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Phase I Environmental Site Assessment

Stonebridge – Phase 16
Part of 2701 Longfields Drive
Ottawa, Ontario

Prepared For

Mattamy Homes

September 11, 2019

Report: PE4327-2

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EXECUTIVE SUMMARY

Assessment

Paterson Group conducted a Phase I-Environmental Site Assessment (ESA) of Part of 2701 Longfields Drive, in the City of Ottawa, Ontario. The purpose of this Phase I-ESA was to research the past and current use of the subject site and neighbouring properties and to identify any environmental concerns with the potential to have impacted the subject property.

According to the historical research, the subject property was vacant, agricultural land until 2000 or 2001, when it was developed as part of the Stonebridge golf course. The site includes part of Hole 5 and Holes 6 and 7. No significant environmental concerns were identified with the historical use of the property.

Historical research indicates that surrounding lands were developed for residential purposes in the late 1990s and 2000s from agricultural lands. No potentially contaminating activities (PCAs) were identified at properties in the general vicinity of the subject site.

Fill material, suspected to consist of reworked native soils, was encountered during a geotechnical investigation on the site in 2018. To confirm the quality of the fill, metals testing was carried out as part of a soil quality assessment. Soil samples from the fairways and greens were also analyzed for pesticides. The test results were found to comply with the MECP standards selected for the property, except 2 selenium concentrations which were marginally above the standard. It was considered possible that the concentrations are naturally occurring, since selenium is naturally present in most rocks and soils. A further soil quality evaluation, which did not identify further selenium exceedances, was completed for the site, the detailed results of which are available in a separate report.

An inspection of the subject site and the surrounding properties was conducted on September 10, 2019. The subject site consists of several golf course fairways. Surrounding land use consists of residential and vacant properties that are not considered to pose a concern to the subject site.

Conclusion

Based on the findings of the Phase I ESA and previous work carried out, it is our opinion that a Phase II ESA is not required for the subject property.

It is recommended that soil in the vicinity of the known selenium exceedances be reassessed just prior to site redevelopment to confirm the initial data and determine the appropriate handling/management requirements for this material.

1.0 INTRODUCTION

At the request of Mattamy Homes, Paterson Group (Paterson) conducted a Phase I - Environmental Site Assessment (Phase I ESA) of part of the Stonebridge golf course, addressed 2701 Longfields Drive, 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. Connor Gallagher of Mattamy Homes. Mattamy's offices are located at 50 Hines Road, Suite 100, Ottawa, Ontario.

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

This Phase I ESA report has been prepared in general accordance with the requirements of Ontario Regulation 153/04 as amended by O.Reg. 269/11 (Environmental Protection Act), and also complies with the requirements of CSA Z768-01. The conclusions presented herein are based on information gathered from a limited historical review and field inspection program. The findings of the Phase I ESA are based on a review of readily available geological, historical and regulatory information and a cursory review made at the time of the field assessment. The historical research relies on information supplied by others, such as local, provincial and federal agencies and was limited within the scope-of-work, time and budget of the project herein.

2.0 PHASE I PROPERTY INFORMATION

Address:	Part of 2701 Longfields Drive, Ottawa, Ontario.
Legal Descriptions:	Part of Lot 7, Concession 2, Rideau Front, City of Ottawa.
Property Identification Number (PIN):	Part of 04591-2115
Location:	The subject property is located on the southwest side of Longfields Drive, between Prince of Wales Drive and Kilspindie Ridge, in the City of Ottawa, Ontario
Latitude and Longitude:	45°14' 52" N, 75°43' 0.1" W
Site Description:	
Configuration:	Irregular.
Site Area:	9.72 ha (approximate)
Zoning:	O1 – Parks and Open Space Zone
Current Use:	The subject site is currently occupied by part of the Stonebridge golf course, more specifically Part of Holes 5, 6 and 7.
Services:	All new development in the area of the subject site is municipally serviced, but some of the remaining older residences may be privately serviced.

3.0 SCOPE OF INVESTIGATION

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

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

4.0 RECORDS REVIEW

4.1 General

Phase I ESA Study Area Determination

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

First Developed Use Determination

Based on a review of historically available information, the property was developed with a golf course in 2000 or 2001, prior to which it was agricultural fields.

National Archives

Fire insurance plans and city directories are not available for the Phase I study area.

Proposed Development Plan

The proposed residential lot layout is depicted on the geotechnical Test Hole Location Plan, included in Appendix 1.

Previous Engineering Reports

Paterson has conducted several environmental and geotechnical projects in the area of the subject site, including a geotechnical investigation that involved excavating nine (9) boreholes throughout the subject site. During the geotechnical investigation, fill consisting of a mixture of clay, silt, sand, gravel and occasional cobbles was encountered in six of the boreholes. No deleterious substances or evidence of contamination was observed in the fill or native soil samples recovered during the geotechnical investigation. Although the fill was considered to be reworked native soils, it was decided that metals analyses would be carried out on four (4) representative samples to confirm the quality of the material. The test results are discussed in further detail in our Soil Quality Assessment report and summarized below.

- “Soil Quality Assessment –Stonebridge – Phase 16, Part of 2701 Longfields Drive, Ottawa, Ontario” Prepared by Paterson Group Inc., dated June 19, 2018.

On June 5, a representative from Paterson Group carried out a site visit to acquire samples of the fill identified in some of the geotechnical holes. Fill samples were acquired from the following 5 borehole locations: BH1, BH2, BH3, BH4 and BH8. Four (4) of these samples were submitted to Paracel Laboratories for metals analyses, the results of which were compared to the Ontario Ministry of Environment and Climate Changes (MECP) residential standards. All of the test results complied with the standards except 2 selenium values. Selenium was identified in 2 samples at 3ug/g, which is marginally above the MECP standard of 2.4 ug/g. It is unknown what the source of the selenium was, however, it was considered possible that the concentrations were naturally occurring, since selenium is naturally present in most rocks and soils. To further evaluate the presence of the selenium, it was recommended that additional testing of the on-site fill and in-situ soils be completed.

During our site visits to the golf course, the Golf Course Superintendent was interviewed regarding the general application of pesticides throughout a typical season. We were informed that several products may be used depending upon the intended purpose while the number of applications can also vary from none to several dependent upon the nature of the weather. To address this potential concern, it was decided that near surface soil samples would be acquired and tested, as discussed below.

An additional seven (7) shallow test holes were placed throughout the tees, fairways and greens of the fifth, sixth and seven holes. Soil samples were collected from just beneath the sod to approximately 0.32 m depth, with six (6) of these samples being submitted to eurofins laboratories for pesticide testing. All of the test results were in compliance with the selected MECP standards (no concentrations of any of the parameters were detected). Based on the testing carried out, this potentially contaminating activity (PCA) is no longer considered to represent an area of potential environmental concern (APEC) on the subject property.

- “Soil Quality Assessment, Stonebridge – Phase 16, Ottawa, Ontario” Prepared by Paterson Group Inc., dated September 11, 2019.

In order to address the selenium exceedances identified in the initial soil testing, additional soil samples were acquired from BH1, BH2, BH3, BH4, BH5, BH6, BH7, and BH9. Twelve (12) samples were submitted to Paracel Laboratories for metals analyses, the results of which were compared to the Ontario Ministry of Environment and Climate Changes (MECP) residential standards. All of the test results complied with the standards including the selenium values. Based on the

testing carried out, there are two areas of fill material that have selenium concentrations that are marginally in excess of the residential standard for the property. It is recommended that these areas be reassessed prior to redevelopment of the site and, if deemed necessary, remove this soil off site to an approved property.

4.2 Environmental Source Information

Environment Canada

A search of the National Pollutant Release Inventory (NPRI) was conducted electronically on September 9, 2019. The subject site and Phase I study area were not listed in the NPRI database.

PCB Inventory

A search of national PCB waste storage sites was conducted. No PCB waste storage sites are located within the Phase I study area.

Ontario Ministry of Environment and Climate Change (MECP) Instruments

A request was submitted to the MECP Freedom of Information office in 2018 for information with respect to certificates of approval, permits to take water, certificates of property use or any other similar MECP issued instruments for the site. The response from the MECP did not identify any records for the Phase I Property.

MOECC Coal Gasification Plant Inventory

The Ontario Ministry of Environment and Climate Change 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 Incident Reports

A request was submitted to the MECP Freedom of Information office in 2018 for information with respect to records concerning environmental incidents, orders, offences, spills, discharges of contaminants or inspections maintained by the MECP for the site or adjacent properties. The response from the MECP did not identify any records for the Phase I Property.

MECP Waste Management Records

A request was submitted to the MECP Freedom of Information office for information with respect to waste management records. The response from the MECP did not identify any records for the Phase I Property

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 property. The response from the MECP did not identify any records for the Phase I Property.

MECP Brownfields Environmental Site Registry

A search of the MECP Brownfields Environmental Site Registry was conducted as part of this assessment for the site, neighbouring properties and the Phase I study area. No Records of Site Condition (RSCs) were filed for any properties within the Phase I study area.

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. No records were listed for the subject site or for properties within the Phase I study area.

Areas of Natural Significance

A search for areas of natural significance and features within the Phase I study area was conducted on the web site of the Ontario Ministry of Natural Resources and Forestry (MNRF) on September 9, 2019. No areas of natural significance were identified on the subject site or within the Phase I study area.

Technical Standards and Safety Authority (TSSA)

The TSSA, Fuels Safety Branch in Toronto was contacted electronically on September 9, 2019 to inquire about current and former underground storage tanks for the site and neighbouring properties. The response from the TSSA, which is included in Appendix 2, did not identify any records for the subject or adjacent properties.

City of Ottawa Landfill Document

The document entitled “Old Landfill Management Strategy, Phase I – Identification of Sites, City of Ottawa”, was reviewed. No 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 as part of the previous Phase I ESA to request information from the City’s Historical Land Use Inventory (HLUI 2005) database for this project. Since the HLUI database has not been updated since that search was completed, a new search request was not submitted. A review of the original response did not identify any contaminating activities on site, while the 3 activities listed in the area are not considered to pose a risk to the subject property.

4.3 Physical Setting Sources

Aerial Photographs

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

1956	The subject property consists of vacant agricultural fields. The property appears to be intersected by a driveway that leads to a farmstead to the west of the subject property. Longfields Drive is present to the east. Surrounding properties are also agricultural fields with occasional residences.
1966	No significant changes have been made to the subject site or surrounding properties.
1975	No significant changes have been made to the subject site or surrounding properties.
1987	No significant changes have been made to the subject site or surrounding properties.
1996	The southern part of the subject property appears to be unutilized and is partially brush covered. No other changes appear to have

been made to the site. The adjacent property to the north, at 2741 Longfields Drive, appears to be in the preliminary stages of development. Some of the surrounding properties no longer appear to be used for agricultural purposes and have been left vacant.

- 2002 (GeoOttawa website) The subject property has been developed with the existing golf course. The surrounding properties are mostly vacant, and brush or tree covered.
- 2007 (GeoOttawa website) No changes have been made to the subject property. The surrounding lands to the north and west are undergoing development with residential subdivisions.
- 2017 (GeoOttawa website) No significant changes have been made to the subject site. The lands to the northeast, across Longfields Drive, have been developed with residential dwellings.

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

Topographic Maps

Topographic information was obtained from Natural Resources Canada – The Atlas of Canada website. The topographic maps indicate that the elevation of the subject site varies between approximately 100 and 104 m above sea level. The regional topography in the general area of the site slopes downward towards the Rideau River, to the east. An illustration of the referenced topographic map is presented on Figure 2 – Topographic Map, appended to this report.

Physiographic Maps

A Physiographic Map was reviewed from the Natural Resources Canada – The Atlas of Canada website, as a part of this assessment. According to the publication and mapping, the site is situated within the St. Lawrence Lowlands, Till Plains (Drumlinized) physiographic region. 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 in the Central St. Lawrence Lowland, “where the land is rarely more than 150 m above sea level, except for the Monteregion 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 this information, bedrock in the area of the site consists of dolomite of the Oxford Formation. Overburden consists of till, with a drift thickness of 15 to 25 m.

Water Well Records

A search of the MECPs web site for all drilled well records within 250 m of the subject site was conducted on September 9, 2019. Fourteen well records were identified for wells drilled between 1950 and 2009. All of the wells were drilled for domestic water supply purposes, except one well indicated for irrigation purposes. This well may be located on the part of the golf course located on the northeastern side of Longfields Drive. No monitoring well records were identified.

Water Bodies and Areas of Natural Significance

Several ponds created as part of the golf course are present on site, but no natural water features were identified. No areas of natural significance were identified within the Phase I study area.

5.0 SITE RECONNAISSANCE

5.1 General Requirements

The initial site assessment was conducted on May 22, 2018, with a follow-up inspection conducted on September 10, 2019. No changes have been made to the site since that time. Weather conditions were overcast, with a temperature of approximately 17°C. Personnel from the Environmental Department of Paterson Group conducted the site visit. In addition to the site, the uses of neighbouring properties within the Phase I study area were also assessed at the time of the site visit.

5.2 Specific Observations at Phase I Property

Buildings and Structures

No buildings or structures exist on the subject property. A depiction of the subject site is shown on Drawing PE4327-5 – Test Hole Location Plan, in Appendix 1.

Site Features

The subject site is not developed with any buildings and exists as a landscaped golf course. No hazardous materials/substances were observed on the property.

Underground Utilities

An irrigation system is present beneath part of the subject site.

Waste Materials

No waste materials were present on the subject site at the time of the site visit.

Storage Tanks

No storage tanks were present on the subject site at the time of the site visit.

Drains, Pits and Sumps

No drains, pits or sumps were present on the subject site at the time of the site visit.

Unidentified Substances

No unidentified substances were present on the subject site at the time of the site visit.

Hazardous Building Materials

No hazardous building materials were present on the subject site at the time of the site visit.

Phase I Study Area

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

- ☐ North – Vacant residential dwelling at 2741 Longfields Drive and Longfields Drive, followed by residential dwellings;
- ☐ South – Vacant land;
- ☐ East – Longfields Drive, followed by residential dwellings;
- ☐ West – Residential dwellings.

No PCAs were identified on the neighbouring properties in the Phase I study area. Property use within the Phase I study area is presented on Drawing PE4327-4 – Surrounding Land Use Plan.

