Geotechnical Engineering

Environmental Engineering

Hydrogeology

Geological Engineering

Materials Testing

Building Science

Archaeological Services

patersongroup

Phase I-Environmental Site Assessment

Vacant Land 4725 Spratt Road Ottawa, Ontario

Prepared For

Claridge Homes

Paterson Group Inc.

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

Tel: (613) 226-7381 Fax: (613) 226-6344 www.patersongroup.ca October 23, 2018

Report: PE4468-1



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EXECUTIVE SUMMARY

Assessment

Paterson Group was retained by Claridge Homes to conduct a Phase I-Environmental Site Assessment (ESA) of the property addressed 4725 Spratt Road, 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 Phase I study area and to identify any environmental concerns with the potential to have impacted the Phase I property.

According to the historical research, the subject site was occupied by a farmstead from at least 1976 until 2011. The farmstead and associated buildings were removed between 2011 to 2014 and the site has been vacant since. Neighbouring land uses were for residential and agriculture purposes. No potential contaminating activities were identified with the historical use of the subject site or surrounding lands.

Following the historical research, a site visit was conducted. The subject site is vacant with tall grass, shrub and trees. The neighbouring properties in the Phase I study area were observed from publicly accessible roadways. No potentially contaminating activities were identified on the subject site or in the Phase I study area. Therefore, no areas of potential environmental concern with respect to the Phase I property were identified.

Conclusion

Based on the results of the assessment, in our opinion, a Phase II- Environmental Site Assessment is not required for the subject property.



1.0 INTRODUCTION

At the request of Claridge Homes, Paterson Group (Paterson) conducted a Phase I-Environmental Site Assessment (Phase I-ESA) of the property addressed 4725 Spratt 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. Vincent Denomme with Claridge Homes. The head office is located at 210 Gladstone Avenue, Ottawa, Ontario. Mr. Denomme can be reached by telephone at (613) 233-6030.

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



2.0 PHASE I PROPERTY INFORMATION

Address: 4725 Spratt Road, Ottawa, Ontario.

Legal Description: Part of Lot 22, Concession 1 (Rideau Front), in the

Township of Gloucester, in the City of Ottawa

Property Identification

Numbers: 04330-1571

Location: The site is located on the east side of Spratt Road,

500 m to the south of the intersection with Earl Armstrong Road, in the City of Ottawa (formerly Gloucester), Ontario. Refer to Figure 1 - Key Plan in

the Figures section following the text.

Latitude and Longitude: 45° 16' 00.72" N, 75° 41' 2.63" W

Site Description:

Configuration: Irregular.

Zoning: DR – Development Reserve Zone

Current Use: The subject site is currently undeveloped vacant land,

covered with tall grass, brush and trees.

Services: Older homes are likely serviced by private wells and

sewage systems while all new development to the

north is municipally serviced.



3.0 SCOPE OF INVESTIGATION

e scope of work for this Phase I – Environmental Site Assessment was as lows:
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 O.Reg. 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 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

An aerial photograph from 1976 indicated that the subject site was developed with a farmstead while the rest of the site consisted of agricultural fields.

Fire Insurance Plans

Fire Insurance Plans (FIPs) are not available for the subject area.

City of Ottawa Street Directories

City directories are not available for the area of the subject site.

Chain of Title

Paterson did not request a Chain of Title for the subject site as it was determined that sufficient information was gathered from other sources, such as personal interviews, aerials photographs and previous engineering reports. Additionally, the subject site has always been vacant and undeveloped land.

Environmental Reports

Paterson Group has conducted many environmental and geotechnical investigations in the immediate vicinity of the subject site. Based on a review of our files, no potential environmental concerns were identified on the subject site or neighbouring lands.

Plan of Survey

A draft plan of subdivision prepared by Annis, O'Sullivan, Vollebekk Ltd. was reviewed as part of this assessment. The plan depicts the Phase I property in its current configuration as well as the proposed residential development. A copy of the survey plan is included in Appendix 1.



4.2 Environmental Source Information

Environment Canada

A search of the National Pollutant Release Inventory (NPRI) was conducted electronically on October 19, 2018. The subject site and adjacent properties were not listed in the NPRI database. No records of pollutant release were listed in the database for properties located within the Phase I study area.

PCB Inventory

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

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

A request was submitted to the MECP Freedom of Information (FOI) office for information with respect to certificates of approval, permits to take water, certificates of property use or any other similar MECP issued instruments for the site. At the time of issuing this report, a response had not been received from the MECP. A copy of the response will be forwarded to the client if it contains any pertinent information.

MECP Incident Reports

A request was submitted to the MECP FOI office 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. At the time of issuing this report, a response had not been received from the MECP. A copy of the response will be forwarded to the client if it contains any pertinent information.

MECP Waste Management Records

A request was submitted to the MECP FOI office for information with respect to waste management records. At the time of issuing this report, a response had not been received from the MECP. A copy of the response will be forwarded to the client if it contains any pertinent information.

MECP 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 Municipal Coal Gasification Plant Sites are located within the Phase I study area.

MECP Submissions

A request was submitted to the MECP FOI office for information with respect to reports related to environmental conditions for the property. At the time of issuing this report, a response had not been received from the MECP. A copy of the response will be forwarded to the client if it contains any pertinent information.

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 general area of the site. No Records of Site Condition (RSCs) were filed for the subject property or properties within the Phase I ESA study area.

MECP Waste Disposal Site Inventory

The Ontario Ministry of Environment document titled "Waste Disposal Site Inventory in Ontario, 1991" was reviewed as part of the historical research. 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. There are no former waste disposal sites located within 1 km of 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 website of the Ontario Ministry of Natural Resources (MNR) on October 19, 2018. The search did not reveal areas of natural significance within the Phase I study area.

Technical Standards and Safety Authority (TSSA)

The TSSA, Fuels Safety Branch in Toronto was contacted electronically on October 19, 2018, to inquire about current and former underground storage tanks, spills and incidents for the site and neighbouring properties. No records are listed in the TSSA registry for the subject site or the adjacent properties. A copy of the TSSA correspondence is included in Appendix 2.



City of Ottawa Landfill Document

The document entitled "Old Landfill Management Strategy, Phase I – Identification of Sites, City of Ottawa", was reviewed. There are no closed landfill sites within the vicinity of the Phase I study area.

City of Ottawa Historical Land Use Inventory (HLUI)

A search of the City of Ottawa's Historical Land Use Inventory (HLUI) database was conducted as part of this assessment. At the time of issuance of this report, the HLUI search results had not been received. A copy of the HLUI request form is provided in Appendix 2.

