Geotechnical Engineering

Environmental Engineering

Hydrogeology

Geological Engineering

Materials Testing

Building Science

Archaeological Services

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Phase I Environmental Site Assessment

27 Monk Street
Ottawa, Ontario

Prepared For

Art Properties and Construction

September 23, 2019

Report: PE4714-1

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EXECUTIVE SUMMARY

Assessment

Paterson Group was retained by Art Properties and Construction to conduct a Phase I Environmental Site Assessment (Phase I-ESA) of 27 Monk Street, in the City of Ottawa, Ontario. The purpose of this Phase I – Environmental Site Assessment 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 properties.

The subject site was shown as undeveloped on the 1912 fire insurance plan and first recorded as developed on the 1925 fire insurance plan. The site has remained unchanged since that date. No PCAs/APECs were identified on the subject site during the historical review.

In the subject area, commercial operations including various retail fuel outlets, garages and drycleaners, two printers and an electricity sub-station have mostly been identified on the properties fronting on to Bank Street. Though numerous PCAs have been identified, only the property neighbouring the subject site to the east has been identified as representing and APEC. Though this property has historically hosted various RFOs and service garages, subsequent investigation by Paterson has shown the soils neighbouring the subject site have not been impacted by these historical activities.

Following the historical review, a site visit was conducted. No additional PCAs or APECs were noted during the site visit.

Based on the results of the Phase I - Environmental Site Assessment, it is our opinion that **a Phase II - Environmental Site Assessment is not required for the subject site.**

Recommendations

Based on the age of the subject building, asbestos-containing materials (ACMs) are potentially present in the subject structure. The potential ACMs include drywall joint compound, plaster, and stippling around the fireplace, as well as exterior stucco finishes. Both wall materials and floor coverings in the building were in generally in good condition. An asbestos survey of the building must be conducted in accordance with Ontario Regulation 278/05, under the Occupational Health and Safety Act, prior to the disturbance of these materials.

Lead-based paint may be present on any remaining original surfaces within the building. It is recommended that original paint is tested for lead content prior to its disturbance.

Major work involving lead-based paint or other lead-containing products must be done in accordance with Ontario Regulation 843, under the Occupational Health and Safety Act.

If the subject building is going to be demolished, the above-noted testing programs should be completed as part of a designated substance survey.

1.0 INTRODUCTION

At the request of Art Properties and Construction, Paterson Group (Paterson) conducted a Phase I Environmental Site Assessment (Phase I ESA) for 27 Monk Street, 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.

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

This Phase I-ESA report has been prepared in general accordance with the requirements of Ontario Regulation 153/04, as amended, under the Environmental Protection Act and also complies with the requirements of CSA Z768-01. The conclusions presented herein are based on information gathered from a limited historical review and field inspection program. The findings of the Phase I - ESA are based on a review of readily available geological, historical and regulatory information 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:	27 Monk Street, Ottawa, Ontario.
Legal Description:	Part of Lot 24 in Block 5, North side of Holmwood Avenue, Registered Plan 26085, City of Ottawa.
Property Identification Number:	04140-0203.
Location:	The subject site is situated 30m south of the intersection between Monk Street and Thornton Avenue, in the City of Ottawa.
Latitude and Longitude:	45° 24' 01" N, 75° 41' 15" W;
Site Description:	
Configuration:	Trapezoid.
Site Area:	325 m^2 (approximate).
Zoning:	R4T – Residential 4^{th} Density.
Current Use:	The subject site is currently occupied by a two storey house.
Services:	The subject site is located 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.

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 available sources, the property was first developed for residential purposes between 1912 and 1925.

Fire Insurance Plans

Fire insurance plans (FIP) were reviewed for the subject site and surrounding area. The subject site was shown as vacant land in the 1912 FIP and developed with a residential building in the 1925 FIP.

The subject area was shown as sparsely developed with largely residential properties in the 1912 FIP. By 1925, the FIP shows the area to be more densely developed, with the majority of land west of Monk Street comprising residential properties but with commercial properties fronting onto Bank Street, east of the subject site. These included two retail fuel outlets (RFO) at the intersections of Bank Street and Holmwood Avenue and Bank Street and Fifth Avenue. Additionally, at 115 Holmwood Avenue, an electricity substation is labelled. Due to the separation distance and anticipated groundwater flow direction, these Potentially Contaminating Activities (PCAs) do not represent areas of potential environmental concern (APECs). The remainder of the area east of Bank Street largely consisted of residential properties.

In the 1956 FIP, increased commercial development was noted, fronting onto Bank Street. Of particular significance was an RFO, immediately east of the subject site. This RFO is considered to be a PCA, however, it is not considered to be an APEC due to our involvement in the redevelopment of this neighbouring property (refer to Previous Engineering Reports section). Several other automobile garages, RFOs and dry cleaners were also labelled along Bank Street, however, due to the separation distances, these features are not considered to represent APECs.

City of Ottawa Street Directories

City directories at the National Archives were reviewed in approximate 10-year intervals from 1931 to 2011 as part of the Phase I ESA.

A summary of PCAs in the Phase I study area is provided in the table below.

Table 1: City Directories – Potentially Contaminating Activities (PCA) in Phase I Study Area

Address	Listed Activity (years listed)	Distance / Orientation from site	APEC
890 Bank Street	Ratcliffe Joseph T Service Station (1960) Texaco Service Station (1970) Custom Muffler Repair (1980-1990) Mr. Muffler (2011)	Immediately east	No
860 Bank Street	Ottawa Motor Sales Ltd. (1941) Motosport Plus (1970)	40m north	No
875 Bank Street	Keith's Auto Sales (1950) United Car Market Garage Repairs (1960) Foerster Frank Ltd Volkswagen Service (1970-1980)	45m east	No
891 Bank Street	Excel Garage Body Repair Shop (1960) Excel Radiator (1950-1970) Lansdown Printing (1980)	45m east	No
885 Bank Street	Excel Radiator (1941)	45m east	No
912 Bank Street	McDonald Service Station (1941) Supertest Petroleum Corp. (1941-1950) MacLennan's Supertest Service Station (1960) Barry's Supertest Service Station (1960)	50m south	No
856 Bank Street	Browns Cleaners (2011)	80m north	No
852 Bank Street	Cities Service Oil Service Station (1931) Luciano Nicholas Service Station (1941) Noels Cities Service Station (1950-1960) McKale BP Service Station (1970-1980) McKale Petro Canada Service Station (1990) McKale's Service Centre Ltd. (1999) Auto Pro (1999)	85m north	No
855 Bank Street	Bank and Fifth Garage (1941-1950) Keith's Auto Sales; new & used (1960) Toilet Laundries Ltd. (1960)	90m north	No
844 Bank Street	Capitol Cleaners and Tailors (1931) Blackwell Lyle Cleaners and Tailors (1950)	145m north	No
837 Bank Street	Vern's Cleaners and Tailors (1970) Glebe Photo Inc. (1999)	165m north	No
829 Bank Street	Glebe Fashion Cleaners (1970-1999)	175m north	No
831 Bank Street	Fashion Cleaners (1960-1999)	175m north	No

Table 1: City Directories – Potentially Contaminating Activities (PCA) in Phase I Study Area			
Address	**Listed Activity (years listed)**	**Distance / Orientation from site**	**APEC**
821 Bank Street	The Walsh Press (1960)	185m north	No

The site was already developed with the existing residential building in the earliest directory referred to (1931). No PCAs or APECs were identified on the subject site.

Numerous PCAs were identified in the subject area. These mostly comprised RFOs, garages and cleaners. Due to the separation distance and known groundwater flow direction, none are considered to represent an APEC.

Current Plan of Survey

A plan of survey, dated 31 July 2019, prepared by Annis, O'Sullivan, Vollebekk Ltd. was provided to Paterson for review. A copy of the provided plan of survey is included in Appendix 2.

4.2 Environmental Source Information

Environment and Climate Change Canada

A search of the National Pollutant Release Inventory (NPRI) was conducted electronically on August 9, 2019. The subject site 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. No PCB waste storage sites were identified on the subject site or within a 250m radius.

Ontario Ministry of Environment (MECP) Instruments

A request was submitted to the MECP Freedom of Information office for information with respect to certificates of approval, permits to take water, certificates of property use or any other similar MECP issued instruments for the site. At the time of issuance of this report, a response had not been received. A copy of the response will be forwarded to the client, should it contain 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 coal gasification plants were identified within the Phase I study area.

MECP Incident Reports

A request was submitted to the MECP Freedom of Information office for information with respect to records concerning environmental incidents, orders, offences, spills, discharges of contaminants or inspections maintained by the MECP for the site or adjacent properties. At the time of issuance of this report, a response had not been received. A copy of the response will be forwarded to the client, should it contain any pertinent information.

MECP Waste Management Records

A request was submitted to the MECP Freedom of Information office for information with respect to waste management records. At the time of issuance of this report, a response had not been received. A copy of the response will be forwarded to the client, should it contain any pertinent information.

MECP Submissions

A request was submitted to the MECP Freedom of Information office for information with respect to reports related to environmental conditions have been submitted to the MECP. At the time of issuance of this report, a response had not been received. A copy of the response will be forwarded to the client, should it contain any pertinent information.

MECP Brownfields Environmental Site Registry

A search of the MECP Brownfields environmental site registry was conducted electronically on August 9, 2019. Three (3) record of site condition (RSC) sites were listed in the data base for properties within a 250 m radius of the subject site.

The nearest RSC property to the subject site is located at 852 Bank Street, a former RFO, approximately 85m north of the subject site.

The remaining two RSC are filed for 945 Bank Street, approximately 135m south of the subject site.

Based on the information contained in the MOE Brownfields environmental site registry, these properties are not considered to have had any potential to impact the subject property.

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. No waste disposal sites were identified within the Phase I study area.

Areas of Natural and Scientific Interest (ANSI)

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 August 9, 2019. The search did not reveal any natural features or 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 on August 9, 2019, to inquire about current and former underground/aboveground storage tanks, spills and incidents for the subject and neighbouring properties. No records were found for the subject site or neighbouring properties.

City of Ottawa Landfill Document

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

City of Ottawa Historical Land Use Inventory

A search of the City’s Historical Land Use Inventory (HLUI 2005) database for the subject property was conducted as part of the Phase I ESA. At the time of issuance of this report, a response had not been received. A copy of the response will be forwarded to the client, should it contain any pertinent information.

Previous Engineering Reports

No historical reports have been conducted at the subject site to our knowledge.

Paterson conducted an investigation and monitored the remediation of the land at 890 Bank Street, which is located immediately east of the subject site. The

remediation involved the removal of petroleum hydrocarbon impacted soils from the site. No groundwater contamination was present on the adjacent land (the groundwater was determined to flow eastward). Based on our knowledge of this adjacent site, it has not impacted the subject land and therefore the former PCA at 890 Bank Street does not represent an APEC.

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:

1928 The subject site is occupied with the existing residential building at this time. The western portion of the subject area surrounding the site is developed with residences while immediately southeast of the site appears to be within the grounds of a large house. Residential/Commercial properties occupy land to the east of the subject area.

1958 No significant changes have been made to the subject site. The previously vacant land to the southeast of the site appears to be occupied by cars. A retail fuel outlet (RFO) can be seen immediately east of the subject site fronting on to bank street. Commercial buildings have also been constructed fronting onto Bank Street, east of the subject site.