6.0 REVIEW AND EVALUATION OF INFORMATION

6.1 Land Use History

The subject site does not appear to have ever been developed with any structures or buildings. The site currently exists as a golf course.

Potentially Contaminating Activities (PCAs)

As discussed earlier in this report, fill material was identified during a geotechnical investigation conducted on the property. Although the fill was considered to be reworked native soils and no evidence of impact was observed, it was decided that metals analyses would be carried out on representative samples to confirm the quality of the material. All of the test results complied with the standards except 2 selenium values. Selenium was identified in 2 samples at 3 ug/g, which is marginally above the MECP standard of 2.4 ug/g. To further evaluate the presence of the selenium, additional testing of the on-site fill and in-situ soils was completed.

Twelve (12) additional soil samples were analysed for metals. Selenium was not detected in any of the samples analysed.

In addition to the fill testing, six (6) shallow soil samples were collected from the fairways and greens and tested for pesticides. All of the test results complied with the MECP standards selected for the site (no concentrations of any of the parameters were detected). Based on the testing carried out, this potentially contaminating activity (PCA) is no longer considered to represent an area of potential environmental concern (APEC) on the subject property.

Areas of Potential Environmental Concern (APECs)

Based on the results of the soil testing completed on the subject property, no APECs were identified.

Contaminants of Potential Concern (CPCs)

Based on the findings of the Soil Quality Assessment, selenium was identified above the MECP standard in 2 soil samples. Given the natural presence of selenium in most soils and rock, and the limited extent of the detections, these concentrations may be naturally occurring.

6.2 Conceptual Site Model

Existing Buildings and Structures

No buildings or structures exist on the subject property. A depiction of the subject site is shown on Drawing PE4327-5 – Test Hole Location Plan, in Appendix 1.

Geological and Hydrogeological Setting

The subject site is located in an area of dolomite bedrock with till overburden, reported to be 15 to 25 m in depth. Groundwater is expected to flow eastward.

Water Bodies

Several ponds created as part of the golf course are present on site, but no natural water features were identified.

Areas of Natural Significance

No areas of natural significance were identified within the Phase I study area.

Water Wells

A search of the MECPs web site for all drilled well records within 250 m of the subject site was conducted on September 9, 2019. Fourteen (14) well records were identified for wells drilled between 1950 and 2009. All of the wells were drilled for domestic water supply purposes, except one well indicated for irrigation purposes. This well may be located on the part of the golf course located on the northeastern side of Longfields Drive. No monitoring well records were identified.

Neighbouring Land Use

Neighbouring land use in the Phase I study area is currently vacant or residential.

Contaminants of Potential Concern

Selenium was identified above the MECP standard in 2 initial soil samples. Follow-up soil testing did not identify further selenium exceedances.

Assessment of Uncertainty and/or Absence of Information

The information available for review as part of the preparation of this Phase I ESA is considered to be sufficient to conclude that there are no APECs on the subject site.

7.0 CONCLUSION

Assessment

Paterson Group conducted a Phase I-Environmental Site Assessment (ESA) of Part of 2701 Longfields Drive, in the City of Ottawa, Ontario. The purpose of this Phase I-ESA was to research the past and current use of the subject site and neighbouring properties and to identify any environmental concerns with the potential to have impacted the subject property.

According to the historical research, the subject property was vacant, agricultural land until 2000 or 2001, when it was developed as part of the Stonebridge golf course. The site includes part of Hole 5 and Holes 6 and 7. No significant environmental concerns were identified with the historical use of the property.

Historical research indicates that surrounding lands were developed for residential purposes in the late 1990s and 2000s from agricultural lands. No potentially contaminating activities (PCAs) were identified at properties in the general vicinity of the subject site.

Fill material, suspected to consist of reworked native soils, was encountered during a geotechnical investigation on the site in 2018. To confirm the quality of the fill, metals testing was carried out as part of a soil quality assessment. Soil samples from the fairways and greens were also analyzed for pesticides. The test results were found to comply with the MECP standards selected for the property, except 2 selenium concentrations which were marginally above the standard. It was considered possible that the concentrations are naturally occurring, since selenium is naturally present in most rocks and soils. A further soil quality evaluation, which did not identify further selenium exceedances, was completed for the site, the detailed results of which are available in a separate report.

An inspection of the subject site and the surrounding properties was conducted on September 10, 2019. The subject site consists of several golf course fairways. Surrounding land use consists of residential and vacant properties that are not considered to pose a concern to the subject site.

Conclusion

Based on the findings of the Phase I ESA and previous work carried out, it is our opinion that a Phase II ESA is not required for the subject property.

It is recommended that soil in the vicinity of the known selenium exceedances be reassessed just prior to site redevelopment to confirm the initial data and determine the appropriate handling/management requirements for this material.

8.0 STATEMENT OF LIMITATIONS

This Phase I - Environmental Site Assessment report has been prepared in general accordance with O.Reg. 153/04 as amended by O.Reg. 269/11, and meets the requirements of CSA Z768-01. The conclusions presented herein are based on information gathered from a limited historical review and field inspection program. The findings of the Phase I ESA are based on a review of readily available geological, historical and regulatory information and a cursory review made at the time of the field assessment. The historical research relies on information supplied by others, such as, local, provincial and federal agencies and was limited within the scope-of-work, time and budget of the project herein.

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

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

Paterson Group Inc.



Anna Graham, M.E.S.



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



Report Distribution:

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- Paterson Group Inc.

9.0 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).
Natural Resources Canada – The Atlas of Canada.
Environment Canada, National Pollutant Release Inventory.
PCB Waste Storage Site Inventory.

Provincial Records

MECP Freedom of Information and Privacy Office.
MECP Municipal Coal Gasification Plant Site Inventory, 1991.
MECP document titled “Waste Disposal Site Inventory in Ontario”.
MECP Brownfields Environmental Site Registry.
Office of Technical Standards and Safety Authority, Fuels Safety Branch.
MNR Areas of Natural Significance.
MECP Water Well Inventory.
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.
The City of Ottawa Historical Land Use Inventory.
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.
Geotechnical Investigation

Public Information Sources

Google Earth.
Google Maps/Street View.

FIGURES

FIGURE 1 – KEY PLAN

FIGURE 2 – TOPOGRAPHIC MAP

DRAWING PE4327-3 – SITE PLAN

DRAWING PE4327-4 – SURROUNDING LAND USE PLAN

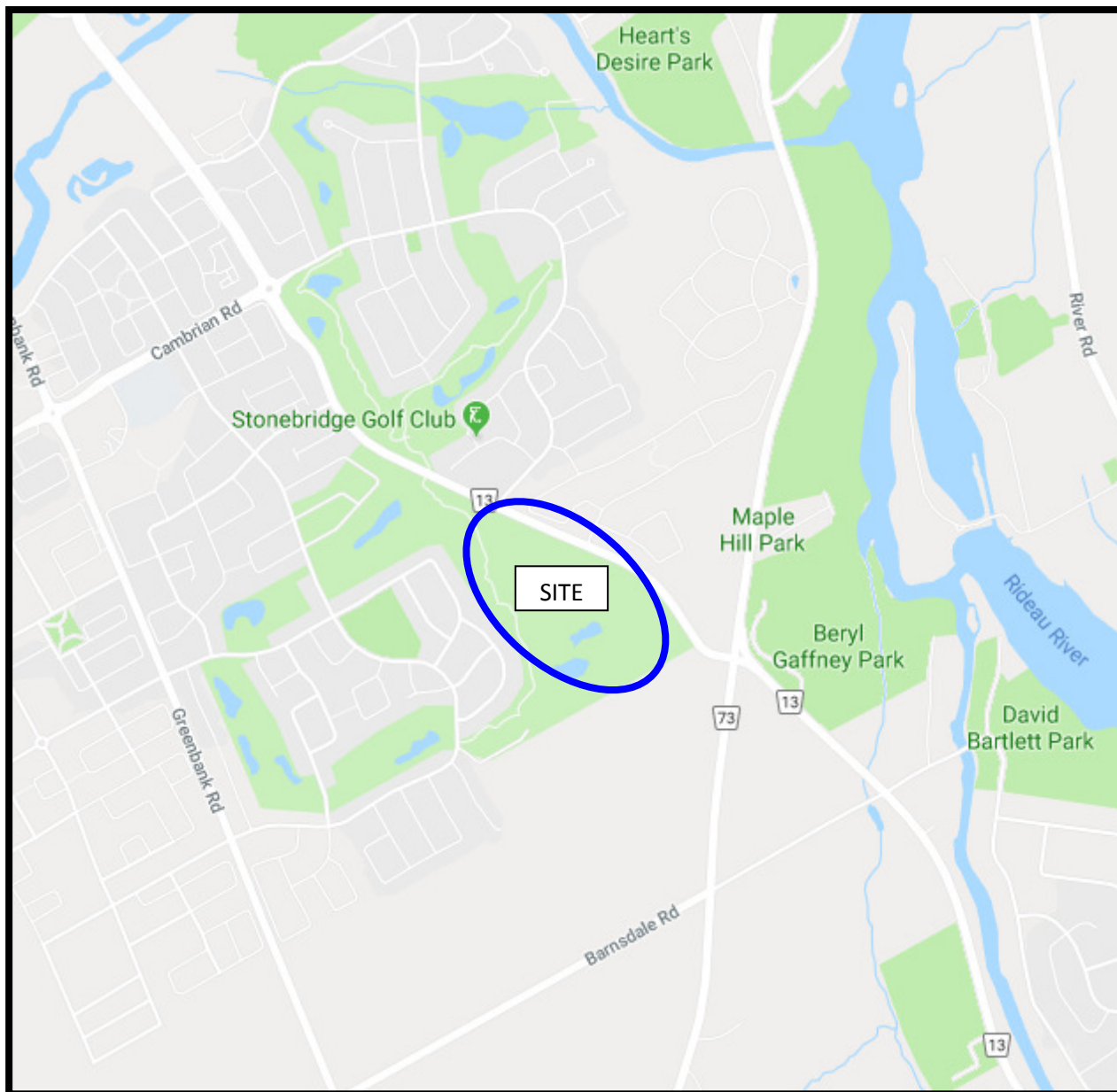


FIGURE 1
KEY PLAN

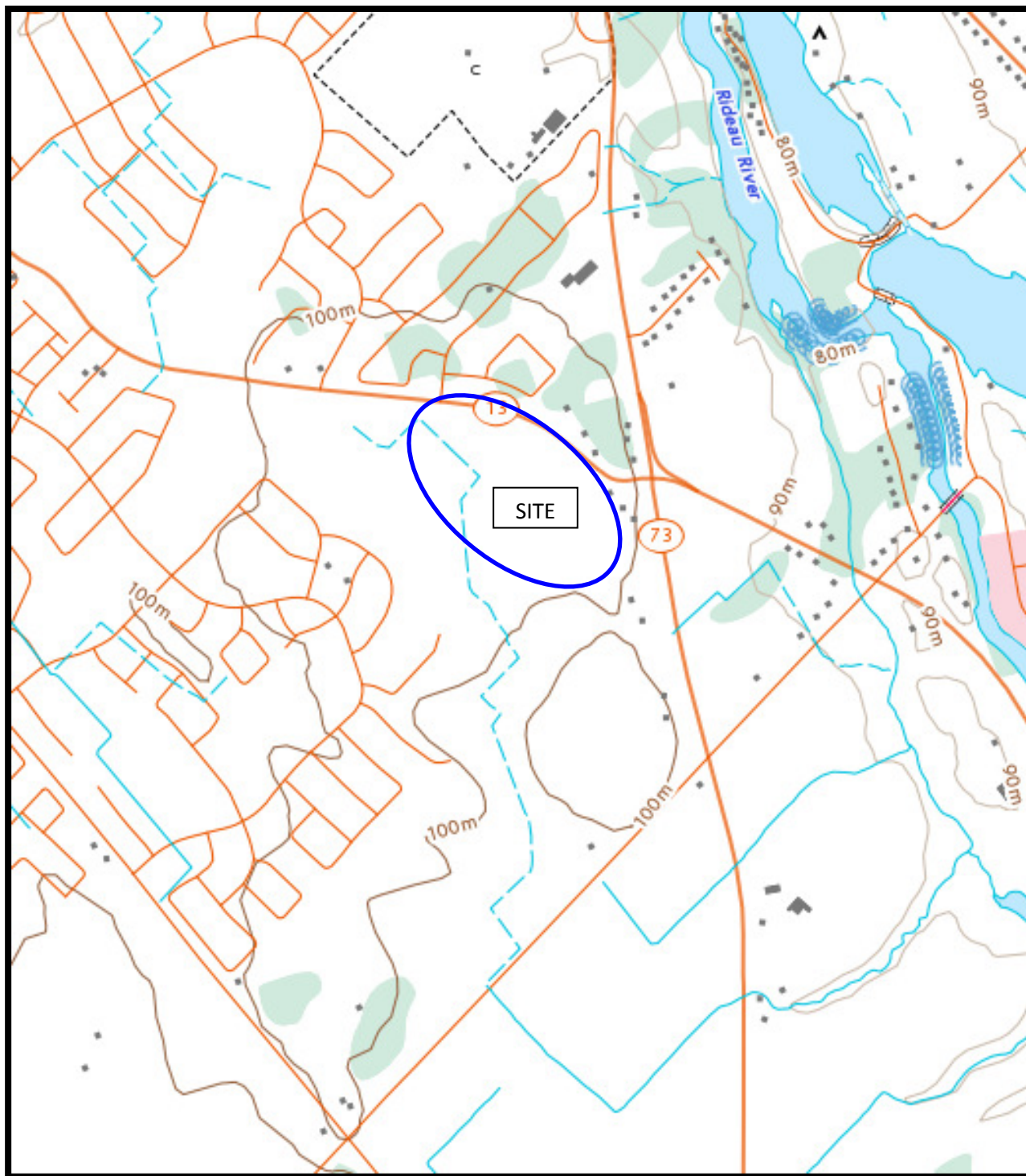
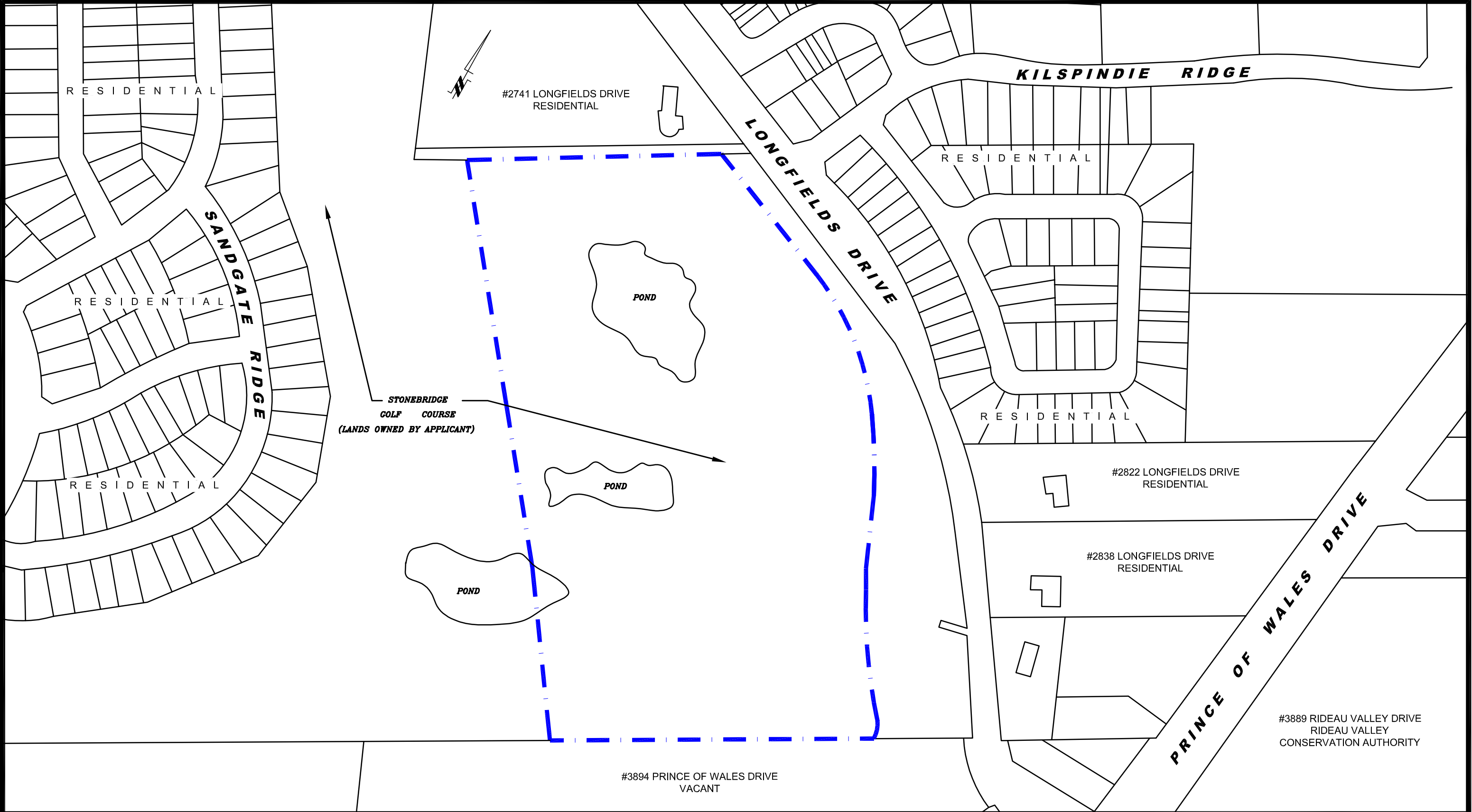


