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## Phase I Environmental Site Assessment

Residential Property  
3996 and 3998 Innes Road - Ottawa

Prepared For

Mr. Loutfi Frangian

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## EXECUTIVE SUMMARY

### Assessment

Paterson Group was retained by Mr. Loutfi Frangian to conduct a Phase I Environmental Site Assessment (ESA) of 3996 and 3998 Innes 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.

The historical research indicated that the subject property was first developed in the late 1950s with the existing residential duplex. No PCAs were identified on the Phase I property.

The properties in the Phase I study area were developed with residential dwellings from the late 1950s to 1990s from agricultural fields. Innes Road was subsequently developed with commercial businesses in the 2000s. Several Potentially Contaminating Activities were identified in the Phase I study area: a retail fuel outlet located to the east of the subject site, a retail fuel outlet at 3930 Innes Road, a former dry cleaners at 4025 Innes Road, and a former automotive garage at 2025 Mer Bleue Road. Based on their distances from the subject site, these PCAs are not considered to have the potential to have impacted the subject property, and are not considered to represent Areas of Potential Environmental Concern on the subject property.

Following the historical research, an inspection was conducted of the subject site and Phase I ESA study area. At the time of the site visit, only the two retail fuel outlets were identified as PCAs.

Based on the results of this Phase I ESA, **it is our opinion that a Phase II ESA is not required for the property.**

### Recommendations

It is our understanding that the Phase I Property is to be redeveloped. Prior to the demolition of the existing residential dwelling, a designated substance survey (DSS) must be conducted in accordance with Ontario Regulation 490/09 under the Occupational Health and Safety Act.

## 1.0 INTRODUCTION

At the request of Mr. Loutfi Frangian, Paterson Group (Paterson) conducted a Phase I Environmental Site Assessment (Phase I ESA) for 3996 and 3998 Innes 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. Loutfi Frangian. Mr. Frangian can be contacted at 3047 Courtyard Crescent, Ottawa, Ontario, K1T 3R7.

This report has been prepared specifically and solely for the above noted project which is described herein. It contains all of our findings 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**

Addresses:	3996 and 3998 Innes Road, Ottawa, Ontario
Legal Descriptions:	Part of Lot 1, Concession 3, (Geographic Township of Gloucester), City of Ottawa.
Property Identification Numbers:	04404-0458
Location:	The subject site is located on the south side of Innes Road, west of Mer Bleue Road, in the City of Ottawa, Ontario. The subject site is shown on Figure 1 - Key Plan following the body of this report.
Latitude and Longitude:	45° 27' 17" N, 75° 30' 23" W
<b>Site Description:</b>	
Configuration:	Rectangular
Site Area:	1,554 m <sup>2</sup> (approximate)
Zoning:	AM – Arterial Mainstreet Zone.
Current Use:	The Phase I property is currently occupied by one (1) duplex residential dwelling.
Services:	The subject site is in a municipally serviced area.

### **3.0 SCOPE OF INVESTIGATION**

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

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

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## **4.0 RECORDS REVIEW**

### **4.1 General**

#### **Phase I-ESA Study Area Determination**

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

#### **First Developed Use Determination**

Based on the city directories and air photo research, it is our interpretation that the subject property was first developed at some time between 1952 and 1967, with the existing residential structure.

#### **Fire Insurance Plans**

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

#### **City of Ottawa Street Directories**

City directories at the National Archives were reviewed in approximate 10 year intervals from 1980 through 2011. Based on the directory review, the subject property has been listed since 2003 and has always been listed as residential.

Adjacent properties and other properties within the Phase I study area have been used for a combination of residential and commercial purposes. A retail fuel outlet (RFO) was listed at 3934 Innes Road (170 m to the west) in 2011. This address was listed as Amerco Rentals and U-Haul Company in 2005. An RFO was listed with the address 3944 Innes Road in 2005, 2002, 2000 and 1992, and is suspected to be the same property as 3934 Innes Road. Another retail fuel outlet was listed at 4042 Innes Road in 2000 and 2011. A dry cleaners was listed in 2000 and 2005 at 4025 Innes Road, located across Innes Road to the north of the subject site, in a commercial plaza. This section of Innes Road was not listed in the directories in the 1980s. Based on the distances of these activities from the subject site, they are not considered to have had the potential to impact the subject property.

#### **Plan of Survey**

A plan of survey was not available for the subject site at the time of issuing this report.

## **Previous Engineering Reports**

Based on a review of our files, Paterson has conducted several investigations within the Phase I study area. An automotive garage was present at 2025 Mer Bleue Road, approximately 160 m to the east of the subject site. Based on its distance from the subject site, it is not considered to represent an APEC on the subject property. No other environmental concerns regarding the potential for impact to the Phase I property were identified.

A Phase II ESA was completed by Paterson in conjunction with a geotechnical investigation for the subject site in January 2018 for due diligence purposes, at the request of the client. Two (2) boreholes with monitoring wells were placed along the eastern boundary of the subject site, and one borehole was placed near the western side of the site. Two (2) soil samples and one (1) groundwater sample were submitted for analysis of petroleum hydrocarbons, fractions 1 to 4 and benzene, toluene, ethylbenzene, and xylenes (BTEX). No detectable concentrations of these parameters were noted in the soil or groundwater samples.

## **4.2 Environmental Source Information**

### **Environment Canada**

A search of the National Pollutant Release Inventory (NPRI) was conducted electronically on January 18, 2018. The Phase I Property was not listed in the NPRI database. No records of pollutant release were listed in the database for properties located within the Phase I Study Area.

### **PCB Inventory**

A search of national PCB waste storage sites was conducted on January 18, 2018. No PCB waste storage sites are located within the Phase I study area.

### **Ontario Ministry of Environment and Climate Change (MOECC) Instruments**

A request was submitted to the MOECC Freedom of Information office for information with respect to certificates of approval, permits to take water, certificates of property use or any other similar MOECC issued instruments for the site. A response had not been received from the MOECC at the time this report was issued. Should pertinent information be provided by the response, the MOECC response will be forwarded to the client.



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## **MOECC Coal Gasification Plant Inventory**

The Ontario Ministry of Environment document titled "Municipal Coal Gasification Plant Site Inventory, 1991" was reviewed to reference the locations of former plants with respect to the site. No coal gasification plants were identified within 1 km of the subject site.

## **MOECC Incident Reports**

A request was submitted to the MOECC Freedom of Information office for information with respect to records concerning environmental incidents, orders, offences, spills, discharges of contaminants or inspections maintained by the MOECC for the site or adjacent properties. A response had not been received from the MOECC at the time this report was issued. Should pertinent information be provided, the MOECC response will be forwarded to the client.

## **MOECC Waste Management Records**

A request was submitted to the MOECC Freedom of Information office for information with respect to waste management records. Applicable information of current and historical waste storage locations, waste generators and waste receivers pursuant to Ontario Regulation 347 was considered in this review. A response had not been received from the MOECC at the time this report was issued. Should pertinent information be provided, the MOECC response will be forwarded to the client once it has been received.

## **MOECC Submissions**

A request was submitted to the MOECC Freedom of Information office for information with respect to reports related to environmental conditions that have been submitted to the MOECC. A response had not been received from the MOECC at the time this report was issued. Should pertinent information be provided, the MOECC response will be forwarded to the client once it has been received.

## **MOECC Brownfields Environmental Site Registry**

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

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## **MOECC Waste Disposal Site Inventory**

The Ontario Ministry of Environment document titled "Waste Disposal Site Inventory in Ontario, 1991" was reviewed as part of the historical research. This document includes all recorded active and closed waste disposal sites, industrial manufactured gas plants and coal tar distillation plants in the Province of Ontario. Based on the available information, no active or closed waste disposal sites, industrial manufactured gas plants or coal tar distillation plants are present in the Phase I study area.

## **Areas of Natural Significance (ANSIs)**

A search for areas of natural significance and features within the Phase I study area was conducted on the web site of the Ontario Ministry of Natural Resources (MNR) on January 18, 2018. The search did not reveal any natural features or areas of natural significance 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 January 18, 2018 to inquire about current and former underground storage tanks, spills and incidents for the site and neighbouring properties. At the time of issuing this report, a response from the TSSA had not been received. If the response contains pertinent information, the client will be notified.

## **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 in the immediate vicinity of the Phase I study area.

## **City of Ottawa Historical Land Use Inventory (HLUI)**

A request for information from the City of Ottawa's Historical Land Use Inventory (HLUI 2005) database for the Phase I Properties was submitted to the City of Ottawa. At the time of issuing this report, a response had not been received from the City. Should the response contain pertinent information, the client will be notified.

### **4.3 Physical Setting Sources**

#### **Aerial Photographs**

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

- 1952            The subject site is a vacant agricultural field. Properties in the Phase I study area are also agricultural fields, with some farmsteads and barn structures.
  
- 1967            The subject site has been developed with what appears to be the existing residential duplex building. The surrounding properties do not appear to have changed significantly, with the exception of the property 50 m to the east, which appears to be under construction.
  
- 1979            No apparent changes have been made to the Phase I property or surrounding properties.
  
- 1987            No apparent changes have been made to the Phase I property. The north side of Innes Road has been extensively developed with residential dwellings, and a commercial building is present across Innes Road from the subject property.
  
- 1994            No apparent changes have been made to the subject site. further development has occurred on the north side of Innes Road; no major changes appear to have been made along the south side of Innes Road.
  
- 2002            No significant changes appear to have been made to the subject property. The adjacent lands to the east have been developed with commercial and/or institutional buildings. The property to the east at 4042 Innes Road is occupied by a retail fuel outlet.
  
- 2011            (City of Ottawa Website) No changes have been made to the subject property. The adjacent lands to the west and south have been developed with commercial buildings and associated asphaltic concrete parking areas.
  
- 2017            (City of Ottawa Website) No significant changes have been made to the subject site or surrounding properties.

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

### **Topographic Maps**

Topographic maps were obtained from Natural Resources Canada – The Atlas of Canada website and from the City of Ottawa website. The topographic maps indicate that the subject site is approximately 90 m above sea level, and regional topography in the general area of the site slopes gently downward to the north, towards Bilberry Creek. 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. According to this physiographic map, the site is located in the St. Lawrence Lowlands. According to the mapping description provided: “The lowlands are plain-like areas that were all affected by the Pleistocene glaciations and are therefore covered by surficial deposits and other features associated with the ice sheets.” The subject site is located in the Central St. Lawrence Lowland, which is generally less than 150 m above sea level.

### **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 interbedded limestone and dolomite of the Gull River Formation. Overburden consists of plain till with a drift thickness reported to range from 2 to 3 m across the site.