4.3 Physical Setting Sources

Aerial Photographs

1976

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

The subject site appears as agricultural fields occupied by a

1970	farmstead on the southeast corner. The neighbouring lands are occupied with some farmsteads and agricultural fields.
1991	The subject site appears unchanged from the previous photograph. The adjacent lands are the same except for two (2) residential dwellings located to the south and west of the site.
2002	No significant changes have been made to the subject site or surrounding properties. A residential subdivision development is beginning to occur further to the northwest, on the north side of Earl Armstrong Road.
2011	No significant changes have been made to the subject site or surrounding properties. More residential development is noticeable further to the north.

The subject site appears vacant. The farmstead that was located on the southeast corner of the subject site no longer exists at this time. More residential development is occurring to the west, northwest and north, while the remaining lands are vacant and/or undeveloped in the east, south and southwest.



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

Topographic Maps

Topographic maps were obtained from Natural Resources Canada – The Atlas of Canada website and from the City of Ottawa website. The topographic maps indicate that the regional topography in the general area of the site slopes down to the west in the direction of the Rideau River. The Rideau River is located to approximately 1.3 km to the west. An illustration of the referenced topographic map is presented on Figure 2 – Topographic Map, appended to this report.

Physiographic Maps

The Ontario Geological Survey publication 'The Physiography of Southern Ontario, Third Edition' was reviewed as a part of this assessment. According to the publication, the site is situated within the Ottawa Clay Plain physiographic region.

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 consists of sandstone and dolomite of the March Formation. The site is located in an area of both near shore marine sediments of sand and reworked glaciofluvial in the northern part and plain till in the southern part of the site, with an overburden thickness ranging from 5 to 15 meters.

Water Well Records

A well record search was conducted on October 19, 2018 for all drilled wells within 250 m of the subject site. The well record search returned seven (7) well records, four (4) of which were potable water wells on-site, two (2) domestic wells off-site, approximately 200 m north and an abandoned well, approximately 175 m northwest of the subject site. No potential environmental concern has been identified with respect to the subject site. A copy of the well records has been included in Appendix 2.

Water Bodies and Areas of Natural Significance

No water bodies nor areas of natural significance are known to exist on the subject site and in the Phase I study area.



5.0 INTERVIEWS

Property Owner Representative

Mr. Vincent Denomme with Claridge Homes was interviewed via email as part of this assessment. Claridge Homes purchased the subject property in 2011 and demolished the residential home and associated buildings located on the southeast corner of the property in 2012. The subject site has since been vacant. Mr. Denomme is not aware of any potential environmental concerns with respect to the subject or adjacent properties.

6.0 SITE RECONNAISSANCE

6.1 General Requirements

The site visit was conducted on October 18, 2018. Weather conditions were sunny and windy with a temperature of approximately 4°C. Ms. Mandy Witteman from the Environmental Department of Paterson conducted the site assessment. In addition to the site visit, neighbouring land use within the Phase I study area was also assessed at the time of the site visit.

6.2 Specific Observations at Phase I Property

Buildings and Structures

There were no buildings or structures on the subject site.

Site Features

The subject property is vacant land that is covered in tall grass, brush and trees.

The site topography is below grade with the adjacent properties and Spratt Road. The regional topography slopes down towards the west in the direction of the Rideau River, approximately 1.3 km from the subject site. Site drainage consists of infiltration.

No underground structures, drains, or private sewage systems were observed at the subject land at the time of the site visit. No evidence of current or former railway or spur lines on the subject property was observed at the time of the site visit. No areas of stained soil or unidentified substances were observed on-site at this time.



Neighbouring Properties

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

☐ North -	Vacant land, followed by a residential development;
☐ South -	Residential dwelling and vacant and undeveloped land;
□ East -	Vacant land and a residential subdivision;
■ West -	Spratt Road, followed by vacant land.

The current use of the immediately adjacent properties is not considered to pose an environmental concern to the subject site. No properties within the Phase I study area are occupied by potentially contaminating activities. Current land use in the Phase I Study area is illustrated on Drawing PE4468-2 – Surrounding Land Use Plan in the Figures section of this report.

7.0 REVIEW AND EVALUATION OF INFORMATION

7.1 Land Use History

The following table indicates the current and past uses of the site as well as any associated potentially contaminating activities dating back to the first developed use of the site.

Table 1 - Land Use History – 4725 Spratt Road				
Time Period	Land Use	Potentially Contaminating Activities (PCAs)	Areas of Potential Environmental Concern (APECs)	
1976 – 2011	Agricultural land with a residence and barn-like buildings	None	None	
2011 - Present	Vacant	None	None	



Potentially Contaminating Activities and Areas of Potential Environmental Concern

No potentially contaminating activities (PCAs) were identified at the Phase I property or within the Phase I study area. Therefore, no Areas of Potential Environmental Concern (APECs) were identified on the subject site.

Contaminants of Potential Concern

No Contaminants of Potential Concern (CPCs) were identified on the subject site.

7.2 Conceptual Site Model

Geological and Hydrogeological Setting

Based on information from the Geological Survey of Canada, drift thickness in the area of the subject site is estimated to be on the order of 5 to 15 m. The overburden on the northern part is comprised of near shore marine sediments of sand and reworked glaciofluvial silt and clay and plain till on the southern part of the subject site. Bedrock in the area is comprised of sandstone and dolomite from the March Formation.

Existing Buildings and Structures

No building or structures exist on the subject site.

Water Bodies and Areas of Natural Significance

No water bodies or areas of natural significance were identified on the subject site or in the Phase I study area.

Drinking Water Wells

Four (4) potable water wells were located on the subject site, and two (2) off-site, approximately 200 m north. All four potable wells on-site were drilled to fresh water at depths ranging from 33.5 to 74.7 m. No potential environmental concern has been identified with respect to the Phase I property.

Neighbouring Land Use

Neighbouring land use in the Phase I study area consists of vacant, undeveloped land and/or residential dwellings.



Potentially Contaminating Activities and Areas of Potential Environmental Concern

As per Section 7.1 of this report, PCAs were not identified on the subject property or within the Phase I study area. Therefore, no APECs are present on the Phase I property.

Contaminants of Potential Concern

As per Section 7.1 of this report, no Contaminants of Potential Concern (CPCs) were identified on the subject site.

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. A variety of independent sources were consulted as part of this assessment, and as such, the conclusions of this report are not affected by uncertainty which may be present with respect to the individual sources.



8.0 CONCLUSIONS

Assessment

Paterson Group was retained by Claridge Homes to conduct a Phase I-Environmental Site Assessment (ESA) of the property addressed 4725 Spratt Road, 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 Phase I study area and to identify any environmental concerns with the potential to have impacted the Phase I property.

According to the historical research, the subject site was occupied by a farmstead from at least 1976 until 2011. The farmstead and associated buildings were removed between 2011 to 2014 and the site has been vacant since. Neighbouring land uses were for residential and agriculture purposes. No potential contaminating activities were identified with the historical use of the subject site or surrounding lands.

