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Phase I - Environmental Site Assessment

Vacant Property
1034 McGarry Terrace and 1117 Longfields Drive
Ottawa, Ontario

Prepared For

1897365 Ontario Inc.

November 3, 2017

Report: PE2830-2

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EXECUTIVE SUMMARY

Assessment

The historical research indicated that 1034 McGarry Terrace has been owned primarily by individuals since at least 1859, and was originally developed as a residential farmstead. The property at 1117 Longfields Drive has always been vacant and undeveloped. An automotive garage was later constructed and operated on the subject site (1034 McGarry Terrace portion). As discussed in this report, Paterson reviewed a Phase I-II-ESA report and a remediation report prepared by another consultant which addressed the garage operation. Contaminated soil and liquid waste materials were removed from the site. Based on the results of the remediation report, the clean-up was considered to have been effective in removing the contamination.

The results of the historical research and site assessment identified two (2) types of potentially contaminating activities (PCAs) on the subject site and none on adjacent properties. The resulting areas of potential environmental concern include: former use of the property as an automotive service garage (APEC1) and former underground fuel storage tanks (APEC2). No other PCAs or APECs were identified within the study area.

Adjacent lands have been used for residential and agricultural purposes for many years, until recently, when commercial establishments have been constructed to the west of the site, and an institutional building to the east of the site. No environmental concerns were identified with regards to the historical use of adjacent lands.

Following the historical review, a site visit was conducted in 2013. At the time, a residential building and two (2) garage buildings are present on the west side of the subject property, while the east side of the property remains vacant and covered with vegetation. No environmental concerns were identified with regards to properties within the Phase I-ESA study area. Neighbouring properties were observed to be residential to the north, institutional to the east, new residential construction to the south and a commercial centre to the west. Following a recent review of site photos, it was determined that the residential dwelling and one of the garages have been demolished following a fire.

Although a remediation was conducted on the property to address the former auto garage, the works were conducted in 1997, under different standards than those currently in use. In order to verify that the findings of the remediation satisfy the current MOE standards, **in our opinion, a Phase II - Environmental Site Assessment will be required for the property.**

Recommendations

As discussed in Section 6.2 of this report, due to the age of the structures on the subject property, asbestos may be present within the drywall joint compound, plaster and ceiling tiles. Lead-based paint may also be present within the buildings. Potentially asbestos containing materials and painted surfaces were generally in good condition at the time of the site visit.

Prior to the demolition of the subject structures as part of the future redevelopment of the site, it is recommended that a Designated Substance Survey be conducted. The aforementioned building materials and painted surfaces would be tested for asbestos and lead as part of this survey.

The drinking water well on the property should be abandoned prior to redevelopment, according to Ontario Regulation 903.

1.0 INTRODUCTION

At the request of 1897365 Ontario Inc., Paterson Group (Paterson) conducted a Phase I - Environmental Site Assessment (ESA) Update for the property located at 1034 McGarry Terrace and 1117 Longfields Drive, 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 of our findings and results of the environmental conditions at this site.

This Phase I - Environmental Site Assessment Update report has been prepared in general accordance with the agreed scope-of-work and the general requirements of Ontario Regulation 269/11, amending O.Reg. 153/04 made 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 PROPERTY INFORMATION

Address: 1034 McGarry Terrace and 1117 Longfields Drive, Ottawa, Ontario.

Parcel Identification Number: 0473-20003, 0473-21456 (1034 McGarry Terrace)
0473-22607 (1117 Longfields Drive)

Legal Description: Part Lot 15, Concession 2, Rideau Front, (1034 McGarry Terrace) and Block 4 of Plan 4M1303 (1117 Longfields Drive), in the City of Ottawa, Ontario.

Location: The portion of the subject site addressed as 1034 McGarry Terrace (a cul-de-sac road) is located at the very end of McGarry Terrace, and the portion of the subject site addressed as 1117 Longfields Drive is located in the northwest corner of the intersection of Longfields Drive and Marketplace Avenue. Refer to Figure 1 - Key Plan, following the body of this report, for the site location.

Latitude and Longitude: 45° 16' 17" N, 75° 44' 21" W

Site Description:

Configuration/Area: Irregular, 0.9 hectare.

Zoning: MC - Mixed use.

Current Use: The subject site is currently vacant.

Services: The site is located in a municipally serviced area, however the residential dwelling was formerly equipped with a drinking water well and septic tank.

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 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 Ontario Regulation 153/04) made under the Environmental Protection Act and in compliance with the requirements of CSA Z768-01;
- Provide a preliminary 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 Study Area Determination

A radius of 250 m was determined to be appropriate as a Phase I study area for the Phase I Environmental Site Assessment. Properties outside the 250 m radius are not considered to have impacted the subject land, based on their significant distances from the site.

First Developed Use Determination

Based on available information at the time of preparing this report (aerial photographs), it appears as though the subject property was developed as early as the mid 1940's.

City directories covering the area of the subject site are not available prior to 1991.

Fire Insurance Plans

No fire insurance plans covering the area of the subject site are available.

City of Ottawa Street Directories

Ottawa city directories from 1991 to 2010 were reviewed, at approximate ten year intervals, for the subject site and properties located within the Phase I ESA study area. No concerns were identified in the sparse city directories.

Chain of Title

Paterson verified the current land titles for the subject property with Read Abstracts Ltd. According to the Chain of Title, dated September 3, 2013, the first available records for the subject property are dated 1859, when the deed was transferred between Richard Powell and John Neil Junior. Deeds were transferred between individuals until 1934, when a quit claim deed was registered from Leonard A. Davis to the Agricultural Development Board. The deed was later transferred from the Commissioner of Agricultural Loans to W.G. Standing in 1936.

In 1998, through power of sale, Caisse Populaire Ste-Anne-Laurier D'Ottawa Inc. transferred the deed to Sat Paul Singh Bhullar. Finally, in 2009, the deed was transferred from Sat Paul Singh Bhullar to Masha Bhullar, the present property owner.

Environmental Reports

The following reports/correspondence were reviewed as part of this assessment:

- ❑ “Phase I/II Environmental Site Assessment, 3641 Strandherd Drive, City of Nepean”, prepared by Oliver, Mangione, McCalla and Associates Limited, dated September 1997;
- ❑ “Site Remediation, 3641 Strandherd Drive, Nepean”, prepared by Oliver, Mangione, McCalla and Associates Limited, dated December 1997.

A Phase I and Phase II Environmental Site Assessment was conducted for a portion of the subject site (currently 1034 McGarry Terrace, formerly known as 3641 Strandherd Drive). Historical information collected as part of the report indicated that at the time, the site was unoccupied, however an automotive garage (Strandherd Auto Center) was formerly located on the property. During a site visit conducted as part of the project, several environmental concerns were identified. These include underground storage tanks and aboveground storage tanks (used for storing diesel fuel, heating oil, used motor oil), areas of stained floor surfaces, and several drums containing various automotive fluids.

