Kollaard Associates
Engineers

210 Prescott Street, Unit 1
P.O. Box 189
Kemptville, Ontario K0G 1J0

Civil • Geotechnical •
Structural • Environmental •
Hydrogeology •

(613) 860-0923

FAX: (613) 258-0475

REPORT ON

PHASE I
ENVIRONMENTAL SITE ASSESSMENT
1994 ST. JOSEPH BOULEVARD, ORLEANS
CITY OF OTTAWA, ONTARIO

Submitted to:

M. J. Pulickal Holdings Inc.
1475 York Mills Drive
Ottawa, Ontario
K4A 2N5

DATE: June 13, 2019

DISTRIBUTION:

3 copies	M. J. Pulickal Holdings Inc.	
1 copy	Kollaard Associates Inc.	190361

TABLE OF CONTENTS

LIST OF FIGURES

LIST OF ATTACHMENTS

1.0 EXECUTIVE SUMMARY

This Phase I Environmental Site Assessment was carried out by Kollaard Associates Inc. for M. J. Pulickal Holdings Inc. of Ottawa, Ontario. The subject site for this assessment consists of a property with civic address 1994 St. Joseph Boulevard, Orleans, Ontario (see Key Plan, Figure 1). The site has a total area of 0.14 hectares (0.36 acres) of land located on the south side of St. Joseph Boulevard, about 93 metres east of the intersection of Jeanne D'Arc Boulevard South and St. Joseph Boulevard. The site is currently vacant.

It is understood that it is proposed to construct a commercial building at the site.

The purpose of the Phase I Environmental Site Assessment was to identify, if possible, through non-intrusive investigation, consisting of a review of current and historical information and observations of site conditions during a site reconnaissance visit, the existence of any significant, actual or potential environmental liabilities associated with the property. The Phase I Environmental Site Assessment (ESA) has been prepared in general conformity with our interpretation of the requirements of CSAZ768 as well as Ontario Regulation 153/04 (as amended in December 2009 through Ontario Regulation 511/09) for conducting environmental site assessments.

The Phase I ESA was based on a site reconnaissance visit carried out on May 15, 2019, together with a review of available geological, topographical and historical and environmental information for the site.

There was one historical Potentially Contaminating Activity (PCA) identified at the subject site resulting in an Area of Potential Environmental Concern (APEC) at the property. One potential off-site source of hydrocarbon contamination was also identified immediately west of the site subject (existing fuel service station). Other off-site current or historical PCAs were also identified within the Phase I ESA study area. However, given their distances and the inferred groundwater flow direction is away from the subject site, Kollaard Associates considers there were no resulting PCAs or APECs from these off-site sources to the subject site, with the exception of the adjacent gas station.

It is understood that it is proposed to construct a commercial development at the site. The historical land use of the property, based on the results of this investigation, has also been for commercial use. Therefore, a RSC is not required for the property, based on our understanding of Ontario Regulation 153/04.

The results of this Phase I ESA indicates that the most significant environmentally related issues identified at 1994 St. Joseph Street are the possible presence of metals, benzene, toluene, ethylbenzene and xylenes (BTEX) and hydrocarbon contamination from the former on site uses and from an off-site potential source of contamination, a current neighbouring fuel service station.

Based on the results of this study, a Phase II ESA program of soil and groundwater sampling is required to determine whether any contaminants are present within the soil and groundwater at the site from the previous uses at the site and from a neighbouring fuel service station.

This executive summary is a brief synopsis of the report and should not be read in lieu of reading the report in its entirety.

2.0 INTRODUCTION

2.1 PROPERTY INFORMATION

The subject site for this assessment consists of a property located at civic address 1994 St. Joseph Boulevard, in the City of Ottawa, Ontario (see Key Plan, Figure 1). The site consists of about 0.14 hectares (0.36 acres) of land located on the south side of St. Joseph Boulevard, about 93 metres east of the intersection of Jeanne D'Arc Boulevard South and St. Joseph Boulevard, in Orleans, Ward of the City of Ottawa, Ontario.

For the purposes of this assessment, project north is considered to be perpendicular to St. Joseph Boulevard at the site (see Key Plan, Figure 1).

Kollaard Associates Inc. carried out this Phase I Environmental Site Assessment for M. J. Pulickal Holdings Inc., for the purpose of a development application with the City of Ottawa.

The site is currently a vacant commercial property. The property is partially asphaltic concrete surfaced and partially gravel surfaced with vegetation. No building exists at the site.

It is understood that it is planned to redevelop the site into a commercial development. As such, there is no change of use or previous use for which a Record of Site Condition could be required under Ontario Regulation 153/04.

Surrounding land use is currently mixed residential and commercial development. The site is bordered on the north by St. Joseph Boulevard, on the east by a commercial development (Dairy Queen and Cash Money Mart), on the west by a Petro Canada Service Station and on the south by a multi-unit residential apartment building with an asphaltic surfaced parking lot.

The local topography is mostly flat lying with a gentle slope from south to north across the property. The regional topography slopes north towards the Ottawa River located approximately 2.2 kilometres from the subject site.

The legal description for the subject property based on information from the chain of title is as follows:

- Part of Lot 6, Concession 1, Ottawa Front, being Part 4 on Plan 5R-2697 and Part of the Road Allowance between Concessions 1 & 2 Ottawa Front, being Part 2 on Plan 5R-6397, subject to Easement no. N5176236, being a strip at the rear of the property in favour of Hydro, formerly City of Gloucester, City of Ottawa, PIN 04417-0105.

2.2 OBJECTIVES

The primary objective of this Phase I ESA is to document the site conditions on the day of a walk-through site reconnaissance and, if possible, to identify former and current operations or practices that may present potential environmental risks. The study is based on current and historical information and observations of site conditions during a site reconnaissance visit conducted on May 15, 2019. The general objectives of the Phase I Environmental Site assessment, as outlined in Ontario Regulation 153/04, include the following:

1. To develop a preliminary determination of the likelihood that one or more contaminants have affected any land or water on, in or under the phase one property.
2. To determine the need for a Phase II ESA.
3. To provide a basis for carrying out any Phase II ESA, required.
4. To provide adequate preliminary information about environmental conditions in the land or water on, in or under the phase one property for the conduct of a risk assessment following completion of a Phase II ESA.

3.0 SCOPE OF WORK

The scope of the Phase I ESA is sufficient to identify existing and/or potential environmental liabilities which are obvious from visual examination of surface features and from available sources of information. The Phase I Environmental Site Assessment (ESA) has been prepared in general conformity with our interpretation of the requirements of CSAZ768-01 as well as Ontario Regulation 153/04 (as amended in December 2009 through Ontario Regulation 511/09 and subsequent amendments) for conducting environmental site assessments.

