 ☐ FRESH 2 ☐ SALTY — 3 ☐ SULPHUR 4 ☐ MINERALS 5 ☐ GAS
	1 ☐ FRESH 2 ☐ SALTY — 3 ☐ SULPHUR 4 ☐ MINERALS 5 ☐ GAS
	1 ☐ FRESH 2 ☐ SALTY — 3 ☐ SULPHUR 4 ☐ MINERALS 5 ☐ GAS
	1 ☐ FRESH 2 ☐ SALTY — 3 ☐ SULPHUR 4 ☐ MINERALS 5 ☐ GAS

NOT TESTED

51 CASING & OPEN HOLE RECORD

INSIDE DIAM INCHES	MATERIAL	WALL THICKNESS INCHES	DEPTH - FEET FROM	DEPTH - FEET TO
2"	1 ☐ STEEL 2 ☐ GALVANIZED 3 ☐ CONCRETE 4 ☐ OPEN HOLE 5 ☒ PLASTIC	3/16	3'	20'
	1 ☐ STEEL 2 ☐ GALVANIZED 3 ☐ CONCRETE 4 ☐ OPEN HOLE 5 ☐ PLASTIC			
	1 ☐ STEEL 2 ☐ GALVANIZED 3 ☐ CONCRETE 4 ☐ OPEN HOLE 5 ☐ PLASTIC			

SCREEN

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

61 PLUGGING & SEALING RECORD

DEPTH SET AT - FEET FROM	DEPTH SET AT - FEET TO	MATERIAL AND TYPE (CEMENT GROUT, LEAD PACKER, ETC.)
3	7	CLAY
7	10	HOLEPLUG 3/8
10	20	SAND #3

71 PUMPING TEST

PUMPING TEST METHOD	PUMPING RATE	DURATION OF PUMPING
1 ☐ PUMP 2 ☐ BAILER	NOT TESTED GPM	HOURS MINS

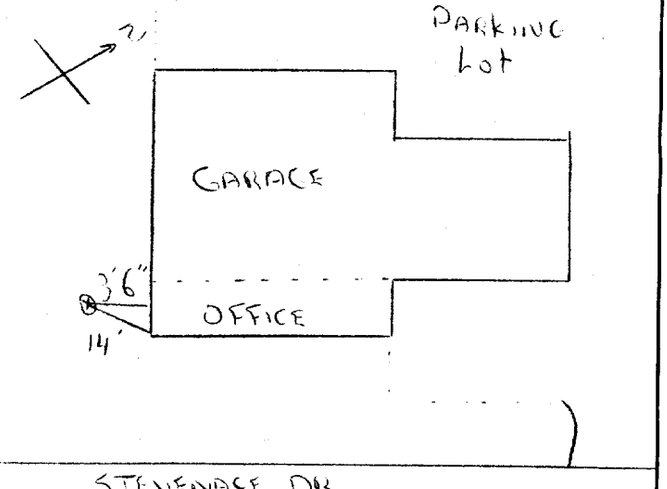
STATIC LEVEL	WATER LEVEL END OF PUMPING	WATER LEVELS DURING	15 MINUTES	30 MINUTES	45 MINUTES	60 MINUTES
PIEZOMETER FEET	FEET	1 ☐ PUMPING 2 ☐ RECOVERY	FEET	FEET	FEET	FEET

IF FLOWING, GIVE RATE	PUMP INTAKE SET AT	WATER AT END OF TEST
GPM	INSTALLED FEET	1 ☐ CLEAR 2 ☐ CLOUDY

RECOMMENDED PUMP TYPE	RECOMMENDED PUMP SETTING	RECOMMENDED PUMPING RATE
☐ SHALLOW ☐ DEEP	FEET	GPM

LOCATION OF WELL

IN DIAGRAM BELOW SHOW DISTANCES OF WELL FROM ROAD AND LOT LINE. INDICATE NORTH BY ARROW.



DRILLERS REMARKS: 149097

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; ☐ DEWATERING
WATER USE	1 ☐ DOMESTIC; 2 ☐ STOCK; 3 ☐ IRRIGATION; 4 ☐ INDUSTRIAL; 5 ☐ COMMERCIAL; 6 ☐ MUNICIPAL; 7 ☐ PUBLIC SUPPLY; 8 ☐ COOLING OR AIR CONDITIONING; ☒ OTHER TESTING; 9 ☐ 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; ☐ DIGGING; ☐ OTHER

CONTRACTOR

NAME OF WELL CONTRACTOR	WELL CONTRACTOR'S LICENCE NUMBER
DAVIS DRILLING LTD	6844

ADDRESS: 668 McKINLEY RD., UNIT 100 OTTAWA ONT.