### **Water Well Records**

A search of the MOECC’s online database of well records was conducted for the Phase I ESA study area. No well records were identified for the Phase I property, although several are for wells located on adjacent properties. Well records for thirteen (13) water supply wells were identified for the properties within the Phase I study. The potable wells were drilled to 7 to 37 m below grade and were installed within limestone bedrock. The water supply wells were installed in the 1960s and 1970s and are not expected to be in current use. Copies of the well records are provided in Appendix 2.

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## **Water Bodies and Areas of Natural Significance**

No water bodies are present on the subject property or in the Phase I study area. Bilberry Creek is located approximately 600 m to the northeast of the Phase I property. No areas of natural significance are known to exist within the Phase I study area.

## **5.0 INTERVIEWS**

### **Property Manager**

Mr. David Lewis, the property manager, was available during the site visit to respond to questions. Mr. Lewis has been managing the property for approximately ten years. According to Mr. Lewis, the sump pit in the basement of 3996 Innes Road (western unit) is serviced on an annual basis, and normally contains little, if any, water. The building has a wood-burning fireplace which has been sealed, and replaced with an electric fireplace in the basement. According to Mr. Lewis, the chimney was capped at the top.

The building was previously heated with fuel oil, stored in an aboveground tank, the location of which was indicated by Mr. Lewis during the site visit, in the basement of the subject building (western unit, addressed 3996 Innes Road).

In the ten years that Mr. Lewis has been managing the property, parts of the roof have been re-shingled, and some of the siding has been replaced.

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## **6.0 SITE RECONNAISSANCE**

### **6.1 General Requirements**

A representative from the Environmental Department of Paterson Group conducted a site visit on January 25, 2018. The site was snow covered at the time and weather conditions were partly cloudy with a temperature of approximately -10° C. At the time of the site visit, the neighbouring properties within the Phase I study area were also observed from publicly accessible areas.

### **6.2 Specific Observations at Phase I Properties**

#### **Buildings and Structures**

The subject property is occupied by a residential duplex building, situated near Innes Road. The building is finished with a combination of decorative pebble, brick, and vinyl siding. The roof is sloped and shingled, and has been partially re-shingled over the last ten years. The rear of the property includes two (2) small storage sheds, used to store yard maintenance equipment. No other buildings or structures were present on the property at the time of the site visit.

#### **Underground Utilities**

Underground service locates were completed for the subject site prior to the geotechnical investigation. Underground utilities on the Phase I property include municipal water, sewer, and gas, the latter of which enters the property from the south, through the back yard.

#### **Site Features**

The subject structure is situated on the north part the Phase I property. Each unit has a paved asphalt driveway (on either side of the building), with landscaped lawn areas at the front along Innes Road, and at the rear. The site was snow covered at the time of the site visit.

Site drainage primarily consists of surficial infiltration and runoff to Innes Road. No areas of standing water were observed on the property at the time of the site visit. One storm sewer catch basin was observed on Innes Road near the site.

Apart from a propane barbeque tank, no aboveground storage tanks (ASTs) or evidence of underground storage tanks (USTs) were observed on the exterior of the property at the time of the site visit. Other than underground utilities,

discussed above, there was no evidence of belowground structures observed at the time of the site visit.

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

As previously discussed, the Phase I property and surrounding lands are serviced with municipal water. There were no potable wells observed on the Phase I property or on other properties within the Phase I study area.

The above-noted site features are shown on Drawing PE4215-1 - Site Plan.

### **Fill Material**

No signs of fill material were noted at the time of the site visit. No odours or visible signs of contamination were noted.

### **Interior Assessment**

A general description of the interior of the building is as follows:

- Floors consist of a combination of laminate, ceramic tile, vinyl floor tile, linoleum, and unfinished poured concrete (basement only).
- Walls consist of drywall and/or plaster and concrete in the basement.
- Ceilings consist of plaster and drywall, ceiling stipple, and decorative plaster finishes.
- Lighting throughout the building is provided by incandescent and fluorescent fixtures.

Liquid discharged from the Phase I property includes wash water and sewage. One (1) sump pit was observed in the basement. The water in the pit could not be observed at the time of the site visit.

Chemical storage within the subject structure was limited to commercially-available cleaning products and paints, which were properly stored and are not considered to represent an environmental concern to the Phase I property.

### **Hazardous Building Materials**

Based on the age of the residential dwelling (1950s or 60s), asbestos-containing materials may be present. Potential asbestos containing materials (ACMs)

observed within the structure include linoleum, vinyl floor tiles, drywall joint compound, plaster/parging, and ceiling stipple. The exterior stucco finish on the building is also a potential ACM.

Based on the age of the dwelling, lead-based paint may also be present on older or original painted surfaces. Fluorescent light ballasts installed before 1980 may contain PCBs. It is considered likely that ballasts have by now been replaced with PCB-free ballasts.

Based on the age of the dwelling, urea formaldehyde foam insulation may be present. No signs of UFFI were noted at the time of the site visit, although ceiling and wall cavities were not inspected.

Ozone-depleting substances (ODSs) noted at the time of the site visit included kitchen refrigerators and fire extinguishers, which should be maintained on a regular basis by a contractor licensed for these works.

### **Mould and Moisture**

At the time of the site visit, no mould or excessive moisture conditions were identified, and no damage resulting from potential previous mould or moisture presence was noted.

### **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 Phase I property was as follows:

- North – Innes Road, followed by residential dwellings and a multi-unit commercial plaza;
- South – multi-unit commercial plaza and asphaltic concrete parking area;
- East – Kingdom Hall of Jehovah's Witnesses, followed by a retail fuel outlet;
- West – Commercial units and parking area.

Two (2) PCAs (retail fuel outlets) were identified within the Phase I study area, neither of which were considered to pose a risk to the subject land based on their separation distances. The fuel pumps to the east of the subject site are at least 75 m from the subject property, and the tanks are over 100 m distant. Land use within the Phase I study area (250 m radius) is used for residential and



commercial purposes, and is depicted on Drawing PE4215-2 – Surrounding Land Use Plan.

## 7.0 REVIEW AND EVALUATION OF INFORMATION

### 7.1 Land Use History

The following table outlines the ownership and land use dating back to the first developed use of the Phase I Property.

<b>Table 1 - Land Use History – 3996 Innes Road, Ottawa</b>				
<b>Year</b>	<b>Name of Owner</b>	<b>Description of Property Use</b>	<b>Property Use</b>	<b>Other Observations from Aerial Photos, FIPs, etc.</b>
<1960s	Unknown	Agricultural	Agricultural	The property was a vacant agricultural field in the 1952 aerial photo.
1960s - 2007	Mr. and Mrs. Taillefer	Residential	Residential	The existing residential duplex is visible in the 1967 aerial photo.
2007 - present	Mario Lepage and Christine Morris	Residential	Residential	No changes have been made.

### Potentially Contaminating Activities and Areas of Potential Environmental Concern

No Potentially Contaminating Activities were identified on the subject property. Potentially Contaminating Activities in the Phase I study area include two (2) existing retail fuel outlets, a former dry cleaning operation, and a former garage. These PCAs are not considered to have the potential to have impacted the subject site, based on their separation distances, and do not represent Areas of Potential Environmental Concern.

### Contaminants of Potential Concern (CPCs)

There are no CPCs on the Phase I Property.

## 7.2 Conceptual Site Model

### Existing Buildings and Structures

The subject site is occupied by one (1) residential duplex dwelling with a full basement level and two storage sheds.

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## **Geological and Hydrogeological Setting**

The Geological Survey of Canada website on the Urban Geology of the National Capital Area was consulted as part of this assessment. Based on this information, bedrock in the area of the site consists of interbedded limestone and dolomite of the Gull River Formation. Overburden is reported to consist of till with a drift thickness reported to range from 2 to 3 m across the site. Based on the regional topography, the groundwater flow is expected to be towards the north, towards Bilberry Creek and the Ottawa River.

## **Water Bodies**

Bilberry Creek is the nearest water body, located approximately 600 m to the northeast.

## **Areas of Natural Significance**

No areas of natural significance were identified on the Phase I property or in the Phase I study area.

## **Water Well Records**

No well records were identified on the Phase I property. Well records identified for the properties within the Phase I study area include 13 domestic water supply wells. The potable wells were drilled to 7 to 37 m below grade and were installed within limestone bedrock. The water supply wells were installed in the 1960s and 70s and are not expected to be in current use. Copies of the well records are provided in Appendix 2.

## **Potentially Contaminating Activities and Areas of Potential Environmental Concern**

As per Section 7.1 of this report, no PCAs were identified on the subject property. PCAs in the Phase I study area include two (2) retail fuel outlets, a former dry cleaners, and a former automotive garage. Based on this distances from the subject site, these PCAs are not considered to have impacted the subject site, and do not represent Areas of Potential Environmental Concern.

## **Contaminants of Potential Concern (CPCs)**

No CPCs were identified on the Phase I Property.

### **Assessment of Uncertainty and/or Absence of Information**

The presence of potentially contaminating activities was confirmed by a variety of independent sources. As such, the conclusions of this report are not affected by uncertainty which may be present with respect to the individual sources.

## 8.0 CONCLUSIONS

### Assessment

Paterson Group was retained by Mr. Loutfi Frangian to conduct a Phase I Environmental Site Assessment (ESA) of 3996 and 3998 Innes 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.

The historical research indicated that the subject property was first developed in the late 1950s with the existing residential duplex. No PCAs were identified on the Phase I property.

The properties in the Phase I study area were developed with residential dwellings from the late 1950s to 1990s from agricultural fields. Innes Road was subsequently developed with commercial businesses in the 2000s. Several Potentially Contaminating Activities were identified in the Phase I study area: a retail fuel outlet located to the east of the subject site, a retail fuel outlet at 3930 Innes Road, a former dry cleaners at 4025 Innes Road, and a former automotive garage at 2025 Mer Bleue Road. Based on their distances from the subject site, these PCAs are not considered to have the potential to have impacted the subject property, and are not considered to represent Areas of Potential Environmental Concern on the subject property.

Following the historical research, an inspection was conducted of the subject site and Phase I ESA study area. At the time of the site visit, only the two retail fuel outlets were identified as PCAs.

Based on the results of this Phase I ESA, **it is our opinion that a Phase II ESA is not required for the property.**

### Recommendations

It is our understanding that the Phase I Property is to be redeveloped. Prior to the demolition of the existing residential dwelling, a designated substance survey (DSS) must be conducted in accordance with Ontario Regulation 490/09 under the Occupational Health and Safety Act.

