



# GEMTEC

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**Phase One  
Environmental Site Assessment  
Proposed Residential Dwelling  
262 Armstrong Street  
Ottawa, Ontario**



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Submitted to:

Mr. Lance Lunetta  
262 Armstrong Street  
Ottawa, Ontario  
K1Y 2W6

**Phase One  
Environmental Site Assessment  
Proposed Residential Dwelling  
262 Armstrong Street  
Ottawa, Ontario**

June 1, 2021  
Project: 65071.01 – V02

GEMTEC Consulting Engineers and Scientists Limited  
32 Steacie Drive  
Ottawa, ON, Canada  
K2K 2A9

June 1, 2021

File: 65071.01 – V02

Mr. Lance Lunetta  
262 Armstrong Street  
Ottawa, Ontario  
K1Y 2W6

Attention: Mr. Lance Lunetta

**Re: Phase One Environmental Site Assessment  
Proposed Residential Dwelling  
262 Armstrong Street  
Ottawa, Ontario**

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Enclosed is our Phase One ESA report for the above-noted property. The report presented herein is based on the scope of work summarized in our proposal dated March 22, 2021. This report was prepared by Mohit Bhargav MScE, EIT and senior reviewed by Su-Kim Roy M.Eng., P.Eng.

Sincerely,



Mohit Bhargav, MScE, EIT  
Environmental Technician

MB/SKR



Su-Kim Roy, M.Eng., P.Eng  
Senior Environmental Engineer

Enclosures  
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## **EXECUTIVE SUMMARY**

GEMTEC Consulting Engineers and Scientists Limited (GEMTEC) was retained by Mr. Lance Lunetta to carry out a Phase One Environmental Site Assessment (ESA) for the property located at 262 Armstrong Street in Ottawa, Ontario (hereafter referred to as the “subject property” or “subject site”). It is understood that this Phase One ESA is required to support a site plan control application for a future multi-unit residential development.

This Phase One ESA was completed in general accordance with the CSA Group standard Z768-01 (R2016), and Ontario Regulation (O.Reg.) 153/04. It is also our understanding that the zoning of the subject property will not be changing to a more sensitive land use, and that the filing of a Record of Site Condition (RSC), as regulated by Ontario Regulation 153/04 under the Environmental Protection Act, will not be required.

The primary objective of this Phase One ESA was to identify any former or current potentially contaminating activities at the subject property and within the study area to develop a preliminary determination of the likelihood of contamination in soil or groundwater, and to determine the need for a Phase Two ESA. The general objectives were met through the evaluation of the information gathered from the review of records, an interview and a site reconnaissance.

Based on review of records and the site reconnaissance, seven Areas of Potential Environmental Concern (APECs) were identified on the subject property and are summarized below:

### **APEC 1 – Importation of Fill Material of Unknown Quality**

Through a review of aerial photographs and knowledge that the subject property has had an on-site residential dwelling since at least 1920s, fill of unknown quality has likely been used during development. The associated contaminants of potential concern are polycyclic aromatic hydrocarbons (PAHs), Metals and Inorganics (M&I), Petroleum Hydrocarbon four fractions (PHC F1-F4), and Volatile Organic Compounds (VOCs) in soil and groundwater.

### **APEC 2 – Gasoline and Associated Products Storage in Fixed Tanks**

Through observations made during site reconnaissance, a repair was noticed on the left of an opening (possibly a chute) on the western side of the building. This repair could possibly have been a result of former fill/vent pipes for the tank. Although it should be noted that FIPs were reviewed, for year 1912, 1948 and 1956, and they do not show the presence of the tank on the subject property. The potentially associated contaminants of concern are metals, PHC F1-F4, and Benzene, Toluene, Ethylbenzene and Xylenes (BTEX) in soil and groundwater. This APEC is present closer to the northern boundary of the subject property, close to Armstrong Street.