This level of work is a method of risk reduction, not risk elimination. No building materials, liquid, gas, or chemical product sampling and/or testing on or in the vicinity of the subject site were carried out as part of this assessment. This assessment included only a cursory overview of the present neighbouring land uses and does not constitute a complete assessment of the adjacent facilities.

The scope of work carried out for the site comprised the following:

- a review of available current and historical information about the site and surrounding properties within 250 metres of the site
- observations of site conditions during a site reconnaissance visit
- review and evaluate the information from the above noted information sources
- document the findings in a report

4.0 RECORDS REVIEW

4.1 GENERAL

4.1.1 PHASE ONE STUDY AREA DETERMINATION

Kollaard Associates Inc. considers that a 250 metre study area is sufficient to identify areas of historical and current potential concern on or near the subject site. As part of the preliminary review of historical documents for the site, aerial photographs of the site and surrounding area were reviewed, as well as documentation from the City of Ottawa on landfills and historical industrial sites (Sections 4.2.1 and 4.3.1). Any properties outside of this radius are considered too distant to cause any significant impact to the site.

4.1.2 FIRST DEVELOPED USE DETERMINATION

The first developed use of the property was determined based on a review of aerial photographs and the title search for the site (Section 4.3.1). The title search indicates that the Ottawa Fur Farm Company leased the property beginning in 1940. The earliest air photograph that was reviewed was 1958. The air photograph indicates that the site was partially occupied by two separate buildings (barns) located in the east center portion of the property along with a small garden shed located in the southeast corner of the site. The

buildings correspond to the timeline of the Ottawa Fur Farm Company. Farms were also observed west, east and south of the site. As such, first developed use of the property is indicated to be sometime between 1940 and 1958 or earlier.

4.1.3 FIRE INSURANCE PLANS

Fire insurance plans were not obtained as the search request did not yield any results for the site.

4.1.4 CHAIN OF TITLE

The legal description for the property based on information from the City of Ottawa, is as follows:

- Part of Lot 6, Concession 1, Ottawa Front, being Part 4 on Plan 5R-2697 and Part of the Road Allowance between Concessions 1 & 2 Ottawa Front, being Partt 2 on Plan 5R-6397, subject to Easement no. N5176236, being a strip at the rear of the property in favour of Hydro, formerly City of Gloucester, City of Ottawa, PIN 04417-0105.

A chain of title for this site (see Attachment A) was provided by Wentzell Titles Ltd. Based on a review of information obtained from that title search, the property is indicated to have been owned mostly by individuals and two companies, The Corporation of the City of Gloucester and 143348 Canada Inc (current owner). In 1940, the title search indicates that the property was leased by Ottawa Fur Farm Company for 10 years in 1940.

4.1.5 ENVIRONMENTAL REPORTS

No environmental related reports are expected to exist for this site.

4.1.6 PROPERTY USE RECORDS

The City of Ottawa Website was reviewed for the zoning designation of the subject site. The website indicates that the site is currently zoned AM3 – Arterial Mainstreet Zone according to the City of Ottawa Zoning By-law 2008-250. This zoning permits a broad range of uses

including retail, service commercial, offices, residential and institutional uses in mixed-use buildings or side by side in separate buildings in areas designated Arterial Mainstreet in the Official Plan and impose development standards that will promote intensification while ensuring that they are compatible with the surrounding uses.

The earliest air photograph that was reviewed was 1958. At that time, the site and surrounding land appear to be farms.

A search of the environmental databases (Section 4.2.2) indicates no records found for the subject property.

Neither an open or closed waste management facility was identified to be within 500 metres of the subject property.

4.2 ENVIRONMENTAL SOURCE INFORMATION

In order to assess some of the historical conditions at the property, a preliminary review of information from the following sources was conducted:

Municipal and Provincial Government Sources

- Old Landfill Management Strategy Phase 1 – Identification of Sites, City of Ottawa, Ontario, December 2003, Reference Number 021-2785 by Golder Associates Ltd.
- Mapping and Assessment of Former Industrial Sites – City of Ottawa, Ontario, July 1988, Reference Number H87-053 by Intera Technologies Ltd.
- Online queries with the following provincial and federal databases; Pits and Quarries database, Large and Small Landfills, online MOECC well records database, Federal Contaminated Sites Inventory
- Ministry of Environment, Conservation and Parks (MECP), Ottawa, Ontario

Environmental Databases

- Ecolog ERIS – Environmental Risk Information Services Standard Report

4.2.1 MUNICIPAL AND PROVINCIAL GOVERNMENT SOURCES

City of Ottawa

A review of a report entitled Old Landfill Management Strategy Phase 1 – Identification of Sites, City of Ottawa, Ontario, December 2003, Reference Number 021-2785 by Golder Associates Ltd. and Mapping and Assessment of Former Industrial Sites – City of Ottawa, Ontario, July 1988, Reference Number H87-053 by Intera Technologies Ltd. indicates there are no old landfill sites within greater than 500 metres of the subject site.

The review of the Mapping and Assessment of Former Industrial Sites indicated no sites within greater than 500 metres of the subject site.

Historical Land Use Inventory

The City of Ottawa was contacted to conduct a search of all environmental databases, including Historical Land Use Inventory (HLUI) and any information pertaining to the environmental condition of the property and adjoining areas including, but not limited to, past environmental reports, orders, violations of environmental statutes, regulations or by-laws, certificates, approvals, permits and any other environmental information. At the time of the preparation of this report, a response from the City of Ottawa had not been received (see Attachment D). Should any environmentally relevant information be provided from this information request that had not been previously identified from other sources, it will be provided in an addendum letter at a later date.

Ministry of the Environment, Conservation and Parks

A formal request was made to the MECP office in Ottawa, Ontario to determine if the Ministry has maintained a file with respect to the subject property. Specifically, the MECP was asked to respond (in writing) with information concerning any historical or existing incidents at or in the vicinity of the subject site. At the time of the preparation of this report, a response from the MECP had not been received. However, if any relevant environmental information about the site is provided, an addendum letter summarizing the new information will be provided at that time (Attachment G).

Pits and Quarries

Based on a review of the provincial online database, there are no active pits or quarries with the Phase I Study Area (i.e. 250 metres).

Large and Small Landfills

Based on a review of the provincial online databases for large and small landfill sites, there are no landfill sites (open or closed) within at least 2 kilometres of the subject site.