## 9.0 STATEMENT OF LIMITATIONS

This Phase I Environmental Site Assessment 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 Mr. Loutfi Frangian. Permission and notification from Mr. Frangian 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<sub>ESA</sub>



### Report Distribution:

- Mr. Loutfi Frangian
- Paterson Group

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## 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**

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

### **Municipal Records**

City of Ottawa Document “Old Landfill Management Strategy, Phase I - Identification of Sites.”, prepared by Golder Associates, 2004.  
Intera Technologies Limited Report “Mapping and Assessment of Former Industrial Sites, City of Ottawa”, 1988.  
City of Ottawa Historical Land Use Inventory (HLUI) database.  
The City of Ottawa eMap website.

### **Local Information Sources**

Personal Interviews.  
Previous Engineering Reports.

### **Public Information Sources**

Google Earth.  
Google Maps/Street View.

# **FIGURES**

**FIGURE 1 – KEY PLAN**

**FIGURE 2 – TOPOGRAPHIC MAP**

**DRAWING PE4215-1 – SITE PLAN**

**DRAWING PE4215-2 – SURROUNDING LAND USE PLAN**

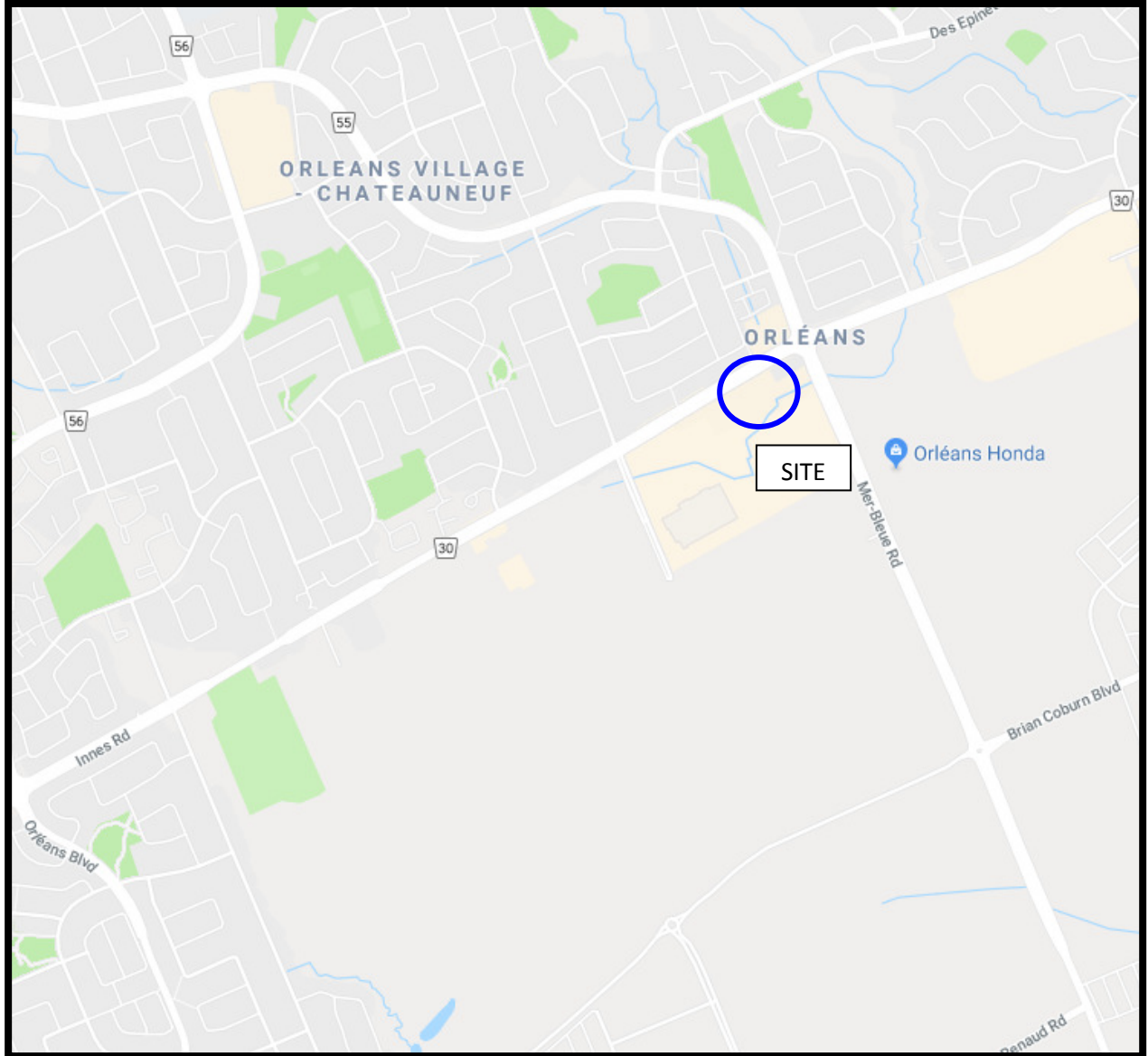


FIGURE 1  
KEY PLAN



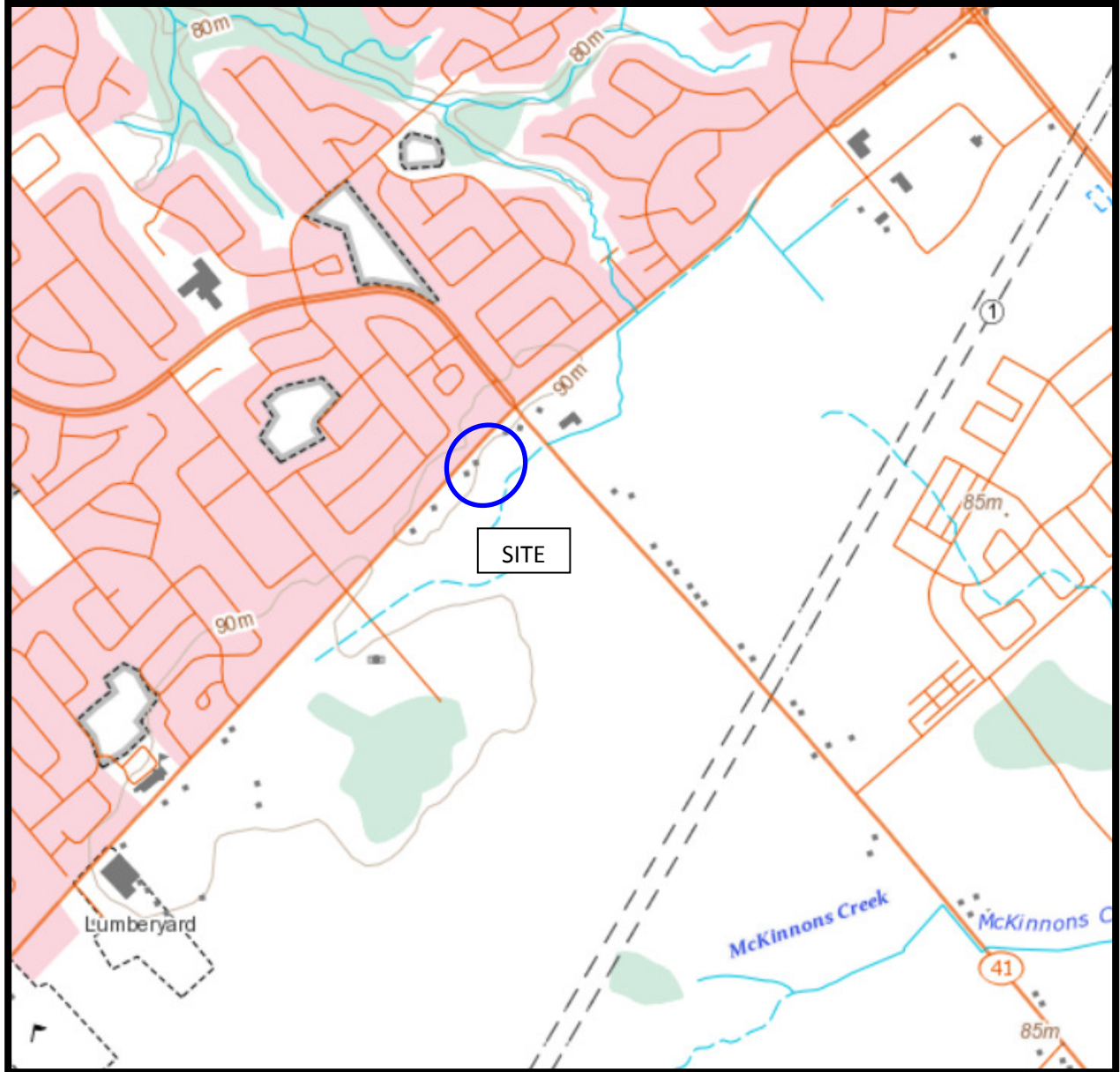
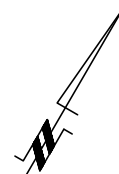


FIGURE 2  
TOPOGRAPHIC MAP

RESIDENTIAL

#4025 INNES ROAD  
MULTI-UNIT  
COMMERCIAL-RETAIL

**INNES ROAD**



#3920 INNES ROAD  
MULTI-UNIT  
COMMERCIAL-RETAIL

#3996 INNES ROAD  
RESIDENTIAL  
(2 UNITS)

ASPHALT

BH 1

ASPHALT

GRASS

BH 2

BH 3

#4042 INNES ROAD  
RETAIL FUEL OUTLET

CAR WASH

#4030 INNES ROAD  
KINGDOM HALL OF  
JEHOVAH'S WITNESSES

#2010 MER  
BLEUE ROAD  
MULTI-UNIT  
COMMERCIAL-RETAIL

**LEGEND:**



BOREHOLE LOCATION, PATERSON 2018



BOREHOLE WITH MONITORING WELL  
LOCATION, PATERSON 2018

**patersongroup**  
consulting engineers

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

NO.	REVISIONS	DATE	INITIAL
0			

MR. LOUTFI FRANGIAN  
**PHASE I - ENVIRONMENTAL SITE ASSESSMENT**  
 3996 AND 3998 INNES ROAD  
 OTTAWA, ONTARIO

Title: **SITE PLAN**

Scale:	1:600	Date:	01/2018
Drawn by:	AG	Report No.:	PE4215-1
Checked by:	AG	Dwg. No.:	<b>PE4215-1</b>
Approved by:	MSD	Revision No.:	0