Through a review of the ERIS report and available historical documents and records, many commercial fueling stations, with bulk underground storage of fuels, have been present upgradient of the site and within the study area. The potentially associated contaminants of concern are metals, PHC F1-F4, and BTEX in soil and groundwater. This APEC is present across the subject property, although higher concentrations may be observed on the southern portion of the property parcel.

### **APEC 3 – Commercial Autobody Shops, Electronic and Computer Manufacturing, and Ink Manufacturing, Processing and Bulk Storage**

Through a review of the ERIS report and available historical documents and records, many commercial Autobody Shops, Electronic and Computer Manufacturing Companies and Businesses (i.e., Printers) involving ink manufacturing, processing and bulk storage have been present upgradient of the site and within the study area. The potentially associated contaminants of concern are VOCs and metals in soil and groundwater. This APEC is present across the subject property, although higher concentrations may be observed on the southern portion of the property parcel.

### **APEC 4 – Operation of Dry Cleaning Equipment (where chemicals are stored)**

Through a review of the ERIS report and available historical documents and records, many commercial dry cleaning establishments have been present upgradient of the site and within the study area. The potentially associated contaminants of concern are VOCs in soil and groundwater. This APEC is present across the subject property, although higher concentrations may be observed on the southern portion of the property parcel.

### **APEC 5 – Coal Gasification**

Through a review of the city directories, the Canadian Under Feed Coal Burners machine shop was listed as being located at 20 Hamilton Avenue North (south of the subject property) from approximately 1936-1951. The potentially associated contaminants of concern are BTEX, PAHs, Metals, and Phenols in soil and groundwater. This APEC is present across the subject property, although higher concentrations may be observed on the southern portion of the property parcel.

### **APEC 6 – Iron and Steel Manufacturing and Processing, Metal Fabrication**

Through a review of the ERIS report and available historical documents and records, foundries and machine shops have been present upgradient of the site and within the study area. The potentially associated contaminants of concern are Metals, VOCs, PAHs, PHC F1-F4, and Polychlorinated Biphenyls (PCBs) in soil and groundwater. This APEC is present across the subject property, although higher concentrations may be observed on the southern portion of the property parcel.

## **APEC 7 – Wood Treating and Preservative Facility and Bulk Storage of Treated and Preserved Wood Products**

Through a review of the ERIS report and available historical documents and records, operations involving wood treatment and preserving, and potentially bulk storage of treated and preserved wood products have been present upgradient of the site and within the study area. The potentially associated contaminants of concern are Metals, PAHs, and VOCs in soil and groundwater. This APEC is present across the subject property, although higher concentrations may be observed on the southern portion of the property parcel.

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## 1.0 INTRODUCTION

GEMTEC Consulting Engineers and Scientists Limited (GEMTEC) was retained by Mr. Lance Lunetta to carry out a Phase One Environmental Site Assessment (ESA) for property located at 262 Armstrong Street in Ottawa, Ontario (hereafter referred to as the “subject property” or “subject site”). It is understood that this Phase One ESA is required to support a site plan control application for a future multi-unit residential development. The site location and study area are provided on Figure A.1, Appendix A.

This Phase One ESA was completed in general accordance with the CSA Group standard Z768-01 (R2016), and Ontario Regulation (O.Reg.) 153/04. It is GEMTEC’s understanding that the zoning of the subject property will not be changing to a more sensitive land use, and that the filing of a Record of Site Condition (RSC), as regulated by Ontario Regulation 153/04 under the Environmental Protection Act, will not be required. The Phase One ESA was conducted by GEMTEC staff members whose qualifications are provided in Appendix B.

The subject property consists of a land parcel with an approximate area of 142 square metres with on-site residential building. The subject property is bounded to the east by 260 Armstrong Street, to the south by 79 Hinton Avenue North, to the west by 75 Hinton Avenue North and to the north by Armstrong Street followed by 7 Hinton Avenue North.