A Phase II Environmental Site Assessment was conducted to address some of these concerns. Trenches, test pits and coreholes were excavated in select areas in order to investigate the subsurface conditions in areas where environmental concerns were identified. Areas of impacted soil material were encountered in the vicinity of the garage floor drains as well as around an abandoned underground storage tank. Based on these findings, a site remediation program was conducted.

A site remediation program was conducted on the subject property in December 1997, to address environmental issues encountered during the Phase II ESA program. The remediation included the removal of the floor drains and contaminated soil from within the garage, the removal of heavily stained asphalt from near the main garage, the removal of the abandoned underground storage tank and associated contaminated soil, and finally, the removal of all liquid waste found stored in drums and barrels.

Following the remedial works, confirmatory samples were collected from the excavations, and were analyzed for a combination of gas and diesel range petroleum hydrocarbons as well as volatile organic compounds and polycyclic aromatic hydrocarbons. All confirmatory samples were found to be in compliance with the selected Ministry of the Environment and Energy standards applicable to the subject site (at the time of remediation) based on a residential land use using potable groundwater and fine grained soils.

Paterson Group has also conducted other Phase I ESAs within the study area. With the exception of the abovementioned former automotive garage, no significant environmental concerns were identified.

Paterson has also recently conducted a geotechnical investigation on the subject property, whose boreholes are presented on drawing PE2830-3-Site Plan. No signs of impacted soil material were encountered during this investigation.

Plan of Survey

A survey plan of the property at 1117 Longfields Drive, dated May 2, 2007, and prepared by Stantec Geomatics Ltd., was provided to Paterson for review. The property boundary appears the same as that identified on the current City of Ottawa electronic mapping website. A topographic plan (showing property boundaries) of the property at 1034 McGarry Terrace, prepared by Annis, O'Sullivan, Vollebeck Ltd., was also provided to Paterson for review. A copy of both plans are provided in Appendix 1.

4.2 Environmental Source Information

Environment Canada

A search of the National Pollutant Release Inventory (NPRI) was conducted electronically on March 28, 2013. The subject site was not listed in the NPRI database. No properties within the 250 m Phase I study area were listed in the NPRI database.

PCB Inventory

A search of national PCB waste storage sites was conducted. The subject property is not registered as a PCB waste storage site. No properties within the Phase I study area were listed as PCB waste storage sites.

Ontario Ministry of the Environment and Climate Change (MOECC) Instruments

A request for information was submitted to the MOECC Freedom of Information office, for information with respect to Certificates of Approval, Permits to Take Water, Certificates of Property Use or any other similar MOECC issued instruments for the site. The MOECC response, dated September 3 2013, indicated that no records were located for the subject property. A copy of the MOECC response is provided in Appendix 2.

MOECC Coal Gasification Plant Inventory

The Ontario Ministry of the Environment and Climate Change document titled "Municipal Coal Gasification Plant Site Inventory, 1991" was reviewed to reference the location of former plants with respect to the subject site. No coal gasification plant sites were identified within the Phase I study area.

MOECC Incident Reports

A request was submitted to the MOECC Freedom of Information office for information with respect to records concerning environmental incidents, orders, offences, spills, discharges of contaminants or inspections maintained by the MOECC for the site or adjacent properties. The MOECC response, dated September 3 2013, indicated that no records were located for the subject property. A copy of the MOECC response is provided in Appendix 2.

MOECC Waste Management Records

A request was submitted to the MOECC Freedom of Information office for information regarding waste management records within the files maintained by the MOE. The MOECC response, dated September 3 2013, indicated that no records were located for the subject property. A copy of the MOECC response is provided in Appendix 2.

MOECC Submissions

A request was submitted to the MOECC Freedom of Information office for information regarding reports related to environmental conditions which are expected to have been submitted to the MOECC. The MOECC response, dated September 3 2013, indicated that no records were located for the subject property. A copy of the MOECC response is provided in Appendix 2.

Ontario Ministry of the Environment and Climate Change (MOECC) Notices and Instruments

A search of the MOECC Brownfields Environmental Site Registry was conducted as part of this assessment, for the subject site and properties located within the Phase I study area. There are no records of site condition (RSC) listed in the registry, for the subject site or for properties within the 250 m Phase I ESA study area.

MOECC Waste Disposal Site Inventory

The Ontario Ministry of Environment and Climate Change document entitled "Waste Disposal Site Inventory in Ontario, 1991" was reviewed as part of the historical research. This document includes all recorded active and closed waste disposal sites, industrial manufactured gas plants and coal tar distillation plants in the Province of Ontario. Based on a review of this document, there are no open or closed waste disposal sites within the study area.

Areas of Natural Scientific Interest (ANSI)

According to the Ministry of Natural Resources' (MNR) electronic mapping website, the subject property is not listed as an area of natural and scientific interest. Properties located within the 250 m Phase I-ESA study area are also not identified as ANSIs.

Technical Standards and Safety Authority (TSSA)

The TSSA, Fuels Safety Branch in Toronto was contacted on August 15, 2013, to inquire about current and former underground storage tanks, spills and incidents for the site and neighbouring properties with potential environmental concerns. No such records exist for subject properties within the study area. A copy of the TSSA response is provided in Appendix 2.

City of Ottawa Old Landfill Document

The document entitled "Old Landfill Management Strategy, Phase I - Identification of Sites, City of Ottawa", prepared by Golder, was reviewed. There are no old landfills within the study area.

City of Ottawa Historic Land Use Inventory

A search of the City of Ottawa's Historical Land Use Inventory (HLUI) database was conducted as part of this assessment. The HLUI search returned one (1) activity. This activity was located at 3651 Strandherd Drive, to the west of the subject site. The activity is described as a photographer, and is not considered to pose an environmental concern to the subject property.

4.3 Physical Setting Sources

Air Photo Research

Historical air photos were reviewed for the subject property and adjacent sites. A summary of our findings is presented below.

- | | |
|------|---|
| 1945 | It appears as though the subject site is occupied by buildings, however, due to the poor scale of the photograph, it is difficult to distinguish. Adjacent properties to the north, south, east and west appear to be vacant, and used as agricultural lands. A road is located north of the site, and travels in an east-west direction (presumably Strandherd Drive). |
| 1954 | No significant changes appear to have been made to the subject property. In this photograph, more than one building is clearly defined on the subject site. Adjacent properties appear to be vacant agricultural lands, however, there may be a structure (or structures) present on the property to the north of the site (across the roadway). |
| 1960 | No significant changes appear to have been made to the subject property, or neighbouring properties. |
| 1973 | At least one of the garage structures appears to have been constructed on the subject property. Neighbouring properties appear to be used for agriculture. |
| 1979 | No changes appear to have been made to the subject site or neighbouring properties. |
| 1987 | No changes appear to have been made to the subject site or neighbouring properties. |

- 1999 No changes appear to have been made to the subject site or neighbouring properties. In this photograph, three (3) buildings are clearly present on the subject site. They appear to be consistent with those currently present on site.
- 2002 (City of Ottawa website) No apparent changes have been made to the subject property. The neighbouring property to the west has been redeveloped with a large building, presently occupied by Wal-Mart. To the south of the subject site a roadway appears to be under construction (known today as Market Place Avenue). Beyond the new road is another large building and vacant lots. To the east of the subeject site are vacant lots, and to the north, beyond Strandherd Drive, are more vacant lots.
- 2011 (City of Ottawa website) No significant changes appear to have been made to the subject site. Significant changes have been made to neighbouring properties. To the north of the site, a new road, a cul-de-sac, leading to the subject site has been constructed (McGarry Terrace). However, the former laneway can still be seen. Further north, beyond Strandherd Drive, is a new residential subdivision. To the east of the subject property, a large residential building has been constructed, and further east, is a large school building. To the south of the subject site, the construction of Market Place Avenue has been completed. The lands beyond Market Place Avenue appear to be undergoing some form of development. To the west of the subject site, the large Wal-Mart building remains, along with newer buildings to the south of that.
- 2015 (City of Ottawa Website) The residential dwelling and one of the garages have been demolished. No other changes have been made to the subject property or adjacent sites.