NAME OF WELL TECHNICIAN	WELL TECHNICIAN'S LICENCE NUMBER
TIM HARRISON	T-2251

SIGNATURE OF TECHNICIAN/CONTRACTOR: [signature] — SUBMISSION DATE: DAY 05 MO 07 YR 94

OFFICE USE ONLY

DATA SOURCE	CONTRACTOR	DATE RECEIVED
	6844	JUL 15 1994

DATE OF INSPECTION: — INSPECTOR: — REMARKS:

MINISTRY OF THE ENVIRONMENT COPY

FORM NO. 0506 (11/86) FORM 9

Ontario **Ministry of the Environment**

The Ontario Water Resources Act
WATER WELL RECORD

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

11 (1 2) **1531854** Municipality 15002 (10 14) Con. RF (15 22 23 24) 06

County or District	Township/Borough/City/Town/Village	Con block tract survey, etc.	Lot (25-27)
Ottawa Carleton	Ottawa Carleton	Con 6	5

Owner's surname (26-47)	First Name	Address	Date completed (48-53)
Minto	Properties Ltd	4236 Russell Road	09 day 04 month 2001 year

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

LOG OF OVERBURDEN AND BEDROCK MATERIALS (see instructions)

General colour	Most common material	Other materials	General description	Depth - feet From	Depth - feet To

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

41 WATER RECORD

Water found at - feet	Kind of water
10-13	1 ☐ Fresh 2 ☐ Salty 3 ☐ Sulphur 4 ☐ Minerals 6 ☐ Gas (14)
15-18	1 ☐ Fresh 2 ☐ Salty 3 ☐ Sulphur 4 ☐ Minerals 6 ☐ Gas (19)
20-23	1 ☐ Fresh 2 ☐ Salty 3 ☐ Sulphur 4 ☐ Minerals 6 ☐ Gas (24)
25-28	1 ☐ Fresh 2 ☐ Salty 3 ☐ Sulphur 4 ☐ Minerals 6 ☐ Gas (29)
30-33	1 ☐ Fresh 2 ☐ Salty 3 ☐ Sulphur 4 ☐ Minerals 6 ☐ Gas (34)

60

51 CASING & OPEN HOLE RECORD

Inside diam inches	Material	Wall thickness inches	Depth - feet From	Depth - feet To
10-11: 4	1 ☐ Steel 2 ☐ Galvanized 3 ☐ Concrete 4 ☒ Open hole 5 ☐ Plastic (12)		80'	0' (13-16)
17-18	1 ☐ Steel 2 ☐ Galvanized 3 ☐ Concrete 4 ☐ Open hole 5 ☐ Plastic (19)			(20-23)
24-25	1 ☐ Steel 2 ☐ Galvanized 3 ☐ Concrete 4 ☐ Open hole 5 ☐ Plastic (26)			(27-30)

SCREEN

Sizes of opening (Slot No.) (31-33)	Diameter (34-38) inches	Length (39-40) feet

Material and type	Depth at top of screen (41-44) feet	30

61 PLUGGING & SEALING RECORD

☐ Annular space ☒ Abandonment

Depth set at - feet From	Depth set at - feet To	Material and type (Cement grout, bentonite, etc.)
80 (10-13)	20 (14-17)	12 bag hole plug
20 (18-21)	0 (22-25)	8 bags high early
(26-29)	(30-33)	80

71 PUMPING TEST

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

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

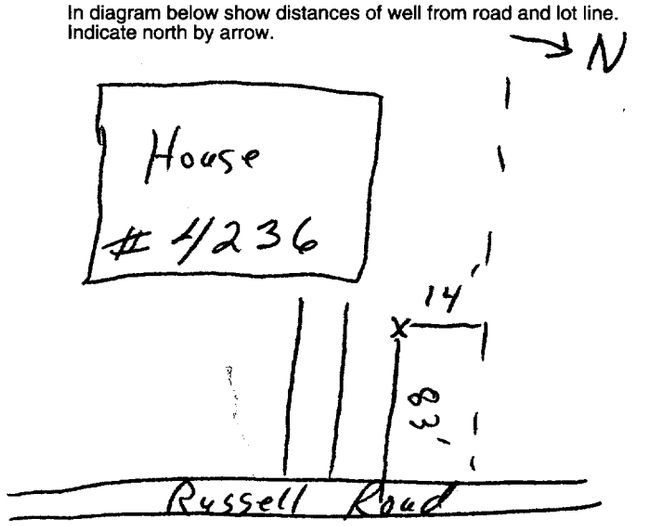
If flowing give rate (38-41) GPM	Pump intake set at feet	Water at end of test (42) ☐ Clear ☐ Cloudy

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

50-53

LOCATION OF WELL

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



227491

FINAL STATUS OF WELL (54)

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

WATER USE (55-56)

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

METHOD OF CONSTRUCTION (57)

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

Name of Well Contractor	Well Contractor's Licence No.
Olympic Drilling Co.Ltd.	4006

Address
2320 Scrivens Dr. Metcalfe Ont.

Name of Well Technician	Well Technician's Licence No.
Wayne Renwick	327

Signature of Technician/Contractor	Submission date (day mo yr)
Wayne Renwick	12 03 01

MINISTRY USE ONLY

Data source (58)	Contractor (59-62)	Date received (63-68) (80)
	4006	APR 03 2001

Date of inspection	Inspector

Remarks: CSS.ES1

2 - MINISTRY OF THE ENVIRONMENT COPY

Ontario Ministry of the Environment

Well Tag No. for Master Well (Affix and/or Print Below)
A 068579
A068579 MW7-08

Master Well Record for Cluster Well Construction

Regulation 903 Ontario Water Resources Act

Page 1 of 2

Master Well Owner's and Land Owner's Information

First Name	Last Name	E-mail Address
Coors Tek Inc. (Dan Engineering)		