### 1.1 Phase One Property Information

The legal description for 262 Armstrong Street, Ottawa is as follows:

- PT LT 1335, PL 157, AS IN N364734; OTTAWA/NEPEAN.

The subject property is currently owned by Ms. Lisa Fudge-Lunetta. The contact person for the subject property is Mr. Lance Lunetta.

## 2.0 SCOPE OF THE INVESTIGATION

### 2.1 General Objectives

The Phase One ESA was conducted in general accordance with O.Reg. 153/04 as amended, and current industry standards, as outlined within CSA Group standard Z768-01. The general objectives of the Phase One ESA were:

- To develop a preliminary determination of the likelihood of contamination in soil or groundwater at the subject property; and,
- To determine the need for a Phase Two ESA.

The general objectives were met through the evaluation of the information gathered from the review of records, an interview and a site reconnaissance. Specific objectives for these components and the tasks completed to achieve these objectives are described below.

## 2.2 Records Review

In order to identify actual or potential sources of contamination within the study area, a review of information from the following sources was conducted:

- Bedrock and Overburden Geology Maps – Overburden and bedrock geology maps provided by Natural Resources Canada were reviewed in order to identify the underlying soil deposits and bedrock types.
- Fire Insurance Maps and Reports – Based on our knowledge and prior experience completing Phase One ESAs for the vicinity, fire insurance plans were reviewed to assess the historical occupants in the study area, historical presence of storage tanks and general development of the study area overtime.
- Title Abstract – A chain of title abstract for the subject property was provided by EcoLog ERIS and is included in Appendix C.
- EcoLog ERIS Databases – The EcoLog ERIS report searches more than 50 public and private information databases to identify potential environmental concerns. An EcoLog ERIS report was obtained for the subject site and a 250-metre-buffer surrounding the subject site. A copy of the EcoLog ERIS Report is provided in Appendix D.
- City Directories – Review of city directory listings and ownership history for the subject site obtained from LGI Copy Service Canada to confirm the site development history. This information was used to assess the historical ownership/occupants at the subject site, the historical presence of USTs, industrial activities and development at the subject site.
- Freedom of Information (FOI) – FOI searches completed through the Ministry of the Environment, Conservation and Parks (MECP) consist of information obtained from documents and records from the Ottawa District Office, Investigations and Enforcement Branch, Environmental Assessment and Permissions Branch, Environmental Monitoring and Reporting Branch, Sector Compliance Branch and Safe Drinking Water Branch.
- A records search was requested from the TSSA for the subject property (262 Armstrong Street) and adjacent properties located at 65 Holland Avenue; 366 and 390 Parkdale Avenue; 7 and 85 Hinton Avenue; and 1191, 1195, 1205 and 1239 Wellington Street in Ottawa, Ontario. The TSSA search results are provided in Appendix E.
- GeoOttawa and National Air Photo Library Aerial Photographs – Aerial photographs from the years 1928, 1938, 1958, 1965, 1976, 1995, 2009, and 2019 were reviewed for the subject site and study area. The photographs were reviewed in order to identify areas of potential environmental concern resulting from historical land uses on the subject site and surrounding areas. GeoOttawa aerials and aerials reviewed from historical reports are not included as part of this report due to copyright limitations.

- “*Map of Federal Contaminated Sites Inventory*” prepared by Treasury Board of Canada Secretariat was reviewed.
- “*Ontario Inventory of PCB Storage Sites*” dated January 1992 and prepared by Ontario Ministry of the Environment (Waste Management Branch) was reviewed.
- “*Old Landfill Management Strategy – Phase 1 – Identification of Sites, City of Ottawa, Ontario*” dated October 2004 and prepared by Golder Associates Ltd. was reviewed.

## **2.3 Interview/ E-mail Correspondence**

The objective of the interview/e-mail correspondence was to assist in the identification of potentially contaminating activities (PCAs) that may have led to areas of potential environmental concern (APECs) at the subject property.