Online MECP Well Records

Three drinking water wells records were identified within 250 metres of the subject site. The well records indicate limestone bedrock was encountered at between 55 to 63 metres below the existing ground surface. One of the well records was indicated to be abandoned from lack of water. The well records indicate the wells were constructed between 1959 and 1963.

Other records identified within 250 metres of the site are indicated to be for boreholes. The boreholes are indicated to range in depth from about 4.6 to 6.1 metres below existing ground surface. It is indicated that the boreholes were placed for geotechnical purposes.

Federal Contaminated Sites Inventory

Based on a review of the online database for federal contaminated sites, there are no sites (open or closed) within at least 500 metres of the subject site.

4.2.2 ENVIRONMENTAL DATABASES

ECOLOG ERIS – Environmental Risk Information Services Standard Report

A review of information provided by Ecolog ERIS – Environmental Risk Information Services (see Attachment E) was carried out as part of this Phase I ESA. Based on that review, four (4) records- two duplicates were found in the Ontario Regulation 347 Waste Generators Summary database searched for the project property. The records indicated the following for the site:

- Orleans Cycles - 1994 St. Joseph Boulevard - Petroleum Distillates

- Jolyn Sports - 1994 St. Joseph Boulevard- Petroleum Distillates

The following were identified in the report for properties within 250 metres of the subject site with some environmental significance.

In the List of TSSA Expired Facilities (EXP), Fuel Storage Tank (FST) and Fuel Storage Tank - Historic (FSTH), Private and Retail Fuel Storage Tanks (PRT), Retail Fuel Storage Tanks (RST) Summaries, the following sites were identified:

- 1988 St. Joseph Boulevard - Suncor Energy Products Partnership - 44.3 metres southwest
- 1988 St. Joseph Boulevard - Petro Canada Inc. - 44.3 metres southwest
- 1988 St. Joseph Boulevard - 1213475 Ontario Inc. O/A Gas Station - 44.3 metres southwest
- 1988 St. Joseph Boulevard - Petro-Canada Products - 44.3 metres southwest
- 1980 St. Joseph Boulevard - 6234241 Canada Corporation - 182.5 metres southwest
- 1980 St. Joseph Boulevard - 1189739 Ontario Inc. O/A Jeanne D'Arc Esso - 182.5 metres southwest
- 1980 St. Joseph Boulevard - Imperial Oil - 182.5 metres southwest
- 1976 St. Joseph Boulevard - Mr. Lube - 228 metres west southwest

Based on the proximity of the fuel service station located at 1988 St. Joseph Boulevard, Kollaard Associates considers that there is a potential for an APEC to the subject site as the fuel service station is located immediately adjacent of the site.

In the Ontario Regulation 347 Waste Generators Summary, the following sites were identified:

- Christian De Coninck Painting - 1772 Trappist Lane - Petroleum Distillates - 167.2 metres north northeast
- Imperial Oil - 1980 St. Joseph Boulevard - Light Fuels - Oil Skimmings & Sludges - 182.5 metres southwest
- Ottawa Cardio Center Orleans - 5929 Jean D'Arc Boulevard - Pharmaceuticals and Pathological Wastes - 237.2 metres west

All other waste generators were indicated to be insignificant. Kollaard Associates considers that none of the waste generators represent APECs to the subject site.

A total of 4 spills have been reported in the Phase I Study Area in the Ontario Spills database.

Address	Distance from site metres (m) dir	Spill Description	Impact	APEC on site
1988 St. Joseph Boulevard	60 m WSW	Petro Canada - 9 litres of fuel spilled to ground from fuel tank - June 7, 1992	Minor Soil Contamination	No
Jeanne D'Arc and Henri Lauzon	71.43 m NNE	Collision/Accident - October 31, 2017 - 50 litres of coolant to ground surface.	Minor Soil Contamination	No
1980 St. Joseph Blvd - Jeanne D'Arc ESSO	182.5 m SW	Minor spill 20 to 30 litres of gasoline to the ground.	Minor Spill	No
1267 Marenger Street & 5925 Jeanne D'Arc Boulveard	229.82 m W	Private Residence - July 22, 1996 - Above ground furnace oil tank spill - 90 litres spill onto neighbours lawn.	Possible Soil and water Contamination	No

These spills and others reported in the database were indicated to be minor and localized. Kollaard Associates considers that none of the spills represent APECs to the subject site.

No other significant environmental concerns are listed in the Environmental Risk Information Services Standard Report, with the exception of the fuel station located at 1988 St. Joseph Boulevard.

4.3 PHYSICAL SETTING SOURCES

4.3.1 AERIAL PHOTOGRAPHS

A review of air photographs of the site for the years 1958, 1965, 1976, 1991, 2002, 2007, 2011, 2015 and 2017 was carried out as part of this Phase I ESA (Attachment C). The aerial photographs were obtained from the City of Ottawa website. The following table is a summary of the air photograph review:

Date	Observations
1958	The site appears to form part of a large farm that became divided over the years. A portion of two large buildings are observed on the air photo and are located in the northeast portion of the property. The buildings appear to be barns. A small building, possibly a garden shed is located in the southeast corner of the site. A small pond is located in the northwest portion of the site. Farmland, farm buildings and residential dwellings are located west, east and south of the site.
1965	The large barns formerly on a portion of the property are no longer visible. A single family dwelling is now located in the north half of the site. A smaller building is located in the south half of the site. The farm located immediately east is now vacant farmland. No significant changes are evident on the subject site. No other significant changes are evident on the adjacent properties.
1976	Poor quality air photograph. The pond located in the northwest portion of the site appears to have been filled in. No significant changes are evident on the subject site or adjacent properties.
1991	Significant changes have occurred at the site. A commercial building has been developed in about the center of the property. Several vehicles are parked in the northwest portion. Commercial buildings have been developed east and west (fuel service station) of the site. A large building (residential) and parking lot have been constructed south of the site. The area surrounding the site has significantly developed.
2002	No significant changes are evident on the subject site. More residential development has been constructed southeast of the site.
2007	No significant changes are evident on the subject site or adjacent properties.
2011	No significant changes are evident on the subject site or adjacent properties.
2015	The building no longer exists at the subject site. No significant changes are evident on the adjacent properties.
2017	Some vegetative growth has occurred in the area of the former building at the site. No other significant changes are evident on the subject site or adjacent properties.

4.3.2 TOPOGRAPHY, HYDROLOGY AND GEOLOGY

Topography and Hydrology

For most of the site, the ground surface consists of a gentle slope from south to north. Near the rear property line, the ground surface rises upward about 3 to 4 metres to a higher

elevation. Surface drainage is largely controlled by a catch basin located within St. Joseph Boulevard located north of the site.