FIGURE 2
TOPOGRAPHIC MAP



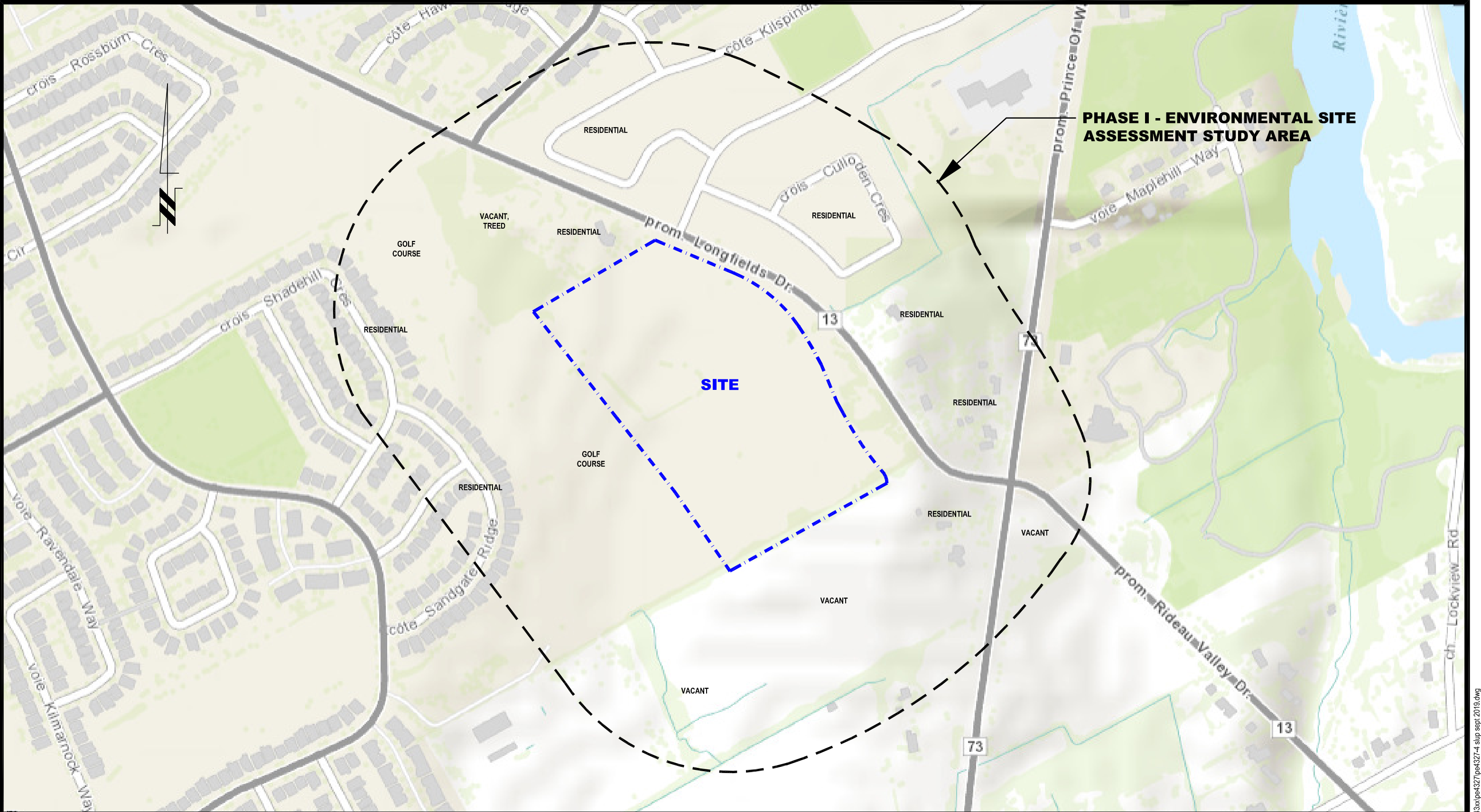
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0			
NO.	REVISIONS	DATE	INITIAL

MATTAMY HOMES
PHASE I - ENVIRONMENTAL SITE ASSESSMENT
2701 LONGFIELDS DRIVE
OTTAWA, ONTARIO
Title: **SITE PLAN**

Scale:	1:2500	Date:	09/2019
Drawn by:	AG	Report No.:	PE4327-2
Checked by:	MD	Dwg. No.:	PE4327-3
Approved by:	MSD	Revision No.:	0



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0			
NO.	REVISIONS	DATE	INITIAL

MATTAMY HOMES	
PHASE I - ENVIRONMENTAL SITE ASSESSMENT	
2701 LONGFIELDS DRIVE	
OTTAWA,	ONTARIO
Title: SURROUNDING LAND USE PLAN	

Scale:	1:1	Date:	09/2019
Drawn by:	AG	Report No.:	PE4327-2
Checked by:	MD	Dwg. No.:	PE4327-4
Approved by:	MD	Revision No.:	0

APPENDIX 1

DRAWING PE4327-5 - TEST HOLE LOCATION PLAN

AERIAL PHOTOGRAPHS



LEGEND:

SOIL PARAMETERS COMPLY WITH MECP TABLE 2 STANDARDS

SOIL PARAMETERS EXCEED MECP TABLE 2 STANDARDS

GEOTECHNICAL BOREHOLE LOCATION

SHALLOW SOIL SAMPLE LOCATION
JUNE 5, 2018

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

NO.	REVISIONS	DATE	INITIAL

MATTAMY HOMES

SOIL QUALITY ASSESSMENT

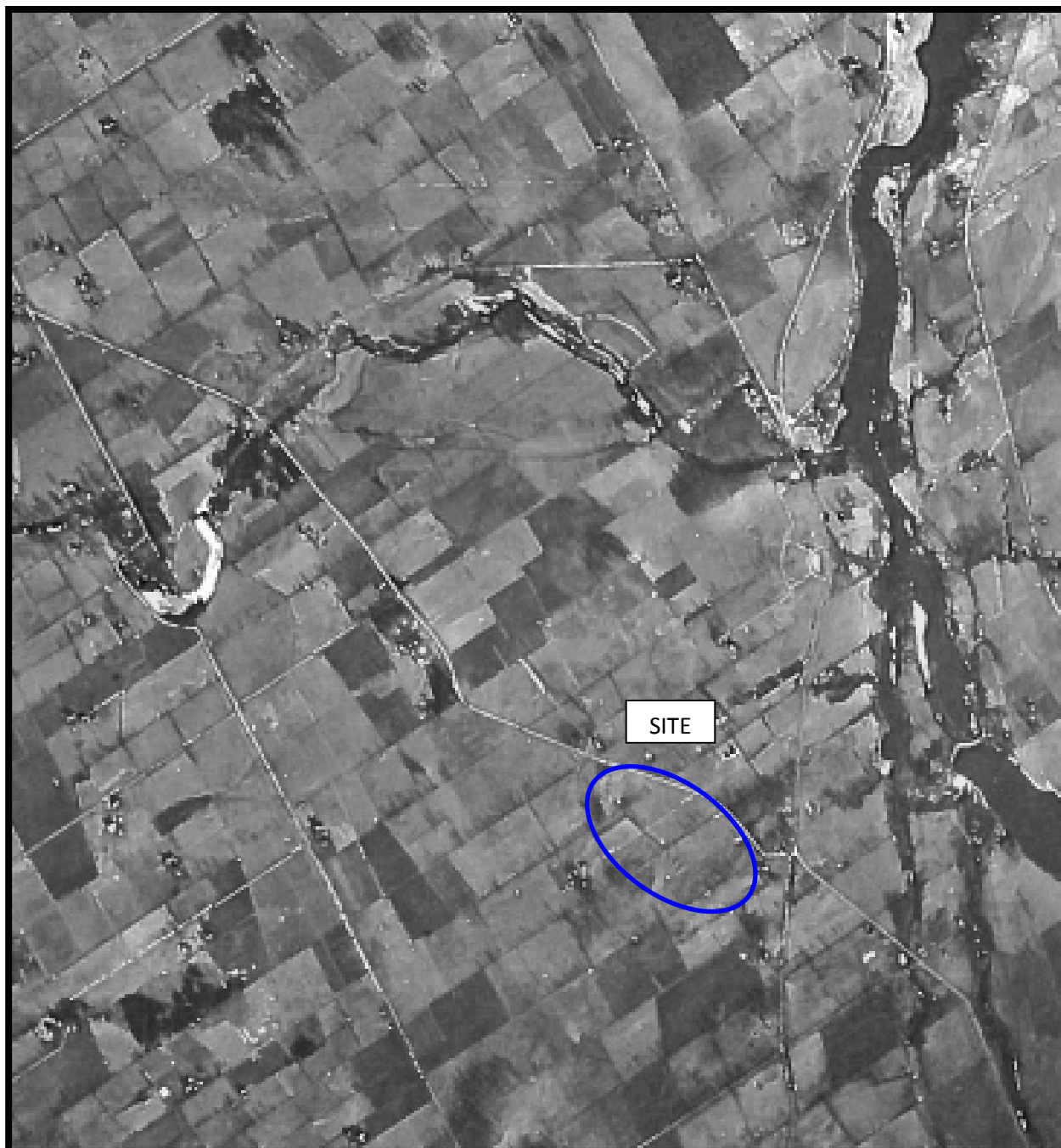
PROP. RESIDENTIAL DEVELOPMENT - STONEBRIDGE PHASE 16