### **2.3.1 Interviews**

An interview was carried out with Mr. Lance Lunetta on April 20, 2021. Mr. Lunetta has approximately 10 years of knowledge with respect to the history and operations at the subject property and provided, to the best of his knowledge, a description of recent and past uses of the subject property and activities that could have contributed to contamination of on-site soil and groundwater.

Mr. Don Urquhart, former owner of the subject property, was also contacted via email for information. Mr. Urquhart has approximately 6 years of knowledge with respect to the history and operations at the subject property.

## **2.4 Site Reconnaissance**

The subject property was visually assessed to document current conditions and to evaluate the potential for environmental impacts to on-site soil and groundwater. The site was also inspected to identify if any possible preferential pathways such as underground utilities exist on the subject property that may affect the fate, transport and distribution of contaminants. Adjacent properties were assessed from publicly accessible boundaries to evaluate the potential for environmental impacts to the subject property.

Photographs were taken to support pertinent observations and are provided in Appendix G.

## **3.0 RECORDS REVIEW**

### **3.1 General**

#### **3.1.1 Phase One Study Area Determination**

The subject property has an area of approximately area of 142 square metres and is located at 262 Armstrong Street in Ottawa, Ontario.

The current land use in the study area is mixed (combination of residential and commercial properties).

Based on this information, a study area of 250 metres surrounding the subject property is deemed sufficient for the purpose of this Phase One ESA. The location of the subject property and the extent of the Phase One ESA study area, including the 250-metre radius buffer zone, are provided on the Site Location Plan, Figure A.1, Appendix A.

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

Based on the review of selected historical aerial photographs, the subject property has been occupied by a residential dwelling since at least 1928. As per testimonial evidence from Mr. Lunetta, a residential building has occupied the subject property since at least the 1910s.

Land use in the study area has been mixed use (combination of residential and commercial properties) since at least 1928 and has remained unchanged since that time. Two industrial properties named “Capital Wire Cloth Manufacturing Co.” and “Beach Foundry Limited” were located to the north of the subject property. “Capital Wire Cloth Manufacturing Co.” was manufacturing site for wire cloth, a fine gauge metal screen, used in the production of paper from pulp (*PCA #54. Textile Manufacturing and Processing*). “Beach Foundry Limited” was metal fabrication shop for stove manufacturing (*PCA #32. Iron and Steel Manufacturing and Processing, PCA#34. Metal Fabrication*).

### **3.1.3 Fire Insurance Plans / Insurance Reports**

The original Fire Insurance Plans (FIPs) were produced by Chas. E. Goad Co. between 1875 and 1923. These plans mapped urban areas of Canada and provided property-specific information such as building construction, building occupancy and potential fire hazards.

A FIP from 1912 was available for the subject property and the study area. The FIP shows a residential dwelling on the subject property. Residential dwellings adjoin the subject property to the east and the west. Two industrial properties named “Capital Wire Cloth Manufacturing Co.” and “Beach Foundry Limited” were located to the north of the subject property. “Capital Wire Cloth Manufacturing Co.” was manufacturing site for wire cloth, a fine gauge metal screen, used in the production of paper from pulp. “Beach Foundry Limited” was metal fabrication shop for stove manufacturing.

A FIP from 1948 was available for the subject property and the study area. The FIP shows a residential dwelling on the subject property. Residential dwellings adjoin the subject property to the east and the west. Two industrial properties named “Capital Wire Cloth Manufacturing Co.” and “Beach Foundry Limited” were located to the north of the subject property. The FIP shows USTs in two distinct locations:

- One UST is northwest of the subject property across Armstrong Street on 65 Holland Avenue.
- One UST is northeast of the subject property across Armstrong Street on 171 Armstrong Street. (PCA #28. Gasoline and Associated Products Storage in Fixed Tanks).