Following the historical research, a site visit was conducted. The subject site is vacant with tall grass, shrub and trees. The neighbouring properties in the Phase I study area were observed from publicly accessible roadways. No potentially contaminating activities were identified on the subject site or in the Phase I study area. Therefore, no areas of potential environmental concern with respect to the Phase I property were identified.

Conclusion

Based on the results of the assessment, in our opinion, a Phase II-Environmental Site Assessment is not required for the subject property.



9.0 STATEMENT OF LIMITATIONS

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

POFESSION

M. S. D'ARC'

POVINCE OF ON

Paterson Group Inc.

Mandy Witteman, M.A.Sc.

Mark S. D'Arcy, P.Eng.

Report Distribution:

- Claridge Homes
- □ Paterson Group



10.0 REFERENCES

Federal Records

Air photos at the Energy Mines and Resources Air Photo Library.

National Archives.

Maps and photographs (Geological Survey of Canada surficial and subsurface mapping).

Natural Resources Canada – The Atlas of Canada.

Environment Canada, National Pollutant Release Inventory.

PCB Waste Storage Site Inventory.

Provincial Records

MECP Freedom of Information and Privacy Office.

MECP Municipal Coal Gasification Plant Site Inventory, 1991.

MECP document titled "Waste Disposal Site Inventory in Ontario".

MECP Brownfields Environmental Site Registry.

Office of Technical Standards and Safety Authority, Fuels Safety Branch.

MNR Areas of Natural Significance.

MECP Water Well Record 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.

Intera Technologies Limited Report "Mapping and Assessment of Former Industrial Sites, City of Ottawa", 1988.

geoOttawa: City of Ottawa electronic mapping website.

City of Ottawa Historical Land Use Inventory (HLUI) Database

Local Information Sources

Personal Interviews.

Public Information Sources

Google Earth.

Google Maps/Street View.