Laser copies of selected aerial photographs reviewed are included in Appendix 1 following the body of this report.

Topographic Maps

Topographic maps were obtained from Natural Resources Canada - The Atlas of Canada website. The topographic maps indicate that the regional topography in the general area of the subject site slopes downward to the southeast. According to the maps, the Jock River is present approximately 1 km to the southeast of the property.

No environmental concerns were identified on the topographic mapping. An illustration of the referenced topographic map is present on 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 Monteregion Hills, which consist of intrusive igneous rocks."

Geological Maps

The Geological Survey of Canada website on the Urban Geology of the National Capital Area was consulted as part of this assessment. Based on the information from NRCAN, bedrock in the area of the site consists of interbedded sandstone and dolomite of the March Formation. Based on the maps, the thickness of overburden ranges from 10 to 15 m and consists of till.

Water Well Records

Water well records pertaining to wells located on the subject property and within the 250 m Phase I ESA study area were obtained from the MOE by Well Record Search Request. Based on the search results provided by the MOE, there are no wells drilled on the subject property, and one (1) well within the study area. Based on the information contained in the well record, it appears as though the well is located approximately 160 m to the southwest of the subject site. A copy of the well record is provided in Appendix 2.

Fill Materials

No obvious signs of fill material were noted on the subject property. Small amounts of fill material were observed on the adjacent property to the north.

Water Bodies and Areas of Natural and Scientific Interest (ANSI)

No water bodies are located within the 250 m Phase I-ESA study area. The nearest water body to the subject site is the Jock River, located approximately 1 km to the south.

5.0 INTERVIEWS

Previous Property Owner

The owner of the property at the time of the original Phase I-ESA conducted by Paterson, Ms. Masha Tiwana, was present on site during the Phase I-ESA site visit. Ms. Tiwana indicated that her husband purchased the property in the late 1990's, approximately 20 years ago. She indicated that the property was once used as an automotive garage, however, when she purchased the property, it had not been used as a garage for at least 10 years. She indicated that several renovations had been constructed in the dwelling, including extensions to the original farm house, which she indicated was approximately 100 years old. Ms. Tiwana indicated that the gas furnace within the dwelling had been replaced four (4) years ago.

6.0 SITE RECONNAISSANCE

6.1 General Requirements

The site investigation was carried out on December 7, 2012, between 1:00 and 4:00 PM, by Ms. Nadine Kopp, a member of the Environmental Department of Paterson Group. The weather conditions were overcast with a temperature of 4°C. In addition to the site, the uses of neighbouring properties within the Phase I ESA study area were also assessed at the time of the site investigation. A follow-up site investigation was conducted by Mr. Adrian Menyhart, of the Environmental Department of Paterson Group on August 22, 2013. A review of recent information was conducted in 2017.

6.2 Specific Observations at the Phase I Property

Buildings and Structures

There are no buildings or structures located on the property at 1117 Longfields Drive. The residence and one of the garages at 1034 McGarry Terrace have been demolished

following a fire in 2014. The structure of the second garage remains.

In 2013, a 900L aboveground storage tank was observed in the basement of the residential dwelling. The tank appeared to be in good condition and there was no staining observed on the concrete floor below the tank. The tank was formerly used to hold fuel oil prior to the building's conversion to natural gas as its heat source. The tank's vent and fill pipes are located on the east side of the building. The presence of the aboveground storage tank is not considered to have impacted the subject property.

Below Ground Structures

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

Drains, Pits and Sumps

At the time of the site visit, no drains or sump pits were observed.

It should be noted that the subject site utilises a private septic system. The septic tank is located on the east side of the property. No concerns were identified with the use of the septic tank.

Unidentified Substances

There were no unidentified substances on the interior or exterior of the subject property at the time of the site assessment.

Current and Former Wells

Based on information included in the Phase I and Phase II ESA report produced by Oliver, Mangione, McCalla and Associated (1997), the subject building draws potable water from a groundwater well. There are no known wells on the property at 1117 Longfields Drive.

Ground Surface

The exterior surface at 1034 McGarry Private consists primarily of asphaltic concrete and grass. The ground surface at 1117 Longfields Drive consists of tall grasses and other vegetation.

The ground surface slopes down to the east, from the property at 1034 McGarry Terrace, to 1117 Longfields Drive, as well as to Marketplace Avenue to the south.

No areas of stained soil, vegetation or pavement or areas of stressed vegetation were observed at the time of the site assessment.

Railway Lines

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

Potentially Contaminating Activities

No potentially contaminating activities were observed on the subject site at the time of the site visit.

Potentially Hazardous Building Products

Based on the age of the buildings, asbestos and lead may be present in building materials. Fluorescent light ballasts manufactured prior to 1980 may contain PCBs, however, it is expected that most, if not all of the light ballasts, have been replaced with new non-PCB containing ballasts by this time.

6.3 Enhanced Investigation Property

On-site Operations

Formerly, an automotive garage was present on the subject property. The garage was equipped with a private underground storage tank and floor drains. Based on a review of previous reports (described earlier in this report), it appears as though the soil below a large portion of the garage area, as well as the underground storage tank area, was removed from site during a remediation program. The present owner of the property indicated that a garage had not operated on the property for at least 10 years prior to her ownership.

Hazardous Materials Used or Stored at the Phase I-ESA Property

No significant quantities of chemicals were observed.

Products Manufactured at the Phase I-ESA Property

No products have ever been manufactured at the Phase I-ESA property.

By-Products and Wastes

No by-products were observed at the Phase I ESA property. Waste recently generated on site includes domestic waste and recycling typical of that of a residence.

Raw Materials Handling Storage Locations

No raw materials were stored on the subject property at the time of the site inspection.

Drums, Totes and Bins

No drums, totes or bins were observed at the subject property at the time of the site visit.

Oil-Water Separators

No oil-water separator was observed at the property during the current site visit.

Vehicle and Equipment Maintenance Areas

No vehicle or equipment maintenance areas were observed at the time of the site visit. The two (2) garages on the property are primarily used for storage.