Mailing Address (Street Number/Name, RR)	Municipality	Province	Postal Code	Telephone No. (inc. area code)
3429 Hawthorne Road	Ottawa	ON	K1G4G2	6137365100

Location and Construction of the Master Well in the Cluster

Address of Well Location (Street Number/Name, RR)	Township	Lot	Concession
3429 Hawthorne Road			

County/District/Municipality	City/Town/Village	Province	Postal Code
	Ottawa	Ontario	K1G4G2

UTM Coordinates	Zone	Easting	Northing	GPS Unit Make	Model	Mode of Operation
NAD 83	18	453264	5024850	Garmin	Etrex	☐ Undifferentiated ☑ Averaged ☐ Differentiated, specify

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

MW7-08

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

Hole Details

Depth (Metres) From	Depth (Metres) To	Diameter (Centimetres)
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

Construction Details

Inside Diameter (Centimetres)	Material (steel, plastic, fibreglass, concrete, galvanized)	Wall Thickness	Depth (Metres) From	Depth (Metres) To
5.1	PVC	sched 40	0	4.27

No Casing and Screen Used

Open Hole ☐ Yes ☑ No

Static Water Level Test

5.1 Metres

Screen

☐ Galvanized ☐ Steel ☐ Fibreglass ☐ Concrete ☑ Plastic

Outside Diameter (Centimetres)	Slot No.
5.8	10

Annular Space/Abandonment Sealing Record

Depth Set at (Metres) From	Depth Set at (Metres) To	Type of Sealant Used (Material and Type)	Volume Used (Cubic Metres)
0	3.6	Bentonite holeplug	66 Kgs

Water Details

Water found at Depth		Kind of Water
5.1 Metres	☐ Gas	☐ Fresh ☐ Salty ☐ Sulphur ☐ Minerals
Metres	☐ Gas	☐ Fresh ☐ Salty ☐ Sulphur ☐ Minerals
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	Please indicate Number of Cluster Well Information Log Sheets Submitted
9	1
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 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

[redacted]

Well Contractor and Well Technician Information

Business Name of Well Contractor	Well Contractor's Licence No.
George Downing Estate Drilling	1814

Business Address (Street No./Name, number, RR)	Municipality
410 Rue Principale	Grenville-sur-la-Rouge

Province	Postal Code	Business E-mail Address
Qc	J0V1B0	downing@xplornet.com

Bus. Telephone No. (inc. area code)	Name of Well Technician (Last Name, First Name)
8192426469	Downing, Bruce

Well Technician's Licence No.	Signature of Technician	Date Submitted (yyyy/mm/dd)
2173	Bruce Downing	2008/09/23.

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

Remarks

1992 (11/2006)

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Ministry of the Environment

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

Cluster Well Information for Cluster Well Construction

Regulation 903 Ontario Water Resources Act

Page 1 of 1

Property Owner's Information

First Name	Last Name	Mailing Address (Street No./Name, RR)	Municipality
DEW Engineering	Coors Tek Inc.	3429 Hawthorne Road	Ottawa

Province	Postal Code	E-mail Address	Telephone No. (inc. area code)
ONTARIO	K1G4G2		6137365100

[redacted]
upon request

Cluster Well Information

Address of Well Location (Street Number/Name, RR)	Lot	Concession	Township	County/District/Municipality
3429 Hawthorne Road				

City/Town/Village	Province	Postal Code	GPS Unit Make	Model	Unit Mode of Operation		
Ottawa	Ontario	K1G4G2	Garmin	Etrex	☐ Differentiated, specify:	☐ Undifferentiated	☑ Averaged

Signature of Technician/Contractor: Bruce Downing

Date (yyyy/mm/dd):

Well # on Sketch	UTM Coordinates Zone	Easting	Northing	Full Depth of Hole (metres)	Hole Diameter (cm)	Method of Construction	Casing Material	Casing Length (metres)	Screen Interval (metres) From	To	Annular Space Sealant Used	Static Water Level (metres)	Abandonment Sealant Used	Comments	Date of Completion (yyyy/mm/dd)
MW 1-08	18	453371	5025023	6.0	20	HSA	PVC	3.0	3.0	6.0	Bentonite	2.13			2008/07/04
MW 2-08	18	453391	5024942	6.7				4.5	4.5	6.7	Holeplug	4.5			2008/06/24
MW 3-08	18	453417	5024895	2.1				2.1	—	—					2008/06/23
MW 4-08	18	453337	5025039	3.1				2.4	2.4	3.1					2008/07/07
MW 5-08	18	453343	5024858	2.3				1.5	1.5	2.3					2008/07/02
MW 6-08	18	453342	5024835	1.4				1.4	+	—					2008/07/02
MW 8-08	18	453262	5025000	1.9				1.5	1.5	1.9					2008/06/24
MW 9-08	18	453376	5024899	6.7				3.0	3.0	6.7		3.9			2008/07/08

Well Contractor and Well Technician Information

Business Name of Well Contractor	Business Address (Street Number/Name, RR)	Municipality	Province
George Downing Estate Drilling Ltd.	410 Rue Principale	Grenville-sur-la-Rouge	Qc

Postal Code	Business Telephone No. (inc. area code)	Well Contractor's Licence No.	Business E-mail Address
J0V1B0	8192426469	1844	downing@explornet.com