FIGURES

FIGURE 1 – KEY PLAN

FIGURE 2 – TOPOGRAPHIC MAP

DRAWING PE4468-1 – SITE PLAN

DRAWING PE4468-2 - SURROUNDING LAND USE PLAN

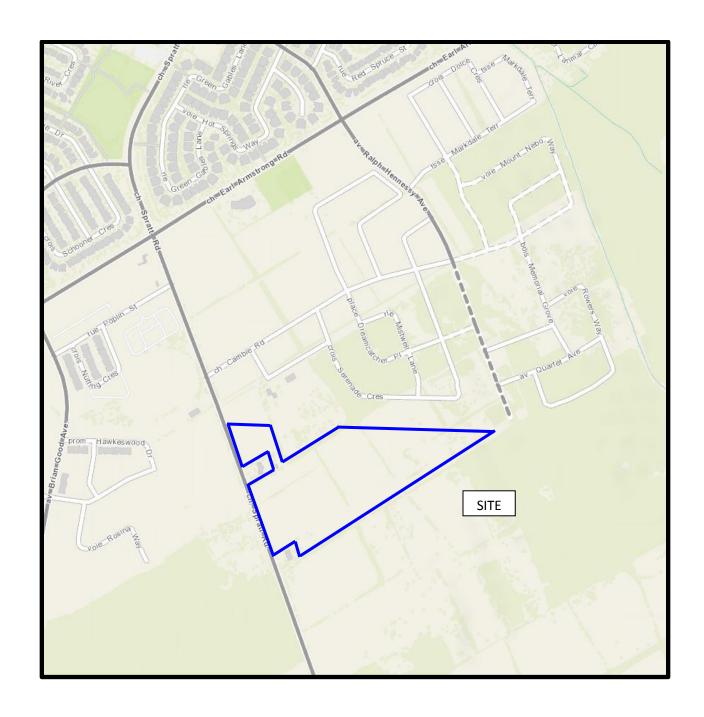


FIGURE 1 KEY PLAN

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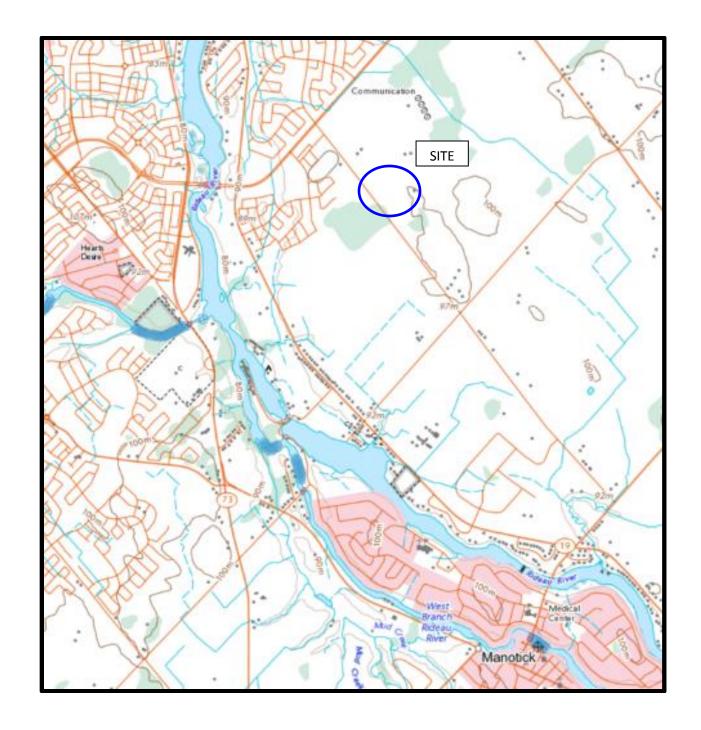
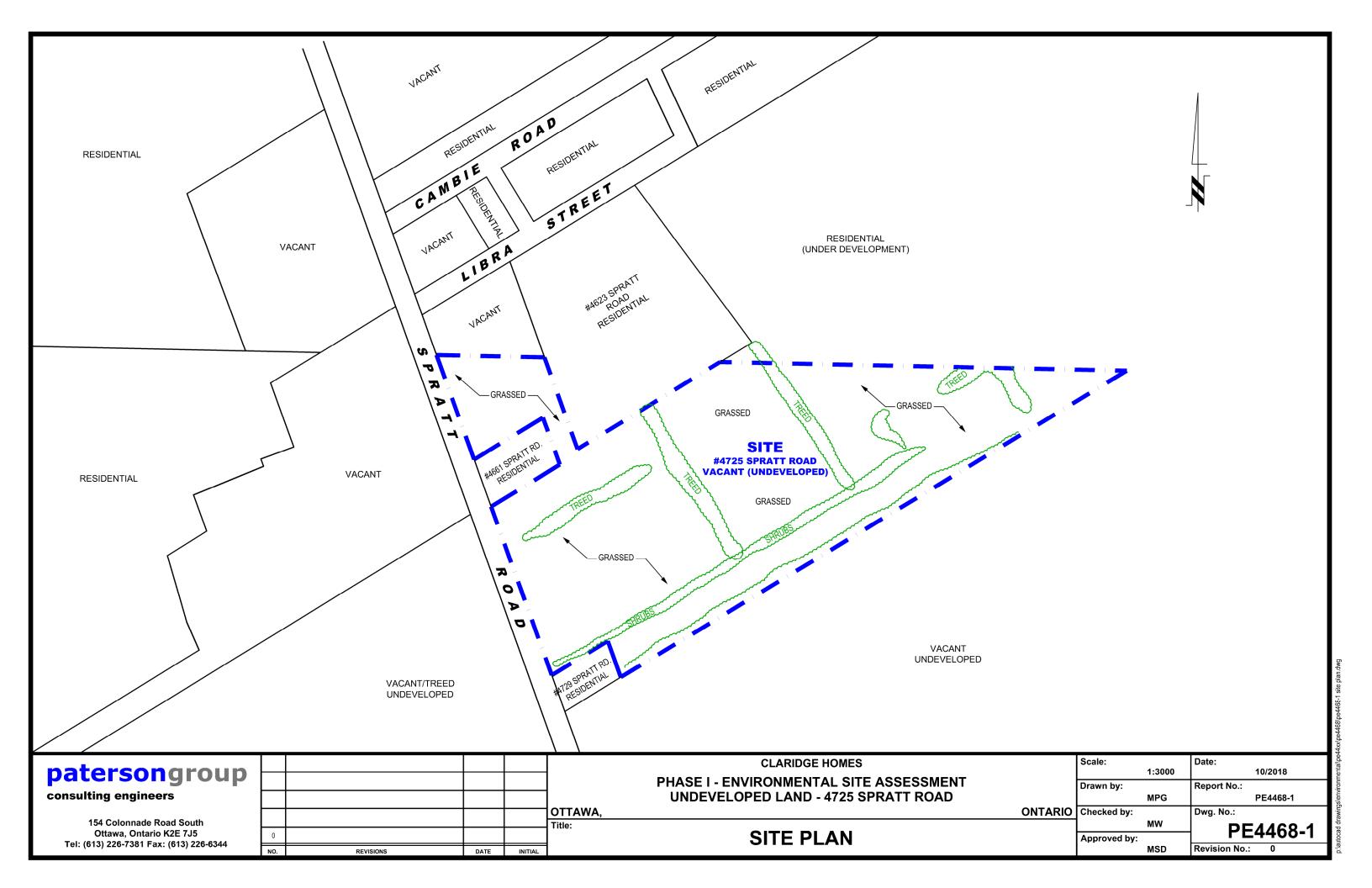
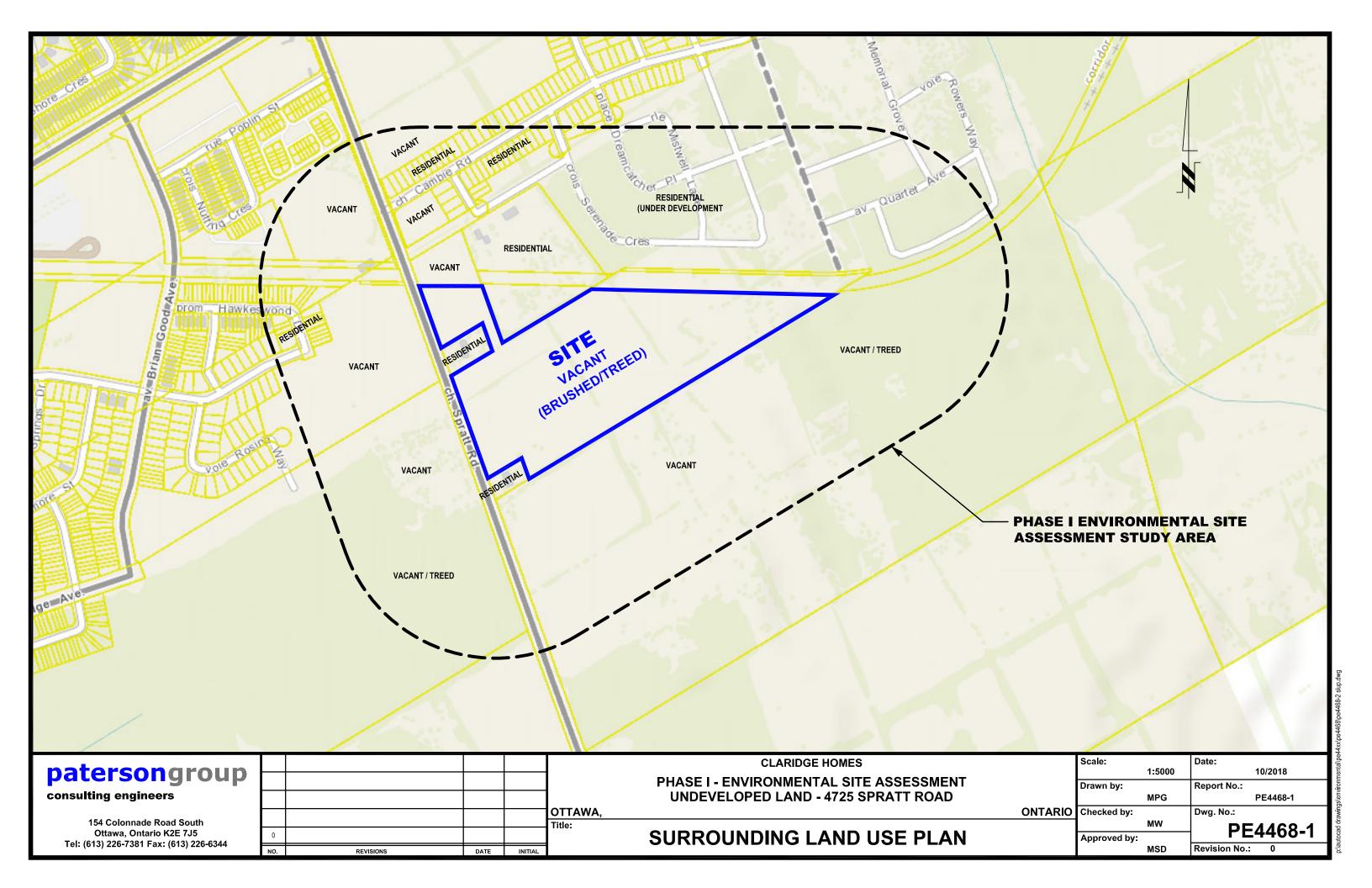