On-Site Spills

No significant signs of spilling were observed on the subject property.

Hydraulic Lift Equipment

No hydraulic lift equipment was observed within the subject buildings.

6.4 Phase I ESA Study Area

An inspection of the neighbouring properties within the 250 m Phase I-ESA study area, was conducted from publicly accessible roadways at the time of the site assessment. Immediately adjacent properties consist of commercial establishments to the west (Wal-Mart, Staples), residential dwellings to the north (across Strandherd Drive), a seniors residence to the east, and new residential construction to the south (across Marketplace Avenue). The current uses of the immediately adjacent properties are not considered to pose a concern to the subject site.

Potentially contaminating activities (PCAs) identified in the Phase I ESA study area at the time of the site visit (excluding the subject site), as per Column A of Table 2 in O.Reg 269/11, include Gasoline and Associated Products Storage in Fixed Tanks. This PCA is associated with the retail fuel outlet located at 3580 Strandherd Drive, approximately 220 m to the northeast of the subject site. Based on this separation distance, and the fact that the fuel outlet has been constructed within the past 10 years, the abovementioned PCA is not considered to be an area of potential environmental concern.

7.0 REVIEW AND EVALUATION OF INFORMATION

7.1 Land Use History

The following table indicates the current and past uses of the site as well as ownership and other observations dating back to the first known date of ownership of the site.

Table 1: Land Use History				
Year	Name of Owner	Description of Property Use	Property Use	Other Observations from Aerial Photographs, Fire Insurance Plans, Etc.
1859-1934	Various Private Individuals	Agricultural	Agricultural	
1934-1936	The Agricultural Development Board/Commissioner of Agricultural Loans	Residential/Agricultural	Residential/Agricultural	
1936-2009	Various Private Individuals	Residential/Automotive Service garage	Residential/Commercial	Based on aerial photos, the property appeared to be used for agriculture, however, it was indicated in past reports that an automotive garage operated on the property from the 1970's to 1990's.
2009-2013	Masha Bhullar	Residential	Residential	

The subject property was owned by private individuals from 1859 (the first registered deed) until 1934 when it was acquired by The Agricultural Development Board (also listed as the Commissioner of Agricultural Loans) in 1934. In 1936, the property was once again acquired by a private individual. In 1998, the property was sold by power of sale by the Caisse Populaire Ste-Anne-Laurier D'Ottawa Inc. to Sat Paul Singh Bhullar. Finally, in 2009, Masha Bhullar acquired the property.

7.2 Areas of Potential Environmental Concern and Potentially Contaminating Activities

Current and historical potentially contaminating activities identified on the subject site and which are considered to pose a potential environmental concern to the subject property, are provided in Table 2 below. PCAs were identified as per Column A of Table 2, from Ontario Regulation 153/04 as amended by Ontario Regulation 296/11.

Table 2 Areas of Potential Environmental Concern					
Area of Potential Environmental Concern (APEC)	Location of PEC on Phase One Property	Potential Contaminating Activities (PCA)	Location of PCA (on-site/off-site)	Contaminants of Potential concern (CPC)	Media Potentially Impacted (Groundwater, Soil and/or Sediment)
Former Automotive Service Garage (APEC 1)	Southwest corner of subject property	Item 27 - Garages and Maintenance and Repair of Rail Cars, Marine Vehicles and Aviation Vehicles	on-site	VOCs and PHCs	Soil and Groundwater
Former USTs (APEC 2)	South edge of property, south of residential dwelling and west of garages	Item 28 - Gasoline and Associated Products Storage in Fixed Tanks	on-site	VOCs and PHCs	Soil and Groundwater

The former use of the subject property as an automotive service garage, as well as the former presence of underground storage tanks are considered to be potentially contaminating activities which have resulted in areas of potential environmental concern on the subject site. Potential contaminants of concern in the soil and groundwater beneath the subject site include volatile organic compounds (VOCs) and petroleum hydrocarbons (PHCs).

No off-site areas of potential environmental concern were identified within the study area. The retail fuel outlet located at the intersection of Strandherd Drive and Longfields Drive is located at a significant distance from the subject property and as a result, is not considered to be an APEC.

7.3 Conceptual Site Model

Existing Buildings and Structures

The subject site was formerly occupied by a two-storey residential dwelling with basement, and two (2) single storey, slab on grade storage garages. The remainder of the subject property is vacant and partially grass-covered.

The dwelling consists of a brick-clad building, with a sloped and shingled roof. The building is heated by natural gas.

The two (2) garages located on the subject property were both constructed with concrete block and sloped and shingled roofs. These buildings did not appear to be heated at the time of the site visit in 2013. An automotive service garage operated from the southwest-most garage. Following a remediation program below this building, a new concrete floor was poured. The location of the structure is depicted on Drawing: PE2830-2 - Site Plan.

In 2014, the residence and one of the garages have been demolished following a fire.

The adjacent properties consist of residential dwellings to the north (across Strandherd Drive), new residential dwellings (under construction) to the south (across Marketplace Avenue), a high school to the east (across Longfields Drive) and a Wal-Mart store to the west. The uses of the adjacent and neighbouring properties in the Phase I study area are identified on Drawing PE2830-3 - Surrounding Land Use Plan.

Water Bodies

There are no water bodies on the subject site or in the study area.

Areas of Natural and Scientific Interest (ANSI)

No ANSIs were identified on the subject property or within the Phase I ESA study area.

Drinking Water Wells

According to the Ministry of the Environment's well record database, there are no records for potable water wells on the subject site. A potable drinking water well is located approximately 160 m southwest of the subject site.

However, based on a previous report, an on-site drinking water well is located to the west of the residential dwelling.

Groundwater Monitoring Wells

Three (3) groundwater monitoring wells are currently present on the subject property. The wells were installed during the Phase II-ESA investigation carried out in conjunction with this report.

Neighbouring Land Use

Neighbouring land use in the Phase I study area was a combination of residential and commercial, with one (1) institutional property to the east. No potentially contaminating activities with the potential to impact the subject property were identified within the Phase I study area. Neighbouring land use within the Phase I-ESA study area is depicted on Drawing: PE2830-3 - Surrounding Land Use Plan.

Areas of Potential Environmental Concern and Potentially Contaminating Activities

As per Column A of Table 2 outlined in Ontario Regulation 153/04 and amended by O.Reg. 279/11, potentially contaminating activities considered to be areas of potential environmental concern, identified on the subject property include the following: Garages and Maintenance and Repair of Rail Cars, Marine Vehicles and Aviation Vehicles (Item 27) and Gasoline and Associated Products Stored in Fixed Tanks (Item 28).

Two (2) historical areas of potential environmental concern (APECs) were identified on the subject site. The former use of one of the garages on the subject property as an automotive service garage is considered to be an APEC (APEC1). In addition to the garage, an underground diesel storage tank was formerly located to the south of the residence (APEC2).

Potential contaminants of concern associated with the aforementioned APECs include VOCs and PHCs.

No other APECs were identified within the study area.