The regional topography slopes north towards the Ottawa River located approximately 2.2 kilometres from the subject site (Attachment B).

Surficial and Bedrock Geology

Based on a review of the surficial geology map for the site area, it is expected that the site is underlain by fine textured glaciomarine deposits. Bedrock geology maps indicate that the bedrock underlying the site consists of shale with lenses of sandstone of the Rockcliffe Formation.

Based on a review of overburden thickness mapping for the site area, the overburden is estimated to be between about 55 to 61 metres in thickness above bedrock.

4.3.3 FILL MATERIALS

Based on a review of the aerial photographs and site reconnaissance visit, it is expected that some minor fill materials were used from the previous development of the site for commercial purposes.

4.3.4 WATER BODIES AND AREAS OF NATURAL SIGNIFICANCE

There are no surface water features located on or within the vicinity of the subject site.

Based on a review of the City of Ottawa website information, there is one area (Racette Park) zoned Environmental Protection located about 35 metres south of the subject site. That zoning applies to Significant Wetlands, natural environment areas and Urban Natural Features.

4.3.5 WELL RECORDS

A search on The Ministry of the Environment, Conservation and Parks website for Water Well Record Mapping was completed as part of this assessment. Three drinking water wells

records were identified within 250 metres of the subject site. The well records indicate limestone bedrock was encountered at between 55 to 63 metres below the existing ground surface. One of the well records was indicated to be abandoned from lack of water. The well records indicate the wells were constructed between 1959 and 1963.

Other records identified within 250 metres of the site are indicated to be for boreholes. The boreholes are indicated to range in depth from about 4.6 to 6.1 metres below existing ground surface. It is indicated that the boreholes were placed for geotechnical purposes.

5.0 INTERVIEWS

A discussion via email with the real estate agent for the owner of the site, Ms. Annick Lemay, on June 17, 2019. It is understood that the building was torn down based on the advice that the property would be more appealing without any building present. It is understood that the existing owner, Ms. Estelle Lalonde, operated a party supply store and her husband operated the other business at the site. It is also understood that there was a grooming salon at one point as well as a bicycle sales and repair business prior to the party supply store.

6.0 SITE RECONNAISSANCE

6.1 GENERAL REQUIREMENTS

On May 15, 2019, a walk-through site reconnaissance was conducted at the subject property by Dean Tataryn, B.E.S., EP. The uses of the site and adjacent properties within the Phase I ESA Study Area were assessed. Observations of adjacent properties were limited to views from the subject property and from publicly accessible areas.

The attached Key Plan, Figure 1 and air photographs show the relative location of the subject site with respect to the surrounding land and the existing roadway network.

Site photographs are provided (Attachment F).

6.2 SPECIFIC OBSERVATIONS AT PHASE ONE PROPERTY

6.2.1 SITE DESCRIPTION

The following was observed:

- The site is currently vacant. The ground surface at the site is partially asphaltic surfaced and partially gravel and soil surfaced. Some vegetative growth has occurred over the gravel as it appears the site has been vacant for at least a few years. A sign indicates a "Party Supply Store" business operated at the site and was likely the last tenant. The former building footprint is evident from the gravel surface.
- The gravelled area indicates that the former building was previously located in about the center of the property.
- A fuel service station (Petro Canada) was observed immediately west of the site.
- A Dairy Queen and a Cash Money business are located immediately east of the site.
- A multi-unit residential building and parking lot is located immediately south of the site.
- Jeanne D'Arc Boulevard is located immediately north of the site followed by a commercial strip mall.

In general, surface drainage across the site slope slightly from south to north.

The attached Key Plan, Figure 1 and air photographs show the relative location of the subject site with respect to the surrounding land and the existing roadway network.

6.2.2 SITE INFRASTRUCTURE

The following observations of the site were made.

<u>Electricity</u>

Currently, the hydro service has been disconnected from the site. The area is serviced by Hydro Ottawa. A hydro pole with a transformer is located along St. Joseph Boulevard adjacent to the north side of the site.

Heating and Cooling

The site is currently vacant. The area is serviced by natural gas. It is understood that the previous building was serviced with natural gas.

Water Supply

A municipal water supply system is located within St. Joseph Boulevard and services the area.

Wastewater and Sewage Disposal

The area is serviced by sanitary and storm sewers located within St. Joseph Boulevard.

Sumps, Pits and Floor Drains

The site is currently vacant. As such, no floor drains, sumps or pits were observed at the site.

6.2.3 BUILDING DESCRIPTION

The site is currently vacant. Previous buildings at the site have been used for commercial, residential and agricultural purposes.

6.2.4 POTENTIALLY CONTAMINATING ACTIVITY

Since the 1980s, the historical use of the site has been for commercial purposes. Prior to this time period, the site was used for residential as well as agricultural purposes based on a review of air photographs.

Based on information provided, the current or historical activities at the subject site that could be considered “Potentially Contaminating Activities”, as identified in Table 2 of Schedule D of O. Reg. 153/04 are the following:

- Item #30 - Importation of Fill Material of Unknown Quality, possible buried debris from former commercial, residential and agricultural buildings located at the site. Building debris could potentially contain deleterious substances, including metals and hydrocarbons.

- Item #28 - Gasoline and Associated Products Storage in Fixed Tanks - Fuel Service Station - possible subsurface hydrocarbon contamination related to existing fuel service station (Petro Canada) located immediately west of site.

The following table describes PCAs identified at the site and in vicinity of the site.

Address / Occupant	Activity	Distance from Subject Site	Potential Area of Concern on Subject Site (Y/N)?
PCA 1 1994 St. Joseph Boulevard, Orleans - Existing property	Activity #30 - Importation of Fill of Unknown Quality Possible buried debris from former commercial, residential and agricultural buildings located at the site.	0 metres	Y
PCA 2 1988 St. Joseph Boulevard, Orleans - Petro Canada - Potential Subsurface Contamination	Activity #28 - Gasoline and Associated Products Storage in Fixed Tanks Full Service Gasoline Service Station Liquid Fuel Tanks, retail, vendor	30 metres SW	Y
PCA3 2006 St. Joseph Boulevard Tire Plus Ltd.	Activity #10 - Commercial Autobody Shops	101 m E	N
PCA4 1980 St. Joseph Boulevard 6234241 Canada Corporation- Jeanne D'Arc Esso Gas Station	Activity #28 - Gasoline and Associated Products Storage in Fixed Tanks Full Service Gasoline Service Station Liquid Fuel Tanks, retail, vendor	182.5 m SW	N
PCA5 1959 St. Joseph Boulevard MIDAS	Activity #10 - Commercial Autobody Shops	200.87 m NW	N

PCA6 1976 St. Joseph Boulevard Mr. Lube	Activity #10 - Commercial Autobody Shops	228.03 m WSW	N

6.2.5 MATERIALS HANDLING AND STORAGE

General Storage and Debris

At the time of the site reconnaissance, solid waste storage was not observed or expected at the site.