Name of Well Technician (First Name, Last Name)	Well Technician's Licence No.	Date Submitted (yyyy/mm/dd)	Signature of Technician
Bruce Downing	2173		Bruce Downing

Date 1st Well in Cluster Constructed (yyyy/mm/dd)	Date Last Well in Cluster Constructed (yyyy/mm/dd)
2008/06/1	

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Date Received (yyyy/mm/dd)	Date Inspected (yyyy/mm/dd)
NOV 26 2008	
Audit No. C 03068	Remarks m02888

1991 (11/2006)

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Well Ta... A 081867 ...nd/or Print Below)

A 081867

Master Well Record for Cluster Well Construction

Regulation 903 Ontario Water Resources Act

Page 1 of 3

[redacted]

Location and Construction of the Master Well in the Cluster

Address of Well Location (Street Number/Name, RR)	Township	Lot	Concession
Hunt club Rd & Hawthorn.			

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

UTM Coordinates	Zone	Easting	Northing	GPS Unit Make	Model	Mode of Operation
NAD 8 3	18	453380	5024804	Garmin	Etrex	☐ 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 mon. boring
☐ Alteration (Construction) ☐ Abandoned, other, specify

Construction Details

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

No Casing and Screen Used

Open Hole ☐ Yes ☐ No

Static Water Level Test

[ ] [ ] Metres

Screen

☐ Galvanized ☐ Steel ☐ Fibreglass ☐ Concrete ☑ Plastic

Outside Diameter (Centimetres)	Slot No.
4.21	10

Water Details

Water found at Depth	Kind of Water
[ ] Metres ☐ Gas	☐ Fresh ☐ Salty ☐ Sulphur ☐ Minerals
[ ] Metres ☐ Gas	☐ Fresh ☐ Salty ☐ Sulphur ☐ Minerals
[ ] Metres ☐ Gas	☐ Fresh ☐ Salty ☐ Sulphur ☐ Minerals

Annular Space/Abandonment Sealing Record

Depth Set at (Metres) From	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:

Date Master Well Completed (yyyy/mm/dd): 2009/09/28

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

Total Wells in Cluster	Please indicate Number of Cluster Well Information Log Sheets Submitted
3	1
Total Wells on this Property: 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	Date (yyyy/mm/dd)

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

Signature	Date (yyyy/mm/dd)
S Mortisan	2009/09/28

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: L4B1C4 — 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

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Audit No.	Well Contractor No.
M 05246	
Date Received (yyyy/mm/dd): OCT 27 2009	Date of Inspection (yyyy/mm/dd):

Remarks:

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Ontario Ministry of the Environment

Well A 081867 (Well Tag No.)

A 081867

Cluster Well Information for Cluster Well Construction

Regulation 903 Ontario Water Resources Act

Page 2 of 3

[redacted]

Address of Well Location (Street Number/Name, RR)	Lot	Concession	Township	County/District/Municipality
Hunt Club Road & Hawthorn				

City/Town/Village	Province	Postal Code	GPS Unit Make	Model	Unit Mode of Operation
Ottawa	Ontario		GARMIN	Etrex	☐ 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 Zone	Easting	Northing	Full Depth of Hole (metres)	Hole Diameter (cm)	Method of Construction	Casing Material	Casing Length (metres)	Screen Interval (metres) From	To	Annular Space Sealant Used	Static Water Level (metres)	Abandonment Sealant Used	Comments	Date of Completion (yyyy/mm/dd)
2	18	453553	5024874	5.18	8.25	Direct Push	PVC	2.13	2.13	5.18	Benseal				2009/09/2
3	18	454077	5025380	6.1	8.25	Direct Push	PVC	3.1	3.1	6.1	Benseal				2009/09/2

Well Contractor and Well Technician Information

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

Postal Code	Business Telephone No. (inc. area code)	Well Contractor's Licence No.	Business E-mail Address
L4B1K6	905 764 4930	7241	wreords@stratasoil.com

Name of Well Technician (First Name, Last Name)	Well Technician's Licence No.	Date Submitted (yyyy/mm/dd)	Signature of Technician
Mike Mair	3448	2009/10/15	

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

Ministry Use Only

Date Received (yyyy/mm/dd)	Date Inspected (yyyy/mm/dd)
OCT 27 2009	
Audit No. © 00241	Remarks MOE246

1991 (11/2006)

BA 1796

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Ontario — Ministry of the Environment

Measurements recorded in: ☑ Metric ☐ Imperial

Well Tag No. (Place Sticker and/or Print Below) **A 093968** A093968

Well Record

Regulation 903 Ontario Water Resources Act

7016 Page 1 of 2

[redacted]

Well Location

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

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

UTM Coordinates	Zone	Easting	Northing	Municipal Plan and Sublot Number	Other
NAD 83	18	453345	5025414		

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

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

Annular Space

Depth Set at (m/ft) From	To	Type of Sealant Used (Material and Type)	Volume Placed (m³/ft³)
0	.31	Concrete / flushmount	
.31	1.22	Benseal	
1.22	3.66	Sand	