8.0 CONCLUSIONS

Assessment

The historical research indicated that 1034 McGarry Terrace has been owned primarily by individuals since at least 1859, and was originally developed as a residential farmstead. The property at 1117 Longfields Drive has always been vacant and undeveloped. An automotive garage was later constructed and operated on the subject site (1034 McGarry Terrace portion). As discussed in this report, Paterson reviewed a Phase I-II-ESA report and a remediation report prepared by another consultant which addressed the garage operation. Contaminated soil and liquid waste materials were removed from the site. Based on the results of the remediation report, the clean-up was considered to have been effective in removing the contamination.

The results of the historical research and site assessment identified two (2) types of potentially contaminating activities (PCAs) on the subject site and none on adjacent properties. The resulting areas of potential environmental concern include: former use of the property as an automotive service garage (APEC1) and former underground fuel storage tanks (APEC2). No other PCAs or APECs were identified within the study area.

Adjacent lands have been used for residential and agricultural purposes for many years, until recently, when commercial establishments have been constructed to the west of the site, and an institutional building to the east of the site. No environmental concerns were identified with regards to the historical use of adjacent lands.

Following the historical review, a site visit was conducted in 2013. At the time, a residential building and two (2) garage buildings are present on the west side of the subject property, while the east side of the property remains vacant and covered with vegetation. No environmental concerns were identified with regards to properties within the Phase I-ESA study area. Neighbouring properties were observed to be residential to the north, institutional to the east, new residential construction to the south and a commercial centre to the west. Following a recent review of site photos, it was determined that the residential dwelling and one of the garages have been demolished following a fire.

Although a remediation was conducted on the property to address the former auto garage, the works were conducted in 1997, under different standards than those currently in use. In order to verify that the findings of the remediation satisfy the current MOE standards, **in our opinion, a Phase II - Environmental Site Assessment will be required for the property.**

Recommendations

As discussed in section 6.2 of this report, due to the age of the structures on the subject property, asbestos may be present within the drywall joint compound, plaster and ceiling tiles. Lead-based paint may also be present within the buildings. Potentially asbestos containing materials and painted surfaces were generally in good condition at the time of the site visit.

Prior to the demolition of the subject structures as part of the future redevelopment of the site, it is recommended that a Designated Substance Survey be conducted. The aforementioned building materials and painted surfaces would be tested for asbestos and lead as part of this survey.

The drinking water well on the property should be abandoned prior to redevelopment, according to Ontario Regulation 903.

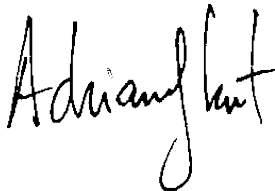
9.0 STATEMENT OF LIMITATIONS

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

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

This report was prepared for the sole use of 1897365 Ontario Inc. Permission and notification from 1897365 Ontario Inc. and Paterson Group will be required to release this report to any other party.

Paterson Group Inc.



Adrian Menyhart, P.Eng.



Mark D'Arcy, P.Eng.

Report Distribution:

- 1897365 Ontario Inc. (6 copies and 1 electronic copy)
- Paterson Group (1 copy)

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.
Environment Canada, Access to Information and Privacy Office.
PCB Waste Storage Site Inventory.

Provincial Records

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

Municipal Records

City of Ottawa HLUI Records.
City of Ottawa electronic map.

Local Information Sources

Chain of Title - Read Abstracts
Topographical Plan, prepared by Annis, O'Sullivan, Vollebekk Ltd.
Previous Engineering Reports (Oliver, Mangione, McCalla and Associated Limited (1997) and Paterson Group Inc.)
Personal Interviews.