FIGURE 2 TOPOGRAPHIC MAP

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APPENDIX 1

SURVEY PLAN

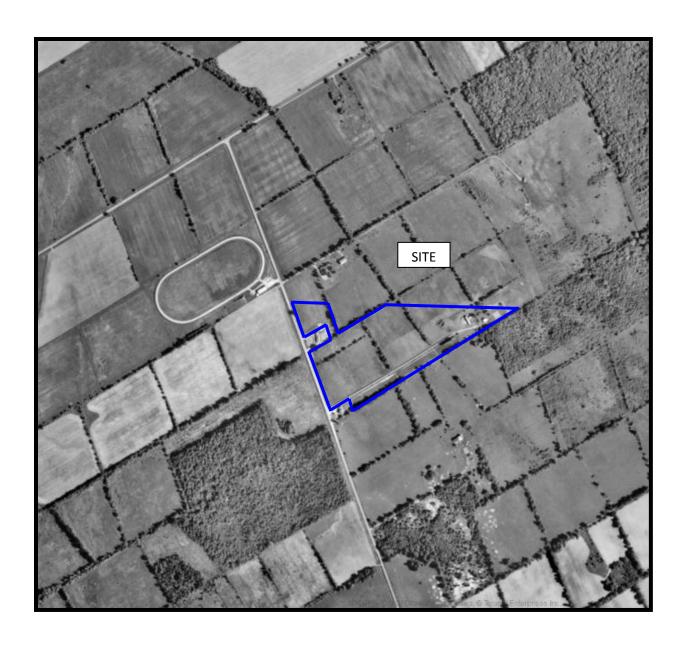
AERIAL PHOTOGRAPHS

SITE PHOTOGRAPHS



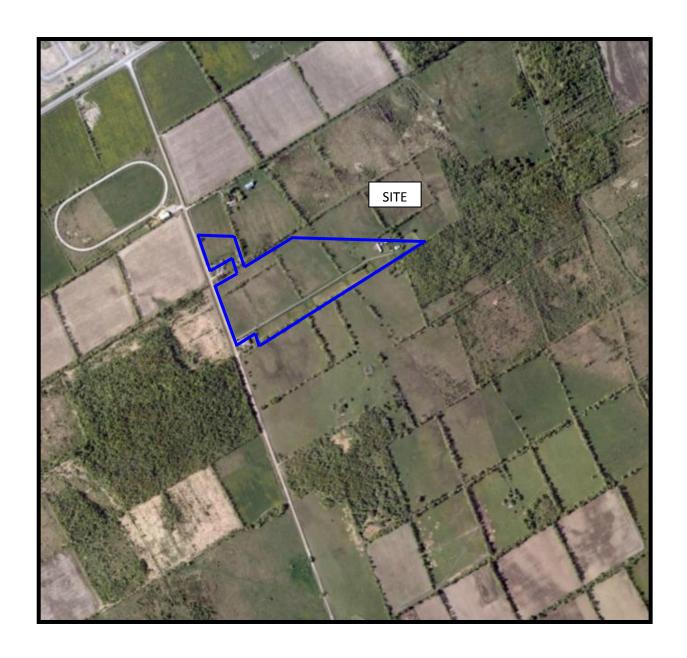
AERIAL PHOTOGRAPH 1976

patersongroup ____



AERIAL PHOTOGRAPH 1991

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AERIAL PHOTOGRAPH 2002



AERIAL PHOTOGRAPH 2011

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AERIAL PHOTOGRAPH 2017

4725 Spratt Road, Ottawa, ON

October 18, 2018



Photograph 1: View of the southwest side of the subject property, taken from Spratt Road looking south.



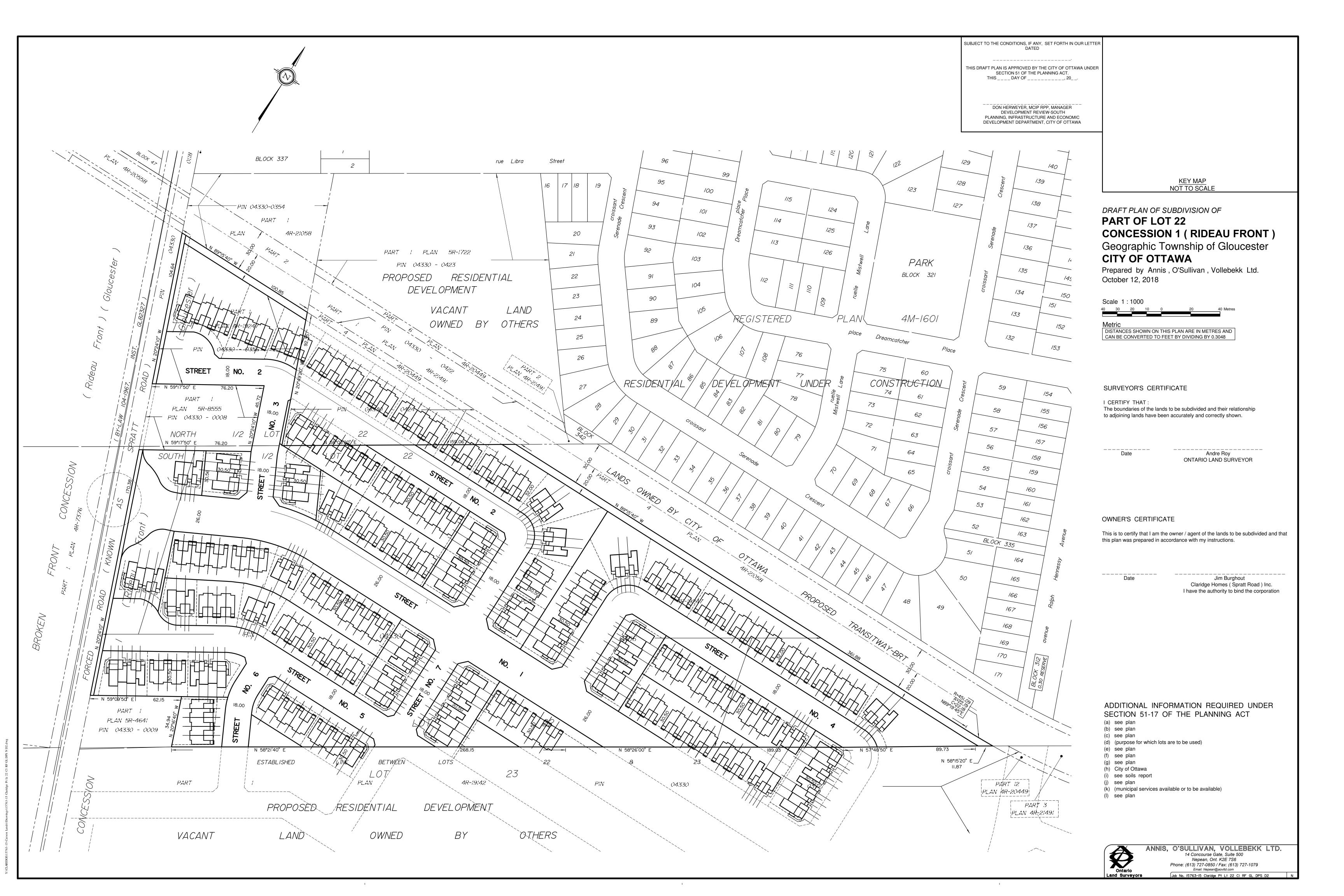
Photograph 2: Central view of the subject site, looking southeast.