Solid Waste

The area is served by City of Ottawa municipal waste collection on a weekly basis.

Hazardous Materials

No storage of hazardous materials was observed or is expected on the subject site.

6.2.6 DESIGNATED AND REGULATED SUBSTANCES

Polychlorinated Biphenyls (PCBs)

The use of PCBs in electrical equipment such as transformers, capacitors, fluorescent light ballasts, etc. was common up to about 1980. The Federal Chlorobiphenyls Regulation, SOR/91-152, prohibits the use of PCBs in the aforementioned electrical equipment installed after July 1, 1980. It is not a requirement to remove materials containing PCBs. However, any handling or removal of PCB containing equipment should be carried out in accordance with Ontario Regulation 362, PCB Waste Management under the Environmental Protection Act of Ontario, R.S.O 1990.

No building exists at the site. As such, there are no concerns for PCB containing equipment to be present.

Suspect Asbestos Containing Materials (ACM)

The common use of friable (breakable by hand) ACM in construction decreased in the mid 1970s. Buildings constructed prior to about 1985 may contain some ACM. Friable asbestos (friable is defined as a material that can be crumpled, powdered or pulverized by hand pressure) was widely used in sprayed fireproofing until 1973, and in decorative or finishing plasters, and thermal systems insulation until the early 1980's. Examples where ACM can exist include floor, wall or ceiling tiles, heating/cooling pipes, pipe gaskets, roofing materials and insulation/non-combustible materials. The application of friable asbestos was banned by Ontario Regulation 654/85, which came into effect March 1985. On November 1, 2005, this regulation was most recently updated and changed to Ontario Regulation 278/05.

Under Ontario Regulations, it is not a requirement to remove asbestos from a building unless it is damaged or is likely to be disturbed during renovations or demolition work etc. Applicable regulations define "asbestos-containing material" as material that contains 0.5 per cent or more asbestos by dry weight. If asbestos is to be removed, it should be carried out in accordance with the procedures outlined in Ontario Regulation 837, R.R.O. 1990 and Ontario Regulation 278/05.

No building exists at the site. As such, there are no concerns for PCB containing equipment to be present.

Ozone- Depleting Substances (ODS)

Certain chemicals, recognized as ozone- depleting substances (ODS), break down in the stratosphere and release chlorine or bromine, which in turn destroy the stratospheric ozone layer. Most of these substances are also greenhouse gases. Ozone- depleting substances are used as foam blowing agents, solvents, fire extinguishers, and refrigerants for air conditioning and refrigeration applications. Under the Canadian Environmental Protection Act, 1999, Environment Canada administers the Ozone- Depleting Substances Regulations, 1998 and its subsequent amendments to reduce the use of these and other ODS. According to Environment Canada's website, the target established by these regulations specifies a one hundred percent reduction in the use of HCFCs by the year 2030. As of January 1, 2010, no new manufacture or import of HCFC (R-22) containing equipment was allowed in Canada.

No air conditioning units were observed at the site.

Lead

Lead is commonly associated with old pipes, pipe solder, and lead paint. In 1976, Canadian Regulations limited the amount of lead in interior paint to 0.5 percent by weight. Although paints containing lead were banned from uses on exterior or interior surfaces of buildings, furniture or household products in the 1970s, various commercial paints (e.g., road paint) are still known to contain lead.

No building exists at the site. As such, there are no concerns for PCB containing equipment to be present.

Urea Formaldehyde Foam Insulation (UFFI)

Urea Formaldehyde Foam Insulation is composed of a mixture of urea-formaldehyde resin, a foaming agent, and compressed air. It was commonly injected in exterior wood frame and masonry walls in order to insulate difficult to reach cavities until its ban in Canada in December 1980. The majority of UFFI was installed in new and existing construction in Canada between 1975 and 1978 as part of the Canadian Home Insulation Program.

No building exists at the site. As such, there are no concerns for UFFI containing equipment to be present.

6.2.7 ABOVE AND UNDERGROUND STORAGE TANKS

No above or below ground storage tanks were observed at the site. No evidence of former use of heating oil was observed at the site. Based on a review of the Ecolog ERIS report for the site and site area, no reports of any spills were documented for the site.

6.2.8 ADJACENT PROPERTIES

For the approximate locations of the following properties, see Attachment E, Map Key and Overview.

At the time of the site visit, adjacent properties were observed from publicly accessible areas to determine whether any activities on those properties could pose a concern for the subject site.

Surrounding land use is currently mixed residential and commercial development. The site is bordered on the north by St. Joseph Boulevard, on the east by a commercial development (Dairy Queen and Cash Money Mart), on the west by a Petro Canada Service Station and on the south by a multi-unit residential apartment building with an asphaltic surfaced parking lot.

The site is located adjacent to an existing fuel service station (Petro Canada). Due to the proximity to the property, Kollaard Associates considers that the gas station represents an APEC to the subject site.

An existing fuel service station (Jeanne D'Arc Esso Gas Station) is located about 182.5 metres southwest of the site. Due to the distance and that the site is considered cross-gradient, the gas station does not represent an APEC to the subject site.

Three automobile service garages exist about 101 metres east (Tire Plus Ltd.), about 201 metres northwest (MIDAS) and about 228 metres west southwest (Mr. Lube) of the subject site. Based on the distance and that the sites are considered cross-gradient or downgradient from the property, it is considered that those site do not represent APECs.

Some hydrocarbon spills were reported to have occurred within 150 metres of the subject site. However, due to the distance and nature of the spills (all localized) from the site, Kollaard Associates does not consider any of these to represent an APEC.

6.2.9 Enhanced Investigation Property Observations

Part VI of O.Reg. 511/09 defines an Enhanced Investigation Property as (i) a property used, or has ever been used, in whole or part, for an industrial purpose, or (ii) a commercial property used as a garage, a bulk liquid dispensing facility, including a gasoline outlet or for the operation of dry cleaning equipment.

Based on the records review and site reconnaissance the site was not classified as an Enhanced Investigation Property.