1965 No significant changes have been made to the subject site. To the southeast a commercial building has been constructed, with an associated parking lot.

1976 No significant changes have been made to the subject site. The RFO east of the subject site is no longer present.

1991 No significant changes have been made to the subject site. A commercial building has been constructed east of the subject site, in the location of the former RFO.

2002 No significant changes have been made to the subject site or surrounding properties.

2011 No significant changes have been made to the subject site or surrounding properties.

2017 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. The topographic maps indicate that the subject site and surrounding area slopes down gently to the east and southeast. An illustration of the referenced topographic map is present in Figure 2 - Topographic Map following the body of 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, “where the land is rarely more than 150 m above sea level, except for the Monteregian Hills, which consist of intrusive igneous rocks”.

Geological Maps

The Geological Survey of Canada website on the Urban Geology of the National Capital Area was consulted as part of this assessment. Based on the information from NRCAN, bedrock in the area of the site consists of limestone, dolostone, shale and arkose of the Ottawa Group. Based on the maps, the thickness of overburden is anticipated to be around 9-10 m and consists of fine grained glacio-marine sediments.

Water Well Records

A search of the MECP’s web site for all drilled well records within 250 m of the subject site was conducted on August 9, 2019. The search identified eleven (11) records in the subject area, dating from 2010 to 2015. All eleven records detailed drilling or abandonment of observation/monitoring wells.

The nearest well is located approximately 75m south of the subject site. No indication of contamination was recorded in any of the records. Given the municipally supplied area, potable water wells are not expected in the subject area.

Water Bodies and Areas of Natural Significance

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

5.0 INTERVIEWS

Property Owner Representative

As part of this assessment, Mr. Oskar Velazquez, a representative for Art Properties and Construction, met with Paterson personnel to provide access and answer questions. Mr. Velazquez was unaware of any environmental issues with regard to the subject or neighbouring properties and confirmed that no renovations had yet been completed.

6.0 SITE RECONNAISSANCE

6.1 General Requirements

The site assessment was conducted on September 11, 2019. Weather conditions were cloudy, with a temperature of approximately 20 °C. Mr. Philip Price from the Environmental Department of Paterson Group conducted the site visit. In addition to the site, the uses of neighbouring properties within the Phase I study area were also assessed at the time of the site reconnaissance.

6.2 Specific Observations at the Phase I Property

Buildings and Structures

The subject site is occupied by a two storey detached residential house with a single storey basement. A standalone garage was located to the rear of the house.

The main building was constructed on a stone foundation, finished with brick and stucco and with a sloped shingled mansard roof. Relict structures suggested the building was historically heated with coal however is now heated through a combination of gas fired furnace and electric base board heating.

Site Features

The site is occupied by the subject building which occupies around 80% of the property. The remainder of the site is set to landscaping. Adjacent properties are approximately at grade with respect to the subject site however the driveway into the garage fronting onto Monk Street stands approximately 1 m lower than the rest of the property, with the change in elevation accommodated by a retaining wall. Site drainage consists of infiltration and runoff towards Monk Street.

Below Ground Structures

No below ground structures were identified at the time of the site visit.

Potable Water Source

The subject property is municipally serviced.

Potential Environmental Concerns

- ❑ **Waste Management**

  Residential waste is stored at the rear (east) of the property and is collected by the city on a weekly basis.

- ❑ **Wastewater Discharge**

  Wastewater is discharged to the municipal sewer system.

- ❑ **Potable Wells**

  No potable wells were observed on the subject site.

- ❑ **Railway Lines**

  No railway lines were observed on the subject site or within the Phase I ESA study area.

- ❑ **Polychlorinated Biphenyls (PCBs)**

  No transformers were observed on the subject site.

- ❑ **Unidentified Substances**

  There were no unidentified substances on the exterior of the subject property at the time of this assessment.

Interior Assessment

A general assessment of the building interior is as follows:

- The floors consisted of concrete, ceramic tiles, and hardwood.
- The walls and ceilings consisted of plaster (lathe), drywall and wooden panelling.
- Lighting throughout the building was of incandescent and fluorescent fixtures.

Potentially Hazardous Building Products

- **Asbestos Containing Materials (ACMs)**

  Based on the approximate age of the building, asbestos-containing materials may have been used during construction and may still be present within the structure. These materials include drywall joint compound, plaster, and stippling around the fire place, as well as exterior stucco finishes. A survey should be conducted prior to the demolition of the building.

- **Lead-Based Paint**

  Based on the age of the building, there is the potential for lead-based paints to be present. Painted surfaces were generally in good condition. A survey should be conducted prior to the demolition of the building.

- **Polychlorinated Biphenyls (PCBs)**

  No potentially PCB containing materials were observed during our site inspection.

- **Urea Formaldehyde Foam Insulation (UFFI)**

  No signs of UFFI were noted at the time of the site visit, however it should be noted that interior wall and ceiling cavities were not inspected for insulation type at the time of the site visit.

Other Potential Environmental Concerns

- **Wastewater Drainage**

  Wastewater drainage from the building is expected to drain into the City of Ottawa sewer system. No sump was noted in the building.

- **Ozone Depleting Substances (ODSs)**

  Potential sources of ODSs observed on site include fire extinguishers. These appliances should be regularly serviced by a licensed contractor.

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 - Residential land followed by Thornton Avenue with residential land fronting onto Monk Street and Commercial retail properties fronting on to Bank Street.
- East - Vacant land (under development) followed by Bank Street with mixed commercial and residential land beyond.
- South - Vacant land (under development) followed by residential land with Holmwood Avenue and residential land beyond.
- West - Monk Street Followed by residential land.

Land use within the Phase I study area is shown on Drawing PE4714-2 - Surrounding Land Use Plan. No additional PCAs were noted during the site visit.

7.0 REVIEW AND EVALUATION OF INFORMATION

7.1 Land Use History

Potentially Contaminating Activities (PCAs) and Areas of Potential Environmental Concern (APEC)

No PCAs were identified on the subject site.

A total of seventeen (17) PCAs were identified outside of the subject property but within the Phase I study area. These comprised various retail fuel outlets, garages and drycleaners, two printers and an electricity sub-station. Based on the separation distance from the Phase I property and the known groundwater flow direction to the east, none are considered to represent an APEC on the subject site.

The off-site PCAs are shown on Drawing PE4714-2 Surrounding Land Use Plan.

Contaminants of Potential Concern (CPC)

No contaminants of potential concern (CPCs) were identified on the subject site as no APECs were identified on the subject property.

7.2 Conceptual Site Model

Geological and Hydrogeological Setting

Based on the information from NRCAN, bedrock in the area of the site consists of limestone, dolostone, shale and arkose of the Ottawa Group. Based on the maps, the thickness of overburden is anticipated to be around 9-10 m and consists of fine grained glacio-marine sediments.

Contaminants of Potential Concern

No contaminants of potential concern were identified on the subject property.

Existing Buildings and Structures

The subject site is occupied by a two storey residential dwelling constructed prior to 1925.

Water Bodies

There are no waterbodies on the subject property or within the Phase I ESA study area.

Areas of Natural Significance

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

Drinking Water Wells

Records of eleven (11) water wells were found in the study area, all comprising observation/monitoring wells, dating from 2010 to 2015.

The nearest well is located approximately 75m south of the subject site. No indication of contamination was recorded in any of the records. Given the municipally supplied area, potable water wells are not expected in the subject area.

Neighbouring Land Use

Neighbouring land use in the Phase I study area consists of residential and commercial properties. Land use is shown on Drawing PE4714-2 Surrounding Land Use Plan.

Potentially Contaminating Activities and Areas of Potential Environmental Concern

Potentially Contaminating Activities (PCAs) within the Phase I ESA study area are shown on Drawing PE4714-2 - Surrounding Land Use Plan. None of these PCAs were considered to have resulted in APECs 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 areas of potential environmental concern on the subject site. The presence of potentially contaminating activities was confirmed by a variety of independent sources, and as such, the conclusions of this report are not affected by uncertainty which may be present with respect to the individual sources.

8.0 CONCLUSIONS

Assessment

Paterson Group was retained by Art Properties and Construction to conduct a Phase I Environmental Site Assessment (Phase I-ESA) of 27 Monk Street, in the City of Ottawa, Ontario. The purpose of this Phase I – Environmental Site Assessment 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 properties.

The subject site was shown as undeveloped on the 1912 fire insurance plan and first recorded as developed on the 1925 fire insurance plan as a residential dwelling. The site has remained unchanged since that date. No PCAs/APECs were identified on the subject site during the historical review.

In the subject area, commercial operations including various retail fuel outlets, garages and drycleaners, two printers and an electricity sub-station have mostly been identified on the properties fronting on to Bank Street. Though numerous PCAs have been identified, only the property neighbouring the subject site to the east was identified as representing a potential risk, however, this property has subsequently been investigated by investigation by Paterson which has shown the soils neighbouring the subject site have not been impacted by the historical activities on this adjacent property.

Following the historical review, a site visit was conducted. No additional PCAs APECs were noted during the site visit.

Based on the results of the Phase I - Environmental Site Assessment, it is our opinion that **a Phase II - Environmental Site Assessment is not required for the subject site.**

Recommendations

Based on the age of the subject building, asbestos-containing materials (ACMs) are potentially present in the subject structure. The potential ACMs include drywall joint compound, plaster, and stippling around the fireplace, as well as exterior stucco finishes. Both wall materials and floor coverings in the building were in generally in good condition. An asbestos survey of the building must be conducted in accordance with Ontario Regulation 278/05, under the Occupational Health and Safety Act, prior to the disturbance of these materials.

Lead-based paint may be present on any remaining original surfaces within the building. It is recommended that original paint is tested for lead content prior to its disturbance. Major work involving lead-based paint or other lead-containing products must be done in accordance with Ontario Regulation 843, under the Occupational Health and Safety Act.

If the subject building is going to be demolished, the above-noted testing programs should be completed as part of a designated substance survey.

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 differs from our findings, we request that we are notified immediately in order to allow for a reassessment.

This report was prepared for the sole use of Art Properties and Construction. Permission and notification from the above-noted party and Paterson will be required to release this report to any other party.

Paterson Group Inc.

Philip Price, BSc.

Mark S. D'Arcy, P.Eng.

Report Distribution:

- Art Properties and Construction
- 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 Inventory.

Municipal Records
The City of Ottawa Historical Land Use Inventory.
The City of Ottawa geoOttawa website.

Local Information Sources
Personal Interviews.