Photograph 3: View of the northwest side of the subject site, looking north onto Spratt Road.



Photograph 4: Northeast view of the subject site, taken from the northwest side of the site (on Spratt Road).



APPENDIX 2

MECP FREEDOM OF INFORMATION

TSSA CORRESPONDENCE

MECP WELL RECORDS

HLUI RESPONSE

Ministry of the Environment, Conservation and Parks

Freedom of Information and Protection of Privacy Office

12th Floor 40 St. Clair Avenue West Toronto ON M4V 1M2 Tel: (416) 314-4075 Ministère de l'Environnement, de la Protection de la nature et des Parcs

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



October 29, 2018

Mandy Witteman Paterson Group Inc. 154 Colonnade Road Ottawa, ON K2E 7J5

Dear Mandy Witteman:

RE: Freedom of Information and Protection of Privacy Act Request Our File # A-2018-06988, Your Reference PE4468

This letter is in response to your request made pursuant to the *Freedom of Information and Protection of Privacy Act* relating to 4725 Spratt Road, 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 Rebeka Bogdan at the **Freedom of Information Office at 416-314-4075**.

Yours truly,

FOR

Janet Dadufalza FOI Manager

Mandy Witteman

From: Public Information Services < publicinformationservices@tssa.org>

Sent: October-19-18 10:37 AM

To: Mandy Witteman

Subject: RE: Search records request (PE4468)

NO RECORD FOUND (FUEL STORAGE TANKS ONLY)

Hello Mandy. Thank you for your request for confirmation of public information.

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

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

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

Kind regards,

Gaya

From: Mandy Witteman < MWitteman@Patersongroup.ca>

Sent: October 19, 2018 9:13 AM

To: Public Information Services <publicinformationservices@tssa.org>

Subject: Search records request (PE4468)

Good Morning,

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

Spratt Rd: 4725, 4661, 4729, 4623, 4635, 4650, 4775, 4721,

Hawkeswood Dr: 218 Earl Armstrong RD: 980

Thank you

Best Regards,

Mandy Witteman

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154 Colonnade Road South

Go Back to Map

Well ID

Well ID Number: 1523059 Well Audit Number: 38381

Well Tag Number:

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

Well Location

Address of Well Location	
Township	GLOUCESTER TOWNSHIP
Lot	022
Concession	RF 01
County/District/Municipality	OTTAWA-CARLETON
City/Town/Village	
Province	ON
Postal Code	n/a
UTM Coordinates	NAD83 — Zone 18 Easting: 446295.00 Northing: 5012901.00
Municipal Plan and Sublot Number	
Other	

Overburden and Bedrock Materials Interval

General Colour	Most Common Material	Other Materials	General Description	Depth From	Depth To
BRWN	CLAY	PCKD		0 ft	16 ft
GREY	CLAY	STKY		16 ft	45 ft
GREY	SAND	PCKD		45 ft	62 ft
GREY	LMSN			62 ft	190 ft
GREY	SNDS			190 ft	250 ft

Annular Space/Abandonment Sealing Record

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

Method of Construction & Well Use

Method of Construction	Well Use		
Air Percussion			
	Domestic		

Status of Well

Water Supply

Construction Record - Casing

Inside	Open Hole or material	Depth	Depth

Diameter		From	To
6 inch	STEEL		65 ft
6 inch	OPEN HOLE		250 ft

Outside Diameter Material Pepth Depth From To

Well Contractor and Well Technician Information

Well Contractor's Licence Number: 1558

Results of Well Yield Testing

After test of well yield, water was	CLEAR
If pumping discontinued, give reason	
Pump intake set at	
Pumping Rate	10 GPM
Duration of Pumping	1 h:0 m
Final water level	60 ft
If flowing give rate	
Recommended pump depth	100 ft
Recommended pump rate	5 GPM
Well Production	PUMP
Disinfected?	

Draw Down & Recovery

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

Water Found at Depth	Kind
245 ft	Fresh

Well ID

Well ID Number: 1523059 Well Audit Number: 38381 Well Tag Number:

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

Well Location

Address of Well Location	
Township	GLOUCESTER TOWNSHIP
Lot	022
Concession	RF 01
County/District/Municipality	OTTAWA-CARLETON
City/Town/Village	
Province	ON
Postal Code	n/a
UTM Coordinates	NAD83 — Zone 18 Easting: 446295.00
Municipal Plan and Sublot Number	Northing: 5012901.00
Other	_

Overburden and Bedrock Materials Interval

General Colour	Most Common Material	Other Materials	General Description		Depth To
BRWN	CLAY	PCKD		0 ft	16 ft
GREY	CLAY	STKY		16 ft	45 ft
GREY	SAND	PCKD		45 ft	62 ft
GREY	LMSN			62 ft	190 ft
GREY	SNDS			190 ft	250 ft

Annular Space/Abandonment Sealing Record

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

Method of Construction & Well Use

Method of Construction	Well Use
Air Percussion	
	Domestic

Status of Well

Water Supply

Inside	Open Hole or material	Depth	Depth

Diameter		From	To
6 inch	STEEL		65 ft
6 inch	OPEN HOLE		250 ft

Outside Diameter Material Pepth Depth From To

Well Contractor and Well Technician Information

Well Contractor's Licence Number: 1558

Results of Well Yield Testing

After test of well yield, water was	CLEAR
If pumping discontinued, give reason	
Pump intake set at	
Pumping Rate	10 GPM
Duration of Pumping	1 h:0 m
Final water level	60 ft
If flowing give rate	
Recommended pump depth	100 ft
Recommended pump rate	5 GPM
Well Production	PUMP
Disinfected?	