OTTAWA, ONTARIO

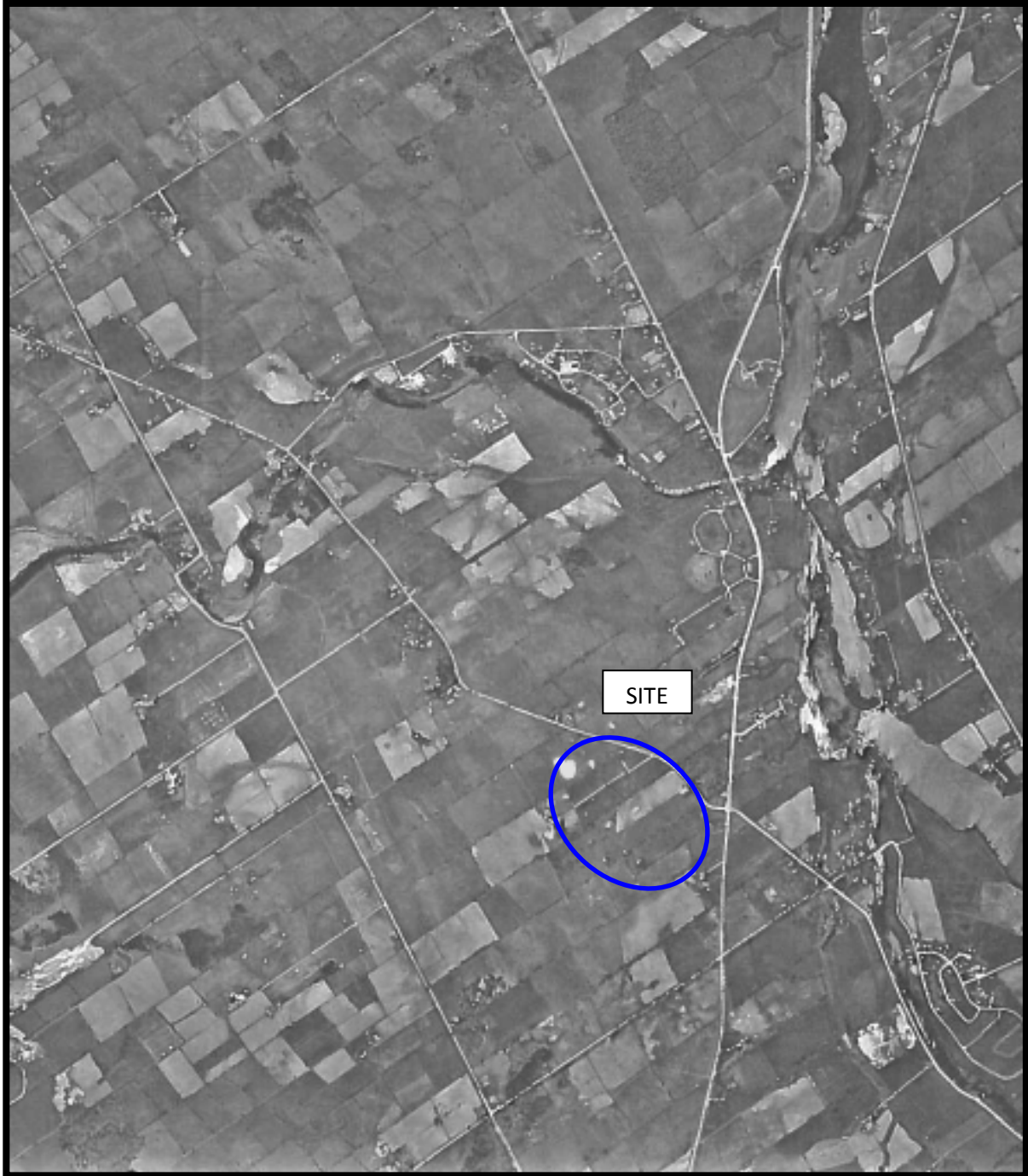
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Scale: 1:2000	Date: 06/2019
Drawn by: MPG	Report No.: PE4327-LET.01
Checked by: AG	Dwg. No.: PE4327-5
Approved by: MSD	Revision No.:

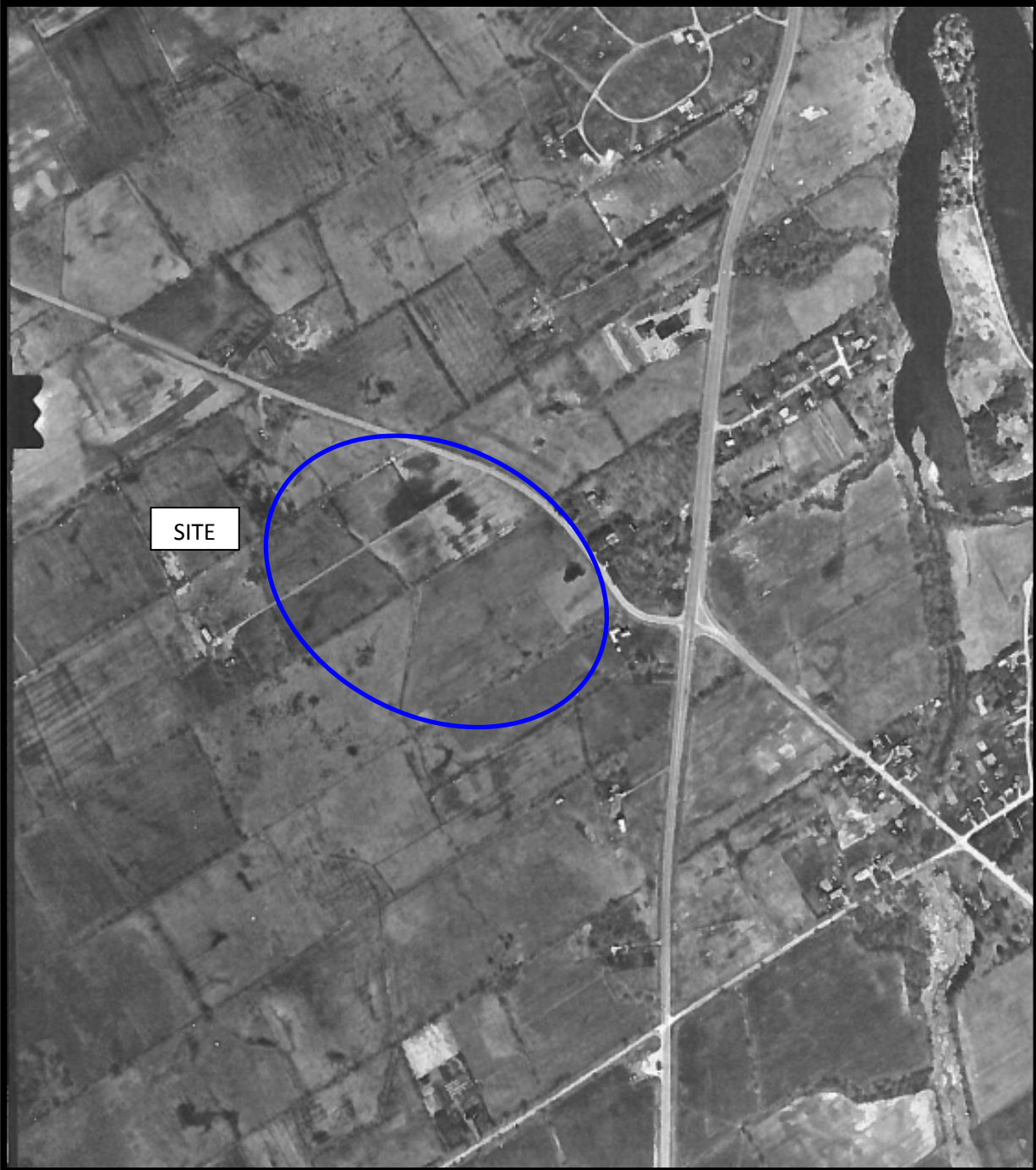
p:\autocad drawings\environmental\pe4327\pe4327-5.dwg



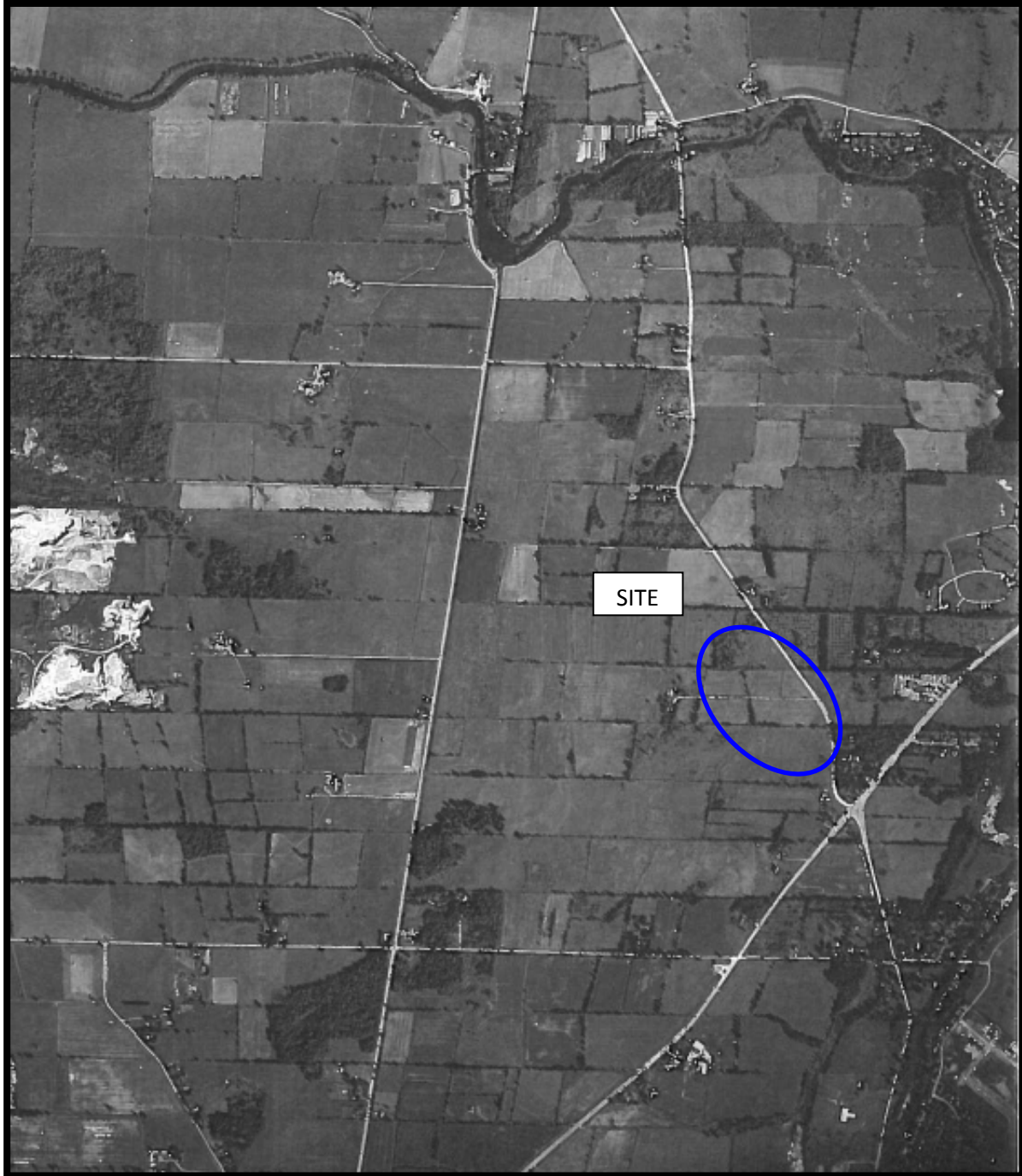
AERIAL PHOTOGRAPH
1956



AERIAL PHOTOGRAPH
1966



AERIAL PHOTOGRAPH
1975



AERIAL PHOTOGRAPH
1987



AERIAL PHOTOGRAPH
1996

APPENDIX 2

MECP FREEDOM OF INFORMATION SEARCH RESPONSE

TSSA RESPONSE

HLUI RESPONSE

MECP WATER WELL RECORDS

Ministry of the Environment
and Climate Change

Freedom of Information and
Protection of Privacy Office

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

Ministère de l'Environnement et de
l'Action en matière de changement
climatique

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

12^e étage
40, avenue St. Clair ouest
Toronto ON M4V 1M2
Tél.: (416) 314-4075
Téléc.: (416) 314-4285



May 28, 2018

Anna Graham
Paterson Group Inc.
154 Colonnade Rd
Ottawa, ON K2E 7J5

Dear Anna Graham:

RE: ***Freedom of Information and Protection of Privacy Act Request***
Our File # A-2018-03508, Your Reference PE4327

This letter is in response to your request made pursuant to the *Freedom of Information and Protection of Privacy Act* relating to 2701 Longfields Drive, Ottawa.

After a thorough search through the files of the Ministry's Ottawa District Office, Investigations and Enforcement Branch, Environmental Assessment and Permissions Branch, Environmental Monitoring and Reporting Branch, Sector Compliance Branch and Safe Drinking Water Branch, no records were located responsive to your request. To provide you with this response and in accordance with Section 57 of the *Freedom of Information and Protection of Privacy Act*, the fee owed is \$30.00 for 1 hour of search time @ \$30.00 per hour. **We have applied the \$30.00 for this request from your initial payment. This file is now closed.**

You may request a review of my decision by contacting the Information and Privacy Commissioner/Ontario, 2 Bloor Street East, Suite 1400, Toronto, ON M4W 1A8 (800-387-0073 or 416-326-3333). Please note that there is a \$25.00 fee and you only have 30 days from receipt of this letter to request a review.

If you have any questions regarding this matter, please contact Nasreen Salar at nasreen.salar@ontario.ca.

Yours truly,

Janet Dadufalza
FOI Manager

For:

Anna Graham

From: Public Information Services <publicinformationsservices@tssa.org>
Sent: September-10-19 7:22 AM
To: Anna Graham
Subject: RE: Records search request for 2701 Longfields Dr, Ottawa

No Records Found

Hello,

Thank you for your request for confirmation of public information.

- We confirm that there are **no fuel storage tanks records** in our database at the subject address(es).

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

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

Kind regards,



Connie Hill | Public Information Agent

Facilities

345 Carlingview Drive

Toronto, Ontario M9W 6N9

Tel: +1-416-734-3383 | Fax: +1-416-231-6183 | E-Mail: publicinformationsservices@tssa.org

www.tssa.org



From: Anna Graham <AGraham@Patersonsgroup.ca>
Sent: September 9, 2019 2:02 PM
To: Public Information Services <publicinformationsservices@tssa.org>
Subject: Records search request for 2701 Longfields Dr, Ottawa

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 for properties located in the City of Ottawa, ON:

2698 Longfields Drive
2701 Longfields Drive
2741 Longfields Drive
2822 Longfields Drive
2838 Longfields Drive

2844 Longfields Drive
3894 Prince of Wales Drive
741 Kilbirnie Drive

Thank you,

Anna Graham, M.E.S.

patersongroup
solution oriented engineering
over 60 years serving our clients

154 Colonnade Road South
Ottawa, Ontario, K2E 7J5
Tel: (613) 226-7381 Ext. (228)

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



File Number: C10-01-15-0354

December 16, 2015

Anna Graham
Paterson Group Inc.
154 Colonnade Road South,
Ottawa, ON
K2E 7J5

Sent via email [agraham@patersongroup.ca]

Dear Ms. Graham,

**Re: Information Request
3740 Jockvale Road, Ottawa, Ontario ("Subject Property")**

Internal Department Circulation

The Planning and Growth Management Department has the following information in response to your request for information regarding the Subject Property:

- The Solid Waste Services Branch notes that the subject property is within 4km of three waste management facilities located at 4296 Trail Road, 4309 Trail Road and 4478 Trail Road.