Public Information Sources
Google Earth.
Google Maps/Street View

FIGURES

FIGURE 1 – KEY PLAN

FIGURE 2 – TOPOGRAPHIC MAP

DRAWING PE4714-1 – SITE PLAN

DRAWING PE4714-2 – SURROUNDING LAND USE PLAN

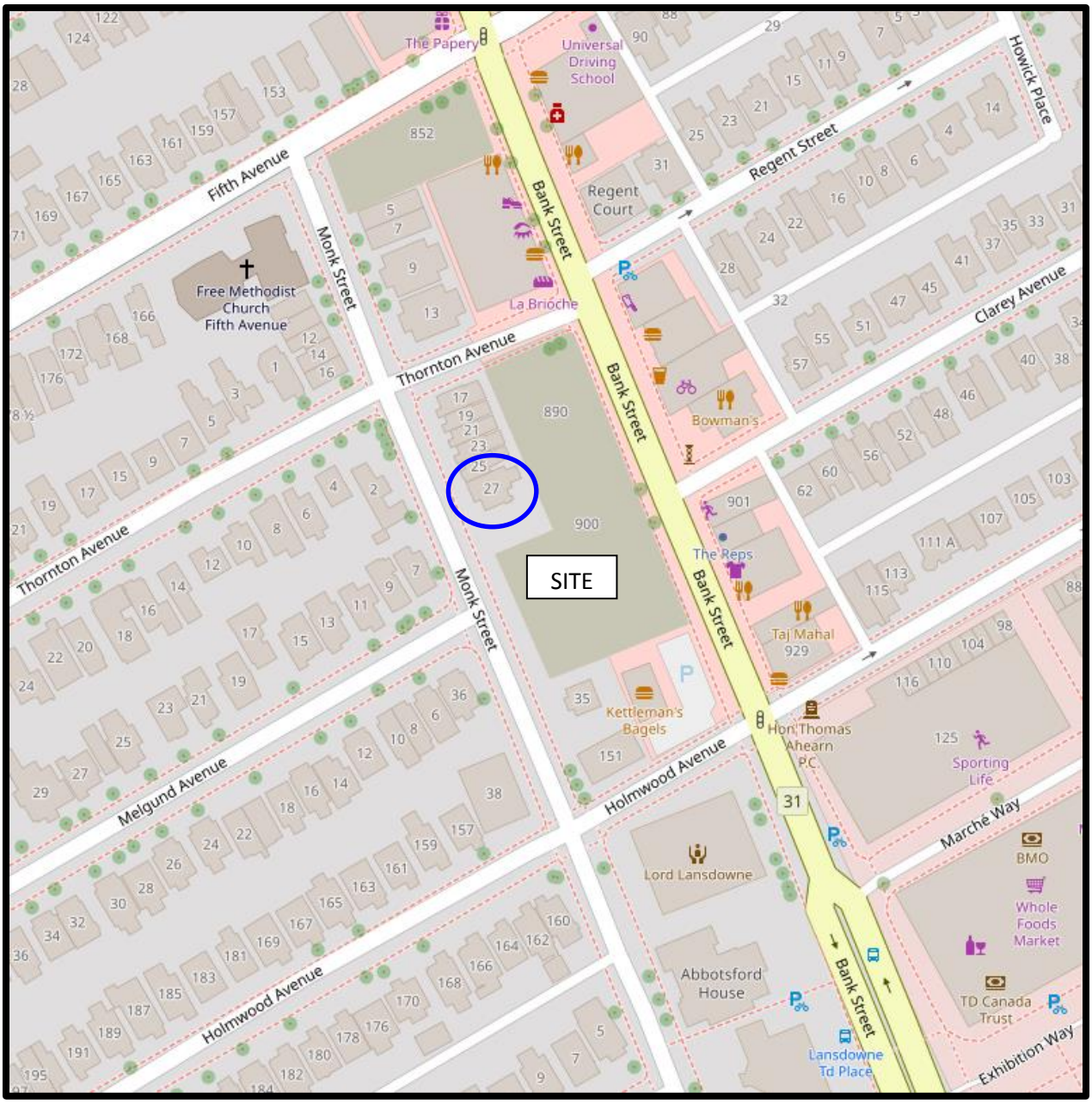


FIGURE 1

KEY PLAN

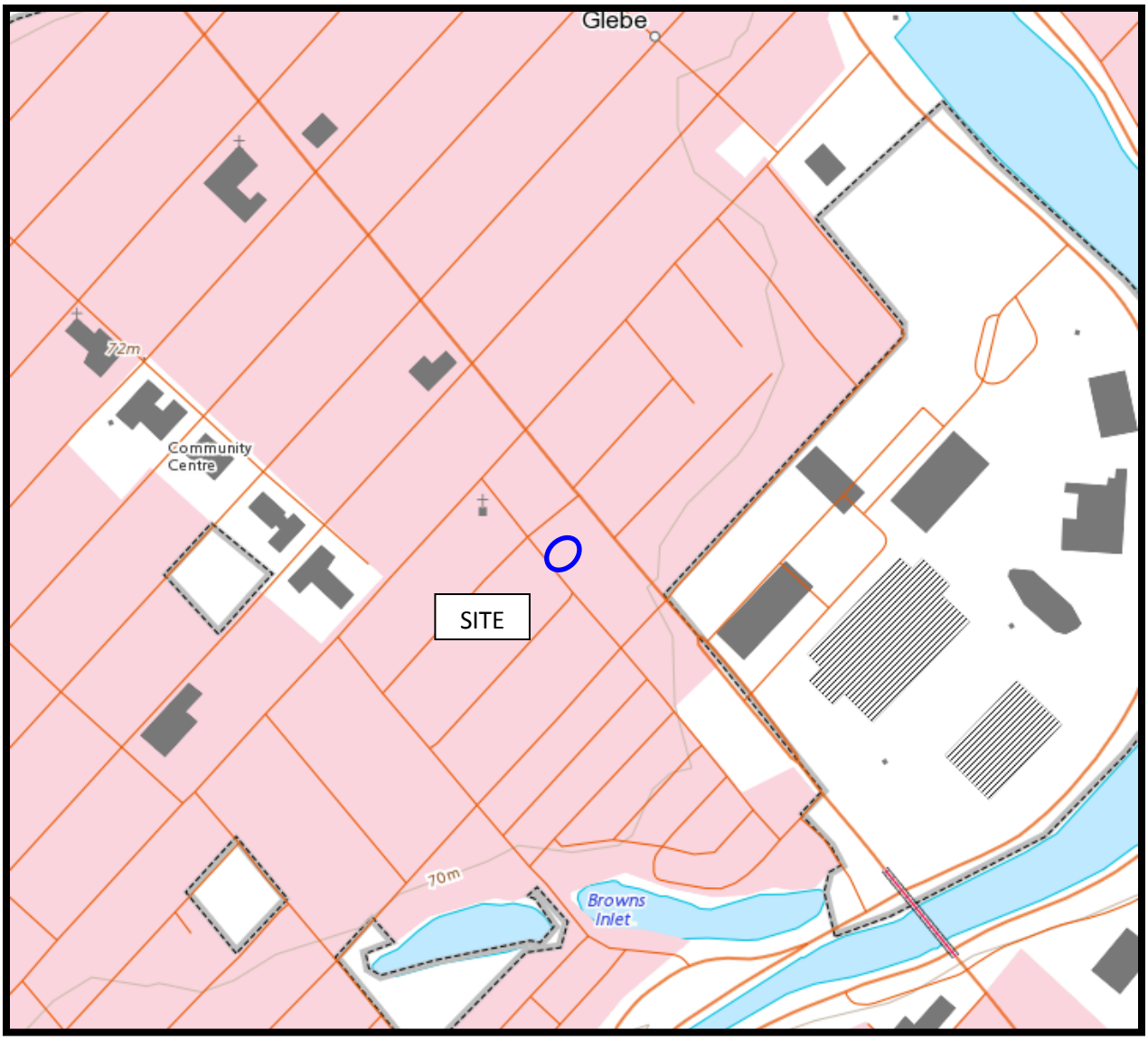


FIGURE 2

TOPOGRAPHIC MAP

#890 BANK STREET
COMMERCIALRESIDENTIAL BUILDING UNDER CONSTRUCTION

PCA 1

GRASS / WEEDS

SHED

THORNTON AVENUE

#17 - 25 MONK STREET
RESIDENTIAL

#27 MONK STREET
RESIDENTIAL

#900 BANK STREET
VACANT
UNDER DEVELOPMENT

MONK STREET

RESIDENTIAL

#2 THORNTON AVENUE
RESIDENTIAL

#7 MELGUND AVENUE
RESIDENTIAL

POTENTIALLY CONTAMINATING ACTIVITY:

PCA 1 890 BANK STREET - FORMER VARIOUS RETAIL FUEL OUTLETS AND SERVICE GARAGES

patersongroup
consulting engineers

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

NO.	REVISIONS	DATE	INITIAL
0			

ART PROPERTIES AND CONSTRUCTION

PHASE I - ENVIRONMENTAL SITE ASSESSMENT
27 MONK STREET

OTTAWA, ONTARIO

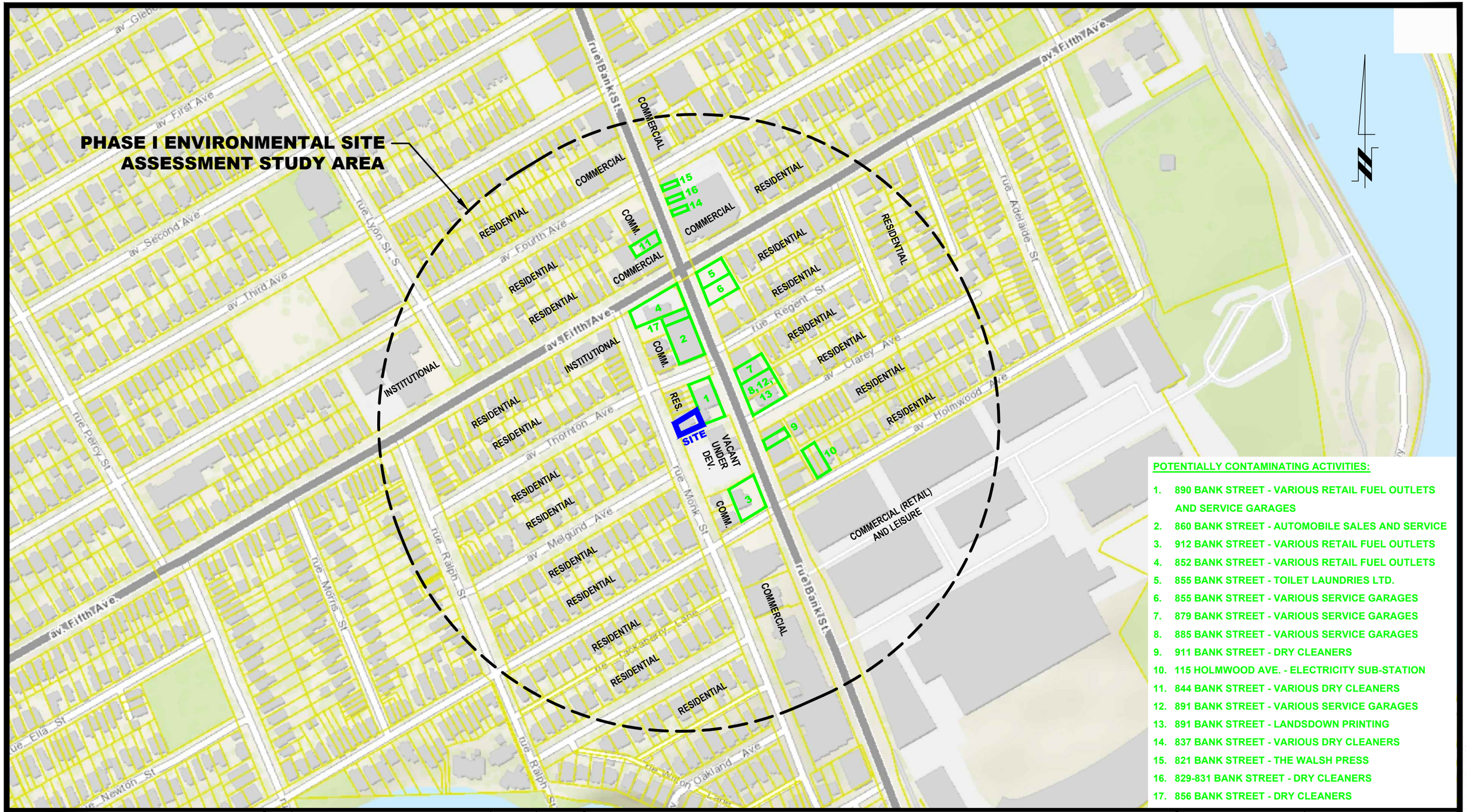
Title:

SITE PLAN

Scale: 1:200	Date: 09/2019
Drawn by: MPG	Report No.: PE4714-1
Checked by: PP	PE4714-1
Approved by: MSD	Revision No.:

11x17

p:\autocad drawings\environmental\pe4714\pe4714-1 site plan.dwg



POTENTIALLY CONTAMINATING ACTIVITIES:

1. 890 BANK STREET - VARIOUS RETAIL FUEL OUTLETS AND SERVICE GARAGES
2. 860 BANK STREET - AUTOMOBILE SALES AND SERVICE
3. 912 BANK STREET - VARIOUS RETAIL FUEL OUTLETS
4. 852 BANK STREET - VARIOUS RETAIL FUEL OUTLETS
5. 855 BANK STREET - TOILET LAUNDRIES LTD.
6. 855 BANK STREET - VARIOUS SERVICE GARAGES
7. 879 BANK STREET - VARIOUS SERVICE GARAGES
8. 885 BANK STREET - VARIOUS SERVICE GARAGES
9. 911 BANK STREET - DRY CLEANERS
10. 115 HOLMWOOD AVE. - ELECTRICITY SUB-STATION
11. 844 BANK STREET - VARIOUS DRY CLEANERS
12. 891 BANK STREET - VARIOUS SERVICE GARAGES
13. 891 BANK STREET - LANDSDOWN PRINTING
14. 837 BANK STREET - VARIOUS DRY CLEANERS
15. 821 BANK STREET - THE WALSH PRESS
16. 829-831 BANK STREET - DRY CLEANERS
17. 856 BANK STREET - DRY CLEANERS

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

NO.	REVISIONS	DATE	INITIAL
0			

ART PROPERTIES AND CONSTRUCTION

PHASE I - ENVIRONMENTAL SITE ASSESSMENT
27 MONK STREET

OTTAWA, ONTARIO

Title:

SURROUNDING LAND USE PLAN

Scale: 1:3000	Date: 09/2019
Drawn by: MPG	Report No.: PE4714-1
Checked by: PP	PE4714-2
Approved by: MSD	Revision No.:

11x17

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APPENDIX 1

PLAN OF SURVEY

AERIAL PHOTOGRAPHS

SITE PHOTOGRAPHS

SURVEYOR'S REAL PROPERTY REPORT
PART 1 Plan of

PART OF LOT 24
IN
BLOCK 5
NORTH SIDE OF HOLMWOOD AVENUE
REGISTERED PLAN 26085
CITY OF OTTAWA

Surveyed by Annis, O'Sullivan, Vollebekk Ltd.

Metric

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

Scale 1 : 100

4 3 2 1 0 2 4 Metres

PART 2
THIS PLAN MUST BE READ IN CONJUNCTION WITH SURVEY REPORT DATED: September 6, 2019

Surveyor's Certificate

I CERTIFY THAT :

1. This survey and plan are correct and in accordance with the Surveys Act, the Surveyors Act and the Land Titles Act and the regulations made under them.
2. The survey was completed on the13th day of August, 2019.

September 6, 2019
Date

Katherine M. Sonier
Katherine M. Sonier
Ontario Land Surveyor

Notes & Legend

		Denotes
—□—	=	Survey Monument Planted
—■—	=	Survey Monument Found
SIB	=	Standard Iron Bar
SSIB	=	Short Standard Iron Bar
IB	=	Iron Bar
CC	=	Cut Cross
CP	=	Concrete Pin
IBø	=	Round Iron Bar
S&W	=	Spike & Washer
SSIB*	=	Short Standard Iron Bar (0.3 Long)
IB*	=	Iron Bar (0.3 Long)
(WIT)	=	Witness
Meas.	=	Measured
(AOG)	=	Annis, O'Sullivan, Vollebekk Ltd.
(P1)	=	Plan 4R-30474
(P2)	=	Plan 5R-3971
(P3)	=	Plan 5R-3489
(P4)	=	(857) Plan, September 29, 1972
(NI)	=	(647) Field Notes dated December 13, 1979
+ 65.00	=	Location of Elevations
+ 65.00*	=	Top of Concrete Curb and Retaining Wall Elevation
+ 65.00**	=	Elevation of OHW
C/L	=	Centreline
BF	=	Board Fence
CLF	=	Chainlink Fence
AC	=	Air Conditioning Unit
B	=	Bollard
GM	=	Gas Metre
CB	=	Catch Basin
MH-S	=	Maintenance Hole - Sanitary
MH-ST	=	Maintenance Hole - Storm
VC	=	Valve Control
TG	=	Top of Grate
RWT	=	Timber Retaining Wall
RWS	=	Stone Retaining Wall
RWC	=	Concrete Retaining Wall
SWC	=	Concrete Sidewalk
OHW	=	Overhead Wires
UP	=	Utility Pole
U/S	=	Underside

ASSOCIATION OF ONTARIO LAND SURVEYORS
PLAN SUBMISSION FORM
2094112
THIS PLAN IS NOT VALID UNLESS IT IS AN EMBOSSED ORIGINAL COPY ISSUED BY THE SURVEYOR In accordance with Regulation 1026, Section 29 (3).

Site Area = 249.4 sq.m.

ELEVATION NOTES

1. Elevations shown are geodetic and are referred to the CGVD28 geodetic datum.
2. It is the responsibility of the user of this information to verify that the job benchmark has not been altered or disturbed and that it's relative elevation and description agrees with the information shown on this drawing.

UTILITY NOTES

1. This drawing cannot be accepted as acknowledging all of the utilities and it will be the responsibility of the user to contact the respective utility authorities for confirmation.
2. Only visible surface utilities were located.
3. A field location of underground plant by the pertinent utility authority is mandatory before any work involving breaking ground, probing, excavating etc.

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

Job No. I9862-I9 Art L#24 Blk5 Plan26085 TOPO F AR

Y:\2019\19862-19\FINAL\19862-19 Art L#24 Blk5 Plan26085 TOPO F.dwg

AERIAL PHOTOGRAPH
1928

AERIAL PHOTOGRAPH
1958

patersongroup

AERIAL PHOTOGRAPH
1965

AERIAL PHOTOGRAPH
1976

AERIAL PHOTOGRAPH
1991

AERIAL PHOTOGRAPH
2002

patersongroup

AERIAL PHOTOGRAPH
2011

AERIAL PHOTOGRAPH
2017

patersongroup

Site Photographs

PE4714-1 27 Monk Street, Ottawa September 23, 2019

Photograph 1: Exterior of the property. Facing east.

Photograph 2: Stippled finish on the first floor fireplace.

Photograph 3: Basement utility room.

Photograph 4: Basement furnace.

APPENDIX 2

MECP FREEDOM OF INFORMATION REQUEST

CITY OF OTTAWA HLUI REQUEST

WATER WELL RECORDS

TSSA CORRESPONDENCE

A.1

Ministry of the Environment, Conservation and Parks

Access and Privacy Office

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

Ministère de l'Environnement, de la Protection de la nature et des Parcs

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

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

Ontario

September 5, 2019

Philip Price
Paterson Group Inc.
154 Colonnade Road
Ottawa, ON K3E 7J5

Dear Philip Price:

RE: ***Freedom of Information and Protection of Privacy Act* Request**
Our File # A-2019-05978, Your Reference PE4714

The Ministry is in receipt of your request made pursuant to the *Freedom of Information and Protection of Privacy Act* and has received your payment in the amount of $5.00 (non-refundable application fee), along with your $30.00 deposit.

The search is being conducted on the following: 27 Monk Street, Ottawa. If there is any discrepancy please contact us immediately.

You may expect a reply or additional communication as your request is processed. For your information, the Ministry charges for search, copying and preparation time.

If you have any questions regarding this matter, please contact Dany Briollais at dany.briollais@ontario.ca.

Yours truly,

Janet Dadufalza
Manager, Access and Privacy

Office Use Only			
Application Number:	Ward Number:	Application Received: (dd/mm/yyyy):	
Client Service Centre Staff:		Fee Received:	$

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:** *27 Monk Street, Ottawa, ON*

** Mandatory Field*

Applicant/Agent Information:

Name:	*Paterson Group*		
Mailing Address:	*154 Colonnade Road, Ottawa, ON*		
Telephone:	*613 226 7381*	Email Address:	*pprice@patersongroup.ca*

Registered Property Owner Information: ☐ Same as above

Name:	*Art Properties and Construction (Alireza Taheri)*		
Mailing Address:	*Suite 201 B, 889 Bank Street, Ottawa, ON*		
Telephone:	*613 262 8767*	Email Address:	*ataheri@artproperties.ca*

Site Details

Legal Description and PIN: *04140 0203*

What is the land currently used for? *Residential property*

Lot frontage: _____ m Lot depth: _____ m Lot area: _____ m²

OR Lot area: (irregular lot) 325 m²

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 $105.00

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): 11/09/2019

Per: Philip Price

(Please print name)

Title: Environmental Scientist

Company: Paterson Group

Ontario — Ministry of the Environment

(Well Tag No. — Sticker and/or Print Below) **A 090648** MW10-14

Master Well Record for Cluster Well Construction

Regulation 903 Ontario Water Resources Act

Page 1 of 2

Master Well Owner's and Land Owner's Information

First Name	Last Name	E-mail Address
City of Ottawa		

Mailing Address (Street Number/Name, RR)	Municipality	Province	Postal Code	Telephone No. (inc. area code)
110 Laurier Avenue West	Ottawa	ON	K1P1J1	613 580 2400

Location and Construction of the Master Well in the Cluster

Address of Well Location (Street Number/Name, RR)	Township	Lot	Concession
1015 Bank Street			

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

UTM Coordinates	Zone	Easting	Northing	GPS Unit Make	Model
NAD 83	18	446332	5027605	Garmin	Etrex

Mode of Operation: ☐ Undifferentiated ☑ Averaged ☐ Differentiated, specify

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

General Colour	Most Common Material	Other Materials	General Description	Depth (Metres) From	To
Brown	Topsoil			0	0.01
"	Fill; sand + silt, trace clay + gravel			0.01	3.8
"	Silty sand fine to med. grained			3.8	6.8
Grey	Silty sand + gravel		Wet @ 8.0	6.8	9.75
	Pieces of rock at 8.7m				

Hole Details

Depth (Metres) From	To	Diameter (Centimetres)
0	9.7	20

Water Use

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

Method of Construction

☐ Cable Tool ☐ Air Percussion ☐ Digging
☐ Rotary (Conventional) ☐ Diamond ☐ Boring
☐ Rotary (Reverse) ☐ Jetting ☑ Other, specify
☐ Rotary (Air) ☐ Driving HSA

Status of Well

☑ Test Hole ☐ Abandoned, Insufficient Supply
☐ Replacement Well ☐ Abandoned, Poor Water Quality
☐ Dewatering Well ☐ Other, specify
☐ Alteration (Construction) ☐ Abandoned, other, specify

Construction Details

Inside Diameter (Centimetres)	Material (steel, plastic, fibreglass, concrete, galvanized)	Wall Thickness	Depth (Metres) From	To
5.1	PVC	Sched 40	0	6.7

No Casing and Screen Used

Open Hole ☐ Yes ☑ No

Static Water Level Test

Metres

Screen

☐ Galvanized ☐ Steel ☐ Fibreglass ☐ Concrete ☑ Plastic

Outside Diameter (Centimetres)	Slot No.
5.8	10

Annular Space/Abandonment Sealing Record

Depth Set at (Metres) From	To	Type of Sealant Used (Material and Type)	Volume Used (Cubic Metres)
0.2	4.5	Bentonite	60 Kgs

Water Details

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

Disinfected ☐ Yes ☑ No — If no, provide reason: Monitoring well

Date Master Well Completed (yyyy/mm/dd): 2010/03/10

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

Total Wells in Cluster	Please indicate Number of Cluster Well Information Log Sheets Submitted
17	
Total Wells on this Property: unknown	2

Location of Well Cluster

Detailed Map must be provided as an attachment no larger than legal size (8.5" x 14"). Sketches are not allowed.