6.3 WRITTEN DESCRIPTION OF INVESTIGATION

The Phase I ESA presented herein is based on information that was obtained from a records review (Section 4.0), interviews (Section 5.0) and site reconnaissance (Section 6.0). The details of the information obtained from each of these sources are provided in the relevant sections of this report. Based on the information obtained, Kollaard Associates has not identified any current and/or historical potential sources of contamination (PCAs) with no resulting areas of potential environmental concern (APEC) at the site, which are described in Section 7.0.

7.0 REVIEW AND EVALUATION OF INFORMATION

7.1 CURRENT AND PAST USES

Based on a review of historical aerial photographs, title search, historical maps, and other records review, the site was first developed sometime between 1940 to 1958 or prior. The 1958 air photograph indicates that the site was partially occupied by two separate buildings (barns) located in the east center portion of the property along with a small garden shed located in the southeast corner of the site. The buildings correspond to the timeline of the Ottawa Fur Farm Company. Farms were also observed west, east and south of the site. As such, first developed use of the property is indicated to be sometime between 1940 and 1958 or earlier. In the 1965 air photograph, a single family dwelling and detached garage occupied the site. The 1976 air photograph indicates a commercial building at the site until about 2015. The 2015 air photograph indicates the commercial building has been removed.

A description of current and past uses of the Phase I ESA property to its first developed use is provided below.

Year	Owner	Property Use	Comments
1803 -1940	Various individuals	Probably Agricultural	No aerial photos reviewed prior to 1958
1940-1968	Percy Headlam Leased to Ottawa Fur Farm Company (10 years)	Agricultural	Farm buildings present in 1958 air photo and 10 year lease on chain of title indicates fur farm
1968 - 1976	Various individuals	Agricultural	Farm buildings removed and farm house and shed constructed - appears in 1965 air photo
1983	The Corporation of the City of Gloucester	Commercial	Roadway allowance between Conc. 1 & 2 created by the original Township in the late 1700s given to the Township of Gloucester
1976 - 1985	Various individuals	Commercial	Large building appears in 1976 air photo.
1985 - current	143348 Canada Inc.	Commercial	Real estate agent indicated several businesses operated in building until prior to 2015 before being torn down.

7.2 POTENTIALLY CONTAMINATING ACTIVITY

As per Ontario Regulation 153/04, a Potential Contaminating Activity (PCA) is defined as one of fifty-nine (59) industrial operations set out in Table 2 of Schedule D. From that list, one item was identified for the subject site, Item #30 - Importation of Fill Material of Unknown Quality.

The historical use of the site has been for agricultural, residential and commercial purposes of which aerial photographs confirmed the presence of several different building types located at the site over the years.

Based on information provided, thirteen current or historical activities have been identified within 250 metres that could be considered “Potentially Contaminating Activities”, as identified in Table 2 of Schedule D of O. Reg. 153/04.

Four records for waste generation or handling and other database search requests were found for the subject site relating to two former commercial businesses at the site (Orleans Cycle and Jolyn Sports - Section 4.2.2). These businesses are not considered to have contributed to any environmental impacts to the site based on the business type.

7.3 AREAS OF POTENTIAL ENVIRONMENTAL CONCERN

There are five current or historical activities that have been identified within 250 metres of the subject site that could be considered Potentially Contaminating Activities within the Phase One Study Area (see Conceptual Site Model, Figure 2). However, none of the activities are considered to have any impact to the subject site based on the historical information and relative distance to the site with the exception of one, the existing fuel service station located at 1988 St. Joseph Boulevard, immediately west of the subject site - Item #28 - Gasoline and Associated Products Storage in Fixed Tanks. None of the other PCAs have caused any APECs to the subject site.

There is one existing APEC at the subject site from the current or past activities at the site, Item #30 - Importation of Fill Material of Unknown Quality.

The corresponding contaminants of potential concern (COPCs) are identified.

APEC	Comment(s)	COPCs
APEC 1 – Former Agricultural, Residential and Commercial Buildings at the site.	- potential fill and/or building debris and residues from former buildings at the site	- Metals, PHCs, BTEX
APEC 2 - Existing Fuel Service Station - 1988 St. Joseph Boulevard	- potential for subsurface hydrocarbon contamination from the existing fuel service station	- PHCs, BTEX and Metals

7.4 PHASE ONE CONCEPTUAL SITE MODEL

The Phase I ESA Conceptual Model provided as Figure 2 identifies the PCAs (identified in Sections 7.2 and 7.3, if applicable) at the site and within the Phase I Study Area (250 metres) as well as surface features, such as buildings, roads and property uses for adjacent properties. The Phase I study area and all of the activities and historical property uses are described within maps provided.

The following describes the Phase One ESA Conceptual Site Model (CSM) for the Site based on the information obtained and reviewed as part of this Phase I ESA:

- The subject site for this assessment consists of one property with civic address 1994 St. Joseph Boulevard, in the City of Ottawa, Ontario.
- The site has a total area of 0.14 hectares (0.36 acres) of land located on the south side of St. Joseph Boulevard, about 93 metres east of the intersection of Jeanne D'Arc Boulevard South and St. Joseph Boulevard.
- The historical use of the site has been for agricultural, residential and commercial purposes.
- Farm buildings covered a portion of the site and were part of the Ottawa Fur Farm Company in around 1958.
- A single family dwelling and detached garage existed at the site around 1965.
- The site is currently vacant, however, a commercial building existed at the site from about 1976 to about 2014.
- According to the Ecolog ERIS report, there are no water wells present on the site.
- Surrounding land use is currently mixed residential and commercial development. The site is bordered on the north by St. Joseph Boulevard, on the east by a commercial development (Dairy Queen and Cash Money Mart), on the west by a Petro Canada Service Station and on the south by a multi-unit residential apartment building with an asphaltic surfaced parking lot.
- The local topography is mostly flat lying with a gentle slope from south to north across the property. The regional topography slopes north towards the Ottawa River located approximately 2.2 kilometres from the subject site.
- One area of natural and scientific interest (ANSI) exists upgradient and about 35 metres south of the subject site (Racette Park) within the Phase I ESA Study Area.
- Groundwater is anticipated to flow north towards the Ottawa River.

In order to determine which potentially contaminating activity within the Phase I study area that may have contributed to an APEC at the subject site, the following were considered.

Site and area topography and surface water drainage: For most of the site, the ground surface consists of a gentle slope from south to north. Near the rear property line, the ground surface rises upward about 3-4 metres to a higher elevation. Surface drainage is largely controlled by catch basins located within St. Joseph Boulevard located north of the site.