Method of Construction

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

Well Use

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

Construction Record - Casing

Inside Diameter (cm/in)	Open Hole OR Material (Galvanized, Fibreglass, Concrete, Plastic, Steel)	Wall Thickness (cm/in)	Depth (m/ft) From	Depth (m/ft) To
4.03	PVC	.368	0	2.74

Construction Record - Screen

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

Status of Well

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

Water Details

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

Hole Diameter

Depth (m/ft) From	To	Diameter (cm/in)
0	3.66	8.25

Results of Well Yield Testing

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

If pumping discontinued, give reason:

Pump intake set at (m/ft)

Pumping rate (l/min / GPM)

Duration of pumping ____ hrs + ____ min

Final water level end of pumping (m/ft)

If flowing give rate (l/min / GPM)

Recommended pump depth (m/ft)

Recommended pump rate (l/min / GPM)

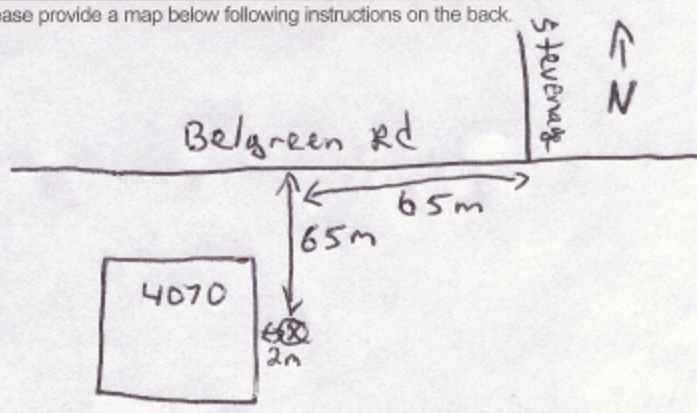
Well production (l/min / GPM)

Disinfected? ☐ Yes ☐ No

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

Map of Well Location

Please provide a map below following instructions on the back.



Comments:

Well Contractor and Well Technician Information

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

Business Address (Street Number/Name)	Municipality	Province	Postal Code	Business E-mail Address
#2-147 West Beaver Creek	Richmond Hill	ON	L4B1C6	

Bus. Telephone No. (inc. area code)	Name of Well Technician (Last Name, First Name)	Well Technician's Licence No.	Signature of Technician and/or Contractor	Date Submitted
(905) 764-9384	Robinson Travis	3158		2010 01 03

Well owner's information package delivered ☐ Yes ☐ No

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

Date Work Completed: 2009 12 23

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Audit No. Z 100163

Received JAN 21 2010

0506E (12/2007) **Ministry's Copy**

BB, 1796

Ontario — Ministry of the Environment

Measurements recorded in: ☑ Metric ☐ Imperial

Well Tag No. (Place Sticker and/or Print Below): A093969 **A 093969**

Well Record

Regulation 903 Ontario Water Resources Act

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[redacted]

Address of Well Location (Street Number/Name)	Township	Lot	Concession
4070 Belgreen Road			

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

UTM Coordinates	Zone	Easting	Northing	Municipal Plan and Sublot Number	Other
NAD 83	18	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	Depth (m/ft) To
GRY	Gravel / Concrete		Hard	0	.3
GRY	Clay	silt / gravel	hard, dry	.3	3.1
GRY	clay	silt / gravel	hard, wet	3.1	3.66

Annular Space

Depth Set at (m/ft) From	To	Type of Sealant Used (Material and Type)	Volume Placed (m³/ft³)
0	1.83	Bensea	
1.83	3.66	Sand	

Method of Construction

☐ Cable Tool ☐ Diamond
☐ Rotary (Conventional) ☐ Jetting
☐ Rotary (Reverse) ☐ Driving
☐ Boring ☐ Digging
☐ Air percussion
☑ Other, specify: DIRECT PUSH

Well Use

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

Construction Record - Casing

Inside Diameter (cm/in)	Open Hole OR Material (Galvanized, Fibreglass, Concrete, Plastic, Steel)	Wall Thickness (cm/in)	Depth (m/ft) From	Depth (m/ft) To
4.03	PVC	.368	0	2.13

Construction Record - Screen

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

Status of Well

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

Water Details

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

Hole Diameter

Depth (m/ft) From	To	Diameter (cm/in)
0	3.66	8.25

Results of Well Yield Testing

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

If pumping discontinued, give reason:

Pump intake set at (m/ft)

Pumping rate (l/min / GPM)

Duration of pumping ____ hrs + ____ min

Final water level end of pumping (m/ft)

If flowing give rate (l/min / GPM)

Recommended pump depth (m/ft)

Recommended pump rate (l/min / GPM)

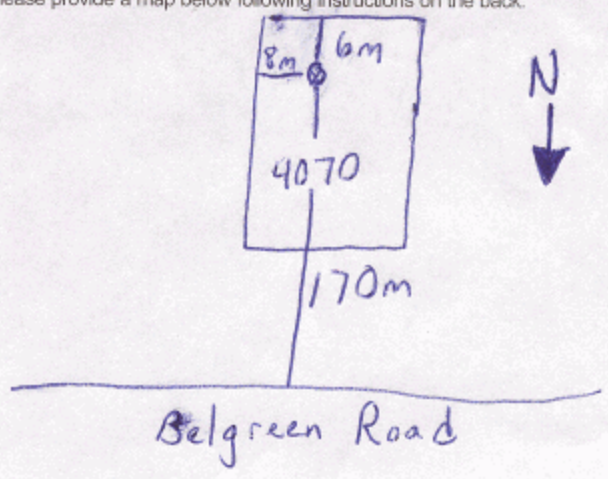
Well production (l/min / GPM)

Disinfected? ☐ Yes ☐ No

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

Map of Well Location

Please provide a map below following instructions on the back.