☑ Check box to confirm detailed map is provided as per Section 11.1 (3)

Consent to release additional information concerning the cluster to [redacted]

Well Contractor and Well Technician Information

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

Business Address (Street No./Name, number, RR)	Municipality
410 Rue Principale	Grenville Sur La Rouge

Province	Postal Code	Business E-mail Address
QC	J0V1B0	downing@hawk.igs.net

Bus. Telephone No. (inc. area code)	Name of Well Technician (Last Name, First Name)
819 242 6469	Downing, Bruce

Well Technician's Licence No.	Signature of Technician	Date Submitted (yyyy/mm/dd)
2173	Bruce Downing	2010/04/23

Ministry Use Only

Audit No.	Well Contractor No.
M 05580	
Date Received (yyyy/mm/dd): SEP 22 2010	Date of Inspection (yyyy/mm/dd)

Remarks

1992 (11/2006) Ministry's Copy

Ontario Ministry of the Environment

A 090648 (Print Well Tag No.) A090648

Cluster Well Information for Cluster Well Construction

Regulation 903 Ontario Water Resources Act

Property Owner's Information

First Name	Last Name	Mailing Address (Street No./Name, RR)	Municipality
City of Ottawa.		110 Laurier Avenue West	Ottawa.

Province	Postal Code	E-mail Address	Telephone No. (inc. area code)
Ontario	K1P1J1		6135188102400

Cluster Well Information

Address of Well Location (Street Number/Name, RR)	Lot	Concession	Township	County/District/Municipality
1015 Bank Street				

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

[redacted]

Signature of Technician/Contractor: [signature] Date (yyyy/mm/dd): 2010/04/22

Well # on Sketch	UTM Coordinates Zone	Easting	Northing	Full Depth of Hole (metres)	Hole Diameter (cm)	Method of Construction	Casing Material	Casing Length (metres)	Screen Interval (metres) From	To	Annular Space Sealant Used	Static Water Level (metres)	Abandonment Sealant Used	Comments	Date of Completion (yyyy/mm/dd)
MW 10-8	18	446462	5027310	8.2	20	HSA	PVC	5.2	5.2	8.2	Bentonite				2010/03/01
MW 10-9	18	446614	5027388	8.2				5.2	5.2	8.2					2010/03/01
MW 10-10	18	446644	5027608	7.6				4.6	4.6	7.6					2010/02/01
MW 10-11	18	446681	5027563	7.6				4.6	4.6	7.6					2010/03/02
MW 10-12	18	446674	5027646	7.6				4.6	4.6	7.6					2010/03/02
MW 10-13	18	446646	5027668	5.1				2.1	2.1	5.1					2010/03/02
MW 10-15	18	446480	5027701	7.6				4.6	4.6	7.6					2010/03/03
MW 10-16	18	446711	5027701	7.6				4.6	4.6	7.6					2010/03/04
MW 10-17	18	446735	5027555	7.6				4.6	4.6	7.6					2010/03/04
MW 10-18	18	446690	5027766	4.5				1.5	1.5	4.5					2010/03/04

Well Contractor and Well Technician Information

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

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

Name of Well Technician (First Name, Last Name)	Well Technician's Licence No.	Date Submitted (yyyy/mm/dd)	Signature of Technician
Bruce Downing	2173	2010/04/22	[signature]

Date 1st Well in Cluster Constructed (yyyy/mm/dd)	Date Last Well in Cluster Constructed (yyyy/mm/dd)
2010/03/01	2010/03/19

Ministry Use Only

Date Received (yyyy/mm/dd)	Date Inspected (yyyy/mm/dd)
SEP 22 2010	
Audit No. c 06199	Remarks M05580

1991 (11/2006)

Ministry's Copy

Ontario Ministry of the Environment

Well Tag No. for Master Well *(Print Well Tag No.)*: A090648

Cluster Well Information for Cluster Well Construction

Regulation 903 Ontario Water Resources Act

Property Owner's Information

First Name	Last Name	Mailing Address (Street No./Name, RR)	Municipality
City of Ottawa		110 Laurier Avenue West	Ottawa

Province	Postal Code	E-mail Address	Telephone No. (inc. area code)
ONTARIO	K1P 1J1		6135802400

Cluster Well Information

Address of Well Location (Street Number/Name, RR)	Lot	Concession	Township	County/District/Municipality
1015 Bank Street				

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

[redacted]

Signature of Technician/Contractor: Bruce Downing — Date (yyyy/mm/dd): 2010/04/23

Well # on Sketch	UTM Coordinates Zone	Easting	Northing	Full Depth of Hole (metres)	Hole Diameter (cm)	Method of Construction	Casing Material	Casing Length (metres)	Screen Interval (metres) From	To	Annular Space Sealant Used	Static Water Level (metres)	Abandonment Sealant Used	Comments	Date of Completion (yyyy/mm/dd)
MW 10-19	18	446458	5027722	7.6	20	HSA	PVC	4.6	4.6	7.6	Bentonite				2010/03/04
MW 10-20	18	446483	5027693	7.0				4.0	4.0	7.0					2010/03/04
MW 10-21	18	446362	5027619	9.1				6.1	6.1	9.1					2010/03/04
MW 10-22	18	446478	5027616	7.6				4.6	4.6	7.6					2010/03/05
MW 10-23	18	446299	5027578	9.7				6.7	6.7	9.7					2010/03/19
MW 10-24	18	446407	5027632	8.2				5.2	5.2	8.2					2010/03/18
MW 10-25	18	446447	5027633	7.6				4.6	4.6	7.6					2010/03/18
MW 10-26	18	446385	5027391	8.8				5.8	5.8	8.8					2010/03/19
MW 10-27	18	446332	5027597	7.9				4.9	4.9	7.9					2010/03/19
MW 10-28	18	446703	5027584	5.1				2.1	2.1	5.1					2010/03/18

Well Contractor and Well Technician Information

Business Name of Well Contractor	Business Address (Street Number/Name, RR)	Municipality	Province
George Downing Estate Drilling Ltd.	410 Rue Principale	Grenville Sur La Rouge	QC

Postal Code	Business Telephone No. (inc. area code)	Well Contractor's Licence No.	Business E-mail Address
J0V 1B0	8192426409	1844	downing@hawkings.net

Name of Well Technician (First Name, Last Name)	Well Technician's Licence No.	Date Submitted (yyyy/mm/dd)	Signature of Technician
Bruce Downing	21713	2010/04/23	Bruce Downing

Date 1st Well in Cluster Constructed (yyyy/mm/dd)	Date Last Well in Cluster Constructed (yyyy/mm/dd)
2010/03/01	2010/03/19

Ministry Use Only

Date Received (yyyy/mm/dd)	Date Inspected (yyyy/mm/dd)
SEP 22 2010	
Audit No. c06200	Remarks MOE580

1991 (11/2006)

Ministry's Copy

Ontario Ministry of the Environment

Well Tag No. for Master Well *(Print Well Tag No.)* A090648

Cluster Well Information for Cluster Well Construction

Regulation 903 Ontario Water Resources Act

Property Owner's Information

First Name	Last Name	Mailing Address (Street No./Name, RR)	Municipality
City of Ottawa		110 Laurier Ave. West	Ottawa

Province	Postal Code	E-mail Address	Telephone No. (inc. area code)
ONTARIO	K1P1J1		6135802400

Cluster Well Information

Address of Well Location (Street Number/Name, RR)	Lot	Concession	Township	County/District/Municipality
1015 Bank Street				

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

[redacted]

Signature of Technician/Contractor	Date (yyyy/mm/dd)
	2010/04/23

Well # on Sketch	UTM Coordinates Zone	Easting	Northing	Full Depth of Hole (metres)	Hole Diameter (cm)	Method of Construction	Casing Material	Casing Length (metres)	Screen Interval (metres) From	To	Annular Space Sealant Used	Static Water Level (metres)	Abandonment Sealant Used	Comments	Date of Completion (yyyy/mm/dd)
MW 10-24	18	446620	5027532	7.6	20	HSA	PVC	4.6	4.6	7.6	Bentonite				2010/03/18

Well Contractor and Well Technician Information

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

Postal Code	Business Telephone No. (inc. area code)	Well Contractor's Licence No.	Business E-mail Address
J0V1B0	8192426469	1814	downing@hawk.195.net

Name of Well Technician (First Name, Last Name)	Well Technician's Licence No.	Date Submitted (yyyy/mm/dd)	Signature of Technician
Bruce Downing	2173	2010/04/25	

Date 1st Well in Cluster Constructed (yyyy/mm/dd)	Date Last Well in Cluster Constructed (yyyy/mm/dd)
2010/03/01	2010/03/19

Ministry Use Only

Date Received (yyyy/mm/dd)	Date Inspected (yyyy/mm/dd)
SEP 22 2010	
Audit No. C07988	Remarks M05580

1991 (11/2006)

Ministry's Copy

Ontario — Ministry of the Environment

Measurements recorded in: ☑ Metric ☐ Imperial

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

S-12699 **Well Record**

Regulation 903 Ontario Water Resources Act

Page ____ of ____

Well Owner's Information

First Name	Last Name / Organization	E-mail Address	☐ Well Constructed by Well Owner
[redacted]	[redacted] City of Ottawa		

Mailing Address (Street Number/Name)	Municipality	Province	Postal Code	Telephone No. *(inc. area code)*
110 Laurier Ave	Ottawa	ON	K1P1J1	

Well Location

Address of Well Location (Street Number/Name)	Township	Lot	Concession
1015 Bank St			

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

UTM Coordinates	Zone	Easting	Northing	Municipal Plan and Sublot Number	Other
NAD 83	18	446330	5027603		

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

General Colour	Most Common Material	Other Materials	General Description	Depth (m/ft) From	Depth (m/ft) To
	N/A				