Draw Down & Recovery

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

Water Found at Depth	Kind
245 ft	Fresh

Well ID

Well ID Number: 1521467 Well Audit Number: 04697

Well Tag Number:

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

Well Location

Address of Well Location	
Township	GLOUCESTER TOWNSHIP
Lot	022
Concession	RF 01
County/District/Municipality	OTTAWA-CARLETON
City/Town/Village	
Province	ON
Postal Code	n/a
UTM Coordinates	NAD83 — Zone 18 Easting: 446295.00 Northing: 5012901.00
Municipal Plan and Sublot Number	
Other	

Overburden and Bedrock Materials Interval

General Colour	Most Common Material	Other Materials	General Description	Depth From	Depth To
BRWN	CLAY	SNDY		0 ft	6 ft
GREY	CLAY	SNDY	BLDR	6 ft	23 ft
GREY	SNDS	HARD		23 ft	50 ft

Annular Space/Abandonment Sealing Record

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

Method of Construction & Well Use

Method of Construction	Well Use
Air Percussion	
	Domestic

Status of Well

Water Supply

Inside	Open Hole or material	Depth	Depth
Diameter		From	To
6 inch	STEEL		25 ft

6 inch

Construction Record - Screen

Outside Diameter Material Pepth Depth From To

Well Contractor and Well Technician Information

50 ft

Well Contractor's Licence Number: 1558

Results of Well Yield Testing

After test of well yield, water was	CLEAR
If pumping discontinued, give reason	_
Pump intake set at	
Pumping Rate	10 GPM
Duration of Pumping	1 h:0 m
Final water level	15 ft
If flowing give rate	_
Recommended pump depth	30 ft
Recommended pump rate	5 GPM
Well Production	PUMP
Disinfected?	_

Draw Down & Recovery

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

Water Found at Depth	Kind
40 ft	Fresh

Well ID

Well ID Number: 7182222 Well Audit Number: *Z126081* Well Tag Number: *A057062*

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

Well Location

Address of Well Location	EARL ARMSTRONG RD
Township	GLOUCESTER TOWNSHIP
Lot	
Concession	
County/District/Municipality	OTTAWA-CARLETON
City/Town/Village	Ottawa
Province	ON
Postal Code	n/a
UTM Coordinates	NAD83 — Zone 18 Easting: 446235.00 Northing: 5013429.00
Municipal Plan and Sublot Number	
Other	

Overburden and Bedrock Materials Interval

Annular Space/Abandonment Sealing Record

Depth	Depth	Type of Sealant Used (Material and Type)	Volume
From	To		Placed
14 ft	0 ft	HOLEPLUG	

Method of Construction & Well Use

Method of Construction	Well Use
Diamond	
	Not Used

Status of Well

Abandoned-Other

Inside Diameter	Open Hole or material	Depth From	
48 inch	OPEN HOLE	14 ft	0 ft

Outside Diameter Material Pepth Depth From To
48 inch 14 ft 0 ft

Well Contractor and Well Technician Information

Well Contractor's Licence Number: 6894

Results of Well Yield Testing

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

Draw Down & Recovery

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

Water Details

Water Found at Depth Kind

Well ID

Well ID Number: 1501674 Well Audit Number: Well Tag Number:

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

Well Location

Address of Well Location	
Township	GLOUCESTER TOWNSHIP
Lot	023
Concession	RF 01
County/District/Municipality	OTTAWA-CARLETON
City/Town/Village	
Province	ON
Postal Code	n/a
UTM Coordinates	NAD83 — Zone 18 Easting: 447930.80 Northing: 5013272.00
Municipal Plan and Sublot Number	
Other	

Overburden and Bedrock Materials Interval

General Colour	Most Common Material	Other Materials	General Description	Depth From	Depth To
	BLDR	CLAY		0 ft	46 ft
	GRVL			46 ft	48 ft
	LMSN			48 ft	73 ft

Annular Space/Abandonment Sealing Record

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

Method of Construction & Well Use

Method of Construction	Well Use
Cable Tool	Domestic
	Livestock

Status of Well

Water Supply

Inside	Open Hole or material	Depth	Depth
Diameter		From	To
4 inch	STEEL		48 ft

Outside Diameter Material Pepth Depth From To

Well Contractor and Well Technician Information

73 ft

Well Contractor's Licence Number: 3601

Results of Well Yield Testing

After test of well yield, water was	CLEAR
If pumping discontinued, give reason	
Pump intake set at	
Pumping Rate	5 GPM
Duration of Pumping	1 h:0 m
Final water level	30 ft
If flowing give rate	
Recommended pump depth	
Recommended pump rate	
Well Production	PUMP
Disinfected?	

Draw Down & Recovery

Draw Down Time(min)	Draw Down Water level	Recovery Time(min)	Recovery Water level
SWL	23 ft		
1		1	
2		2	
3		3	
4		4	
5		5	
10		10	
15		15	
20		20	
25		25	
30		30	
40		40	
45		45	
50		50	
60		60	

Water Found at Depth	Kind
73 ft	Fresh

Well ID

Well ID Number: 1514951 Well Audit Number: Well Tag Number:

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

Well Location

Address of Well Location	
Township	GLOUCESTER TOWNSHIP
Lot	022
Concession	RF 01
County/District/Municipality	OTTAWA-CARLETON
City/Town/Village	
Province	ON
Postal Code	n/a
UTM Coordinates	NAD83 — Zone 18 Easting: 446214.80 Northing: 5013045.00
Municipal Plan and Sublot Number	
Other	

Overburden and Bedrock Materials Interval

General Colour	Most Common Material	Other Materials	General Description	Depth From	Depth To
BRWN	SAND	BLDR	PCKD	0 ft	8 ft
GREY	CLAY	STKY		8 ft	28 ft
BLCK	LMSN			28 ft	105 ft
WHIT	SNDS	LMSN	LYRD	105 ft	140 ft
WHIT	SNDS	PCKD		140 ft	223 ft

Annular Space/Abandonment Sealing Record

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

Method of Construction & Well Use

Method of Construction	Well Use
Air Percussion	
	Domestic

Status of Well

Water Supply

Inside	Open Hole or material	Depth	Depth

Diameter		From	To
6 inch	STEEL		30 ft
6 inch	OPEN HOLE		223 ft

Outside Diameter Material Pepth Depth From To

Well Contractor and Well Technician Information

Well Contractor's Licence Number: 1558

Results of Well Yield Testing

After test of well yield, water was	CLEAR
If pumping discontinued, give reason	_
Pump intake set at	_
Pumping Rate	6 GPM
Duration of Pumping	1 h:0 m
Final water level	100 ft
If flowing give rate	_
Recommended pump depth	125 ft
Recommended pump rate	5 GPM
Well Production	PUMP
Disinfected?	_

Draw Down & Recovery

Draw Down Time(min)	Draw Down Water level	Recovery Time(min)	Recovery Water level
SWL	20 ft		
1		1	
2		2	
3		3	
4		4	
5		5	
10		10	
15	100 ft	15	
20		20	
25		25	
30	100 ft	30	
40		40	
45	100 ft	45	
50		50	
60	100 ft	60	