Comments:

Well Contractor and Well Technician Information

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

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

Province	Postal Code	Business E-mail Address
ON	L4B1C6	

Bus. Telephone No. (inc. area code)	Name of Well Technician (Last Name, First Name)
(905) 764-9814	Robinson Travis

Well Technician's Licence No.	Signature of Technician and/or Contractor	Date Submitted
3159		2010/01/03

Well owner's information package delivered	Date Package Delivered	Date Work Completed
☐ Yes ☐ No		2009/12/23

Ministry Use Only

Audit No. Z 100162

JAN 21 2010 Received

0506E (12/2007)

Ministry's Copy

Ontario Ministry of the Environment

Well A 036934 (t number below)

A 036934

Well Record

Regulation 903 Ontario Water Resources Act

page ___ of ___

Instructions for Completing Form

- For use in the **Province of Ontario** only. This document is a permanent **legal** document. Please retain for future reference.
- All Sections **must** be completed in full to avoid delays in processing. Further instructions and explanations are available on the back of this form.
- Questions regarding completing this application can be directed to the Water Well Management Coordinator at 416-235-6203.
- **All metre measurements shall be reported to 1/10th of a metre.**
- Please print clearly in blue or black ink only.

Ministry Use Only

MUN | CON | LOT

[redacted]

3968 Russell Rd Ottawa Carleton | Ottawa Carleton | 3 | 6

RR#/Street Number/Name: 3968 Russell Rd | City/Town/Village: Ottawa | Site/Compartment/Block/Tract etc.

GPS Reading: NAD 83 | Zone 18 | Easting 453131 | Northing 5025786 | Unit Make/Model: Spot Track | Mode of Operation: UTM | ☐ Undifferentiated ☑ Averaged ☐ Differentiated, specify

Log of Overburden and Bedrock Materials (see instructions)

General Colour	Most common material	Other Materials	General Description	Depth From	Depth To (Metres)
Brown	Top Soil			0	70
Grey	Clay + Stone			70	544

Hole Diameter

Depth From	Depth To (Metres)	Diameter Centimetres

Water Record

Water found at 544 Metres ☑ Kind of Water

360cm ☑ Fresh ☐ Sulphur ☐ Gas ☐ Salty ☐ Minerals ☐ Other:

☐ m ☐ Fresh ☐ Sulphur ☐ Gas ☐ Salty ☐ Minerals ☐ Other:

☐ m ☐ Fresh ☐ Sulphur ☐ Gas ☐ Salty ☐ Minerals ☐ Other:

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

Chlorinated ☑ Yes ☐ No

Construction Record

Inside diam centimetres	Material	Wall thickness centimetres	Depth From	Depth To (Metres)
Casing				
91	☐ Steel ☐ Fibreglass ☐ Plastic ☑ Concrete ☐ Galvanized	7	0	513
	☐ Steel ☐ Fibreglass ☐ Plastic ☐ Concrete ☐ Galvanized			
	☐ Steel ☐ Fibreglass ☐ Plastic ☐ Concrete ☐ Galvanized			
Screen				
Outside diam	☐ Steel ☐ Fibreglass ☐ Plastic ☐ Concrete ☐ Galvanized	Slot No.		
No Casing or Screen				
	☐ Open hole			

Test of Well Yield

Top cover

Pumping test method: Pump

Pump intake set at - (metres) 220

Pumping rate - (litres/min) 13

Duration of pumping 1 hrs + ___ min

Final water level end of pumping cm 427 metres

Recommended pump type. ☑ Shallow ☐ Deep

Recommended pump depth. cm 480 metres

Recommended pump rate. 18 (litres/min)

If flowing give rate - 13 (litres/min)

If pumping discontinued, give reason.

	Draw Down Time min	Draw Down Water Level Metres	Recovery Time min	Recovery Water Level Metres
Static Level		421		
1	1	421	1	427
2	2	421	2	427
3	3	421	3	427
4	4	422	4	427
5	5	422	5	427
10	10	423	10	427
15	15	423	15	427
20	20	423	20	427
25	25	424	25	427
30	30	424	30	427
40	40	425	40	426
50	50	426	50	426
60	60	427	60	425

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)
0	300	Clay	45

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: Geo Foforge | Well Contractor's Licence No.: 7199

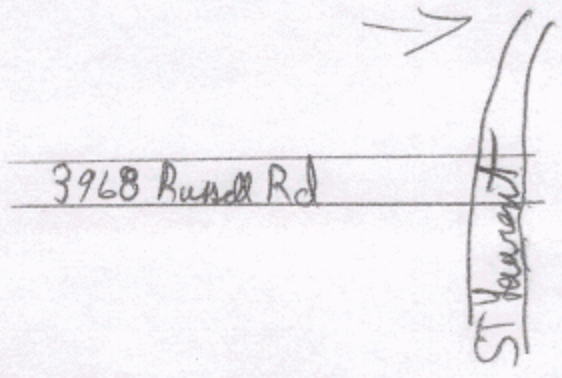
Business Address (street name, number, city etc.): Box 208 Clarence Creek