Public Information Sources

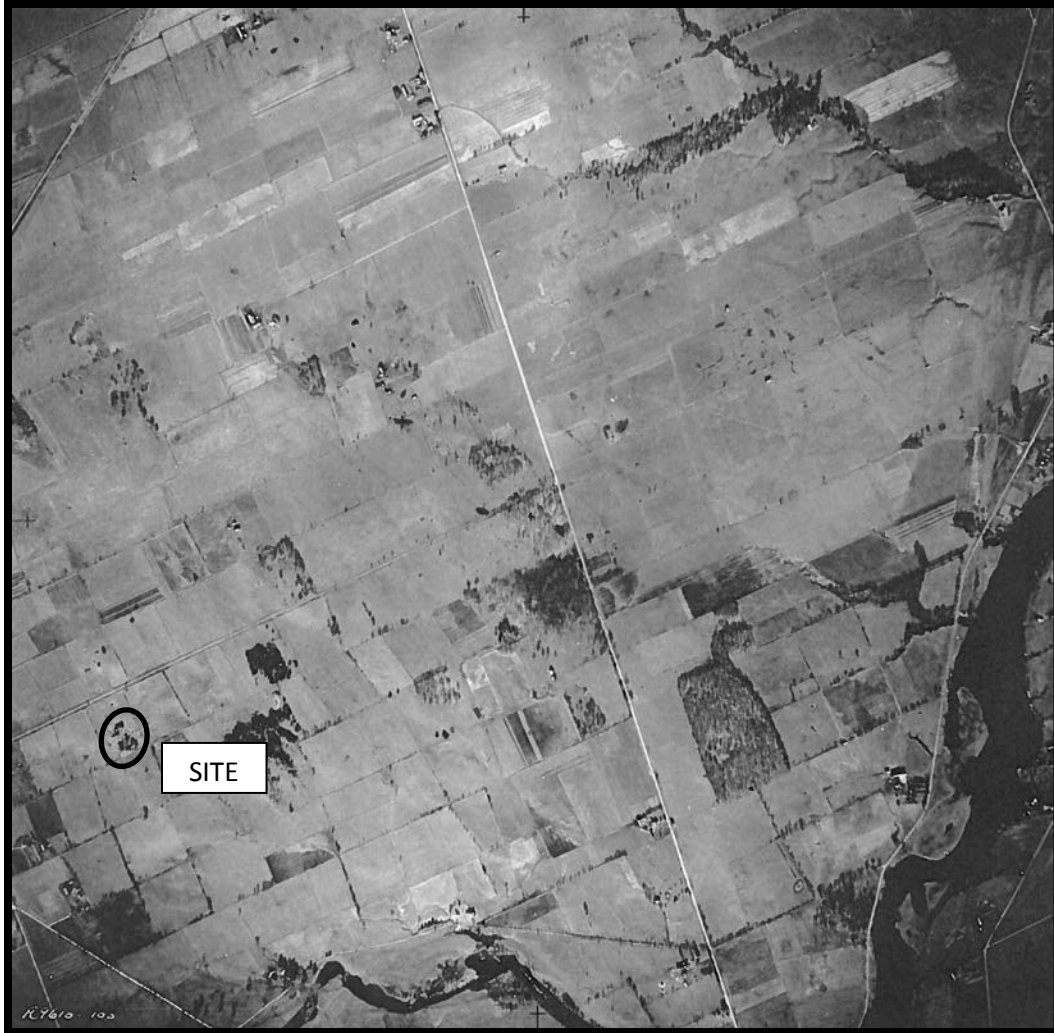
Google Earth
Google Maps/Street View

APPENDIX

AERIAL PHOTOGRAPHS

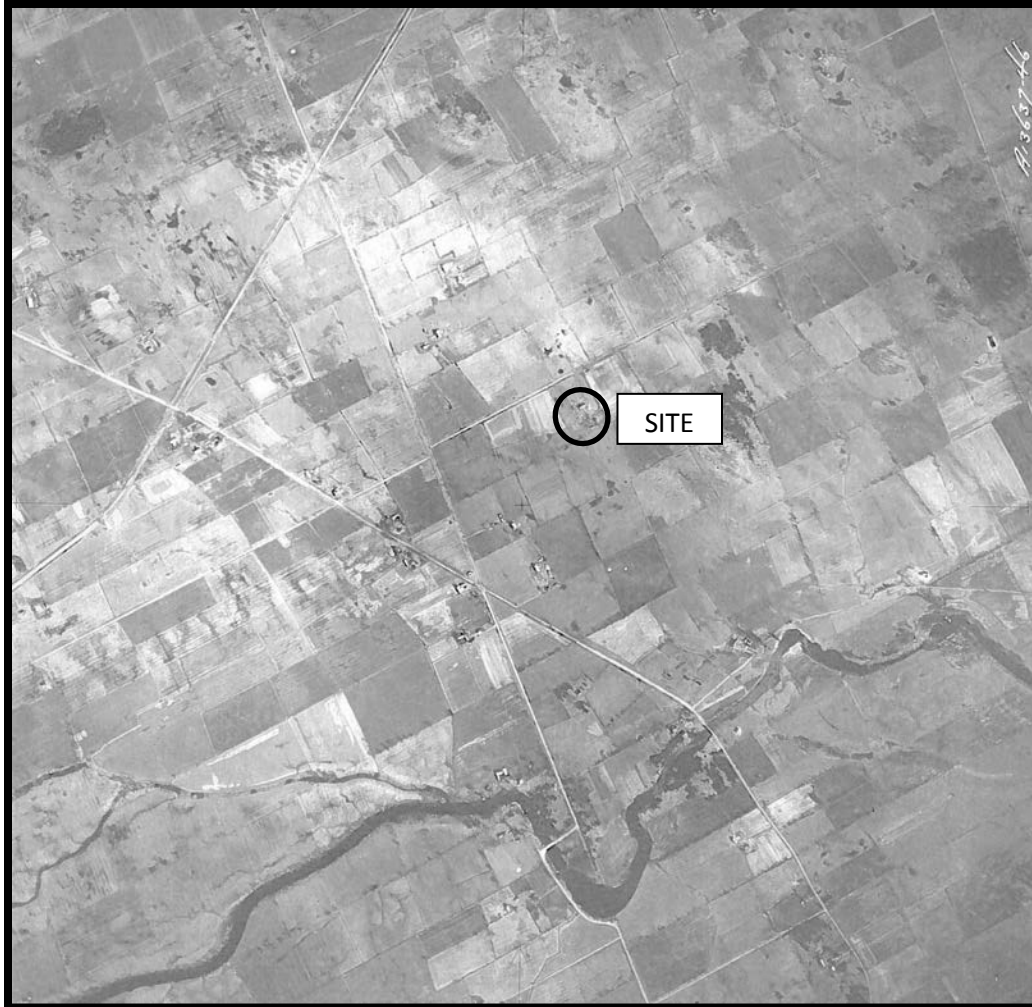
FIGURE 1 - KEY PLAN

DRAWING PE2830-1 - SITE PLAN



AERIAL PHOTOGRAPH
1945

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AERIAL PHOTOGRAPH
1954