An FIP from 1956 was available for the subject property and the study area. The FIP shows a residential dwelling on the subject property. Residential dwellings adjoin the subject property to the east and the west. Two industrial properties named “Capital Wire Cloth Manufacturing Co.” and “Beach Foundry Limited” were located to the north of the subject property and the operations conducted at these two locations were potentially contaminating activities (PCAs). The FIP shows USTs in three distinct locations:

- Two USTs are northwest of the subject property across Armstrong Street on 65 Holland Avenue.
- Four USTs are southwest of the subject property on 1245 Wellington Street West and 1277 Wellington Street with 2 USTs each. (PCA #28. Gasoline and Associated Products Storage in Fixed Tanks).

#### **3.1.4 Historical Reports**

No historical reports were provided to GEMTEC for review.

### **3.2 Environmental Source Information**

#### **3.2.1 Chain of Title**

The Parcel Register Abstract for PIN is 04035-0071 (LT); and legal description for the subject site is PT LT 1335, PL 157, AS IN N364734; OTTAWA/NEPEAN. A copy of the Parcel Register Abstracts is provided in Appendix C.

The property is currently owned by Ms. Lisa Fudge-Lunetta. No PCAs were identified from the review of the title search.

#### **3.2.2 EcoLog ERIS Database Report**

GEMTEC contacted EcoLog Environmental Risk Information Services Ltd. (EcoLog ERIS) to conduct a search of over 50 public and private information databases for the subject property and the area within 250 metres of the subject property. The complete EcoLog Eris report, including a list of databases searched, is provided in Appendix D.

All listings in the EcoLog ERIS report were reviewed and the relevant highlights pertaining to potentially contaminating activities are as follows:



**Table 3.1: EcoLog ERIS Report Summary**

PCA	Address / Location	Distance from Subject Property	Company / Name	Database	Description
28. Gasoline and Associated Products Storage in Fixed Tanks	1186 Wellington Street	195 m southeast	Parkdale ESSO Ron Aspeck & Son Ltd.	FST – Fuel Storage Tanks	Four underground single wall steel gasoline storage tanks with varying volumes (13600 L and 22700 L)
28. Gasoline and Associated Products Storage in Fixed Tanks	390 Parkdale Avenue	150 m southeast	6205429 Canada Inc.; Suncor Energy Products Partnership	FST – Fuel Storage Tank	Seven underground double wall fibreglass gasoline storage tanks with varying volumes (25000 L, 50000 L and 65000 L)
58. Waste Disposal and Waste Management, including thermal treatment, landfilling and transfer of waste, other than use of biosoils as soil conditioners	16 Hamilton Avenue	58 m southeast	CAA North & East Ontario	GEN - Ontario Regulation 347 Waste Generators Summary	Listed as generator of waste oil and lubricants
58. Waste Disposal and Waste Management, including thermal treatment, landfilling and transfer of waste, other than use of biosoils as soil conditioners	1203 Wellington Street	140 m southeast	Vic's Hardrock Cycle	GEN - Ontario Regulation 347 Waste Generators Summary	Listed as generator of petroleum distillates, waste oil and lubricants
31. Ink Manufacturing, Processing and Bulk Storage 58. Waste Disposal and Waste Management, including thermal treatment, landfilling and transfer of waste, other than use of biosoils as soil conditioners	1195 Wellington Street	140 m southeast	Marquardt Printing	GEN - Ontario Regulation 347 Waste Generators Summary	Listed as generator of photoprocessing wastes
58. Waste Disposal and Waste Management, including thermal treatment, landfilling and transfer of waste, other than use of biosoils as soil conditioners	1221 Wellington Street	140 m south	Wellington Medical Clinic	GEN - Ontario Regulation 347 Waste Generators Summary	Listed as generator of pathological wastes
42. Pharmaceutical manufacturing and processing 58. Waste Disposal and Waste Management, including thermal treatment, landfilling and transfer of waste, other than use of biosoils as soil conditioners	1200B Wellington Street	150 m southeast	Carvers Drug Store Ltd; Pharma Plus Drugmarts Ltd.	GEN - Ontario Regulation 347 Waste Generators Summary	Listed as generator of pharmaceuticals and pathological wastes
58. Waste Disposal and Waste Management, including thermal treatment, landfilling and transfer of waste, other than use of biosoils as soil conditioners	1227 Wellington Street	150 m southwest	Apollo Property Management	GEN - Ontario Regulation 347 Waste Generators Summary	Real Estate Property Managers listed as generator of oil skimmings and sludges
37. Operation of Dry Cleaning Equipment (where chemicals are stored)	1233 Wellington Street C/O 1764 Woodward Drive	150 m southwest	Spic & Span	GEN - Ontario Regulation 347 Waste Generators Summary	Listed as user and generator of halogenated solvents
37. Operation of Dry Cleaning Equipment (where chemicals are stored)	1233 Wellington Avenue C/O 6008 Voyageur Drive	150 m southwest	VIP Drycleaners	GEN - Ontario Regulation 347 Waste Generators Summary	Listed as user and generator of halogenated solvents
37. Operation of Dry Cleaning Equipment (where chemicals are stored)	1233 Wellington Street	150 m southwest	898742 Ontario Inc.	GEN - Ontario Regulation 347 Waste Generators Summary	Listed as user and generator of halogenated solvents
58. Waste Disposal and Waste Management, including thermal treatment, landfilling and transfer of waste, other than use of biosoils as soil conditioners	1233 Wellington Street	150 m southwest	Quantum Remediation Inc.	GEN - Ontario Regulation 347 Waste Generators Summary	Listed as generator of oil skimmings and sludges
42. Pharmaceutical manufacturing and processing 58. Waste Disposal and Waste Management, including thermal treatment, landfilling and transfer of waste, other than use of biosoils as soil conditioners	1190 Wellington Street	180 m southeast	Rexall Pharmacy Group Ltd.; Pharma Plus Drugmarts Ltd.	GEN - Ontario Regulation 347 Waste Generators Summary	Pharmacies listed as generator of pharmaceuticals and pathological wastes
58. Waste Disposal and Waste Management, including thermal treatment, landfilling and transfer of waste, other than use of biosoils as soil conditioners	1166 Wellington Street West	210 m southeast	Doran Contractors Ltd.	GEN - Ontario Regulation 347 Waste Generators Summary	Contractor listed as generator of light fuels
31. Ink Manufacturing, Processing and Bulk Storage 58. Waste Disposal and Waste Management, including thermal treatment, landfilling and transfer of waste, other than use of biosoils as soil conditioners	1242 ½ Wellington Street	230 m southwest	Focus Photographic Services	GEN - Ontario Regulation 347 Waste Generators Summary	Photography Equipment/Supplier listed as generator of photoprocessing wastes
Not Applicable	1244 Wellington Street	240 m southwest	The Property Group	GEN - Ontario Regulation 347 Waste Generators Summary	Not Applicable
42. Pharmaceutical manufacturing and processing 58. Waste Disposal and Waste Management, including thermal treatment, landfilling and transfer of waste, other than use of biosoils as soil conditioners	1156 Wellington Street	240 m southeast	The Salvation Army Ottawa Grace Manor; Salvation Army Grace General Hospital	GEN - Ontario Regulation 347 Waste Generators Summary	Nurse care facilities and hospital listed as generator of pharmaceuticals and pathological wastes
58. Waste Disposal and Waste Management, including thermal treatment, landfilling and transfer of waste, other than use of biosoils as soil conditioners	7 Hinton Avenue	75 m northwest	Metcalfe Realty Limited	GEN - Ontario Regulation 347 Waste Generators Summary	Real estate property managers listed as generator of waste oil and lubricants; organic laboratory chemicals
19. Electronic and Computer Equipment Manufacturing	3 Hamilton Avenue	95 m northeast	Honeywell Ltd.	GEN - Ontario Regulation 347 Waste Generators Summary	Listed as generator of halogenated solvents, inorganic laboratory chemicals, aliphatic solvents, petroleum distillates, oil skimmings and sludges
31. Ink Manufacturing, Processing and Bulk Storage 58. Waste Disposal and Waste Management, including thermal treatment, landfilling and transfer of waste, other than use of biosoils as soil conditioners	45 Spencer Street	140 m northeast	Graphic Display Canada	GEN - Ontario Regulation 347 Waste Generators Summary	Listed as generator of photoprocessing wastes