Search of Historical Land Use Inventory

This acknowledges receipt of the signed Disclaimer regarding your request for information from the City's Historical Land Use Inventory (HLUI 2005) database for the Subject Property.

A search of the HLUI database revealed the following information:

- There are no activities associated with the Subject Property.

The HLUI database was also searched for activity associated with properties located within 50m of the Subject Property. The search revealed the following:

*Shaping our future together
Ensemble, formons notre avenir*

City of Ottawa
Infrastructure Services and Community
Sustainability Department
Planning and Growth Management Branch

110 Laurier Avenue West, 4th Floor
Ottawa, ON K1P 1J1
Tel: (613) 580-2424 ext. 14743
Fax: (613) 560-6006
www.ottawa.ca

Ville d'Ottawa
Services d'infrastructure et Viabilité des
collectivités
Direction de l'approbation des demandes
d'aménagement et d'infrastructure

110, avenue Laurier Ouest, 4e étage
Ottawa (Ontario) K1P 1J1
Tél.: (613) 580-2424 ext. 14743
Télééc: (613) 560-6006
www.ottawa.ca

- There are 3 activities associated with properties located within 50m of the Subject Property: Activity Numbers 3031, 8781 and 7190.

Please note that Activity Number 7190 has a PIN Certainty of “2”. This identifier acknowledges that there is some uncertainty about the exact location of the land use activity and that the activity may or may not have been located on the Subject Property. All database entries with a PIN Certainty of “2” require independent verification as to their precise location.

A site map has been included to show the location of the Subject Property as well as the location of all the activities noted above, including the HLUI database’s location of the Activity Number with a PIN Certainty of “2”.

Additional information may be obtained by contacting:

Ontario’s Environmental Registry

The Environmental Registry found at <http://www.ebr.gov.on.ca/ERS-WEB-External/> contains "public notices" about environmental matters being proposed by all government ministries covered by the Environmental Bill of Rights. The public notices may contain information about proposed new laws, regulations, policies and programs or about proposals to change or eliminate existing ones. By using key words i.e. name of proponent/owner and the address one can ascertain if there is any information on the proponent and address under the following categories: Ministry, keywords, notice types, Notice Status, Acts, Instruments and published date (all years).

The Ontario Land Registry Office

Registration of real property is recorded in the Ontario Land Registry Office through the Land Titles Act or the Registry Act. Documents relating to title and other agreements that may affect your property are available to the public for a fee. It is recommended that a property search at the Land Registry Office be included in any investigation as to the historic use of your property. The City of Ottawa cannot comment on any documents to which it is not a party.

Court House
161 Elgin Street 4th Floor
Ottawa ON K2P 2K1
Tel: (613) 239-1230
Fax: (613) 239-1422

Please note, as per the HLUI Disclaimer, that the information contained in the HLUI database has been compiled from publicly available records and other sources of information. The HLUI may contain erroneous information given that the records used as sources of information may be flawed. For instance, changes in municipal addresses over time may introduce error. Accordingly, all information from the HLUI database is provided on an “as is” basis with no representation or warranty by the City with respect to the information’s accuracy or exhaustiveness in responding to the request.

Furthermore, the HLUI database and the results of this search in no way confirm the presence or absence of contamination or pollution of any kind. This information is provided on the assumption that it will not be relied upon by any person for any purpose whatsoever. The City of Ottawa denies all liability to any persons attempting to rely on any information provided from the HLUI database.

Please note that in responding to your request, the City of Ottawa does not guarantee or comment on the environmental condition of the Subject Property. You may wish to contact the Ontario Ministry of Environment for additional information.

If you have any further questions or comments, please contact Fredrick VanRooyen at 613-580-2424 ext. 14743 or HLUI@ottawa.ca

Sincerely,

A handwritten signature in black ink, appearing to read 'DW', followed by a comma.

David Wise, MUP, MCIP, RPP
Program Manager
Development Review (Suburban Services) - West
Planning and Growth Management Department

DW/FV

Attach: 4

cc: File no. C10-01-15-0354



CITY OF OTTAWA

HLUI ID: __679AB4

AREA (Square Metres): 1380320.996

Report: RPTC_OT_DEV0122

Run On: 16 Dec 2015 at: 13:18:59

Study Year

1998

2005

PIN

045910001

045910067

Multi-NAIC

N

N

Multiple Activities

N

N

Activity ID: 3031

Multiple PINS: N

PIN Certainty: 1

Previous Activity ID(s) : 5401

Related PINS: 045910003

Name: CAPITAL BURNER SERVICE LIMITED

Address: 3650 JOCKVALE ROAD,

Facility Type: Mechanical Specialty Work

Comments 1:

Comments 2:

Generator Number:

Storage Tanks:

HL References 1: SC98

HL References 2:

HL References 3: 2005 Select Phone

NAICS

SIC

238210

0

238910

0

238220

0

238220

424

Company Name

Year of Operation

CAPITAL BURNER SERVICE LIMITED

c. 2001

Capital Burner Service Ltd.

c. 1998

CAPITAL BURNER SERVICE LIMITED

c. 2005



CITY OF OTTAWA
HLUI ID: __679AB4
AREA (Square Metres): 1380320.996

Report: RPTC_OT_DEV0122

Run On: 16 Dec 2015 at: 13:18:59

Study Year	PIN	Multi-NAIC	Multiple Activities
1998	045910001	N	N
2005	045910067	N	N

Activity ID: 8781 **Multiple PINS:** N

PIN Certainty: 1 **Previous Activity ID(s) :**

Related PINS: 045910067

Name: MONARCH CONSTRUCTION HEAD OFC-OTTAWA

Address: 3584 JOCKVALE ROAD, NEPEAN

Facility Type: Residential Building and Development

Comments 1:

Comments 2:

Generator Number:

Storage Tanks:

HL References 1:

HL References 2:

HL References 3: 2001 Employment Survey

NAICS **SIC**

236110 0

Company Name

MONARCH CONSTRUCTION HEAD OFC-OTTAWA

Year of Operation

c. 2001



CITY OF OTTAWA
HLUI ID: __670HIE
AREA (Square Metres): 60988.734

Report: RPTC_OT_DEV0122
Run On: 16 Dec 2015 at: 13:34:51

Study Year
1998

PIN
047320234

Multi-NAIC
Y

Multiple Activities
N

Activity ID: 7190 Multiple PINS: Y
PIN Certainty: 2 Previous Activity ID(s) : 6434
Related PINS: 047320234
Name: JACK MAY PONTIAC BUICE LIMITED
Address: 3788 PRINCE OF WALES DRIVE, NEPEAN
Facility Type: Motor Vehicle Repair Shops
Comments 1: Prince of Wales Dr. was formerly known as Highway 16
Comments 2:
Generator Number:
Storage Tanks:
HL References 1: RRQMT 1995/96
HL References 2:
HL References 3:

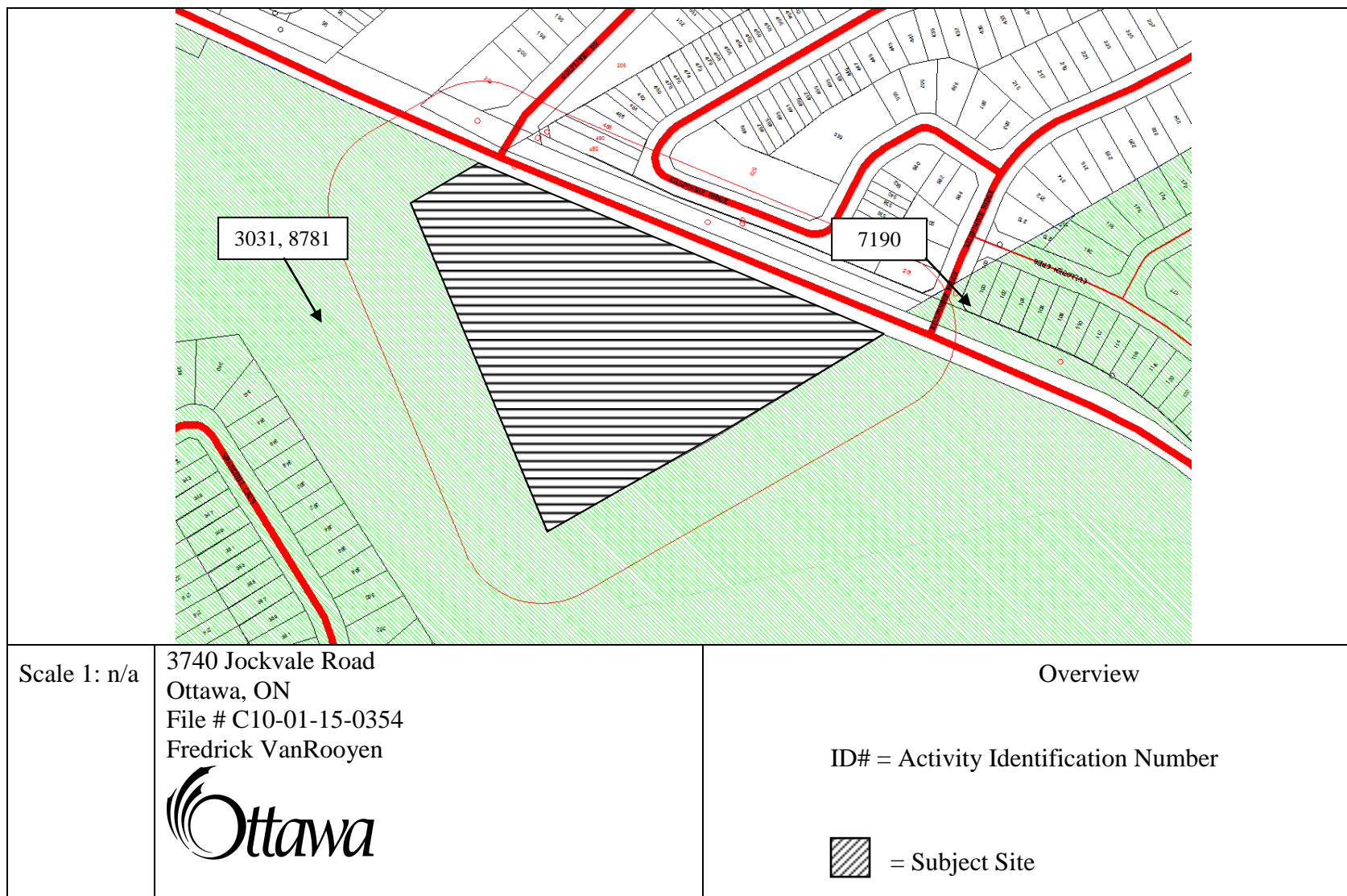
NAICS	SIC
811121	635
811119	635
811112	635

Company Name

Jack May Pontiac Buick Ltd.

Year of Operation

c. 1995-1999



Situation: Is well on upland, in valley, or on hillside? *valley*
 Drilling Firm *M. M. Eager*
 Address *B. Rutanville, Hts.*
 Recorded by *M. M. Eager* Address _____
 Date *Apr. 4, 50* Licence Number *499*

Nº 5916

Elev. 9 R 0325
 Rideau Front
 Basin II
 Cone (25)
 Lat - 7

The Well Drillers Act
Department of Mines, Province of Ontario

Water Well Record

County or Territorial District Chitina Township, Village, Town or City Manokot
 Town or City Manokot
 Date Completed Jan 1 1981 Cost or well (excluding pump) 16,000.00
 (day) (month) (year)

Pipe and Casing Record

Pumping Test

Casing diameter(s) . . . 2" . . . Date . . . June 16/52
Length(s) of casing(s) . . . 48 . . . Static level . . . 22
Type of screen Pumping level . . . 13.0
Length of screen Pumping rate . . . 200 gals
Distance from top of screen to ground level . . . Duration of test . . . 2 hrs
Is well a gravel-wall type? . . . Rock . . . Distance from cylinder or bowls to ground level . . .

Water Record

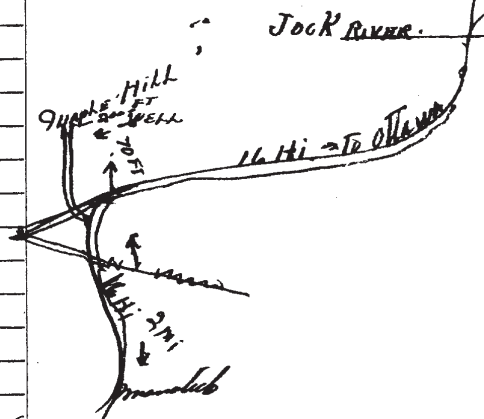
Kind (fresh or mineral)	Depth(s) to Water Horizon(s)	Kind of Water	No. of Feet Water Rises
Quality (hard, soft, contains iron, sulphur, etc.)			
Appearance (clear, cloudy, coloured)	58	hard	46
For what purpose(s) is the water to be used?			
How far is well from possible source of contamination?			
What is the source of contamination?			
Enclose a copy of any mineral analysis that has been made of water			

Well Log

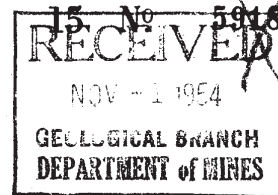
[illegible]

Location of Well

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



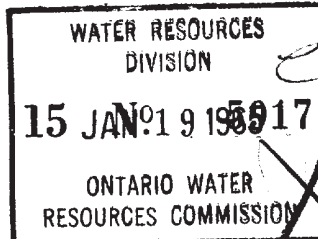
Situation: Is well on upland, in valley, or on hillside? *Hillside*
 Drilling Firm. *J.B. Surber*
 Address. *1870 Cartway*
 Name of Driller. *W. Ray* Address _____
 Date. *Jan 16, 52* Licence Number. *89*



UTM 18 444 1000
5 50 10 38 10
Ele 5 03 20



3164g



The Ontario Water Resources Commission Act

WATER WELL RECORD

Basin 251 C&A Tom Township, Village, Town or City Nepean
Con. 11 RF Lot 7 Date completed 8 OCT. 1964
Address 1489 MERIVALE ROAD, OTTAWA

Casing and Screen Record

Inside diameter of casing 5"
Total length of casing 72'
Type of screen ✓
Length of screen ✓
Depth to top of screen ✓
Diameter of finished hole 5"

Pumping Test

Static level 40'
Test-pumping rate 7 G.P.M.
Pumping level 48'
Duration of test pumping 2 HRS.
Water clear or cloudy at end of test CLEAR.
Recommended pumping rate 7 G.P.M.
with pump setting of 60 feet below ground surface

Well Log

Overburden and Bedrock Record

• Sand & Boulders
Sand
LIMESTONE
SANDSTONE

From
ft.