AERIAL PHOTOGRAPH
1960

patersongroup



AERIAL PHOTOGRAPH
1973

patersongroup



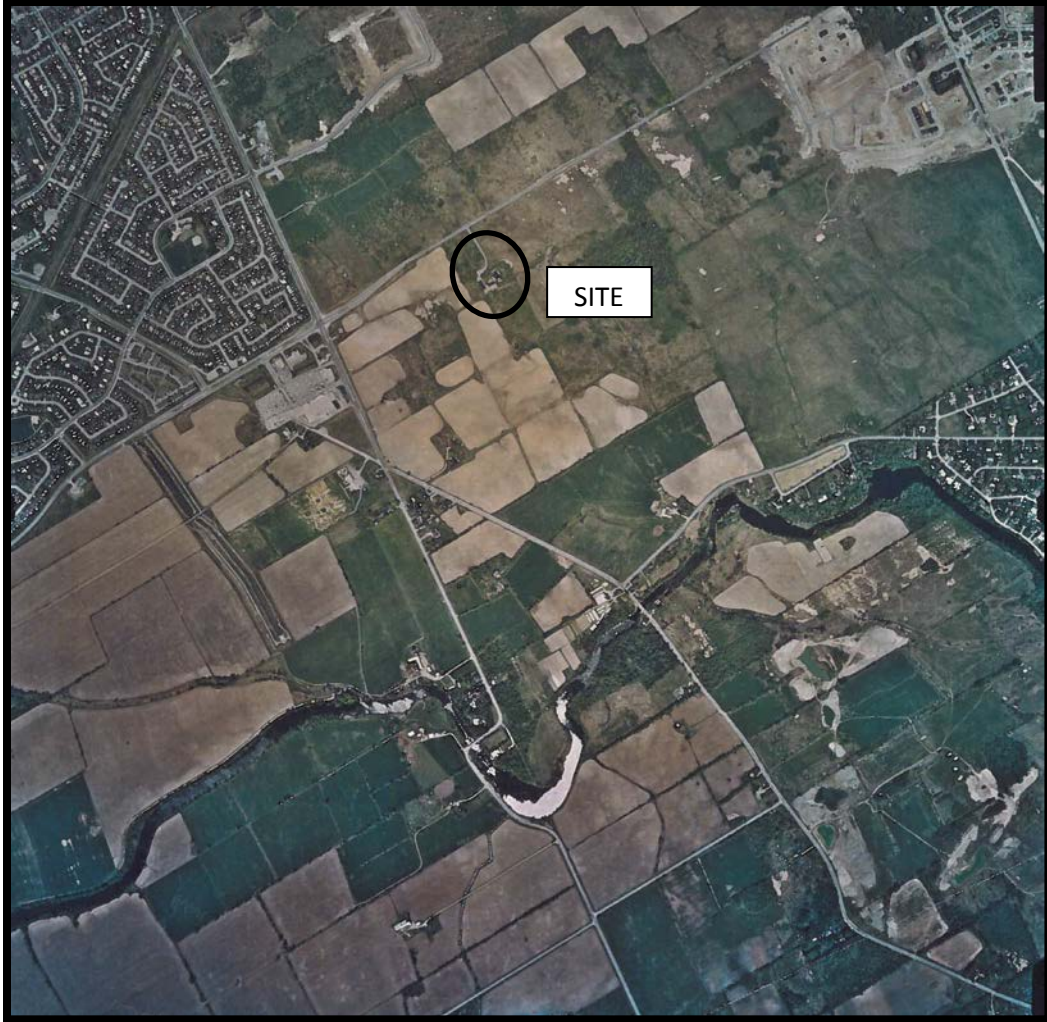
AERIAL PHOTOGRAPH
1979

patersongroup



AERIAL PHOTOGRAPH
1987

patersongroup



AERIAL PHOTOGRAPH
1999

patersongroup

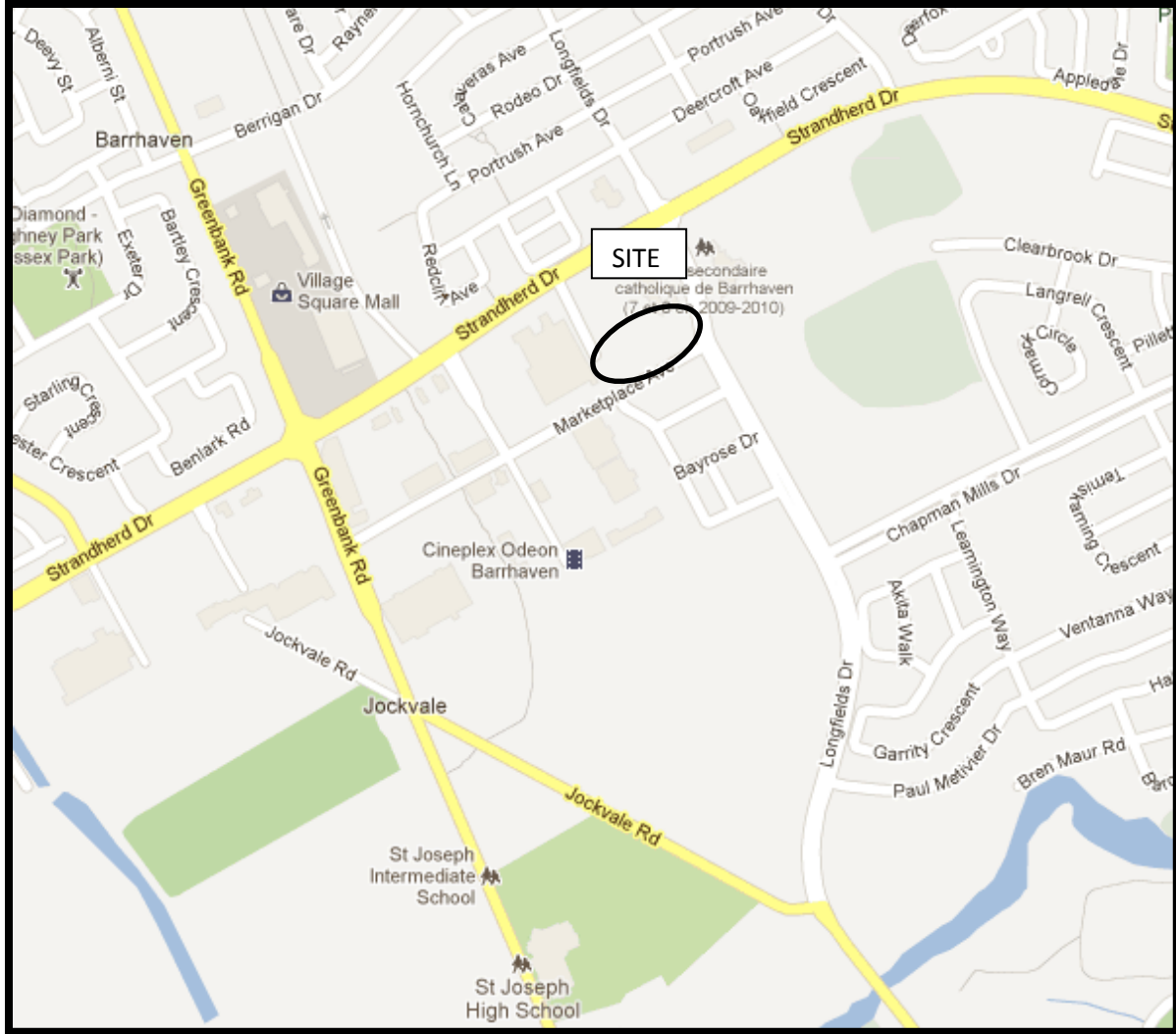
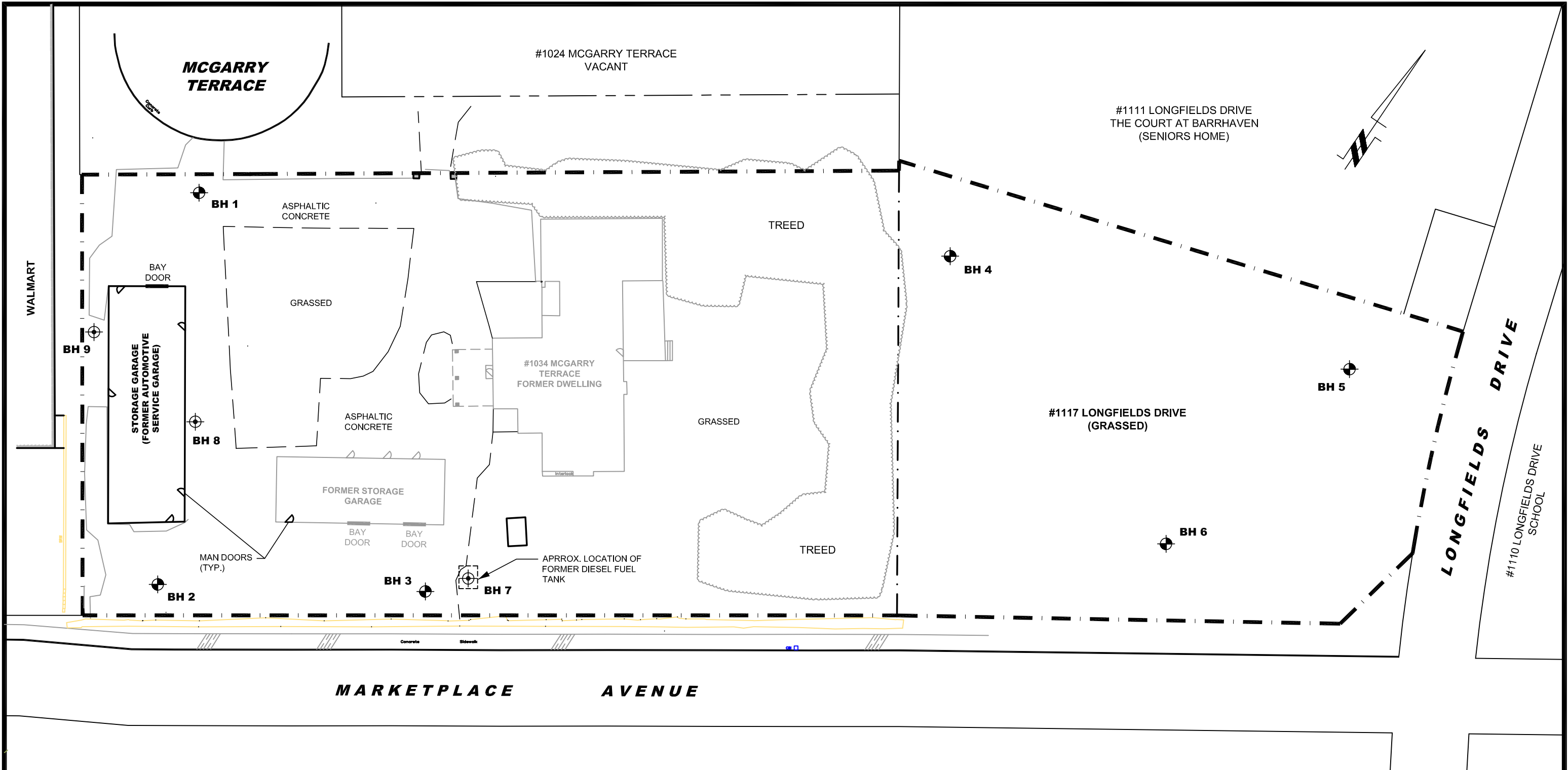