**PHASE I ENVIRONMENTAL  
SITE ASSESSMENT STUDY  
AREA**

- POTENTIALLY CONTAMINATING ACTIVITIES:**
1. RETAIL FUEL OUTLET AT 4042 INNES ROAD
  2. RETAIL FUEL OUTLET AT 3930 INNES ROAD
  3. FORMER DRY CLEANERS AT 4025 INNES ROAD
  4. FORMER AUTOMOTIVE GARAGE AT 2025 MER BLEUE ROAD

**patersongroup**  
consulting engineers

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

NO.	REVISIONS	DATE	INITIAL
0			

**MR. LOUTFI FRANGIAN**  
**PHASE I - ENVIRONMENTAL SITE ASSESSMENT**  
**3996 AND 3998 INNES ROAD**

**OTTAWA, ONTARIO**

Title: **SURROUNDING LAND USE PLAN**

Scale:	1:2500	Date:	01/2018
Drawn by:	AG	Report No.:	PE4215-1
Checked by:	MD	Dwg. No.:	<b>PE4215-2</b>
Approved by:	MSD	Revision No.:	0

# **APPENDIX 1**

**AERIAL PHOTOGRAPHS**

**SITE PHOTOGRAPHS**



AERIAL PHOTOGRAPH  
1952



AERIAL PHOTOGRAPH  
1967



AERIAL PHOTOGRAPH  
1979



AERIAL PHOTOGRAPH  
1987

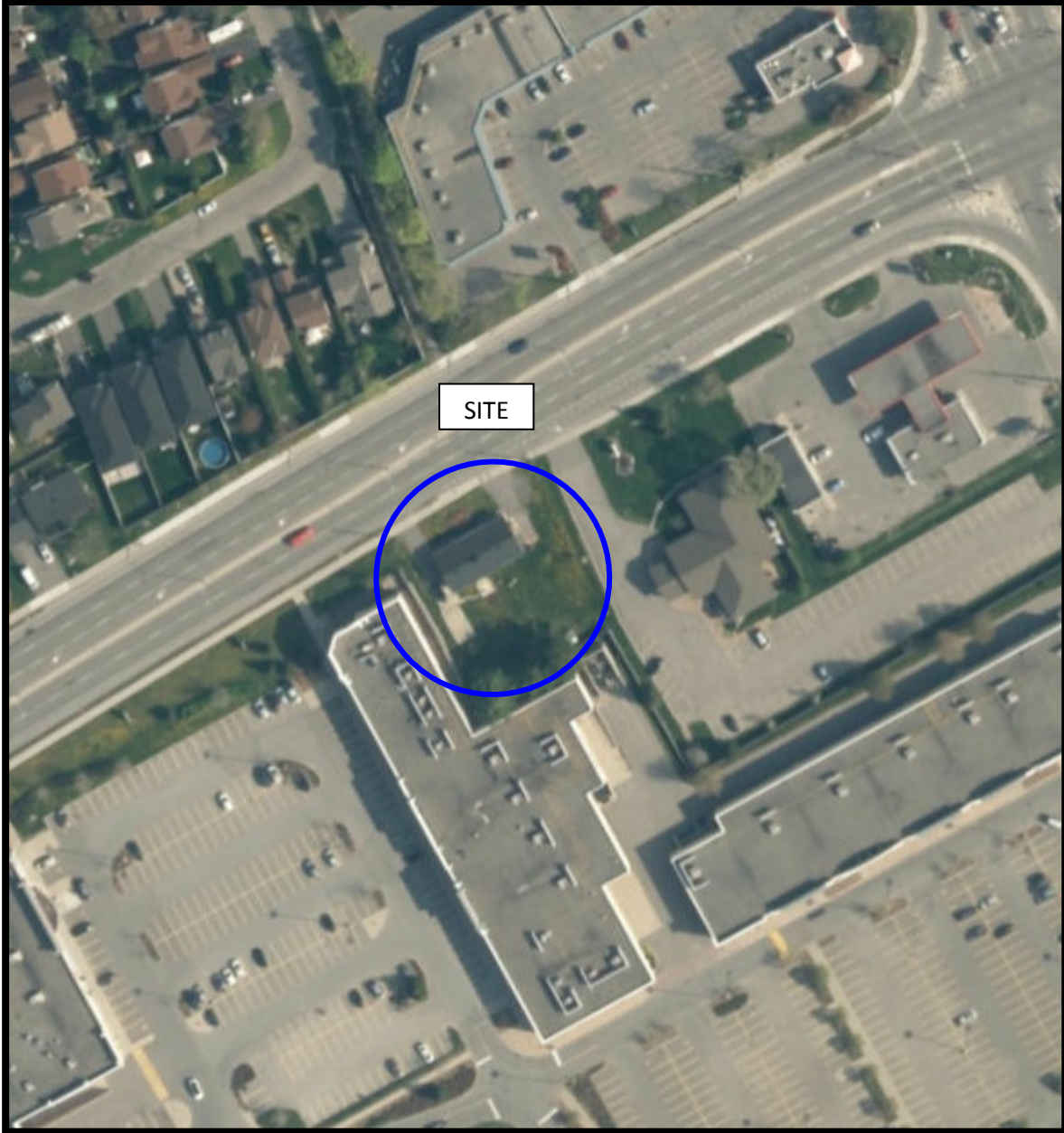




AERIAL PHOTOGRAPH  
1994



AERIAL PHOTOGRAPH  
2002



AERIAL PHOTOGRAPH  
2017

## Site Photographs

PE4215

3996 and 3998 Innes Road, Ottawa, ON

January 25, 2018



Photograph 1: Front view of the subject building, looking east.



Photograph 2: Rear view of the subject building, looking east. The Mr. Gas retail fuel outlet is visible in the distance at right.

## Site Photographs

PE4215

3996 and 3998 Innes Road, Ottawa, ON

January 25, 2018



Photograph 3: Sump pit (with two submersible pumps) and backup battery in the basement of 3996 Innes Road.



Photograph 4: View of the basement boiler room (3996 Innes Road). The brick wall is part of the sealed chimney.

# **APPENDIX 2**

**MOECC FREEDOM OF INFORMATION SEARCH**

**MOECC WELL RECORDS**

**CITY OF OTTAWA HLUI SEARCH**

## 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  <b>Paterson Group Inc.</b> 154 Colonnade Road Ottawa, ON K2E 7J5 Email address: <span style="float: right;">agraham@patersongroup.ca</span>			FOI Request No.	Date Request Received
			Fee Paid  <input type="checkbox"/> ACCT <input type="checkbox"/> CHQ <input type="checkbox"/> VISA/MC <input type="checkbox"/> CASH	
Telephone/Fax Nos. Tel.    613-226-7381 Fax    613-226-6344	Your Project/Reference No. PE4215	Signature/Print /Name of Requester Anna Graham	<input type="checkbox"/> CNR <input type="checkbox"/> ER <input type="checkbox"/> NOR <input type="checkbox"/> SWR <input type="checkbox"/> WCR <input type="checkbox"/> SAC <input type="checkbox"/> IEB <input type="checkbox"/> EAA <input type="checkbox"/> EMR <input type="checkbox"/> SWA	
Request Parameters				
Municipal Address / Lot, Concession, Geographic Township ( <b>Municipal address essential for cities, towns or regions</b> ) 3996 Innes Road, Ottawa (Orleans), Ontario				
Present Property Owner(s) and Date(s) of Ownership Mario Lepage				
Previous Property Owner(s) and Date(s) of Ownership				
Present/Previous Tenant(s), (if applicable) Residential tenants (2 units)				
Search Parameters			Specify Year(s) Requested	
<i>Files older than 2 years may require \$60.00 retrieval cost. There is no guarantee that records responsive to your request will be located.</i>				
Environmental concerns (General correspondence, occurrence reports, abatement)			all	
Orders			all	
Spills			all	
Investigations/prosecutions ➤ Owner <b>AND</b> 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. <b>Search fees in excess of \$300.00</b> could be incurred, depending on the types and years to be searched. Specify Certificates of Approval number(s) (if known). <b>If supporting documents are also required, mark SD box</b> and specify type e.g. maps, plans, reports, etc.				
			<b>SD</b>	<b>Specify Year(s) Requested</b>
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 460280 E

5 5033310 N

Elev. 4 0300

Basin 0251NA FROM

C.V. 3

LOT 1

3125H



ONTARIO

The Water-well Drillers Act, 1954  
Department of Mines

15 No 1399  
GROUND WATER BRANCH  
DEC 29 1958  
ONTARIO WATER  
RESOURCES COMMISSION

# Water-Well Record

Country or Territorial District Canada Township, Village, Town or City Gloucester  
In Village, Town or City Carleton Place  
Address Carleton East

Date completed 12 11 58  
(day) (month) (year)

### Pipe and Casing Record

### Pumping Test

Casing diameter (s) 4" Static level 4 ft  
Length (s) 10 ft Pumping rate 200 GPH  
Type of screen 3" Pumping level 3.8 ft  
Length of screen 10 ft Duration of test 1 hour

### Well Log

### Water Record

Overburden and Bedrock Record	From ft.	To ft.	Depth (s) at which water (s) found	No. of feet water rises	Kind of water (fresh, salty, or sulphur)
<u>gravel and clay</u>	<u>0</u>	<u>8 ft</u>	<u>30</u>	<u>78</u>	<u>fresh</u>
<u>lime rocks</u>	<u>8</u>	<u>82</u>	<u>75</u>		

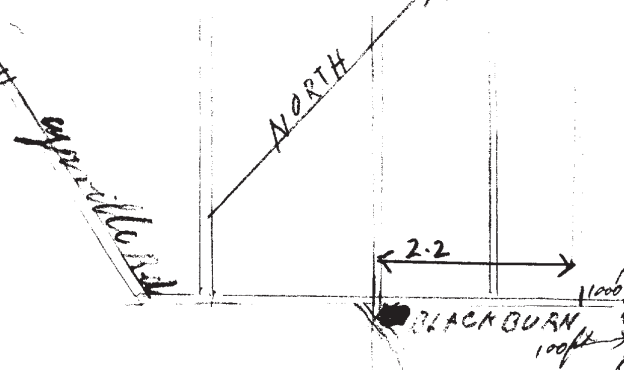
For what purpose(s) is the water to be used? domestic  
Is water clear or cloudy? clear  
Is well on upland, in valley, or on hillside? upland  
Drilling firm W. J. G. Givney  
Address Carletonville  
Name of Driller W. J. G. Givney  
Address Carletonville East  
Licence Number 10-19

I certify that the foregoing statements of fact are true.