Annular Space

Depth Set at (m/ft) From	To	Type of Sealant Used (Material and Type)	Volume Placed (m^3/ft^3)
0	.31	bentonite chips	
.31	2.13	bentonite slurry	

Method of Construction

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

Well Use

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

Construction Record - Casing

Inside Diameter (cm/in)	Open Hole OR Material (Galvanized, Fibreglass, Concrete, Plastic, Steel)	Wall Thickness (cm/in)	Depth (m/ft) From	Depth (m/ft) To
5.20	PVC	.390		

Construction Record - Screen

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

Status of Well

☐ Water Supply
☐ Replacement Well
☐ Test Hole
☐ Recharge Well
☐ Dewatering Well
☐ Observation and/or Monitoring Hole
☐ Alteration (Construction)
☐ Abandoned, Insufficient Supply
☐ Abandoned, Poor Water Quality
☑ Abandoned, other, *specify* Not Needed
☐ Other, *specify*

Water Details

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

Hole Diameter

Depth (m/ft) From	Depth (m/ft) To	Diameter (cm/in)
0	2.13	11.43

Results of Well Yield Testing

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

If pumping discontinued, give reason:

Pump intake set at *(m/ft)*

Pumping rate *(l/min / GPM)*

Duration of pumping
_____ hrs + _____ min

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

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

Recommended pump depth *(m/ft)*

Recommended pump rate *(l/min / GPM)*

Well production *(l/min / GPM)*

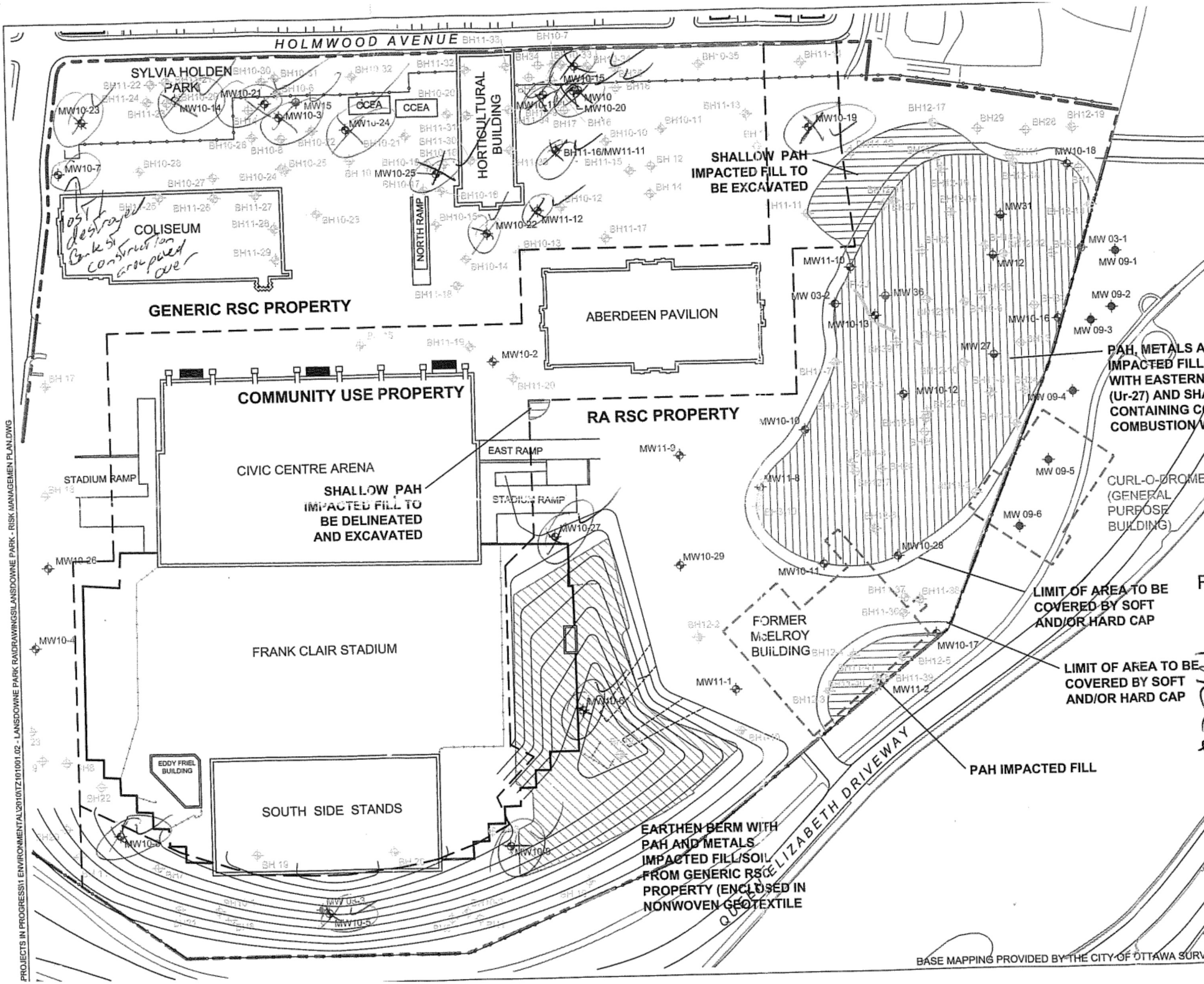
Disinfected?
☐ Yes ☐ No

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

Map of Well Location

Please provide a map below following instructions on the back.

See Map
MW 10-14


HOLMWOOD AVENUE
SYLVIA HOLDEN PARK
COLISEUM
HORTICULTURAL BUILDING
NORTH RAMP
GENERIC RSC PROPERTY
ABERDEEN PAVILION
COMMUNITY USE PROPERTY
RA RSC PROPERTY
CIVIC CENTRE ARENA
STADIUM RAMP
EAST RAMP
SHALLOW PAH IMPACTED FILL TO BE DELINEATED AND EXCAVATED
SHALLOW PAH IMPACTED FILL TO BE EXCAVATED
FRANK CLAIR STADIUM
EDDY FRIEL BUILDING
SOUTH SIDE STANDS
FORMER McELROY BUILDING
CURL-O-DROME (GENERAL PURPOSE BUILDING)
LIMIT OF AREA TO BE COVERED BY SOFT AND/OR HARD CAP
PAH IMPACTED FILL
EARTHEN BERM WITH PAH AND METALS IMPACTED FILL/SOIL FROM GENERIC RSC PROPERTY (ENCLOSED IN NONWOVEN GEOTEXTILE
QUEEN ELIZABETH DRIVEWAY
BASE MAPPING PROVIDED BY THE CITY OF OTTAWA SURV
PROJECTS IN PROGRESS\1 ENVIRONMENTAL\2010\TZ101001.02 - LANSDOWNE PARK RA\DRAWINGS\LANSDOWNE PARK - RISK MANAGEMEN PLAN.DWG

Ontario — Ministry of the Environment

Measurements recorded in: ☑ Metric ☐ Imperial

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

S-12699 **Well Record**

Regulation 903 Ontario Water Resources Act

Page _____ of _____

Well Owner's Information

First Name	Last Name / Organization	E-mail Address	☐ Well Constructed by Well Owner
[redacted]	[redacted] / City of Ottawa		

Mailing Address (Street Number/Name)	Municipality	Province	Postal Code	Telephone No. *(inc. area code)*
110 Laurier Ave.	Ottawa	ON	K1P1J1	

Well Location

Address of Well Location (Street Number/Name)	Township	Lot	Concession
1015 Bank St.			

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

UTM Coordinates	Zone	Easting	Northing	Municipal Plan and Sublot Number	Other
NAD 83	18	446423	5027634		

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

General Colour	Most Common Material	Other Materials	General Description	Depth (m/ft) From	Depth (m/ft) To
	N/A				

Annular Space

Depth Set at (m/ft) From	To	Type of Sealant Used (Material and Type)	Volume Placed (m^3/ft^3)
0	.31	Bentonite chips	
.31	2.13	Bentonite slurry	

Method of Construction

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

Well Use

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

Construction Record - Casing

Inside Diameter (cm/in)	Open Hole OR Material (Galvanized, Fibreglass, Concrete, Plastic, Steel)	Wall Thickness (cm/in)	Depth (m/ft) From	Depth (m/ft) To
5.20	PVC	.390		

Construction Record - Screen

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

Status of Well

☐ Water Supply
☐ Replacement Well
☐ Test Hole
☐ Recharge Well
☐ Dewatering Well
☐ Observation and/or Monitoring Hole
☐ Alteration (Construction)
☐ Abandoned, Insufficient Supply
☐ Abandoned, Poor Water Quality
☑ Abandoned, other, *specify* Not Needed
☐ Other, *specify*

Water Details

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

Hole Diameter

Depth (m/ft) From	Depth (m/ft) To	Diameter (cm/in)
0	2.13	11.43

Results of Well Yield Testing

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

If pumping discontinued, give reason:

Pump intake set at *(m/ft)*

Pumping rate *(l/min / GPM)*

Duration of pumping _____ hrs + _____ min

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

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

Recommended pump depth *(m/ft)*

Recommended pump rate *(l/min / GPM)*

Well production *(l/min / GPM)*

Disinfected? ☐ Yes ☐ No

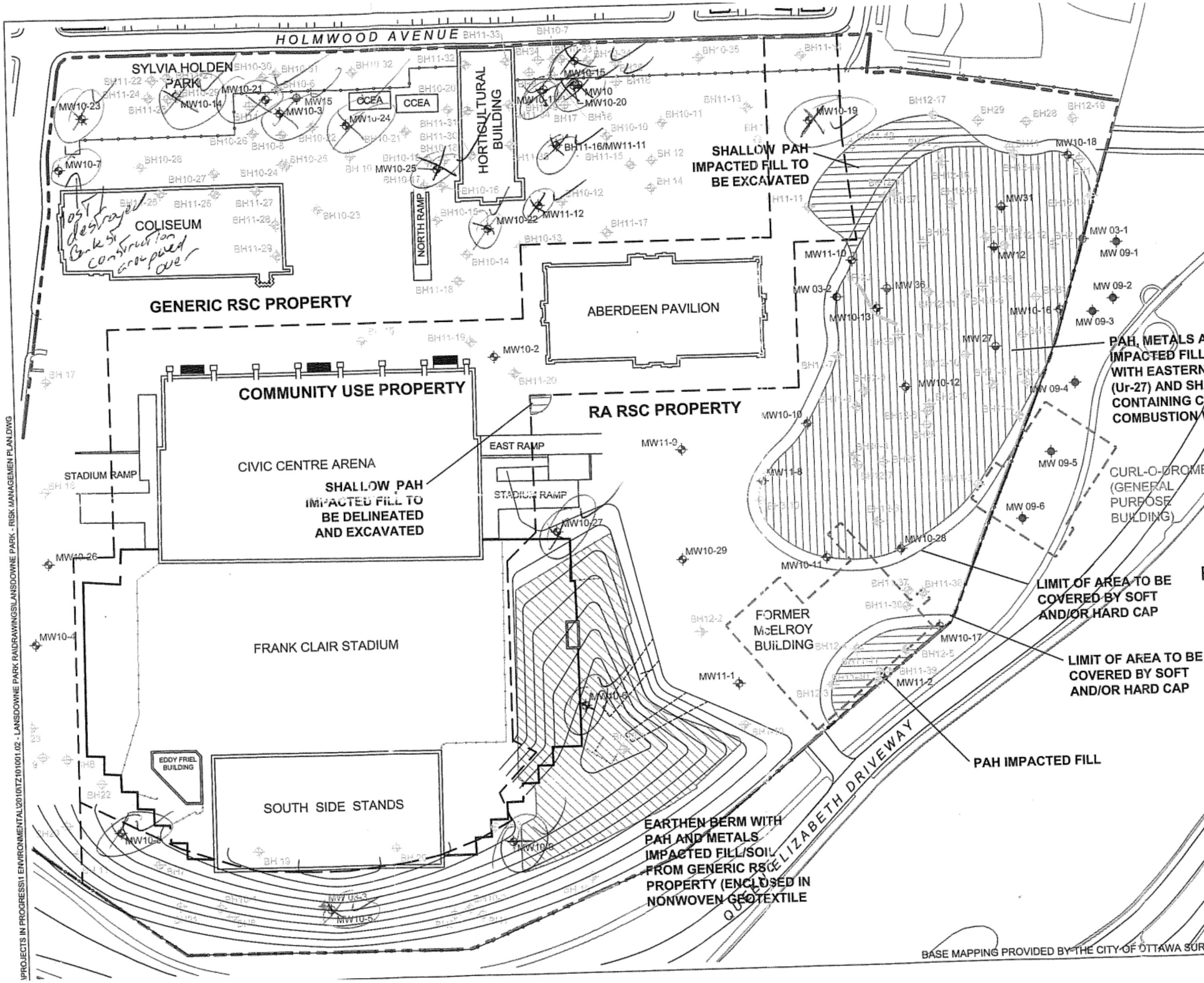
Draw Down Time (min)	Draw Down Water Level (m/ft)	Recovery Time (min)	Recovery Water Level (m/ft)
Static Level			
1		1	
2		2	
3		3	
4		4	
5		5	
10		10	
15		15	
20		20	
25		25	
30		30	
40		40	
50		50	
60		60	