FIGURE 1
KEYPLAN



LEGEND:

	BOREHOLE WITH MONITORING WELL INSTALLED
	GEOTECHNICAL BOREHOLE LOCATIONS, PATERSON GROUP REPORT PG2846, 2013

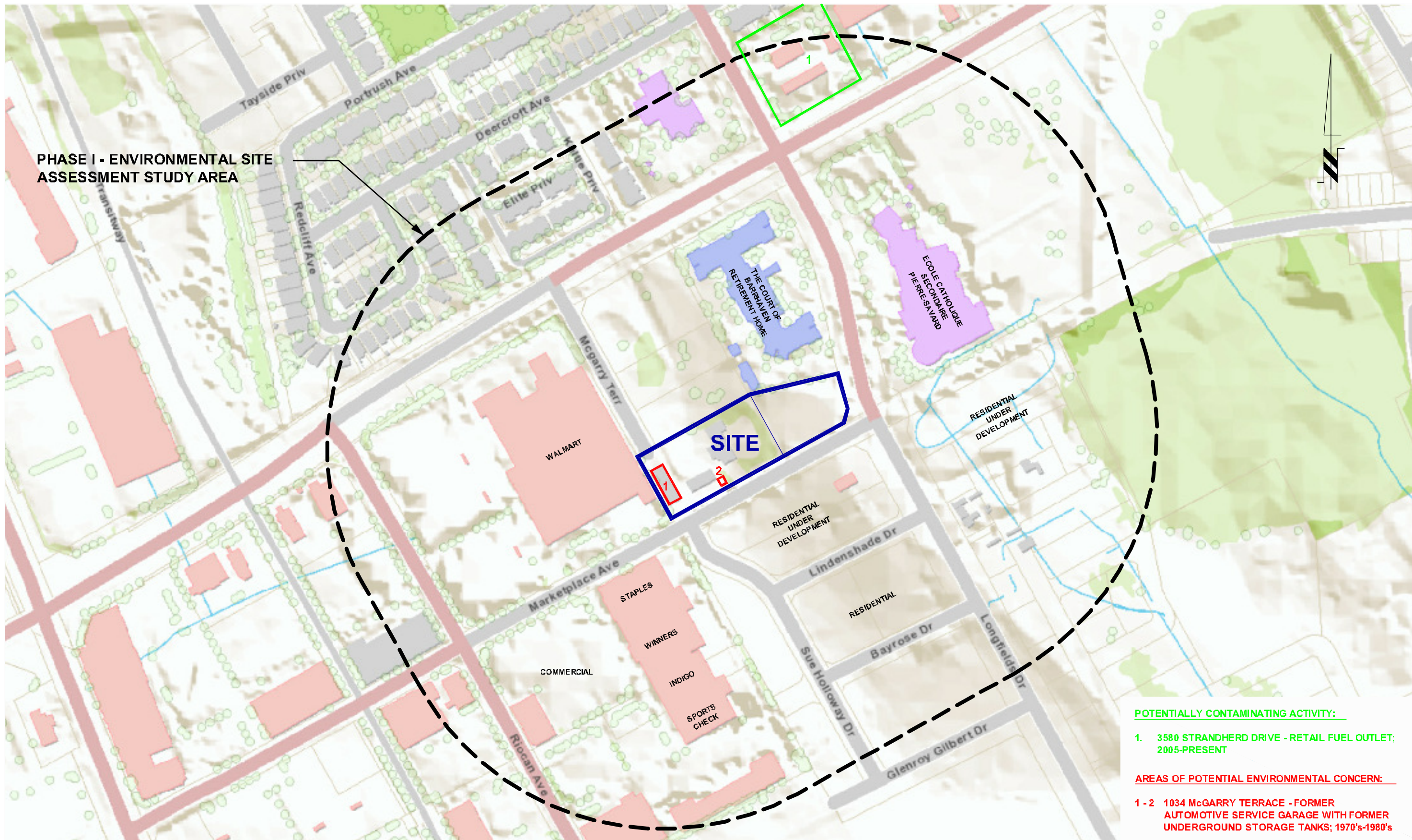
paterson group
 consulting engineers
 154 Colonnade Road South, Ottawa, Ontario K2E 7J5

Scale:	1:500
Des.:	AM
Dwn:	MPG
Chkd:	MSD

TEGA DEVELOPMENTS
PHASE I - ENVIRONMENTAL SITE ASSESSMENT
 1034 MCGARRY TERRACE & 1117 LONGFIELDS DR.
 OTTAWA, ONTARIO

CONCEPTUAL SITE MODEL:
SITE PLAN

Dwg. No.	PE2830-2
Report No.:	PE2830-2
Date:	09/2013



PHASE I - ENVIRONMENTAL SITE ASSESSMENT STUDY AREA

POTENTIALLY CONTAMINATING ACTIVITY:

- 1. 3580 STRANDHERD DRIVE - RETAIL FUEL OUTLET; 2005-PRESENT

AREAS OF POTENTIAL ENVIRONMENTAL CONCERN:

- 1 - 2 1034 MCGARRY TERRACE - FORMER AUTOMOTIVE SERVICE GARAGE WITH FORMER UNDERGROUND STORAGE TANKS; 1970's-1980's

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consulting engineers
154 Colonnade Road South, Ottawa, Ontario K2E 7J5

Scale: 1:3000
Des.: AM
Dwn: MPG
Chkd: MSD

TEGA DEVELOPMENTS
PHASE I - ENVIRONMENTAL SITE ASSESSMENT
1034 MCGARRY TERRACE & 1117 LONGFIELDS DRIVE
OTTAWA, ONTARIO

**SURROUNDING LAND
USE PLAN**

Dwg. No. **PE2830-3**
Report No. PE2830-2
Date: 09/2013