Date Dec 27 W. J. G. Givney  
Signature of Licensee

### Location of Well

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



UTM 118 2 4 6 10 6 1 5 E



GROUND WATER BRANCH  
56 No  
FEB 20 1952  
ONTARIO WATER RESOURCES COMMISSION  
CUMBERLAND

58

177316/54  
Elev. 5 R 10 2 9 2  
15 R 10 3 3 4 4 0 N

The Ontario Water Resources Commission Act

# WATER WELL RECORD

Basin 2 5 | | | | | County or District Russel Township, Village, Town or City Cumbeber

Con. X1 Lot 1 Date completed 13 Nov month 61 year  
Address Orleans R R N 1

### Casing and Screen Record

Inside diameter of casing 2"  
Total length of casing 20'  
Type of screen  
Length of screen  
Depth to top of screen  
Diameter of finished hole 2"

### Pumping Test

Static level 3'  
Test-pumping rate 12 G.P.M.  
Pumping level 20'  
Duration of test pumping 1 Hrs  
Water clear or cloudy at end of test Clear  
Recommended pumping rate 12 G.P.M.  
with pump setting of 20' feet below ground surface

### Well Log

### Water Record

Overburden and Bedrock Record	From ft.	To ft.	Depth(s) at which water(s) found	Kind of water (fresh, salty, sulphur)
Blue Clay	0'	18'		
Grey Limestone	1'8'	48'	48'	Fresh

1512847

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

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

Drilling or Boring Firm G. CHARBONNEAU  
DIAMOND DRILLER ARTESIAN WELLS  
MODERN HOME BUILDERS  
Address ORLEANS, ONT.  
R.R. 1 Box 9R-25

Licence Number 224

Name of Driller or Borer

Address

Date Nov / 13/61

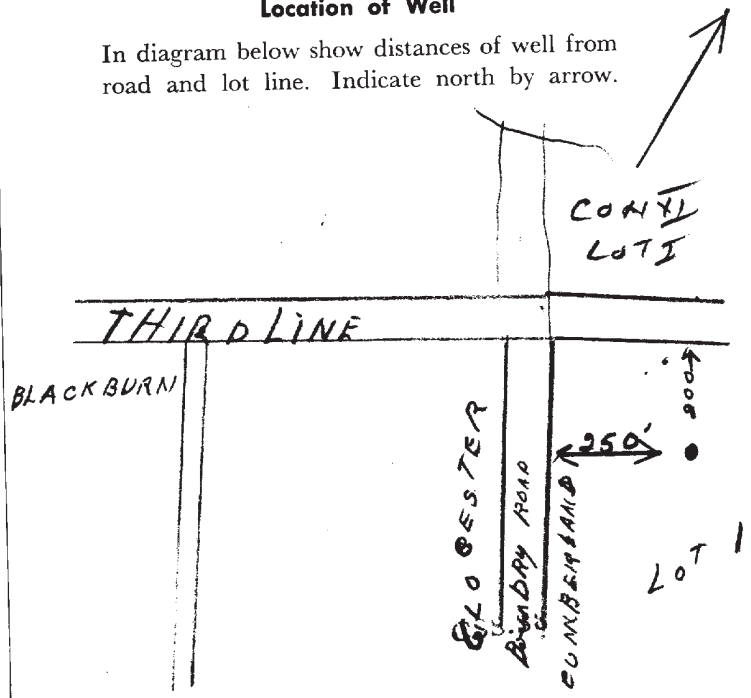
*Gerard Charbonneau*  
(Signature of Licensed Drilling or Boring Contractor)

Form 7 15M Sets 60-5930

OWRC COPY

### Location of Well

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



CONTI  
LOT I

LOT 1

Form 7 15M Sets 60-5930

OWRC COPY

UTM 18Z 460315E

31G5h



GROUND WATER BRANCH  
15 N 28 1962  
ONTARIO WATER RESOURCES COMMISSION

5R 5033445N

The Ontario Water Resources Commission Act

# WATER WELL RECORD

Elev. 14R 0295

Basin 25 | ~~GLoucester~~ | ~~card~~

Township, Village, Town or City *Gloucester*

County or District *9 OF Lot 1*

Date completed *9 June 62*  
(day month year)

Address *Orlean R R 1*

### Casing and Screen Record

Inside diameter of casing *4"*  
Total length of casing *10 ft*  
Type of screen  
Length of screen  
Depth to top of screen  
Diameter of finished hole *4"*

### Pumping Test

Static level *18*  
Test-pumping rate *8* G.P.M.  
Pumping level *25*  
Duration of test pumping *1 hour*  
Water clear or cloudy at end of test *cloudy*  
Recommended pumping rate *8* G.P.M.  
with pump setting of *50* feet below ground surface

### Well Log

### Water Record

Overburden and Bedrock Record	From ft.	To ft.	Depth(s) at which water(s) found	Kind of water (fresh, salty, sulphur)
<i>clay mix with gravel</i>	<i>1</i>	<i>4</i>		
<i>gray stone ?</i>	<i>4</i>	<i>81</i>	<i>80</i>	<i>fresh</i>

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

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

Drilling or Boring Firm *Yvon Girard*

Address *ayerville ont*

Licence Number *623*

Name of Driller or Borer *Yvon Girard*

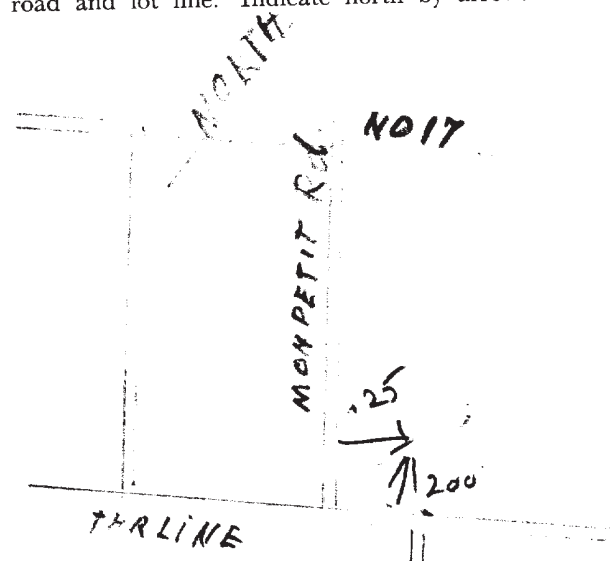
Address *ayerville ont*

Date *June 16*  
*Yvon Girard*  
(Signature of Licensed Drilling or Boring Contractor)

Form 15M Sets 60-5930

### Location of Well

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



OWRC COPY

CSB-33

UTM | 18 | 46 | 04 | 010 | E

3165h



WATER RESOURCES DIVISION JUN 15 1965 No. 1400 ONTARIO WATER RESOURCES COMMISSION

Elev. | 5 | 03 | 33 | 910 | N

The Ontario Water Resources Commission Act

Elev. | 4 | 02 | 95

# WATER WELL RECORD

Basin | 25 | Carleton

Township, Village, Town or City | Gloucester

Con. | III O.F. | Lot | 1

Date completed | 17 May 1965

Address | Box 444 Orleans Ont.

### Casing and Screen Record

Inside diameter of casing 6 1/4"  
Total length of casing 19'6"  
Type of screen none  
Length of screen —  
Depth to top of screen —  
Diameter of finished hole 6"

### Pumping Test

Static level 8'  
Test-pumping rate 6 G.P.M.  
Pumping level 40  
Duration of test pumping 1/2 hr  
Water clear or cloudy at end of test clear  
Recommended pumping rate 6 G.P.M.  
with pump setting of 50' feet below ground surface

### Well Log

### Water Record

Overburden and Bedrock Record	From ft.	To ft.	Depth(s) at which water(s) found	Kind of water (fresh, salty, sulphur)
clay	0	7		
limestone	7	65	28' 62'	fresh "

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

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

Drilling or Boring Firm McLean Water Supply Ltd.

Address 15-32 Raven Ave

Ottawa 3

Licence Number 1686

Name of Driller or Borer H. Scharf

Address

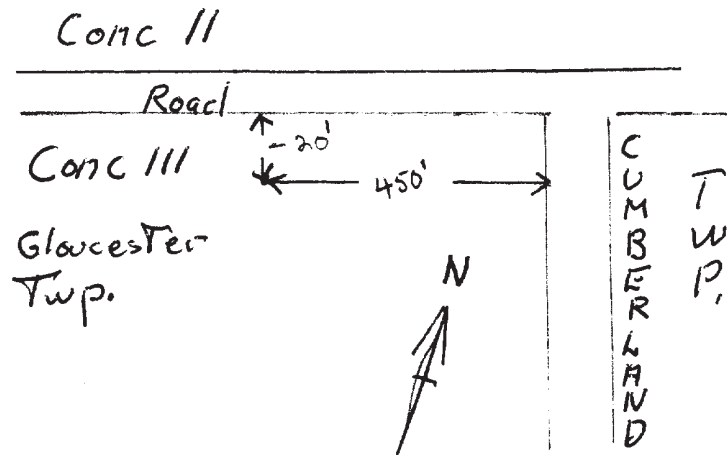
Date May 17 / 65

*(Signature)*  
(Signature of Licensed Drilling or Boring Contractor)

Form 7 15M-60-4138

### Location of Well

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



JB

3165h



232

WATER RESOURCES  
DIVISION  
15 No. 1141  
SEP 20 1965  
ONTARIO WATER  
RESOURCES COMMISSION

UTM 118Z 460385E

5R 5033460N

4R 0295

25 Carleton

ILOF

Lot 1

The Ontario Water Resources Commission Act

# WATER WELL RECORD

Township, Village, Town or City Gloucester

Date completed 24 June 1965

Orleans Ont



### Casing and Screen Record

Inside diameter of casing 6 1/4"  
 Total length of casing 15'  
 Type of screen none  
 Length of screen -  
 Depth to top of screen -  
 Diameter of finished hole 6"

### Pumping Test

Static level 20'  
 Test-pumping rate 8 G.P.M.  
 Pumping level 75'  
 Duration of test pumping 1/2 hr  
 Water clear or cloudy at end of test clear  
 Recommended pumping rate 5 G.P.M.  
 with pump setting of 75 feet below ground surface

### Well Log

#### Overburden and Bedrock Record

	From ft.	To ft.	Depth(s) at which water(s) found	Kind of water (fresh, salty, sulphur)
loam	0	3		
limestone	3	85	60-85	fresh

### Water Record

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

Garden

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

Drilling or Boring Firm

McWean Water Supply Ltd.