Hydrogeology/Surficial and Bedrock Geology: Based on a review of the surficial geology map for the site area, it is expected that the site is underlain by fine textured glaciomarine deposits. Bedrock geology maps indicate that the bedrock underlying the site consists of shale with lenses of sandstone of the Rockcliffe Formation.

Based on a review of overburden thickness mapping for the site area, the overburden is estimated to be between about 55 to 61 metres in thickness above bedrock.

The regional topography slopes north towards the Ottawa River located approximately 2.2 kilometres from the subject site.

Contaminant distribution, transport and underground utilities: The hydraulic conductivity of the soils at the site and within the Phase I study area are low due to the low permeability of the silty clay at the site. The Phase I study area is also controlled by municipal storm and sanitary sewers. Lateral gradients in clay soils are relatively slow and contamination would tend to migrate downward until saturated conditions are encountered. Once saturated conditions are encountered and depending on contaminant mobility, solubility, volatility, etc. the contaminants could be expected to dissolve into the groundwater and migrate laterally in the direction of groundwater flow. In this case, the topographical information indicates that the groundwater flow gradient is moving towards the Ottawa River located approximately 2.2 kilometres north of the subject site.

The underground utilities pertaining to gas, water, sewer and communications enter the site from the north side. Hydro services are overhead. The depth to groundwater is about 1.5 to 1.8 metres below ground surface based on borehole information review for the general site area.

Uncertainty: The uncertainties associated with the conceptual model include those associated with a limited documentation for the subject site and adjacent sites. However, based on the body of information acquired, it is considered that the absence of this information should not likely affect the final conclusion of the Phase I ESA. There were no material deviations to the Phase I ESA requirements set out in O. Reg. 153/04 that would cause uncertainty or absence of information that would affect the validity of the Phase I Conceptual Site Model or the findings of this Phase I ESA.

8.0 CONCLUSION

8.1 PHASE II ESA REQUIREMENT FOR RSC FILING

The results of this Phase I ESA suggest that a Phase II ESA is required at this time.

It is understood that the proposed development of the site is to be commercial use. Given that the Phase I property is currently used for commercial purposes and that there will be no change in the land use from less sensitive to more sensitive, there is no change in use that would trigger a RSC for the property, based on our understanding of Ontario Regulation 153/04.

It is considered that a Phase II ESA should be completed to determine if there were any impacts from the former buildings located at the site over the years and from potential impact from the existing fuel service station located at 1988 St. Joseph Boulevard, immediately west of the site.

8.2 SIGNATURES

The results of this Phase I ESA should in no way be construed as a warranty that the subject property is free from any and all contaminants other than those noted in this report, nor that all compliance issues have been addressed.

This report was prepared for the exclusive use of M. J. Pulickal Holdings Inc. and is based on data and information collected during the Phase I ESA of the property conducted by Kollaard Associates Inc. This report may not be relied upon by any other person or entity without the express written consent of M. J. Pulickal Holdings Inc. and Kollaard Associates Inc. In evaluating this site, Kollaard Associates Inc. has relied in good faith on information provided by others. The assessment of environmental conditions and possible site hazards presented has been made using available

technical data collected and provided by others. We accept no responsibility for any deficiencies, or inaccuracies in this report as a result of omission, misinterpretations, or fraudulent acts of others.

The conclusions provided herein represent the best judgement of Kollaard Associates Inc. based on current environmental standards. Due to the nature of the investigation and the limited data available, we cannot warrant against undiscovered environmental liabilities. If new information is discovered during future work, including excavations, borings or other studies, Kollaard Associates Inc. should be requested to re-evaluate the conclusions presented in this report and provide amendments as required.

We trust that this report is sufficient for your present requirements. If you have any questions concerning this report, please do not hesitate to contact our office.

Yours truly,

Kollaard Associates Inc.

Dean Tataryn, B.E.S., EP.

Colleen Vermeersch, P. Eng.

9.0 REFERENCES

City of Ottawa geoMaps, air photographs for the years 1958, 1965, 1976, 1991, 2002, 2007, 2011, 2015 and 2017.

Old Landfill Management Strategy Phase 1 – Identification of Sites, City of Ottawa, Ontario, December 2003, Reference Number 021-2785 by Golder Associates Ltd.

Mapping and Assessment of Former Industrial Sites – City of Ottawa, Ontario, July 1988, Reference Number H87-053 by Intera Technologies Ltd.

Topographic Map: NRCan Topographic Maps, Ottawa, Ontario, 31 G/5, Edition 11, published 1998, current as of 1994, scale 1:50,000.

Surficial Geology Map: Geological Survey of Canada, Surficial Geology, Ottawa, Ontario, Map 1506A, published 1982, scale 1:50,000.

Bedrock Geology Map: Geological Survey of Canada, Generalized Bedrock Geology, Ottawa-Hull, Ontario and Quebec, Map 1508A, published 1979, scale 1:125,000.

Ecolog Eris Ltd. Standard Report, dated June 12, 2019, various federal, provincial and private database records for 250 metres study area.

10.0 QUALIFICATIONS OF THE ASSESSORS

Dean Tataryn, B.E.S., EP – Senior Environmental Professional

Mr. Dean Tataryn is a Senior Environmental Professional (EP) with Kollaard Associates Inc. in Kemptville, Ontario. Mr. Dean Tataryn has been conducting Phase I ESAs in accordance with the CSA Standard and Environmental Protection Act for more than 21 years. Mr. Tataryn has conducted more than 150 Phase I, II and III ESAs for commercial/residential clients over his career. Mr. Tataryn obtained a Bachelor of Environmental Studies (Honours Urban and Regional Planning) and a Certificate in Environmental Assessment from the University of Waterloo in 1995. Mr. Tataryn obtained his Environmental Professional (EP) designation in June of 2010.

EP certification is available exclusively to experienced professionals who have five or more years of relevant environmental work experience Recipients of the EP designation have demonstrated that their skills and knowledge meet or exceed the National Occupational Standards (NOS) to ensure that they possess the specific environmental competencies required in their fields of practice. The NOS are a comprehensive list of skill statements that describe the competencies required for environmental work in Canada. The NOS provides a rigorous, nationally validated benchmark of the skills, knowledge and experience relevant for practice within the environment sector in the areas of environmental protection, resource management, environmental sustainability, environmental management, environmental auditing and/or greenhouse gas reporting.

Mr. Tataryn joined Kollaard Associates Inc. in 2005 and has worked on numerous environmental, geotechnical and hydrogeological assessment projects over his career. Mr. Tataryn is fully trained in coordinating and conducting environmental site assessments, environmental remediation, reclamation and restoration, contamination and spill inspections, and storage tank assessment and removal.