Name of Well Technician (last name, first name): Geo Foforge | Well Technician's Licence No.: T-2986

Signature of Technician/Contractor: X Geo Foforge | Date Submitted YYYY MM DD: 2010 06 23

Location of Well

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



Audit No. Z 40785 | Date Well Completed YYYY MM DD: 2010 06 12

Was the well owner's information package delivered? ☐ Yes ☐ No | Date Delivered YYYY MM DD

Ministry Use Only

Data Source | Contractor

Date Received YYYY MM DD: JUL 0 8 2010 | Date of Inspection YYYY MM DD

Remarks | Well Record Number

0506E (06/03) Contractor's Copy ☑ Ministry's Copy ☑ Well Owner's Copy ☐ *Cette formule est disponible en français*

Ontario — Ministry of the Environment

Well Tag No. *(Place Sticker and/or Print Below)*: A 165631

Well Record

Regulation 903 Ontario Water Resources Act

5-15777 Page _____ of _____

Measurements recorded in: ☒ Metric ☐ Imperial

Well Owner's Information

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

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

Well Location

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

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

UTM Coordinates	Zone	Easting	Northing	Municipal Plan and Sublot Number	Other
NAD 83	18	453675	5025724		

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

General Colour	Most Common Material	Other Materials	General Description	Depth (m/ft) From	Depth (m/ft) To
BRN/GRY	Gravel	Fill	Soft	0	.61
GRY	Fill			.61	122
GRY	Till			1.22	1.63
GRY	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 / Flushmount	
.31	1.22	Bentonite	
1.22	2.44	Grout Slurry	
2.44	4.27	Sand	

Method of Construction

☐ Cable Tool ☒ Diamond
☐ Rotary (Conventional) ☐ Jetting
☐ Rotary (Reverse) ☐ Driving
☐ Boring ☐ 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) From	Depth (m/ft) To
3.45	PVC	.356	0	2.74

Construction Record - Screen

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

Status of Well

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

Water Details

Water found at Depth (m/ft)	Kind of Water	Hole Diameter Depth From (m/ft)	Hole Diameter Depth To (m/ft)	Diameter (cm/in)
☐ Gas ☐ Other, *specify*	☐ Fresh ☐ Untested	0	1.83	8.25
☐ Gas ☐ Other, *specify*	☐ Fresh ☐ Untested	1.83	4.27	5.71
☐ Gas ☐ Other, *specify*	☐ Fresh ☐ Untested			

Results of Well Yield Testing

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

If pumping discontinued, give reason:

Pump intake set at (m/ft)

Pumping rate (l/min / GPM)

Duration of pumping hrs + min

Final water level end of pumping (m/ft)

If flowing give rate (l/min / GPM)

Recommended pump depth (m/ft)

Recommended pump rate (l/min / GPM)

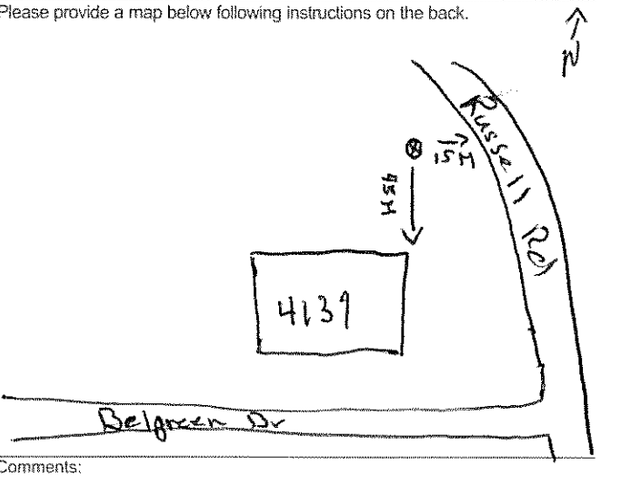
Well production (l/min / GPM)

Disinfected? ☐ Yes ☐ No

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

Map of Well Location

Please provide a map below following instructions on the back.



Comments:

Well Contractor and Well Technician Information

Business Name of Well Contractor	Well Contractor's Licence No.
Strata Drilling Group	7141

Business Address (Street Number/Name)	Municipality	Province	Postal Code	Business E-mail Address
165 Shields Court	Markham	ON	L3R8V2	Wrecords@Stratagrp.com

Bus. Telephone No. (inc. area code)	Name of Well Technician (Last Name, First Name)	Well Technician's Licence No.	Signature of Technician and/or Contractor	Date Submitted
9057649304	Beattie, Brian Matthew	3418		2014 08 29

Well owner's information package delivered	Date Package Delivered	Date Work Completed
☐ Yes ☐ No		2014 07 16

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Audit No. Z 193888

SEP 08 2014 Received

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Ministry's Copy

3428

Ontario — Ministry of the Environment

Well Tag No. (Place Sticker and/or Print Below) **Tag#: A150164** A150164

Well Record

Regulation 903 Ontario Water Resources Act

Measurements recorded in: ☒ Metric ☐ Imperial

5-15777 Page ____ of ____

Well Owner's Information

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

Mailing Address (Street Number/Name)	Municipality	Province	Postal Code	Telephone No. (inc. area code)
3280 Wharton Way	Mississauga	ON	L4X2C5	