Address 1532 Raven Ave

Ottawa 3

Licence Number 1686

Name of Driller or Borer B. Smart

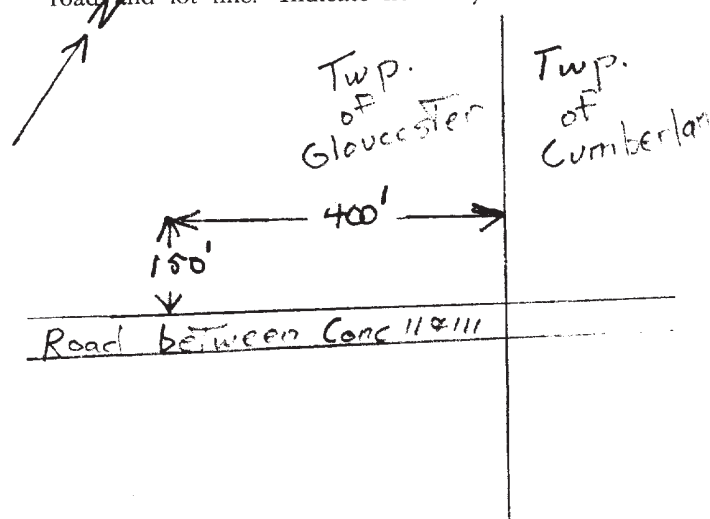
Address

Date June 25/65

(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.



JTM 1182 460490

Cont of Lot 1



1509939

ca

4R 523390 CODED

Elev. 4R 10294

The Ontario Water Resources Commission Act

1st 21ST 111

# WATER WELL RECORD

County or District SB ~~Chackair~~ Carleton Township, Village, Town or City Gloucester

Con. 3 O.F. Lot 1 Date completed 12 July 1968  
(day month year)



Address Navan, Ontario.

### Casing and Screen Record

Inside diameter of casing 2"  
Total length of casing 80'  
Type of screen .....  
Length of screen .....  
Depth to top of screen .....  
Diameter of finished hole 2"

### Pumping Test

Static level 21'  
Test-pumping rate 5 G.P.M.  
Pumping level 60'  
Duration of test pumping 3 hrs.  
Water clear or cloudy at end of test clear  
Recommended pumping rate 5 G.P.M.  
with pump setting of 60 feet below ground surface

### Well Log

### Water Record

Overburden and Bedrock Record	From ft.	To ft.	Depth(s) at which water(s) found	Kind of water (fresh, salty, sulphur)
<u>yellow sand</u>	<u>0</u>	<u>4</u>	<u>106</u>	
<u>blue clay</u>	<u>4</u>	<u>78</u>		<u>fresh</u>
<u>grey limestone</u>	<u>78</u>	<u>106</u>		

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

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

Drilling or Boring Firm G. Charbonneau, Diamond & Cable drilling

Address R.R. 1, Box 194, Orleans, Ont.

Licence Number 3039

Name of Driller or Borer G. Charbonneau

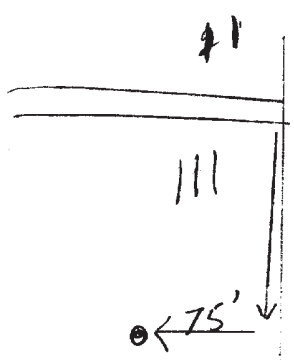
Address Orleans, Ont.

Date 12 July 1968

Gerard Charbonneau  
(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.



NORTH  
CUMBERLAND



316/5 A

P

18460480

485033420

580295

1509943

The Ontario Water Resources Commission Act

# WATER WELL RECORD

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

Cor. 4 Lot 1 Date completed 20 November 1968  
(day month year)



Address Navan, Ont.

### Casing and Screen Record

Inside diameter of casing 2"

Total length of casing 122'

Type of screen .....

Length of screen .....

Depth to top of screen .....

Diameter of finished hole 2"

### Pumping Test

Static level 30'

Test-pumping rate 10 G.P.M.

Pumping level 50'

Duration of test pumping 4 hrs.

Water clear or cloudy at end of test clear

Recommended pumping rate 6 G.P.M.  
with pump setting of 50 feet below ground surface

### Well Log

### Water Record

Overburden and Bedrock Record	From ft.	To ft.	Depth(s) at which water(s) found	Kind of water (fresh, salty, sulphur)
<u>yellow sand</u>	<u>0</u>	<u>5</u>	<u>122</u>	<u>fresh</u>
<u>blue clay</u>	<u>5</u>	<u>115</u>		
<u>coarse gravel</u>	<u>115</u>	<u>122</u>		

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

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

Drilling or Boring Firm .....

G. Charbonneau, Diamond & Cable Drilling,

Address R. R. 1, Box 194, Orleans, Ont.

Licence Number 3039

Name of Driller or Borer G. Charbonneau

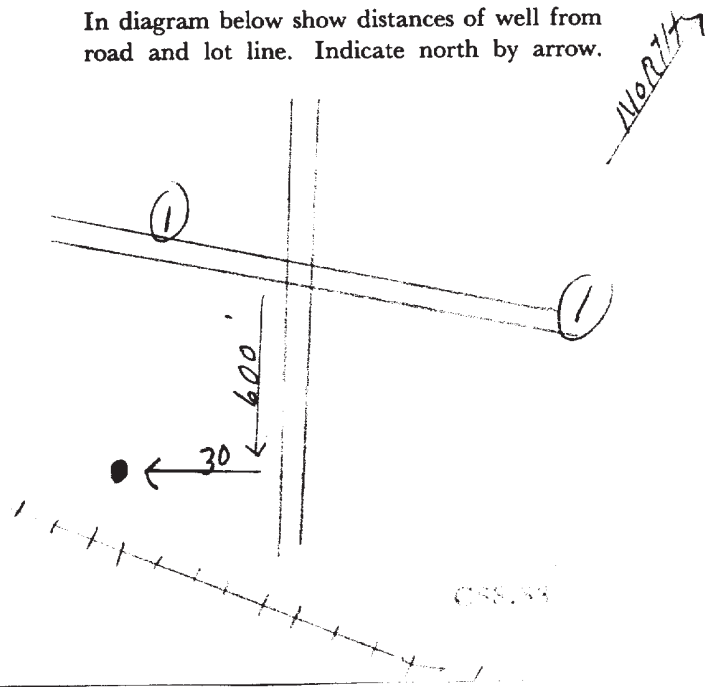
Address Orleans, Ont.

Date 20 November 1968

Gérard Charbonneau  
(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.





# The Ontario Water Resources Commission Act

# WATER WELL RECORD

3165h

Water management in Ontario 1. PRINT ONLY IN SPACES PROVIDED

2. CHECK  CORRECT BOX WHERE APPLICABLE

11 1511798 15002 05 02

COUNTY OR DISTRICT: Cochran TOWNSHIP, BOROUGH, CITY, TOWN, VILLAGE: Windsor CON., BLOCK, TRACT, SURVEY, ETC.: #10 of 11 LOT: 1001

DATE COMPLETED: DAY 19 MO. 06 YR. 92

NG: 233400 RC: 4 ELEVATION: 9296 RC: 4 BASIN CODE: 25

### LOG OF OVERBURDEN AND BEDROCK MATERIALS (SEE INSTRUCTIONS)

GENERAL COLOUR	MOST COMMON MATERIAL	OTHER MATERIALS	GENERAL DESCRIPTION	DEPTH - FEET	
				FROM	TO
	<u>Top 8' of Limestone</u>			<u>1</u>	<u>9</u>
				<u>3</u>	<u>59</u>

31 0003 02 0059 15

32

#### 41 WATER RECORD

WATER FOUND AT - FEET: 0050

10-13	14	17-18	19	20-23	24	25-28	29	30-33	34-60
<input checked="" type="checkbox"/> FRESH <input type="checkbox"/> SALTY	<input type="checkbox"/> SULPHUR <input type="checkbox"/> MINERAL	<input type="checkbox"/> FRESH <input type="checkbox"/> SALTY	<input type="checkbox"/> SULPHUR <input type="checkbox"/> MINERAL	<input type="checkbox"/> FRESH <input type="checkbox"/> SALTY	<input type="checkbox"/> SULPHUR <input type="checkbox"/> MINERAL	<input type="checkbox"/> FRESH <input type="checkbox"/> SALTY	<input type="checkbox"/> SULPHUR <input type="checkbox"/> MINERAL	<input type="checkbox"/> FRESH <input type="checkbox"/> SALTY	<input type="checkbox"/> SULPHUR <input type="checkbox"/> MINERAL

#### 51 CASING & OPEN HOLE RECORD

INSIDE DIAM. INCHES	MATERIAL	WALL THICKNESS INCHES	DEPTH - FEET	
			FROM	TO
<u>05</u>	<input checked="" type="checkbox"/> STEEL <input type="checkbox"/> GALVANIZED <input type="checkbox"/> CONCRETE <input type="checkbox"/> OPEN HOLE	<u>1 1/2</u>	<u>0</u>	<u>0010</u>
	<input type="checkbox"/> STEEL <input type="checkbox"/> GALVANIZED <input type="checkbox"/> CONCRETE <input checked="" type="checkbox"/> OPEN HOLE			<u>0059</u> <u>2700</u>

#### SCREEN

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

DIAMETER: 31-33 INCHES

LENGTH: 34-38 FEET

MATERIAL AND TYPE:

DEPTH TO TOP OF SCREEN: 41-44 FEET

#### 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	
28-29	30-33	

#### 71 PUMPING TEST

PUMPING TEST METHOD:  PUMP  BAILEY

PUMPING RATE: 0008 GPM

DURATION OF PUMPING: 30 HOURS

15-16	17-18	19-21	22-24	25	26-28	29-31	32-34	35-37
WATER LEVEL END OF PUMPING	WATER LEVELS DURING	15 MINUTES	30 MINUTES	45 MINUTES	60 MINUTES	RECOVERY		
<u>012</u>	<u>020</u>	<u>025</u>	<u>035</u>	<u>050</u>				