Kollaard Associates is an engineering consulting firm that provides a complete range of engineering services for developers, builders and homeowners in Eastern Ontario. Kollaard Associates specializes in providing civil, structural, geotechnical, hydrogeological and environmental services to our clients. Kollaard Associates Inc. has been established as a team of engineers and consultants since 2005. Mr. William Kollaard, P.Eng., owner and president, is responsible for the overall company development and management of the firm.

Colleen Vermeersch, P.Eng.

Colleen Vermeersch is an engineer with Kollaard Associates Inc. in Kemptville, Ontario. Colleen has been conducting Phase I ESAs in accordance with the CSA Standard and Environmental Protection Act for more than four years. Colleen has conducted more than thirty Phase I ESAs for commercial/residential clients over her career and several Phase II ESAs, some of which have involved clean up supervision. Colleen Vermeersch obtained a Bachelor of Engineering (Environmental) from Carleton University in 2007 and achieved professional status in 2012.

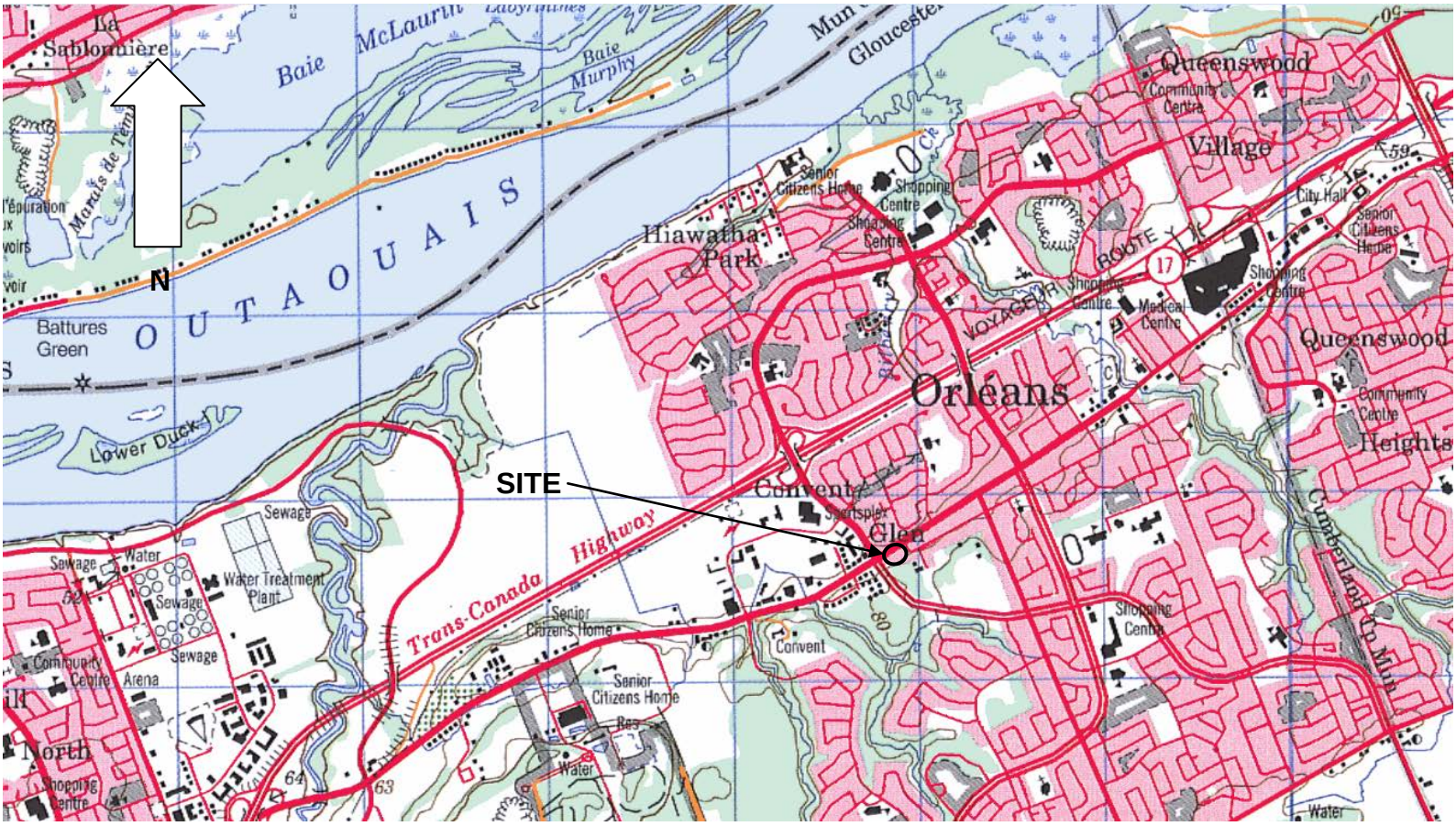
Colleen joined Kollaard Associates Inc. in 2007 and has worked on numerous environmental and hydrogeological projects since that time. Colleen is fully trained in carrying out and analyzing pumping tests, and field and lab based testing to determine soil and aquifer properties, such as hydraulic conductivity, transmissivity and groundwater flow directions/gradients, as these apply to contaminant transport and migration, coordinating and conducting environmental site assessments, environmental remediation, and storage tank assessment and removal.

ATTACHMENT A

TITLE SEARCH DOCUMENTATION

ATTACHMENT B

TOPOGRAPHIC MAP


N
SITE
Baie McLaurin
Baie Murphy
OUTAOUAIS
Battures Green
Lower Duck
Hiawatha Park
Orleans
Queenswood
Village
Queenswood Heights
Convent Glen
Trans-Canada Highway
Water Treatment Plant
Sewage
Water
Community Centre
Arena
Senior Citizens Home
Shopping Centre
Medical Centre
City Hall
ROUTE 17
VOYAGEUR
Cumberland
North

ATTACHMENT C

AIR PHOTOGRAPHS

ATTACHMENT D

CITY OF OTTAWA CORRESPONDENCE

ATTACHMENT E

ECOLOG ERIS AND ENVIRONMENTAL RISK INFORMATION SERVICES

ATTACHMENT F

SITE PHOTOGRAPHS

View of Site facing south

View from centre of site facing west

Northwest facing view from 1994 St. Joseph Boulevard

North facing view from rear property line

East facing view from center of site

Existing Fuel Service Station located immediately west of site

View of some buried utilities located in the north side of the site.

View of gravel surfaced area of former commercial building at the site facing south

ATTACHMENT G

MECP CORRESPONDENCE

ATTACHMENT H

PROPERTY INFORMATION