Water Found at Depth	Kind
145 ft	Fresh



3/6/5.2

The Ontario Water Resources Commission Act WATER WELL RECORD

County or District Carleton Con. 1 R, FRONT. Lots 22 22 I	Fownship, Villa	age, T	own or City	Gloucester	
Owner P. E. Blais Const. (Radio C.J.R.C.) Job					
(print in block letters) Casing and Screen Record			Pumpin		
Inside diameter of casing 51.	Static level		3'		
Total length of casing 321	Test-pump	ing ra	ite18	3	G.P.M.
Type of screen	Pumping le	evel	20	!	
Length of screen	Duration o	f test]	oumping	2 hrs.	
Depth to top of screen				test clear	
Diameter of finished hole 5½"	Recommer	nded 1	oumping rate.	6	G.P.M
	with pump	settir	ng of 20	feet belo	w 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	2		29	33	fresh
grey hard limestone	2	9	33		
For what purpose(s) is the water to be used? domestic	In c			of Well distances of wellicate north by	
Is well on upland, in valley, or on hillside? valley!			, 11		
Drilling or Boring Firm					70/5
G. Charbonneau, Diamond & Cable Drilling,			5		Y
Address R. R. 1, Box 194, Orleans, Ont.		Ç	I = I	exp Stron	19 20 ROAP
Licence Number 3039		V	/ <u>/</u>	, , , , , , , , , , , , , , , , , , ,	The second of th
Address R. R. 1, Box 19x4x 194, Orleans, Ont. Date 15 May 1968. (Signature of Licensed Drilling or Boring Contractor) Form 7 5M 60-20912			B.F	Trances -	LOTE
OWRC COPY				OSS	58

UTM 1/18 2 4/4/8/01/10 E

Elev. ARDEBU4 FRONT

Form 5



The Water-well Drillers Act, 1954

Department of Mines

1050UNNOVATER BEANSH MAR 1 6 1959 ONTARIO WATER PER COMMISSION

Water-Well Record

			hip, Vill age, T o	wn or Cit	tyELouveest	<u> </u>
			n Village, Town	n or City	7)	
OWIGI	TOTA		AddressRR2	2 Mano	tick	
Date completed	7. 1958 (month)	(year)				
		()(a1)				
Pipe and Casing	Record			P	umping Test	
Casing diameter(s)			Static level	3	21	
Length(s) 20	†		Pumning rate	3	00 gph	
Type of screenno	ne		Pumping level	3	5 *	
Length of screen	•		Duration of tes	stI	hr	***********
Well Log				W	ater Record	
	From	То	Depth (No. of feet	Kind of wate
Overburden and Bedrock Record	ft.	ft.	water (water rises	or sulphur)
loam	0	5				
sandstone	5	60	60	-	28	fresh
		<u> </u>				
	·				_/	
					· · · · · · · · · · · · · · · · · · ·	
		l		i_		MIL
For what purpose(s) is the water	to be used?			Loca	tion of Well	,
house Is water clear or cloudy?clear.			-		how distances of	
Is water clear or cloudy (MANNALL) Is well on upland, in valley, or on			road and	lot line.	Indicate north	by arrow.
	illside					/
Drilling firm F.A. McLean						
0440		l l				
	•••••		Lo	723	m reformant de la companya de la com	
Name of Driller H. Sally	T		miles apply a time. I A Valenteen teet to the light			1 Maria (Mariana)
Address	***************************************			\	The same of the sa	
	••••••	••••••				K
Licence Number			0'		T T	bar 1
I certify that the statements of fact			700		LIMER	
COAM.	16					
Date Mar IO	1 ordan		and the second	20	o'	
Sig	gnature of License	е	、 >	· 50	- 11	

patersongroup

Consulting Engineers

154 Calonnade Road South Oltava, Orllano Canada K2E 7J5 Tel: (613) 226-7381 Fax: (613) 226-6344

> Geolectical Engineering Engineering Engineering Hydrageslogy Geological Engineering Malenals Teslog Boilding Science Archibological Services

www.patersongroup.ca

October 17, 2018 File: PE4468-HLUI

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

Subject:

Authorization Letter, HLUI Search

Phase I-Environmental Site Assessment

4725 Spratt Road Ottawa, Ontario

Dear Sir or Madame.

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

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

Name of Company/Property Owner:

Name of Representative

Authorization of Representative

Date

2018-10-17

APPENDIX 3

QUALIFICATIONS OF ASSESSORS

Mandy Witteman, E.I.T.



Geotechnical Engineering

Environmental Engineering

Hydrogeology

Geological Engineering

Materials Testing

Building Science

Archaeological Services

POSITION

Environmental Engineer

EDUCATION

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

MEMBERSHIPS & AWARDS

Alberta Professional Engineers and Geoscience Association NSERC Industry R&D Scholarship

EXPERIENCE

2018 - Present

Paterson Group Inc.

Consulting Engineers Geotechnical and Environmental Division Environmental Engineer

2014 - 2015

Thurber Engineering Limited

Oil Sand Tailings Group Tailings Engineer

2014 - 2013

Carleton University

Department of Civil & Environmental Engineering Division Research Engineer

2013 - 2009

Carleton University

Department of Civil & Environmental Engineering Division Research Assistant and Teachers Assistant

2008 - 2009

SLR Consulting Limited

Contaminated Sites

Junior Environmental Engineer

Mark S. D'Arcy, P. Eng.

patersongroup

Geotechnical Engineering

Environmental Engineering

Hydrogeology

Geological Engineering

Materials Testing

Building Science

Archaeological Services

POSITION

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

EDUCATION

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

MEMBERSHIPS

Ottawa Geotechnical Group Professional Engineers of Ontario

EXPERIENCE

1991 to Present

Paterson Group Inc.

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

SELECT LIST OF PROJECTS

Mary River Exploration Mine Site - Northern Baffin Island Agricultural Supply Facilities - Eastern Ontario

Laboratory Facility – Edmonton (Alberta)

Ottawa International Airport - Contaminant Migration Study - Ottawa

Richmond Road Reconstruction - Ottawa

Billings Hurdman Interconnect - Ottawa

Bank Street Reconstruction - Ottawa

Environmental Review - Various Laboratories across Canada - CFIA

Dwyer Hill Training Centre - Ottawa

Nortel Networks Environmental Monitoring - Carling Campus - Ottawa

Remediation Program - Block D Lands - Kingston

Investigation of former landfill sites - City of Ottawa

Record of Site Condition for Railway Lands - North Bay

Commercial Properties - Guelph and Brampton

Brownfields Remediation - Alcan Site - Kingston

Montreal Road Reconstruction - Ottawa

Appleford Street Residential Development - Ottawa

Remediation Program - Ottawa Train Yards

Remediation Program - Bayshore and Heron Gate

Gladstone Avenue Reconstruction – Ottawa

Somerset Avenue West Reconstruction - Ottawa