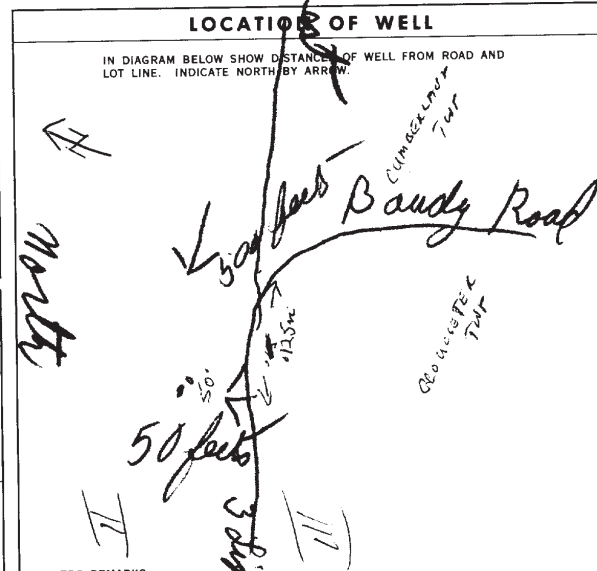
IF FLOWING, GIVE RATE: 35 GPM

RECOMMENDED PUMP TYPE:  SHALLOW  DEEP

RECOMMENDED PUMP SETTING: 050 FEET

RECOMMENDED PUMPING RATE: 0005 GPM

50-53 000.2 GPM/FT. SPECIFIC CAPACITY



#### FINAL STATUS OF WELL

54  WATER SUPPLY  OBSERVATION WELL  TEST HOLE  RECHARGE WELL

55-56  DOMESTIC  STOCK  IRRIGATION  INDUSTRIAL  OTHER

57  CABLE TOOL  ROTARY (CONVENTIONAL)  ROTARY (REVERSE)  ROTARY (AIR)  AIR PERCUSSION

ABANDONED, INSUFFICIENT SUPPLY  ABANDONED, POOR QUALITY  UNFINISHED

COMMERCIAL  MUNICIPAL  PUBLIC SUPPLY  COOLING OR AIR CONDITIONING  NOT USED

BORING  DIAMOND  JETTING  DRIVING

#### CONTRACTOR

NAME OF WELL CONTRACTOR: Maurice Cayer LICENCE NUMBER: 1517

ADDRESS: Cochran

NAME OF DRILLER OR BORER: Alcide Cayer LICENCE NUMBER:

SIGNATURE OF CONTRACTOR: Maurice Cayer SUBMISSION DATE: DAY \_\_\_\_\_ MO. \_\_\_\_\_ YR. \_\_\_\_\_

#### OFFICE USE ONLY

DATA SOURCE: 1 CONTRACTOR: 1517 DATE RECEIVED: 060772

DATE OF INSPECTION: \_\_\_\_\_ INSPECTOR: \_\_\_\_\_

REMARKS: \_\_\_\_\_

63-68 060.58

P K  
WI







Ministry of the Environment  
Ontario

The Ontario Water Resources Act 3/65h

# WATER WELL RECORD

1518182

MUNICIPALITY 15002 CON. OF 02

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

COUNTY OR DISTRICT: [Redacted] TOWNSHIP, BOROUGH, CITY, TOWN, VILLAGE: **Clevedon**  
CON. BLOCK, TRACT, SURVEY, ETC: **Conc 2 OF II**  
DATE COMPLETED: 48-53  
DAY 12 MO 08 YR 82  
ELEVATION: 333.99 RC 4 ELEVATION: 029.5 RC 4 BASIN CODE: 28

## LOG OF OVERBURDEN AND BEDROCK MATERIALS (SEE INSTRUCTIONS)

GENERAL COLOUR	MOST COMMON MATERIAL	OTHER MATERIALS	GENERAL DESCRIPTION	DEPTH - FEET	
				FROM	TO
Yellow	Clay			0	4
Brown	Slate			4	38

31 0004505 0038619 32

**41 WATER RECORD**

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

**51 CASING & OPEN HOLE RECORD**

INSIDE DIAM INCHES	MATERIAL	WALL THICKNESS INCHES	DEPTH - FEET	
			FROM	TO
06 6 1/2	1 <input checked="" type="checkbox"/> STEEL 2 <input type="checkbox"/> GALVANIZED 3 <input type="checkbox"/> CONCRETE 4 <input type="checkbox"/> OPEN HOLE	225	0	0021
06 6 1/2	1 <input type="checkbox"/> STEEL 2 <input type="checkbox"/> GALVANIZED 3 <input type="checkbox"/> CONCRETE 4 <input checked="" type="checkbox"/> OPEN HOLE		21	0038

**SCREEN**

SIZE (S) OF OPENING (SLOT NO.)	DIAMETER	LENGTH
	INCHES	FEET

MATERIAL AND TYPE: \_\_\_\_\_ DEPTH TO TOP OF SCREEN: 41-44 FEET

**61 PLUGGING & SEALING RECORD**

DEPTH SET AT - FEET	MATERIAL AND TYPE (CEMENT GROUT, LEAD PACKER, ETC.)
10-13	14-17
18-21	22-25
26-29	30-33

**71 PUMPING TEST**

PUMPING TEST METHOD: 1  PUMP 2  BAILER

STATIC LEVEL: 010 FEET

WATER LEVEL END OF PUMPING: 00 FEET

WATER LEVELS DURING PUMPING: 010 FEET (15, 30, 45, 60 MINUTES)

RECOVERY: 010 FEET (29-31, 32-34, 35-37)

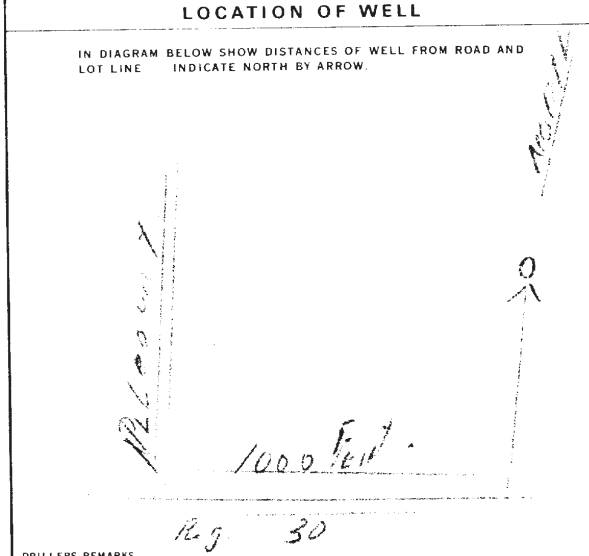
IF FLOWING, GIVE RATE: 30 GPM

PUMP INTAKE SET AT: 030 FEET

RECOMMENDED PUMP TYPE: 1  SHALLOW 2  DEEP

RECOMMENDED PUMP SETTING: 030 FEET

RECOMMENDED PUMPING RATE: 0040 GPM



**FINAL STATUS OF WELL**

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

**WATER USE**

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

**METHOD OF DRILLING**

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

**CONTRACTOR**

NAME OF WELL CONTRACTOR: **G. Charbonneau+Son Drilling Ltd.** LICENCE NUMBER: **1504**

ADDRESS: **Box 194, RR2, Orleans, Ontario K1L8B9**

NAME OF DRILLER OR BORER: **Raymond Charbonneau** LICENCE NUMBER: \_\_\_\_\_

SIGNATURE OF CONTRACTOR: \_\_\_\_\_ SUBMISSION DATE: DAY 12 NO 08 YR 82

**OFFICE USE ONLY**

DATA SOURCE: 1 **1504** CONTRACTOR 59-62 **05 04 83**

DATE OF INSPECTION: \_\_\_\_\_ INSPECTOR: \_\_\_\_\_

REMARKS: \_\_\_\_\_



Ministry of the Environment  
Ontario

The Ontario Water Resources Act  
**WATER WELL RECORD**

3165h

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

(11) 1518181 MUNICIPALITY OF OXFORD 02

COUNTY OR DISTRICT: Georgetown TOWNSHIP, BOROUGH, CITY, TOWN, VILLAGE: Gloucester CON. BLOCK, TRACT, SURVEY ETC: 2 OF II 0017  
DATE COMPLETED: DAY 11 MO 08 YR 82  
ELEVATION: 3339.9 RC: 4 BASIN CODE: 2.6

**LOG OF OVERBURDEN AND BEDROCK MATERIALS (SEE INSTRUCTIONS)**

GENERAL COLOUR	MOST COMMON MATERIAL	OTHER MATERIALS	GENERAL DESCRIPTION	DEPTH - FEET	
				FROM	TO
yellow	clay			0	3
brown	slate			3	38

MOE  
VF-18

31 0003505 0038619

**41 WATER RECORD**

WATER FOUND AT - FEET	KIND OF WATER
0038	1 <input checked="" type="checkbox"/> FRESH 3 <input type="checkbox"/> SULPHUR 2 <input type="checkbox"/> SALTY 4 <input type="checkbox"/> MINERAL
15-18	1 <input type="checkbox"/> FRESH 3 <input type="checkbox"/> SULPHUR 2 <input type="checkbox"/> SALTY 4 <input type="checkbox"/> MINERAL
20-23	1 <input type="checkbox"/> FRESH 3 <input type="checkbox"/> SULPHUR 2 <input type="checkbox"/> SALTY 4 <input type="checkbox"/> MINERAL
25-28	1 <input type="checkbox"/> FRESH 3 <input type="checkbox"/> SULPHUR 2 <input type="checkbox"/> SALTY 4 <input type="checkbox"/> MINERAL
30-33	1 <input type="checkbox"/> FRESH 3 <input type="checkbox"/> SULPHUR 2 <input type="checkbox"/> SALTY 4 <input type="checkbox"/> MINERAL

**51 CASING & OPEN HOLE RECORD**

INSIDE DIAM. INCHES	MATERIAL	WALL THICKNESS INCHES	DEPTH - FEET
6 1/2	1 <input checked="" type="checkbox"/> STEEL	1.88	0 0021
06	2 <input type="checkbox"/> GALVANIZED 3 <input type="checkbox"/> CONCRETE 4 <input type="checkbox"/> OPEN HOLE		20-23
	1 <input type="checkbox"/> STEEL 2 <input type="checkbox"/> GALVANIZED 3 <input type="checkbox"/> CONCRETE 4 <input type="checkbox"/> OPEN HOLE		27-30