Well Location

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

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

UTM Coordinates	Zone	Easting	Northing	Municipal Plan and Sublot Number	Other
NAD 83	18	453685	5025632		

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

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

Annular Space

Depth Set at (m/ft) From	To	Type of Sealant Used (Material and Type)	Volume Placed (m^3/ft^3)
0	.31	Flushmount/Concrete	
.31	3.35	Grout/slurry	
3.35	5.18	SAND	

Method of Construction

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

Well Use

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

Construction Record - Casing

Inside Diameter (cm/in)	Open Hole OR Material (Galvanized, Fibreglass, Concrete, Plastic, Steel)	Wall Thickness (cm/in)	Depth (m/ft) From	Depth (m/ft) To
3.45	PVC	.356	0	3.66

Construction Record - Screen

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

Status of Well

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

Water Details

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

Hole Diameter

Depth (m/ft) From	To	Diameter (cm/in)
8.5	5.18	5.71
0	8.5	8.25

Results of Well Yield Testing

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

If pumping discontinued, give reason:

Pump intake set at (m/ft)

Pumping rate (l/min / GPM)

Duration of pumping ____ hrs + ____ min

Final water level end of pumping (m/ft)

If flowing give rate (l/min / GPM)

Recommended pump depth (m/ft)

Recommended pump rate (l/min / GPM)

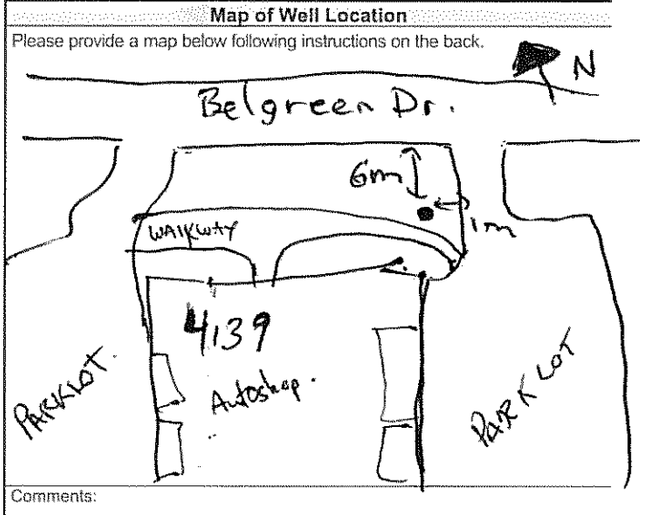
Well production (l/min / GPM)

Disinfected? ☐ Yes ☐ No

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

Map of Well Location

Please provide a map below following instructions on the back.



Comments:

Well Contractor and Well Technician Information

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

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

Province	Postal Code	Business E-mail Address
ON	L3R8V2	wtecords@stratasoil.com

Bus. Telephone No. (inc. area code)	Name of Well Technician (Last Name, First Name)
9057649304	Beatty, Brian

Well Technician's Licence No.	Signature of Technician and/or Contractor	Date Submitted
3616		2014/07/25

Well owner's information package delivered	Date Package Delivered	Date Work Completed
☐ Yes ☐ No		2014/07/21

Ministry Use Only

Audit No. Z 188258

SEP 08 2014

Received

Ministry's Copy

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.

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

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

Hole Diameter

Depth From	Depth To	Diameter
0 m	2.13 m	4.82 cm

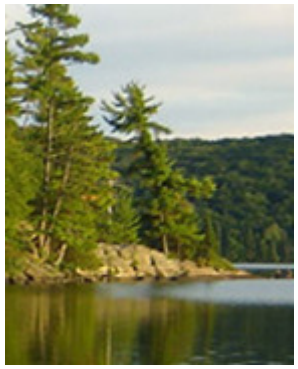
Audit Number: Z188356

Date Well Completed:

Date Well Record Received by MOE: September 30, 2014

Updated: March 7, 2019
Share facebook twitter Print
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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- Environment and energy
- Government
- Health and wellness
- Home and community
- Jobs and employment
- Law and safety
- Rural and north
- Taxes and benefits
- Travel and recreation

- about Ontario
- privacy
- accessibility
- terms of use

Nick Sullivan

From: Public Information Services <publicinformationservices@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 publicinformationservices@tssa.org or through mail along with a fee of $56.50 (including HST) per location. The fee is payable with credit card (Visa or MasterCard) or with a Cheque made payable to TSSA.

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

Thank you,

Roxana

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

From: Nick Sullivan <nsullivan@Patersongroup.ca>
Sent: August 28, 2019 11:12 AM
To: Public Information Services <publicinformationservices@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

APPENDIX 3

QUALIFICATIONS OF ASSESSORS

Nick Sullivan, B.Sc.

patersongroup

- 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

Mark S. D'Arcy, P. Eng

patersongroup

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

POSITION

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

EDUCATION

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

MEMBERSHIPS

Ottawa Geotechnical Group
Professional Engineers of Ontario

EXPERIENCE

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

SELECT LIST OF PROJECTS

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