Map of Well Location

Please provide a map below following instructions on the back.

See Map

MW10-24


HOLMWOOD AVENUE
SYLVIA HOLDEN PARK
HORTICULTURAL BUILDING
CCEA
CCEA
NORTH RAMP
COLISEUM
GENERIC RSC PROPERTY
ABERDEEN PAVILION
COMMUNITY USE PROPERTY
RA RSC PROPERTY
CIVIC CENTRE ARENA
EAST RAMP
STADIUM RAMP
STADIUM RAMP
FRANK CLAIR STADIUM
EDDY FRIEL BUILDING
SOUTH SIDE STANDS
FORMER McELROY BUILDING
CURL-O-DROME (GENERAL PURPOSE BUILDING)
SHALLOW PAH IMPACTED FILL TO BE EXCAVATED
SHALLOW PAH IMPACTED FILL TO BE DELINEATED AND EXCAVATED
PAH, METALS A
IMPACTED FILL
WITH EASTERN
(Ur-27) AND SH
CONTAINING C
COMBUSTION
LIMIT OF AREA TO BE COVERED BY SOFT AND/OR HARD CAP
LIMIT OF AREA TO BE COVERED BY SOFT AND/OR HARD CAP
PAH IMPACTED FILL
EARTHEN BERM WITH PAH AND METALS IMPACTED FILL/SOIL FROM GENERIC RSC PROPERTY (ENCLOSED IN NONWOVEN GEOTEXTILE
QUEEN ELIZABETH DRIVEWAY
MW10-23
MW10-14
MW10-21
MW10-3
MW15
MW10-24
MW10-7
MW10-25
MW10-22
MW11-12
BH11-16/MW11-11
MW10
MW10-20
MW10-15
MW10-19
MW10-18
MW31
MW12
MW 03-1
MW 09-1
MW 09-2
MW 09-3
MW 09-4
MW 09-5
MW 09-6
MW 03-2
MW 36
MW10-16
MW10-13
MW 27
MW10-12
MW10-10
MW11-9
MW11-8
MW10-2
MW10-27
MW10-26
MW10-29
MW10-11
MW10-28
MW10-17
MW11-2
MW11-1
MW10-4
MW10-5
MW10-6
MW10-8
MW10-9
MW 03-3
MW10-5
BASE MAPPING PROVIDED BY THE CITY OF OTTAWA SUR
\PROJECTS IN PROGRESS\1 ENVIRONMENTAL\2010\TZ101001.02 - LANSDOWNE PARK RAIDRAWINGS\LANSDOWNE PARK - RISK MANAGEMEN PLAN.DWG

Ontario — Ministry of the Environment

Measurements recorded in: ☐ Metric ☐ Imperial

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

S-12699

Well Record

Regulation 903 Ontario Water Resources Act

Page ____ of ____

Well Owner's Information

First Name	Last Name / Organization	E-mail Address	☐ Well Constructed by Well Owner
[redacted]	[redacted] / City of Ottawa		

Mailing Address (Street Number/Name)	Municipality	Province	Postal Code	Telephone No. *(inc. area code)*
110 Laurier Ave.	Ottawa	ON	K1P1J1	

Well Location

Address of Well Location (Street Number/Name)	Township	Lot	Concession
1015 Bank St			

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

UTM Coordinates	Zone	Easting	Northing	Municipal Plan and Sublot Number	Other
NAD 83	18	446367	5027620		

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

General Colour	Most Common Material	Other Materials	General Description	Depth (m/ft) From	Depth (m/ft) To
	N/A				

Annular Space

Depth Set at (m/ft) From	To	Type of Sealant Used (Material and Type)	Volume Placed (m^3/ft^3)
0	.31	bentonite chips	
.31	213	bentonite slurry	

Method of Construction

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

Well Use

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

Construction Record - Casing

Inside Diameter (cm/in)	Open Hole OR Material (Galvanized, Fibreglass, Concrete, Plastic, Steel)	Wall Thickness (cm/in)	Depth (m/ft) From	Depth (m/ft) To
5.20	PVC	.390		

Construction Record - Screen

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

Status of Well

☐ Water Supply
☐ Replacement Well
☐ Test Hole
☐ Recharge Well
☐ Dewatering Well
☐ Observation and/or Monitoring Hole
☐ Alteration (Construction)
☐ Abandoned, Insufficient Supply
☐ Abandoned, Poor Water Quality
☑ Abandoned, other, *specify* Not Needed
☐ Other, *specify* ____

Water Details

Water found at Depth (m/ft)	Kind of Water: ☐ Fresh ☐ Untested	Hole Diameter Depth (m/ft) From	To	Diameter (cm/in)
☐ Gas	☐ Other, *specify* ____			

Results of Well Yield Testing

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

If pumping discontinued, give reason:

Pump intake set at *(m/ft)*

Pumping rate *(l/min / GPM)*

Duration of pumping ____ hrs + ____ min

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

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

Recommended pump depth *(m/ft)*

Recommended pump rate *(l/min / GPM)*

Well production *(l/min / GPM)*

Disinfected? ☐ Yes ☐ No

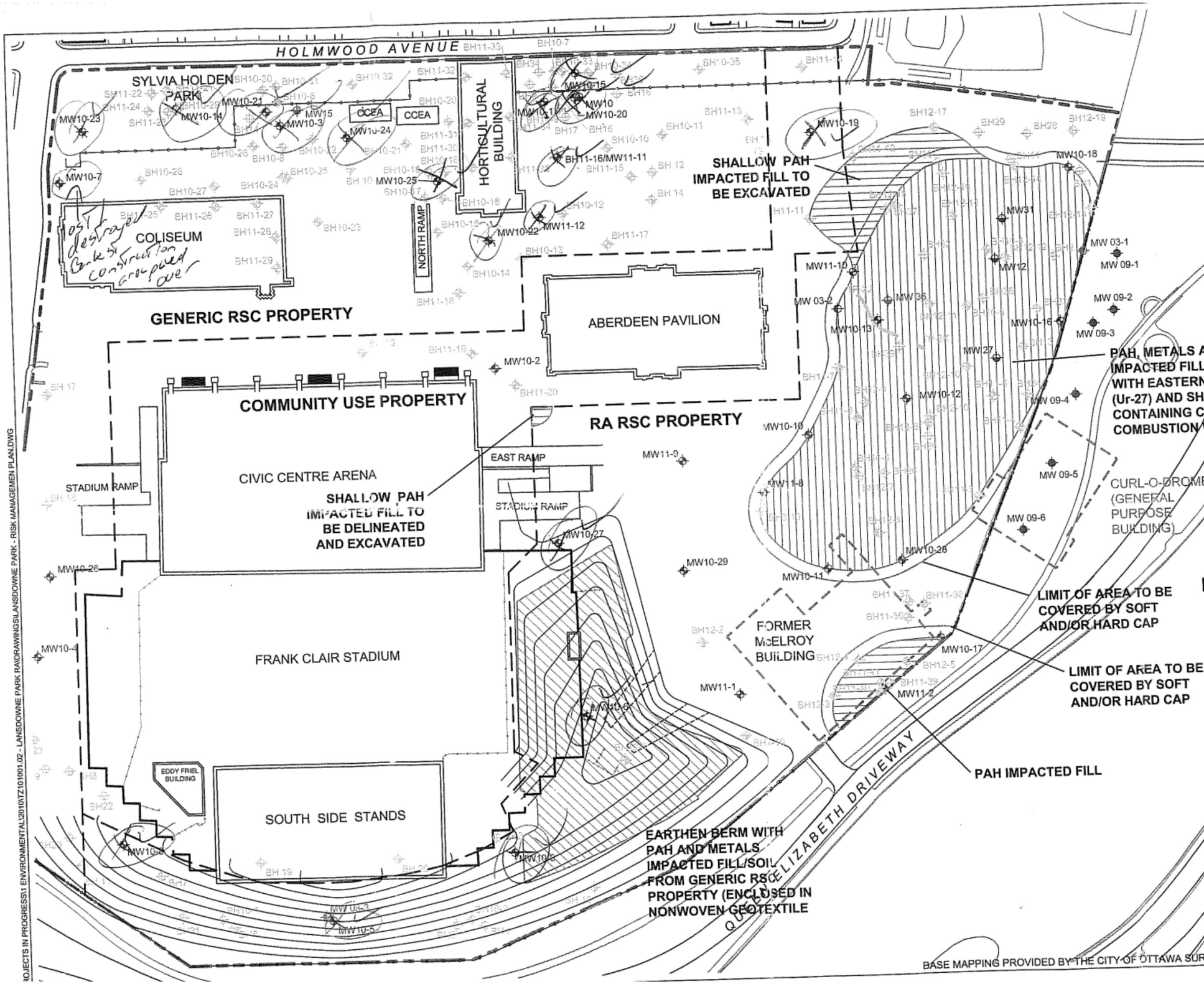
	Draw Down Time (min)	Draw Down Water Level (m/ft)	Recovery Time (min)	Recovery Water Level (m/ft)
Static Level				
1			1	
2			2	
3			3	
4			4	
5			5	
10			10	
15			15	
20			20	
25			25	
30			30	
40			40	
50			50	
60			60	

Map of Well Location

Please provide a map below following instructions on the back.