**SCREEN**

SIZE (S) OF OPENING (SLOT NO.)	DIAMETER INCHES	LENGTH FEET
	31-33	34-38

MATERIAL AND TYPE: \_\_\_\_\_ DEPTH TO TOP OF SCREEN: 41-44 FEET

**61 PLUGGING & SEALING RECORD**

DEPTH SET AT - FEET	MATERIAL AND TYPE	CEMENT GROUT LEAD PACKER, ETC.
10-13	14-17	
18-21	22-25	
26-29	30-33	80

**71 PUMPING TEST**

PUMPING TEST METHOD: air 1  PUMP 2  BAILER

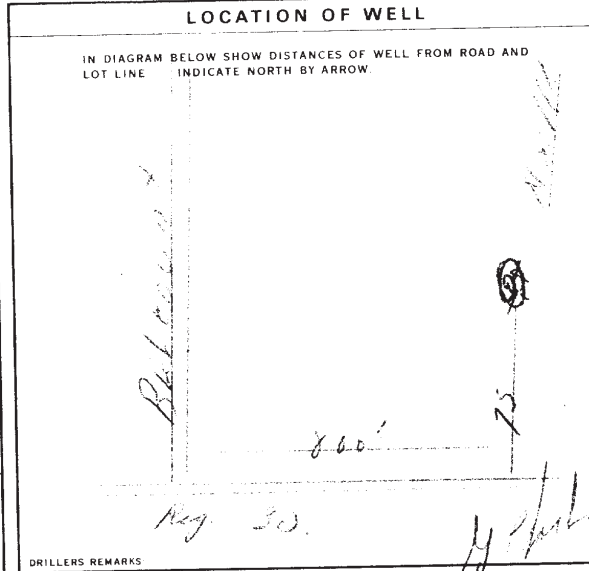
PUMPING RATE: 0030 GPM DURATION OF PUMPING: 01 HOURS 00 MINS

STATIC LEVEL	WATER LEVEL END OF PUMPING	WATER LEVELS DURING PUMPING	WATER AT END OF TEST
011	030	011	011
10.6	10.6	10.6	10.6

RECOMMENDED PUMP TYPE:  SHALLOW  DEEP

RECOMMENDED PUMP SETTING: 030 FEET

RECOMMENDED PUMPING RATE: 0025 GPM



**FINAL STATUS OF WELL** 1  WATER SUPPLY 5  ABANDONED, INSUFFICIENT YIELD  
2  OBSERVATION WELL 6  ABANDONED, POOR QUALITY  
3  TEST HOLE 7  UNFINISHED  
4  RECHARGE WELL

**WATER USE** 01 1  DOMESTIC 5  COMMERCIAL  
2  STOCK 6  MUNICIPAL  
3  IRRIGATION 7  PUBLIC SUPPLY  
4  INDUSTRIAL 8  COOLING OR AIR CONDITIONING  
 OTHER 9  NOT USED

**METHOD OF DRILLING** 4 1  CABLE TOOL 5  BORING  
2  ROTARY (CONVENTIONAL) 6  DIAMOND  
3  ROTARY (REVERSE) 7  JETTING  
4  ROTARY (AIR) 8  DRIVING  
5  AIR PERCUSSION 9  DRIVING

**CONTRACTOR**

NAME OF WELL CONTRACTOR: G. Charbonneau + Son Drilling Ltd 1504 LICENCE NUMBER: \_\_\_\_\_  
ADDRESS: R.R. 2, Box 194, Orleans, Ont, K1C 1T1  
NAME OF DRILLER OR BORER: Raymond Charbonneau LICENCE NUMBER: \_\_\_\_\_  
SIGNATURE OF CONTRACTOR: \_\_\_\_\_ SUBMISSION DATE: 11 MO 08 YR 82

**OFFICE USE ONLY**

DATA SOURCE: 1 CONTRACTOR: 1504 DATE RECEIVED: 05 04 83  
DATE OF INSPECTION: \_\_\_\_\_ INSPECTOR: \_\_\_\_\_  
REMARKS: \_\_\_\_\_



# WATER WELL RECORD

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

(11) 1518057 MUNICIPAL 15.011 CON CAN 11

COUNTY OR DISTRICT: OTTAWA-CARLETON  
TOWNSHIP, BOROUGH, CITY, TOWN, VILLAGE: CUMBERLAND  
CON. BLOCK TRACT, SURVEY ETC: 11  
LOT: 001  
DATE COMPLETED: 04 MO 10 YR 82  
ELEVATION: 334.99  
BASIN CODE: 4 26

## LOG OF OVERBURDEN AND BEDROCK MATERIALS (SEE INSTRUCTIONS)

GENERAL COLOUR	MOST COMMON MATERIAL	OTHER MATERIALS	GENERAL DESCRIPTION	DEPTH - FEET	
				FROM	TO
RED	CLAY			0	17
BLACK	GRAVEL			17	20
BLACK	SHALE			20	24

31 0017705 0020811 0024817  
32

41 WATER RECORD

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

51 CASING & OPEN HOLE RECORD

INSIDE DIAM. INCHES	MATERIAL	WALL THICKNESS INCHES	DEPTH FEET
6.75	STEEL	1.88	0-20
06	STEEL		20-23
	GALVANIZED		23-26
	CONCRETE		26-27
	OPEN HOLE		27-30

SCREEN

SIZE (SI) OF OPENING	DIAMETER	LENGTH
1/2"	4"	10'

61 PLUGGING & SEALING RECORD

DEPTH SET AT - FEET	MATERIAL AND TYPE	CEMENT GROUT LEAD PACKER, ETC.
10-13		
18-21		
26-29		

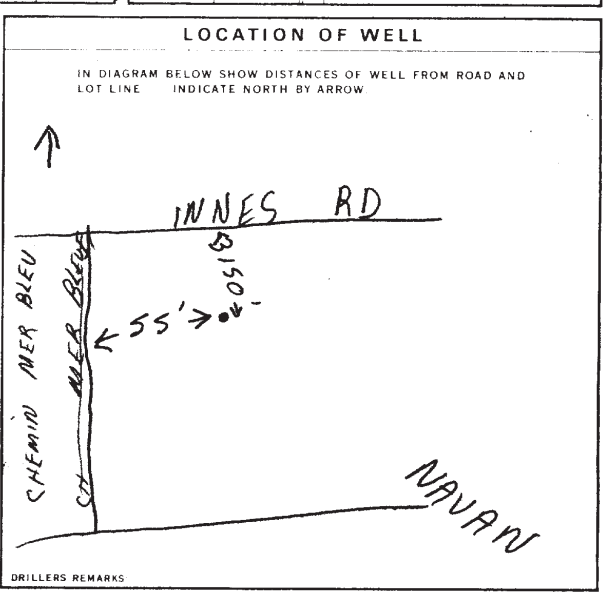
71 PUMPING TEST METHOD

1  PUMP 2  BAILER

10 PUMPING RATE: 0020 GPM  
13-14 DURATION OF PUMPING: 01 HOURS 55 MIN.

STATIC LEVEL	WATER LEVEL END OF PUMPING	WATER LEVELS DURING
010 FEET	019 FEET	15 MINUTES: 019 FEET 30 MINUTES: 019 FEET 45 MINUTES: 019 FEET 60 MINUTES: 019 FEET

RECOMMENDED PUMP TYPE:  SHALLOW  DEEP  
RECOMMENDED PUMP SETTING: 021 FEET  
RECOMMENDED PUMPING RATE: 0010 GPM



FINAL STATUS OF WELL: 1  WATER SUPPLY

WATER USE: 01 DOMESTIC

METHOD OF DRILLING: 1  CABLE TOOL

CONTRACTOR: YVON GENIER WELL DRILLING 2351  
ADDRESS: RAY CASSELMAN KOA-1MO  
NAME OF DRILLER OR BORER: YVON GENIER 2351  
SIGNATURE OF CONTRACTOR: Yvon Genier  
SUBMISSION DATE: 4 NO 10 YR 82

OFFICE USE ONLY

DATA SOURCE: 1 2351  
DATE OF INSPECTION: 17 01 83  
INSPECTOR: OP/LM

**Office Use Only**

Application Number: _____	Ward Number: _____	Application Received: (dd/mm/yyyy): _____
Client Service Centre Staff: _____	Fee Received: \$	<input type="text"/>



# Historic Land Use Inventory

## Application Form

### Notice of Public Record

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

### Municipal Freedom of Information and Protection Act

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

### Background Information

**\*Site Address or Location:**

*\* Mandatory Field*

### Applicant/Agent Information:

Name:

Mailing Address:

Telephone:  Email Address:

### Registered Property Owner Information:

Same as above

Name:

Mailing Address:

Telephone:  Email Address:

## Site Details

Legal Description  
and PIN:

What is the land  
currently used for?

*Residential duplex*

Lot frontage:  m    Lot depth:  m    Lot area: 1554 m<sup>2</sup>

**OR**    Lot area: (irregular lot)  m<sup>2</sup>

Does the site have Full Municipal Services:     Yes     No

## Required Fees

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

Planning Fee

## Submittal Requirements

The following are required to be submitted with this application:

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

**Disclaimer**  
**For use with HLUI Database**

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

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

1. The HLUI may contain erroneous information given that such records and sources of information may be flawed. Changes in municipal addresses over time may have introduced error in such records and sources of information. The City is not responsible for any errors or omissions in the HLUI and reserves the right to change and update the HLUI without further notice. The City does not, however, make any commitment to update the HLUI. Accordingly, all information from the HLUI is provided on an "as is" basis with no representation or warranty by the City with respect to the information's accuracy or exhaustiveness in responding to the request.
2. City staff will perform a search of the HLUI based on the information given by the Requester. City staff will make every effort to be accurate, however, the City does not provide an assurance, guarantee, warranty, representation (express or implied), as to the availability, accuracy, completeness or currency of information which will be provided to the Requester. The HLUI in no way confirms the presence or absence of contamination or pollution of any kind. The information provided by the City to the Requester is provided on the assumption that it will not be relied upon by any person whatsoever. The City denies all liability to any such persons attempting to rely on any information provided from the HLUI database.
3. The City, its employees, servants, agents, boards, officials or contractors take no responsibility for any actions, claims, losses, liability, judgments, demands, expenses, costs, damages or harm suffered by any person whatsoever including negligence in compiling or disseminating information in the HLUI.
4. Copyright is reserved to the City.
5. Any use of the information provided from the HLUI which a third party makes, or any reliance on or decisions to be based on it, are the responsibilities of such third parties. The City, its employees, servants, agents, boards, officials or contractors accept no responsibility for any damages, if any, suffered by a third party as a result of decisions made as a result of an information search of the HLUI.
6. Any use of this service by the Requestor indicates an acknowledgement, acceptance and limits of this disclaimer.
7. All information collected under this request and all records provided in response to this request are subject to the provisions of the Municipal Freedom of Information and Protection of Privacy Act, R.S.O. 1990, c. M.56, as amended.

Signed: \_\_\_\_\_

Dated (dd/mm/yyyy): \_\_\_\_\_

Per: Anna Graham  
\_\_\_\_\_  
(Please print name)

Title: Environmental Assessor  
\_\_\_\_\_

Company: Paterson Group  
\_\_\_\_\_

# **APPENDIX 3**

## **QUALIFICATIONS OF ASSESSORS**





**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