To
ft.

0 45
45 72
72 100
100 110

Depth(s) at
which water(s)
found

Kind of water
(fresh, salty,
sulphur)

100-110 Fresh

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

House

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

Drilling or Boring Firm

McLEAN WATER Supply LTD.

Address 1532 RAVEN AVE.
OTTAWA 3.

Licence Number 1328

Name of Driller or Borer H. SALLY.

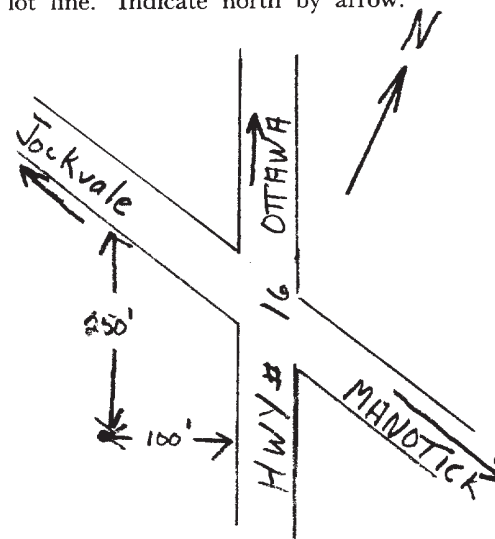
Address

Date OCT 13 / 64

(Signature of Licensed Drilling or Boring Contractor)

Location of Well

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





316/4 East.

Ontario

1. PRINT ONLY IN SPACES PROVIDED

2. CHECK ☒ CORRECT BOX WHERE APPLICABLE

COUNTY OR DISTRICT: Carleton Place TOWNSHIP, BOROUGH, CITY, TOWN, VILLAGE: Napan CON.: 15.008 BLOCK, TRACT, SURVEY, ETC.: 2RF LOT: 02

62 RR#2 @ Harts DATE COMPLETED: 15 03 76

ING RC ELEVATION RC BASIN CODE II III IV

1515329 18 444166 5010650 5 320 5 26 JUN 28, 1977 300

[illegible]

SCREEN	SIZE(S) OF OPENING (SLOT NO.)	DIAMETER	LENGTH
	MATERIAL AND TYPE	DEPTH TO TOP OF SCREEN	

61 PLUGGING & SEALING RECORD			
DEPTH SET AT - FEET		MATERIAL AND TYPE	(CEMENT GROUT LEAD PACKER ETC.)
FROM	TO		
10-13	14-17		
18-21	22-25		
26-29	30-33	80	

71	PUMPING TEST METHOD		10	PUMPING RATE		1-14	DURATION OF PUMPING		17-18			
	1 <input checked="" type="checkbox"/> PUMP 2 <input type="checkbox"/> BAILER		0004		GPM		15-16 HOURS		00 MINS			
	25		WATER LEVELS DURING		1 <input checked="" type="checkbox"/> PUMPING							
	2 <input type="checkbox"/> RECOVERY											
PUMPING TEST	STATIC LEVEL		WATER LEVEL (END OF PUMPING)		15 MINUTES		30 MINUTES		45 MINUTES		60 MINUTES	
	19-21		22-24		25-28		29-31		32-34		35-37	
	020 FEET		036 FEET		036 FEET		036 FEET		036 FEET		036 FEET	
	IF FLOWING, GIVE RATE		38-41		PUMP INTAKE SET AT		WATER AT END OF TEST		42			
					GPM		FEET		1 <input type="checkbox"/> CLEAR 2 <input checked="" type="checkbox"/> CLOUDY			
RECOMMENDED PUMP TYPE		63-65		RECOMMENDED PUMP SETTING		66-68		RECOMMENDED PUMP RATE		69-70		
1 <input type="checkbox"/> SHALLOW 2 <input checked="" type="checkbox"/> DEEP		036		0004								
50-53		GPM./FT. SPECIFIC CAPACITY										

FINAL STATUS OF WELL 54	<input checked="" type="checkbox"/> 1 WATER SUPPLY <input type="checkbox"/> 2 OBSERVATION WELL <input type="checkbox"/> 3 TEST HOLE <input type="checkbox"/> 4 RECHARGE WELL	5 <input type="checkbox"/> ABANDONED, INSUFFICIENT SUPPLY 6 <input type="checkbox"/> ABANDONED POOR QUALITY 7 <input type="checkbox"/> UNFINISHED
	55-56 WATER USE 01	<input checked="" type="checkbox"/> 1 DOMESTIC <input type="checkbox"/> 2 STOCK <input type="checkbox"/> 3 IRRIGATION <input type="checkbox"/> 4 INDUSTRIAL <input type="checkbox"/> 5 OTHER _____
METHOD OF DRILLING 5	<input type="checkbox"/> 1 CABLE TOOL <input type="checkbox"/> 2 ROTARY (CONVENTIONAL) <input type="checkbox"/> 3 ROTARY (REVERSE) <input type="checkbox"/> 4 ROTARY (AIR) <input checked="" type="checkbox"/> 5 AIR PERCUSSION	6 <input type="checkbox"/> BORING 7 <input type="checkbox"/> DIAMOND 8 <input type="checkbox"/> JETTING 9 <input type="checkbox"/> DRIVING

CONTRACTOR	NAME OF WELL CONTRACTOR	LICENCE NUMBER
	Henry Mains Well Drilling	3644
	ADDRESS	
	Box 326, Richmond Ont.	
	NAME OF DRILLER OR BORER	LICENCE NUMBER
	Henry Mains	
	SIGNATURE OF CONTRACTOR	SUBMISSION DATE
		DAY 22 MO. 3 YR. 76

LOCATION OF WELL 4410

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

The diagram shows a well location relative to a road and lot lines. The road is labeled "Hwy 16". The lot line is labeled "8 lot" and "9 lot". The well is marked with an "X" and labeled "well". The distance from the road to the well is "300 ft". The distance from the lot line to the well is "100 ft". The road is labeled "To Ottumwa" and "To Hartsville". The lot line is labeled "To Hartsville" and "To Berthava, Ok. 13". A north arrow is shown pointing towards the top right.

OFFICE USE ONLY	DATA SOURCE	1	CONTRACTOR	3644	DATE RECEIVED	63-68
	DATE OF INSPECTION	JUNE 17, 1976		INSPECTOR	P. P. Pantney	
	REMARKS					
					P	WI



MINISTRY OF THE ENVIRONMENT
The Ontario Water Resources Act
WATER WELL RECORD

316/4

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

11 1515663 15000 02
COUNTY OR DISTRICT: [redacted] TOWNSHIP: [redacted] CITY, TOWN, VILLAGE: [redacted]
CON. BLOCK, TRACT, SURVEY, ETC.: [redacted]
DATE COMPLETED: 29 07 76
ELEVATION: 105.50 5 0328 5 26

LOG OF OVERBURDEN AND BEDROCK MATERIALS (SEE INSTRUCTIONS)

GENERAL COLOUR	MOST COMMON MATERIAL	OTHER MATERIALS	GENERAL DESCRIPTION	DEPTH - FEET	
				FROM	TO
gray	hardpan	boulders		0	35
gray	clay	stones		35	80
gray	limestone			80	185
white	sandstone	mined		185	225
gray	limestone				

31 0035214/13 0080205/12 0185215 0225118/15
32

41 WATER RECORD WATER FOUND AT - FEET: 0180, 0215 KIND OF WATER: 1 FRESH, 2 SALTY, 3 SULPHUR, 4 MINERAL	51 CASING & OPEN HOLE RECORD INSIDE DIAM. - INCHES: 6.4 WALL THICKNESS - INCHES: 1.88 DEPTH - FEET: 0083, 83	61 PLUGGING & SEALING RECORD DEPTH SET AT - FEET: 10-13, 16-17, 18-21, 22-25, 26-29, 30-33 MATERIAL AND TYPE: [redacted]
--	--	---

71 PUMPING TEST METHOD
PUMPING RATE: 0004 GPM
DURATION OF PUMPING: 01 00 HOURS
PUMPING: ☒ PUMPING, ☐ RECOVERY
WATER LEVELS DURING: 15-16, 17-18, 19-21, 22-24, 25-28, 29-31, 32-34, 35-37
PUMP INTAKE SET AT: 150 FEET
RECOMMENDED PUMP TYPE: 1 SHALLOW, 2 DEEP
RECOMMENDED PUMP SETTING: 150 FEET
RECOMMENDED PUMP RATE: 0004 GPM

FINAL STATUS OF WELL
1 WATER SUPPLY, 2 OBSERVATION WELL, 3 TEST HOLE, 4 RECHARGE WELL, 5 ABANDONED, INSUFFICIENT SUPPLY, 6 ABANDONED, POOR QUALITY, 7 UNFINISHED
WATER USE
1 DOMESTIC, 2 STOCK, 3 IRRIGATION, 4 INDUSTRIAL, 5 OTHER, 6 COMMERCIAL, 7 MUNICIPAL, 8 PUBLIC SUPPLY, 9 COOLING OR AIR CONDITIONING, 10 NOT USED
METHOD OF DRILLING
1 CABLE TOOL, 2 ROTARY (CONVENTIONAL), 3 ROTARY (REVERSE), 4 ROTARY (AIR), 5 AIR PERCUSSION, 6 BORING, 7 DIAMOND, 8 JETTING, 9 DRIVING

LOCATION OF WELL
IN DIAGRAM BELOW SHOW DISTANCES OF WELL FROM ROAD AND LOT LINE. INDICATE NORTH BY ARROW.
Diagram showing well location relative to road and lot line. Handwritten notes: "70m.", "new brick house", "Jockville Rd.", "May 16".

WELL CONTRACTOR
Name: Harry Mains Well Drilling
Address: Box 326, Richmond Ont.
Licence Number: 3644
Submission Date: 29 07 76

OFFICE USE ONLY
DATA SOURCE: 1, 3644
DATE OF INSPECTION: 11/7/77
INSPECTOR: [signature]
REMARKS: @ house on Jockville Rd
WI



Ontario

Ministry
of the
Environment

The Ontario Water Resources Act

WATER WELL RECORD

1528552

MUNICIP

15008

CON.

RC

1. PRINT ONLY IN SPACES PROVIDED

2. CHECK ☒ CORRECT BOX WHERE APPLICABLE

11

COUNTY OR DISTRICT <i>Carleton Place</i>	TOWNSHIP, BOROUGH, CITY, TOWN, VILLAGE <i>Carleton Place</i>	CON. BLOCK TRACT, SURVEY ETC. <i>Con 2, 3737 Jackville Rd. N2 7</i>	LOT <i>25-27</i>
3113 RPH3 <i>Nipen</i>		K2C 3H2	DATE COMPLETED DAY <i>28</i> MO <i>6</i> YR <i>95</i>

LOG OF OVERBURDEN AND BEDROCK MATERIALS (SEE INSTRUCTIONS)

GENERAL COLOUR	MOST COMMON MATERIAL	OTHER MATERIALS	GENERAL DESCRIPTION	DEPTH - FEET	
				FROM	TO
grey	clay hardpan	stone		0	87
grey	limestone			87	155
white	sandstone			155	222

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

41 WATER RECORD	
WATER FOUND AT - FEET	KIND OF WATER
10-13 <i>135</i>	1 <input checked="" type="checkbox"/> FRESH 3 <input type="checkbox"/> SULPHUR 2 <input type="checkbox"/> SALTY 4 <input type="checkbox"/> MINERALS 5 <input type="checkbox"/> GAS
15-18 <i>185</i>	1 <input type="checkbox"/> FRESH 3 <input type="checkbox"/> SULPHUR 2 <input type="checkbox"/> SALTY 4 <input type="checkbox"/> MINERALS 5 <input type="checkbox"/> GAS
20-23 <i>218</i>	1 <input type="checkbox"/> FRESH 3 <input type="checkbox"/> SULPHUR 2 <input type="checkbox"/> SALTY 4 <input type="checkbox"/> MINERALS 5 <input type="checkbox"/> GAS
25-28	1 <input type="checkbox"/> FRESH 3 <input type="checkbox"/> SULPHUR 2 <input type="checkbox"/> SALTY 4 <input type="checkbox"/> MINERALS 5 <input type="checkbox"/> GAS
30-33	1 <input type="checkbox"/> FRESH 3 <input type="checkbox"/> SULPHUR 2 <input type="checkbox"/> SALTY 4 <input type="checkbox"/> MINERALS 5 <input type="checkbox"/> GAS

51 CASING & OPEN HOLE RECORD			
INSIDE DIAM. INCHES	MATERIAL	WALL THICKNESS INCHES	DEPTH - FEET
10-11 <i>6 1/4</i>	1 <input checked="" type="checkbox"/> STEEL 2 <input type="checkbox"/> GALVANIZED 3 <input type="checkbox"/> CONCRETE 4 <input type="checkbox"/> OPEN HOLE 5 <input type="checkbox"/> PLASTIC	<i>1/88</i>	0 90
17-18 <i>6</i>	1 <input type="checkbox"/> STEEL 2 <input type="checkbox"/> GALVANIZED 3 <input type="checkbox"/> CONCRETE 4 <input type="checkbox"/> OPEN HOLE 5 <input type="checkbox"/> PLASTIC		90 222
24-25	1 <input type="checkbox"/> STEEL 2 <input type="checkbox"/> GALVANIZED 3 <input type="checkbox"/> CONCRETE 4 <input type="checkbox"/> OPEN HOLE 5 <input type="checkbox"/> PLASTIC		