See Map

MW10-3


HOLMWOOD AVENUE
SYLVIA HOLDEN PARK
HORTICULTURAL BUILDING
NORTH RAMP
COLISEUM
GENERIC RSC PROPERTY
ABERDEEN PAVILION
COMMUNITY USE PROPERTY
RA RSC PROPERTY
CIVIC CENTRE ARENA
STADIUM RAMP
EAST RAMP
FRANK CLAIR STADIUM
EDDY FRIEL BUILDING
SOUTH SIDE STANDS
FORMER McELROY BUILDING
CURL-O-DROME (GENERAL PURPOSE BUILDING)
QUEEN ELIZABETH DRIVEWAY
SHALLOW PAH IMPACTED FILL TO BE EXCAVATED
SHALLOW PAH IMPACTED FILL TO BE DELINEATED AND EXCAVATED
LIMIT OF AREA TO BE COVERED BY SOFT AND/OR HARD CAP
PAH IMPACTED FILL
EARTHEN BERM WITH PAH AND METALS IMPACTED FILL/SOIL FROM GENERIC RSC PROPERTY (ENCLOSED IN NONWOVEN GEOTEXTILE
BASE MAPPING PROVIDED BY THE CITY OF OTTAWA SUR
ROJECTS IN PROGRESS\1 ENVIRONMENTAL\2010\TZ\101001.02 - LANSDOWNE PARK RAIDRAWINGS\LANSDOWNE PARK - RISK MANAGEMEN PLAN.DWG

Ontario — Ministry of the Environment

Measurements recorded in: ☑ Metric ☐ Imperial

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

S-12699

Well Record

Regulation 903 Ontario Water Resources Act

Page ____ of ____

Well Owner's Information

First Name	Last Name / Organization	E-mail Address	☐ Well Constructed by Well Owner
[redacted]	[redacted] City of Ottawa		

Mailing Address (Street Number/Name)	Municipality	Province	Postal Code	Telephone No. *(inc. area code)*
110 Laurier Ave.	Ottawa	ON	K1P1J1	

Well Location

Address of Well Location (Street Number/Name)	Township	Lot	Concession
1015 Bank St.			

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

UTM Coordinates	Zone	Easting	Northing	Municipal Plan and Sublot Number	Other
NAD 83	18	496360	5027617		

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

General Colour	Most Common Material	Other Materials	General Description	Depth (m/ft) From	Depth (m/ft) To
N/A					

Annular Space

Depth Set at (m/ft) From	To	Type of Sealant Used (Material and Type)	Volume Placed (m^3/ft^3)
0	.31	Bentonite chips	
.31	2.13	Bentonite slurry	

Method of Construction

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

Well Use

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

Construction Record - Casing

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

Construction Record - Screen

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

Status of Well

☐ Water Supply
☐ Replacement Well
☐ Test Hole
☐ Recharge Well
☐ Dewatering Well
☐ Observation and/or Monitoring Hole
☐ Alteration (Construction)
☐ Abandoned, Insufficient Supply
☐ Abandoned, Poor Water Quality
☑ Abandoned, other, *specify* Not Needed
☐ Other, *specify* ____

Water Details

Water found at Depth (m/ft)	Kind of Water: ☐ Fresh ☐ Untested	Hole Diameter Depth (m/ft) From	To	Diameter (cm/in)
☐ Gas	☐ Other, *specify* ____	0	2.13	11.43

Results of Well Yield Testing

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

If pumping discontinued, give reason:

Pump intake set at *(m/ft)*

Pumping rate *(l/min / GPM)*

Duration of pumping ____ hrs + ____ min

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

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

Recommended pump depth *(m/ft)*

Recommended pump rate *(l/min / GPM)*

Well production *(l/min / GPM)*

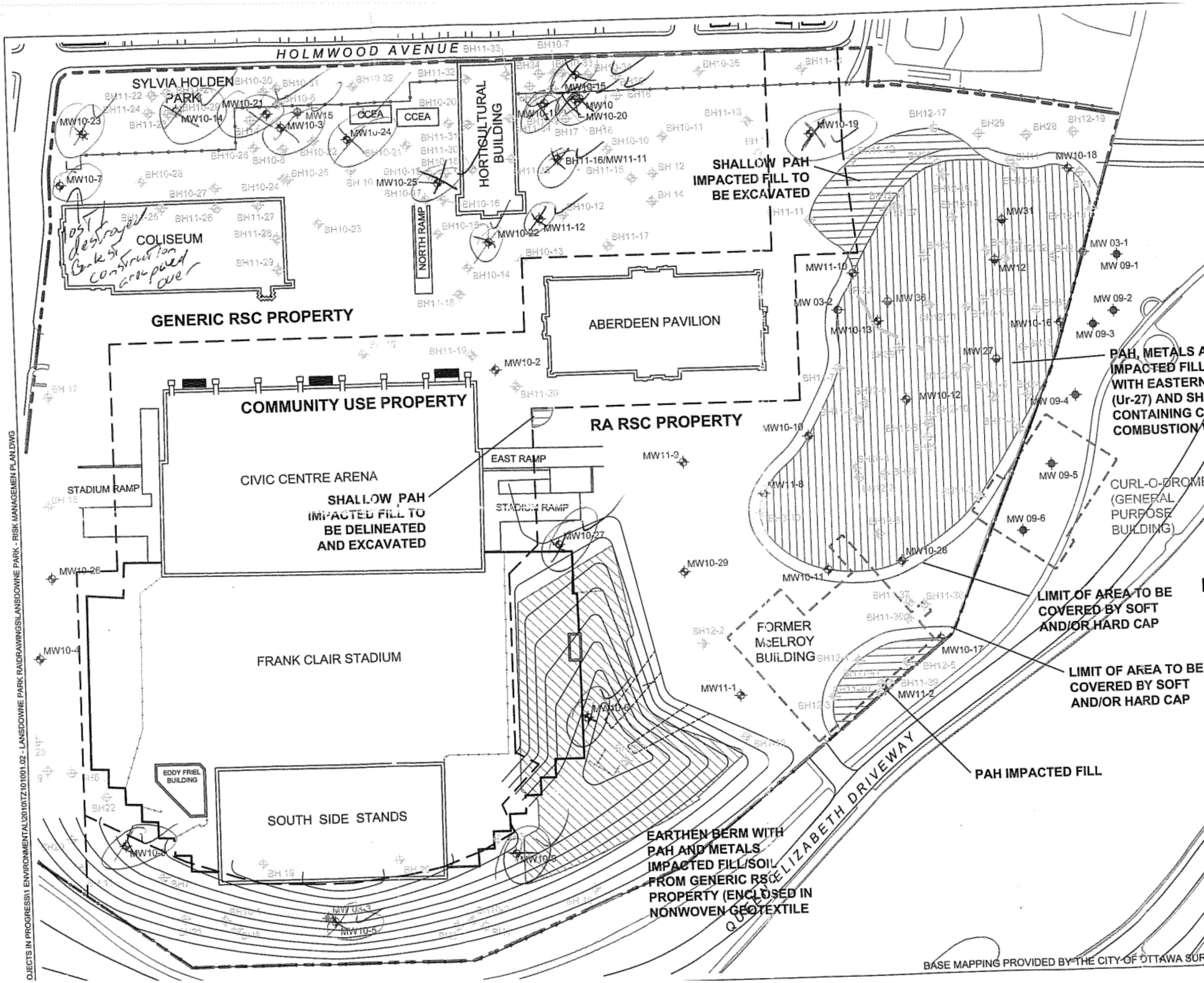
Disinfected? ☐ Yes ☐ No

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

Map of Well Location

Please provide a map below following instructions on the back.

See Map
MW 10-21


HOLMWOOD AVENUE
SYLVIA HOLDEN PARK
HORTICULTURAL BUILDING
CCEA
CCEA
COLISEUM
NORTH RAMP
GENERIC RSC PROPERTY
ABERDEEN PAVILION
COMMUNITY USE PROPERTY
RA RSC PROPERTY
CIVIC CENTRE ARENA
EAST RAMP
STADIUM RAMP
STADIUM RAMP
FRANK CLAIR STADIUM
EDDY FRIEL BUILDING
SOUTH SIDE STANDS
SHALLOW PAH IMPACTED FILL TO BE EXCAVATED
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FORMER McELROY BUILDING
LIMIT OF AREA TO BE COVERED BY SOFT AND/OR HARD CAP
LIMIT OF AREA TO BE COVERED BY SOFT AND/OR HARD CAP
PAH IMPACTED FILL
EARTHEN BERM WITH PAH AND METALS IMPACTED FILL/SOIL FROM GENERIC RSC PROPERTY (ENCLOSED IN NONWOVEN GEOTEXTILE
QUEEN ELIZABETH DRIVEWAY
CURL-O-DROME (GENERAL PURPOSE BUILDING)
BASE MAPPING PROVIDED BY THE CITY OF OTTAWA SUR
OJECTS IN PROGRESS\1 ENVIRONMENTAL\2010\TZ\101001.02 - LANSDOWNE PARK RA\DRAWINGS\LANSDOWNE PARK - RISK MANAGEMEN PLAN.DWG

Philip Price

From: Public Information Services <publicinformationservices@tssa.org>
Sent: August-12-19 9:31 AM
To: Philip Price
Subject: RE: TSSA Records Search, PE4714 - Ottawa, ON

NO RECORD FOUND (FUEL STORAGE TANKS ONLY)

Hello. 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: Philip Price <PPrice@Patersongroup.ca>
Sent: August 9, 2019 11:49 AM
To: Public Information Services <publicinformationservices@tssa.org>
Subject: TSSA Records Search, PE4714 - Ottawa, ON

Good morning,

Could you please conduct a search of your records for underground storage tanks, historical spills and other incidents/infractions for the following addresses for properties located in Ottawa, Ontario:

13 Monk Street
23 Monk Street
25 Monk Street
27 Monk Street

856 Bank Street
890 Bank Street
900 Bank Street

2 Thornton Avenue

7 Melgund Avenue

Thank you very much,

Philip Price

patersongroup

solution oriented engineering
over 60 years servicing our clients

154 Colonnade Road South
Ottawa, Ontario, K2E 7J5
Tel: (613) 226-7381 Ext. 250
Cell: (343) 999 7255

APPENDIX 3

QUALIFICATIONS OF ASSESSORS

Philip Price
BSc.
FGS

Environmental Engineering

Geotechnical Engineering

Materials Testing Quality Control

Building Sciences

Hydrogeology

Archaeological Services

POSITION

Intermediate Environmental Scientist

EDUCATION

Kingston University, London, England, BSc (Hons), 2005
Geology

EXPERIENCE

2018 - Present:
Paterson Group Inc.
Consulting Engineers
Environmental Division
Intermediate Environmental Scientist

2016 - 2018
Harrison Group Environmental Ltd.
Consulting Engineers
Senior Environmental Engineer

2013 - 2016
Harrison Group Environmental Ltd.
Consulting Engineers
Environmental Engineer

2009 – 2011
AP Geotechnics Ltd.
Consulting Engineers
Geotechnical Engineer

2006 - 2009
Harrison Group Environmental Ltd.
Consulting Engineers
Junior Environmental Engineer

SELECT LIST OF PROJECTS

Remediation Supervision – Residential Development, Arnprior
Remediation Supervision – Residential Development, Ottawa
Remediation Supervision – Commercial Development, Ottawa
Phase I & II ESA – Commercial Development, Bells Corners, Ottawa
Groundwater Monitoring and Sampling – Various Location, Ottawa
Phase I ESA – Various Locations, Ontario

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