SIZE(S) OF OPENING (SLOT NO. 1)	31-33	DIAMETER INCHES	34-38	LENGTH FEET	39-40
MATERIAL AND TYPE		DEPTH TO TOP OF SCREEN	41-44	FEET	10

61 PLUGGING & SEALING RECORD	
DEPTH SET AT - FEET	MATERIAL AND TYPE (CEMENT GROUT LEAD PACKER, ETC.)
10-13 <i>10-13</i>	
16-17 <i>16-17</i>	
18-21 <i>18-21</i>	
22-25 <i>22-25</i>	<i>Cement grout</i>
26-29 <i>26-29</i>	
30-33 <i>30-33</i>	

71 PUMPING TEST METHOD	10 PUMPING RATE	11-14 DURATION OF PUMPING
1 <input checked="" type="checkbox"/> AIR 2 <input type="checkbox"/> BAILER	<i>6</i> GPM	15-16 HOURS 17-18 MINS
STATIC LEVEL	WATER LEVEL END OF PUMPING	WATER LEVELS DURING
18-21 <i>50</i> FEET	22-24 <i>180</i> FEET	15 MINUTES 26-28 <i>110</i> FEET 30 MINUTES 29-31 <i>68</i> FEET 45 MINUTES 32-34 <i>56</i> FEET 60 MINUTES 35-37 <i>50</i> FEET
IF FLOWING, GIVE RATE	PUMP INTAKE SET AT	WATER AT END OF TEST
	GPM	1 <input type="checkbox"/> CLEAR 2 <input checked="" type="checkbox"/> CLOUDY
RECOMMENDED PUMP TYPE	RECOMMENDED PUMP SETTING	RECOMMENDED PUMPING RATE
<input type="checkbox"/> SHALLOW <input checked="" type="checkbox"/> DEEP	<i>180</i> FEET	<i>6</i> GPM

FINAL STATUS OF WELL	1 <input checked="" type="checkbox"/> WATER SUPPLY 5 <input type="checkbox"/> ABANDONED, INSUFFICIENT SUPPLY 2 <input type="checkbox"/> OBSERVATION WELL 6 <input type="checkbox"/> ABANDONED, POOR QUALITY 3 <input type="checkbox"/> TEST HOLE 7 <input type="checkbox"/> UNFINISHED 4 <input type="checkbox"/> RECHARGE WELL <input type="checkbox"/> DEWATERING
WATER USE	1 <input checked="" type="checkbox"/> DOMESTIC 5 <input type="checkbox"/> COMMERCIAL 2 <input type="checkbox"/> STOCK 6 <input type="checkbox"/> MUNICIPAL 3 <input type="checkbox"/> IRRIGATION 7 <input type="checkbox"/> PUBLIC SUPPLY 4 <input type="checkbox"/> INDUSTRIAL 8 <input type="checkbox"/> COOLING OR AIR CONDITIONING <input type="checkbox"/> OTHER 9 <input type="checkbox"/> NOT USED
METHOD OF CONSTRUCTION	1 <input type="checkbox"/> CABLE TOOL 6 <input type="checkbox"/> BORING 2 <input type="checkbox"/> ROTARY (CONVENTIONAL) 7 <input type="checkbox"/> DIAMOND 3 <input type="checkbox"/> ROTARY (REVERSE) 8 <input type="checkbox"/> JETTING 4 <input type="checkbox"/> ROTARY (AIR) 9 <input type="checkbox"/> DRIVING 5 <input checked="" type="checkbox"/> AIR PERCUSSION <input type="checkbox"/> DIGGING <input type="checkbox"/> OTHER

LOCATION OF WELL
IN DIAGRAM BELOW SHOW DISTANCES OF WELL FROM ROAD AND LOT LINE. INDICATE NORTH BY ARROW.
<p>2m 10m N Hwy 16</p>
DRILLERS REMARKS
137553

CONTRACTOR	NAME OF WELL CONTRACTOR <i>J. Mains Well Drilling</i>	WELL CONTRACTOR'S LICENSE NUMBER <i>3644</i>
	ADDRESS <i>Box 326 Richmond Ont</i>	
	NAME OF WELL TECHNICIAN <i>John Mains</i>	WELL TECHNICIAN'S LICENSE NUMBER <i>F-0064</i>
	SIGNATURE OF TECHNICIAN/CONTRACTOR <i>[Signature]</i>	SUBMISSION DATE DAY <i>28</i> MO <i>6</i> YR <i>95</i>

OFFICE USE ONLY	DATA SOURCE	58 CONTRACTOR	59-62 DATE RECEIVED	63-68	80
		<i>3644</i>	<i>JUL 17 1995</i>		
	DATE OF INSPECTION	INSPECTION			
	REMARKS				



The Ontario Water Resources Act

WATER WELL RECORD

Print only in spaces provided.

Mark correct box with a checkmark, where applicable.

11

1531051

Municipality

Con

15008

RE

02

County or District Ottawa - Carleton		Township/Borough/City/Town/Village Rideau		Con block tract survey, etc. 2		Lot 8	
<div style="background-color: black; width: 100%; height: 1.2em;"></div>				Nepean, Ontario		Date completed 08 02 00 day month year	

LOG OF OVERBURDEN AND BEDROCK MATERIALS (see instructions)

[illegible]

WATER RECORD			
Water found at - feet		Kind of water	
97	1 <input type="checkbox"/> Fresh	1 <input type="checkbox"/> Sulphur	
	2 <input type="checkbox"/> Salty	2 <input type="checkbox"/> Minerals	
113	1 <input type="checkbox"/> Fresh	3 <input type="checkbox"/> Sulphur	
	2 <input type="checkbox"/> Salty	4 <input type="checkbox"/> Minerals	
2-23	1 <input type="checkbox"/> Fresh	3 <input type="checkbox"/> Sulphur	
	2 <input type="checkbox"/> Salty	4 <input type="checkbox"/> Minerals	
25-26	1 <input type="checkbox"/> Fresh	3 <input type="checkbox"/> Sulphur	
	2 <input type="checkbox"/> Salty	4 <input type="checkbox"/> Minerals	
30-33	1 <input type="checkbox"/> Fresh	3 <input type="checkbox"/> Sulphur	
	2 <input type="checkbox"/> Salty	4 <input type="checkbox"/> Minerals	

CASING & OPEN HOLE RECORD				
Inside diam inches	Material	Wall thickness inches	Depth - feet	
			From	To
10-11	<input checked="" type="checkbox"/> Steel <input type="checkbox"/> Galvanized <input type="checkbox"/> Concrete <input type="checkbox"/> Open hole <input type="checkbox"/> Plastic			1-16
6 1/4		138	0	46
11-12	<input type="checkbox"/> Steel <input type="checkbox"/> Galvanized <input type="checkbox"/> Concrete <input type="checkbox"/> Open hole <input type="checkbox"/> Plastic			21-25
8 3/4			0	44
21-22	<input type="checkbox"/> Steel <input type="checkbox"/> Galvanized <input type="checkbox"/> Concrete <input type="checkbox"/> Open hole <input type="checkbox"/> Plastic			27-30
6			44	120

SCREEN	Sizes of opening (Slot No.)	Diameter	Length
		inches	feet
	Material and type	Depth at top of screen	
		feet	

51		PLUGGING & SEALING RECORD	
<input checked="" type="checkbox"/> Annular space		<input type="checkbox"/> Abandonment	
Depth set at - feet		Material and type (Cement grout, bentonite, etc.)	
From	To		
2-13	17-17	Cement grout	
18-21	23-23		
25-29	30-31		

PUMPING TEST	Pumping test method ¹⁰	Pumping rate ⁹ ^{11 12}	Duration of pumping ^{17 18}
	<input checked="" type="checkbox"/> Pump ² <input type="checkbox"/> Bailor	GPM	Hours ^{17 18} Mins
	Static level ^{12 21}	Water levels during ²⁵ <input type="checkbox"/> Pumping <input checked="" type="checkbox"/> Recovery	
	Water level end of pumping ^{22 24}	15 minutes ^{26 28}	30 minutes ^{29 31}
		45 minutes ^{32 34}	60 minutes ^{35 37}
	36 feet ^{38 41}	110 feet ^{42 44}	36 feet ^{45 48}
If flowing give rate	Pump intake set at	Water at end of test	
GPM	feet	<input type="checkbox"/> Clear <input checked="" type="checkbox"/> Cloudy	
Recommended pump type	Recommended pump setting ^{53 55}	Recommended pump rate ^{56 58}	
<input type="checkbox"/> Shallow <input checked="" type="checkbox"/> Deep	110 feet	9 GPM	

FINAL STATUS OF WELL 54

1 <input checked="" type="checkbox"/> Water supply	5 <input type="checkbox"/> Abandoned, insufficient supply	9 <input type="checkbox"/> Unfinished
2 <input type="checkbox"/> Observation well	6 <input type="checkbox"/> Abandoned, poor quality	10 <input type="checkbox"/> Replacement well
3 <input type="checkbox"/> Test hole	7 <input type="checkbox"/> Abandoned (Other)	
4 <input type="checkbox"/> Recharge well	8 <input type="checkbox"/> Dewatering	

WATER USE 55-56

1 <input checked="" type="checkbox"/> Domestic	5 <input type="checkbox"/> Commercial	9 <input type="checkbox"/> Not use
2 <input type="checkbox"/> Stock	6 <input type="checkbox"/> Municipal	10 <input type="checkbox"/> Other
3 <input type="checkbox"/> Irrigation	7 <input type="checkbox"/> Public supply	
4 <input type="checkbox"/> Industrial	8 <input type="checkbox"/> Cooling & air conditioning	

METHOD OF CONSTRUCTION ⁵⁷

1 <input type="checkbox"/> Cable tool	5 <input checked="" type="checkbox"/> Air percussion	9 <input type="checkbox"/> Driving
2 <input type="checkbox"/> Rotary (conventional)	6 <input type="checkbox"/> Boring	10 <input type="checkbox"/> Digging
3 <input type="checkbox"/> Rotary (reverse)	7 <input type="checkbox"/> Diamond	11 <input type="checkbox"/> Other
4 <input type="checkbox"/> Rotary (air)	8 <input type="checkbox"/> Jetting	

LOCATION OF WELL

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

Eisenhower

55'

1 mile

Grandwood

210442

Name of Well Contractor	Well Contractor's Licence No.
Air-Rock Drilling Co. Ltd	1119
Address	
RR # 2 Jasper, AB	
Name of Well Technician	Well Technician's Licence No.
Shannon Purcell	72122
Signature of Technician/Contractor	Submission date
[Signature]	10/03/00

MINISTRY USE ONLY	Data source	58 Contractor	59-62	Date received	63-68
		1119		MAR 29 2000	
	Date of inspection		Inspector		
	Remarks				
	CSS.ESO				

Print only in spaces provided.

Mark correct box with a checkmark, where applicable.

11

1531390

Municipality **15008** Con. **RF**

Con

02

County or District Ottawa-Carleton		Township/Borough/City/Town/Village Nepean				Con block tract survey, etc. Con #2		Lot 7	
Owner's surname 841114 Ontario Inc		First Name do Monarch Construction Ltd		Address 3584 Tackles Road, Nepean, ON		Date completed 14 07 2000		Day month year	
Zone		Easting		Northing		RC		Elevation	
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	To
Brown	Clay	Stone's	Packed	0	4
Brown	Sand		Soft	4	7
Grey	Clay	Stone's	packed	7	16
Grey	Limestone/Black	Dolomite	Broken	16	28
Grey/Black	Limestone & Dolomite		Hard	28	101

[illegible]

41		10		15		21	
WATER RECORD							
Water found at - feet		Kind of water					
25	10-13	1	<input type="checkbox"/> Fresh	3	<input type="checkbox"/> Sulphur	14	
	2	<input checked="" type="checkbox"/> Salty	4	<input type="checkbox"/> Minerals	5	<input type="checkbox"/> Gas	
	15-18	1	<input type="checkbox"/> Fresh	3	<input type="checkbox"/> Sulphur	19	
	2	<input type="checkbox"/> Salty	4	<input type="checkbox"/> Minerals	6	<input type="checkbox"/> Gas	
	20-23	1	<input type="checkbox"/> Fresh	3	<input type="checkbox"/> Sulphur	24	
	2	<input type="checkbox"/> Salty	4	<input type="checkbox"/> Minerals	6	<input type="checkbox"/> Gas	
	25-28	1	<input type="checkbox"/> Fresh	3	<input type="checkbox"/> Sulphur	29	
	2	<input type="checkbox"/> Salty	4	<input type="checkbox"/> Minerals	6	<input type="checkbox"/> Gas	
	30-33	1	<input type="checkbox"/> Fresh	3	<input type="checkbox"/> Sulphur	34	
	2	<input type="checkbox"/> Salty	4	<input type="checkbox"/> Minerals	6	<input type="checkbox"/> Gas	

CASING & OPEN HOLE RECORD					
Inside diam inches	Material	Wall thickness inches	Depth - feet		
			From	To	
97/8" ¹⁰⁻¹⁹	<input type="checkbox"/> Steel <input type="checkbox"/> Galvanized <input type="checkbox"/> Concrete <input checked="" type="checkbox"/> Open hole <input type="checkbox"/> Plastic	¹²	0	32 ¹³⁻¹⁶	
61/4" ¹⁷⁻¹⁸	<input checked="" type="checkbox"/> Steel <input type="checkbox"/> Galvanized <input type="checkbox"/> Concrete <input type="checkbox"/> Open hole <input type="checkbox"/> Plastic	¹⁹	188	32 ²⁰⁻²³	
6" ²⁴⁻²⁵	<input type="checkbox"/> Steel <input type="checkbox"/> Galvanized <input type="checkbox"/> Concrete <input checked="" type="checkbox"/> Open hole <input type="checkbox"/> Plastic	²⁶	32	101 ²⁷⁻³⁰	

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

61 PLUGGING & SEALING RECORD			
<input checked="" type="checkbox"/> Annular space		<input type="checkbox"/> Abandonment	
Depth set at - feet		Material and type (Cement grout, bentonite, etc.)	
From	To		
3 ¹⁰⁻¹³	0 ¹⁴⁻¹⁷	Cement Pressure Grouted	
18-21	22-25		
26-29	30-33	80	

PUMPING TEST	71	Pumping test method 1 <input checked="" type="checkbox"/> Pump <input type="checkbox"/> Bailor	10	Pumping rate GPM	11-14	Duration of pumping Hours Mins	17-18
		Static level feet	24-24	Water level end of pumping	25	Water levels during 1 <input type="checkbox"/> Pumping 2 <input type="checkbox"/> Recovery	
	 feet	38-41	15 minutes feet	26-28	30 minutes feet	29-31
	 feet	38-41	45 minutes feet	32-34	60 minutes feet	35-37
		If flowing give rate GPM	38-41	Pump intake set at feet	42	Water at end of test <input type="checkbox"/> Clear <input type="checkbox"/> Cloudy	
	Recommended pump type <input type="checkbox"/> Shallow <input type="checkbox"/> Deep		Recommended pump setting feet	43-45	Recommended pump rate GPM	46-49	

FINAL STATUS OF WELL			54
1	<input type="checkbox"/> Water supply	5	<input type="checkbox"/> Abandoned, insufficient supply
2	<input type="checkbox"/> Observation well	6	<input type="checkbox"/> Abandoned, poor quality
3	<input checked="" type="checkbox"/> Test hole	7	<input type="checkbox"/> Abandoned (Other)
4	<input type="checkbox"/> Recharge well	8	<input type="checkbox"/> Dewatering
		9	<input type="checkbox"/> Unfinished
		10	<input type="checkbox"/> Replacement well

WATER USE			55-56
1	<input type="checkbox"/> Domestic	5	<input type="checkbox"/> Commercial
2	<input type="checkbox"/> Stock	6	<input type="checkbox"/> Municipal
3	<input checked="" type="checkbox"/> Irrigation	7	<input type="checkbox"/> Public supply
4	<input type="checkbox"/> Industrial	8	<input type="checkbox"/> Cooling & air conditioning
		9	<input type="checkbox"/> Not use
		10	<input type="checkbox"/> Other

METHOD OF CONSTRUCTION			57
1	<input type="checkbox"/> Cable tool	5	<input checked="" type="checkbox"/> Air percussion
2	<input type="checkbox"/> Rotary (conventional)	6	<input type="checkbox"/> Boring
3	<input type="checkbox"/> Rotary (reverse)	7	<input type="checkbox"/> Diamond
4	<input type="checkbox"/> Rotary (air)	8	<input type="checkbox"/> Jetting
		9	<input type="checkbox"/> Driving
		10	<input type="checkbox"/> Digging
		11	<input type="checkbox"/> Other

LOCATION OF WELL

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

Green bank


Cambrian

1/2 mile

1600'

*Note: No Water found from 32' to 101' *

216766

Name of Well Contractor	Well Contractor's Licence No.
Splash Well Drilling	4877
Address	
P.O. Box 1983 Prescott, Ontario	
Name of Well Technician	Well Technician's Licence No.
Todd Ferguson	T478
Signature of Technician/Contractor	Submission date
	day 19 mo 07 y2000

MINISTRY USE ONLY	Data source	58 Contractor	59 62	Date received	63-68	00
		4877		SEP 15 2000		
	Date of inspection	Inspector				
	Remarks					
	CSS.ES0					

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.

Well Owner's Information and Location of Well Information

MUN										CON										LOT									
-----	--	--	--	--	--	--	--	--	--	-----	--	--	--	--	--	--	--	--	--	-----	--	--	--	--	--	--	--	--	--

RR#/Street Number/Name #3699 Jockvale Road				City/Town/Village Napan				Site/Compartment/Block/Tract etc. P/L 8 2			
GPS Reading 8.3		NAD 18.443689		Zone 5011042		Northing Magellan		Unit Make/Model		Mode of Operation: <input type="checkbox"/> Undifferentiated <input checked="" type="checkbox"/> Averaged <input type="checkbox"/> Differentiated, specify	

Log of Overburden and Bedrock Materials (see instructions)

General Colour	Most common material	Other Materials	General Description	Depth From	Metres To
	Sand Boulders			0	26.42
	Grey limestone			26.42	41.14
	White Sandstone			41.14	48.76

Hole Diameter		
Depth From	Metres To	Diameter Centimetres
0	48.76	15.23

Water Record	
Water found at: 47.94 m	Kind of Water: NOT TESTED
<input type="checkbox"/> Gas	<input type="checkbox"/> Sulphur
<input type="checkbox"/> Other:	<input type="checkbox"/> Salty
<input type="checkbox"/> m	<input type="checkbox"/> Fresh
<input type="checkbox"/> Gas	<input type="checkbox"/> Sulphur
<input type="checkbox"/> Other:	<input type="checkbox"/> Salty
<input type="checkbox"/> m	<input type="checkbox"/> Fresh
<input type="checkbox"/> Gas	<input type="checkbox"/> Sulphur
<input type="checkbox"/> Other:	<input type="checkbox"/> Salty
After test of well yield, water was clear and sediment free	
<input type="checkbox"/> Other, specify	
Chlorinated <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	

Construction Record					
Inside diam centimetres	Material	Wall thickness centimetres	Depth From	Metres To	
15.88	Steel <input checked="" type="checkbox"/> Fibreglass <input type="checkbox"/> Plastic <input type="checkbox"/> Concrete <input type="checkbox"/> Galvanized	1.48	0	21.63	
Screen					
Outside diam	Steel <input type="checkbox"/> Fibreglass <input type="checkbox"/> Plastic <input type="checkbox"/> Concrete <input type="checkbox"/> Galvanized	Slot No.			
No Casing or Screen					
<input checked="" type="checkbox"/> Open hole					
			21.03	48.76	

Test of Well Yield					
Pumping test method	Draw Down	Recovery			
Subsidence	Time Water Level min	Time Water Level min	Time Water Level min	Time Water Level min	Time Water Level min
Pump intake set at - (metres)	Static Level	12.5	23.88		
Pumping rate - (litres/min)	1	14.9	20.60		
Duration of pumping	2	16.10	17.70		
Final water level and of pumping	3	18.70	15.50		
Recommended pump type	4	19.70	14.46		
Recommended pump depth	5	20.90	14.07		
Recommended pump rate	10	24.37	13.10		
(litres/min)	15	24.80	13.00		
If flowing give rate - (litres/min)	20	24.30	12.98		
	25	23.88	12.94		
If pumping discontinued, give reason	30	23.80	12.90		
	40	23.80	12.75		
	50	23.85	12.60		
	60	23.88	12.55		

Plugging and Sealing Record		
Depth set at - Metres From	To	Material and type (bentonite slurry, neat cement slurry) etc.
21.03	17.98	Neat Cement Slurry
17.98	0	Bentonite Slurry
Volume Placed (cubic metres)		
.227		
.735		

Method of Construction			
<input type="checkbox"/> Cable Tool	<input type="checkbox"/> Rotary (air)	<input type="checkbox"/> Diamond	<input type="checkbox"/> Digging
<input type="checkbox"/> Rotary (conventional)	<input checked="" type="checkbox"/> Air percussion	<input type="checkbox"/> Jetting	<input type="checkbox"/> Other
<input type="checkbox"/> Rotary (reverse)	<input type="checkbox"/> Boring	<input type="checkbox"/> Driving	
Water Use			
<input checked="" type="checkbox"/> Domestic	<input type="checkbox"/> Industrial	<input type="checkbox"/> Public Supply	<input type="checkbox"/> Other
<input type="checkbox"/> Stock	<input type="checkbox"/> Commercial	<input type="checkbox"/> Not used	
<input type="checkbox"/> Irrigation	<input type="checkbox"/> Municipal	<input type="checkbox"/> Cooling & air conditioning	
Final Status of Well			
<input checked="" type="checkbox"/> Water Supply	<input type="checkbox"/> Recharge well	<input type="checkbox"/> Unfinished	<input type="checkbox"/> Abandoned, (Other)
<input type="checkbox"/> Observation well	<input type="checkbox"/> Abandoned, insufficient supply	<input type="checkbox"/> Dewatering	
<input type="checkbox"/> Test Hole	<input type="checkbox"/> Abandoned, poor quality	<input type="checkbox"/> Replacement well	

Well Contractor/Technician Information	
Name of Well Contractor AIR ROCK DRILLING CO LTD	Well Contractor's Licence No. 1119
Business Address (street name, number, city etc.) RR1 RICHMOND ONT K0A2Z0	
Name of Well Technician (last name, first name) TODDAN DAN	Well Technician's Licence No. T3058
Signature of Technician/Contractor x [Signature]	Date Submitted 2006 0405

Location of Well	
In diagram below show distances of well from road, lot line, and building. Indicate north by arrow.	
Audit No. z 39916	Date Well Completed 2006 0306
Was the well owner's information package delivered? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Date Delivered 2006 0322

Ministry Use Only	
Date Source	Contractor
Date Received APR 12 2006	Date of Inspection 1119
Remarks	Well Record Number



Ontario

Ministry of
the Environment

Well

A 089400

t Below)

Well Record

Regulation 903 Ontario Water Resources Act

Measurements recorded in: ☐ Metric ☒ Imperial

Page of

Address of Well Location (Street Number/Name)		Township		Concession	
#3721 Jockvale Road		Nepean		North 1/2 Lot 7	
County/District/Municipality		City/Town/Village		Province	
Ottawa - Carleton		Nepean		Ontario	
UTM Coordinates		Northing		Municipal Plan and Sublot Number	
NAD 83 18444012 5010821		PLAN 62444		Other	

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

General Colour	Most Common Material	Other Materials	General Description	Depth (m/ft)
	Sand, Gravel & Boulders			From To
	Gray Limestone			0' 66'
				66' 100'

Annular Space		
Depth Set at (m/ft)	Type of Sealant Used (Material and Type)	Volume Placed (m³/ft³)
From To		
72' 62'	Neat Cement Slurry	7.8
62' 0'	Neat Bentonite Slurry	25.2

Method of Construction		Well Use	
<input type="checkbox"/> Cable Tool	<input type="checkbox"/> Diamond	<input type="checkbox"/> Public	<input type="checkbox"/> Commercial
<input type="checkbox"/> Rotary (Conventional)	<input type="checkbox"/> Jetting	<input checked="" type="checkbox"/> Domestic	<input type="checkbox"/> Municipal
<input type="checkbox"/> Rotary (Reverse)	<input type="checkbox"/> Driving	<input type="checkbox"/> Livestock	<input type="checkbox"/> Test Hole
<input type="checkbox"/> Boring	<input type="checkbox"/> Digging	<input type="checkbox"/> Irrigation	<input type="checkbox"/> Cooling & Air Conditioning
<input checked="" type="checkbox"/> Air percussion		<input type="checkbox"/> Industrial	
<input type="checkbox"/> Other, specify		<input type="checkbox"/> Other, specify	

Construction Record - Casing				Status of Well	
Inside Diameter (cm/in)	Open Hole OR Material (Galvanized, Fibreglass, Concrete, Plastic, Steel)	Wall Thickness (cm/in)	Depth (m/ft)	From	To
6"	Steel	0.188"	72'	72'	72'
6 1/8"	Open hole		72'	72'	100'

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

Water Details		Hole Diameter	
Water found at Depth (m/ft)	Kind of Water: <input type="checkbox"/> Fresh <input checked="" type="checkbox"/> Untested	Depth (m/ft)	Diameter (cm/in)
88'	Gas	From To	
92'	Gas	0 72' 6"	
	Gas	72' 100' 6 1/8"	
	Gas		
	Gas		
	Gas		
	Gas		

Business Name of Well Contractor		Well Contractor's Licence No.	
AIR ROCK DRILLING CO LTD		1119	
Business Address (Street Number/Name)		Municipality	
RR#1		RICHMOND	
Province	Postal Code	Business E-mail Address	
ONT	K0A2Z0		
Bus. Telephone No. (inc. area code)		Name of Well Technician (Last Name, First Name)	
613 838 2170		GRAHAM RYAN	
Well Technician's Licence No.		Signature of Technician and/or Contractor	
T348410552		2009/10/06	

Results of Well Yield Testing			
After test of well yield, water was:		Draw Down	
<input checked="" type="checkbox"/> Clear and sand free	<input type="checkbox"/> Other, specify	Time (min)	Water Level (m/ft)
If pumping discontinued, give reason:		Static Level	Recovery
Pump intake set at (m/ft)		1 35' 9"	1 38' 1"
Pumping rate (l/min / GPM)		2 40' 7"	2 34' 5"
Duration of pumping		3 43' 3"	3 33' 2"
1 hrs + 0 min		4 45' 1"	4 32' 6"
Final water level end of pumping (m/ft)		5 46' 3"	5 32'
If flowing give rate (l/min / GPM)		10 48' 5"	10 29'
Recommended pump depth (m/ft)		15 49' 2"	15 27' 6"
Recommended pump rate (l/min / GPM)		20 49' 9"	20
Well production (l/min / GPM)		25 50' 2"	25
Disinfected?		30 50' 6"	30
<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		40 51' 3"	40
Map of Well Location		50 52'	50
Please provide a map below following instructions on the back.		60 52' 7"	60

Map of Well Location	
Please provide a map below following instructions on the back.	
Comments:	
Well owner's information package delivered	Date Package Delivered
<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	2009/10/29
Date Work Completed	2009/10/28
Ministry Use Only	
Audit No.	z102680
NOV 18 2009	

APPENDIX 3

QUALIFICATIONS OF ASSESSORS

Geotechnical
Engineering

Environmental
Engineering

Hydrogeology

Geological
Engineering

Materials Testing

Building Science

Archaeological
Services

POSITION

Environmental Assessor

EDUCATION

McGill University, B.Sc. 2010
Biology and English Literature

Queen's University, M.E.S. 2012
Environmental Studies

EXPERIENCE

2014 to Present

Paterson Group Inc.
Consulting Engineers
Environmental Assessor

2013 to 2014

Civica Infrastructure Inc.
Municipal Water Resources Engineering - Vaughan
Project Support Coordinator, Project Proposal Writer

PROJECTS

Environmental Impact Statements – various, Ottawa
Phase I Environmental Site Assessments – various, Ottawa
Flood Mapping Project Coordination – Credit Valley Conservation Authority
Manhole Survey Tool Design and Data Processing – City of Markham
Proposal Preparation – Utilities Kingston Inflow and Infiltration Study, City of
Peterborough Drainage Study

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