58. Waste Disposal and Waste Management, including thermal treatment, landfilling and transfer of waste, other than use of biosoils as soil conditioners	383 Parkdale Avenue	170 m east	Rosemount Family Health Organization; GEM Health Care Services	GEN - Ontario Regulation 347 Waste Generators Summary	Listed as generator of pathological wastes
58. Waste Disposal and Waste Management, including thermal treatment, landfilling and transfer of waste, other than use of biosoils as soil conditioners	85 Spencer Street	180 m west	Ottawa Greenbelt Construction Ltd.	GEN - Ontario Regulation 347 Waste Generators Summary	Site preparation contractors listed as generator of light fuels
58. Waste Disposal and Waste Management, including thermal treatment, landfilling and transfer of waste, other than use of biosoils as soil conditioners	45 Holland Avenue	190 m northwest	CCC476	GEN - Ontario Regulation 347 Waste Generators Summary	Leasers of non-residential buildings listed as generator of oil skimmings and sludges
1. Acid and Alkali Manufacturing, Processing and Bulk Storage 19. Electronic and Computer Equipment Manufacturing	300 Parkdale Avenue	220 m north	Scintrex Trace Corp.	GEN - Ontario Regulation 347 Waste Generators Summary	Listed as generator of acid waste, alkaline waste and aliphatic solvents
31. Ink Manufacturing, Processing and Bulk Storage 58. Waste Disposal and Waste Management, including thermal treatment, landfilling and transfer of waste, other than use of biosoils as soil conditioners	300 Parkdale Avenue	220 m north	M.O.M. Printing	GEN - Ontario Regulation 347 Waste Generators Summary	Listed as generator of petroleum distillates and photoprocessing waste
58. Waste Disposal and Waste Management, including thermal treatment, landfilling and transfer of waste, other than use of biosoils as soil conditioners	1 Hamilton Avenue North	230 m north	Ontario Petroleum Pump	GEN - Ontario Regulation 347 Waste Generators Summary	Listed as generator of light fuels
58. Waste Disposal and Waste Management, including thermal treatment, landfilling and transfer of waste, other than use of biosoils as soil conditioners	1600 Scott St	250 m northwest	Colonnade Development Inc.	GEN - Ontario Regulation 347 Waste Generators Summary	Not Applicable
58. Waste Disposal and Waste Management, including thermal treatment, landfilling and transfer of waste, other than use of biosoils as soil conditioners	11 Holland Avenue	250 m northwest	Hetz Medicine Professional Corporation	GEN - Ontario Regulation 347 Waste Generators Summary	Listed as generator of pathological wastes
58. Waste Disposal and Waste Management, including thermal treatment, landfilling and transfer of waste, other than use of biosoils as soil conditioners	11 Holland Avenue	250 m northwest	ITF CJPT Real Estate No. 1 Trust	GEN - Ontario Regulation 347 Waste Generators Summary	Listed as generator of wastes from the use of pigments, coatings and paints
58. Waste Disposal and Waste Management, including thermal treatment, landfilling and transfer of waste, other than use of biosoils as soil conditioners	11 Holland Avenue	250 m northwest	Colonnade Development Inc.	GEN - Ontario Regulation 347 Waste Generators Summary	Real estate property managers listed as generator of aliphatic solvents and paint/pigment/coating residues
42. Pharmaceutical Manufacturing and Processing 58. Waste Disposal and Waste Management, including thermal treatment, landfilling and transfer of waste, other than use of biosoils as soil conditioners	1600 Scott Street	250 m northwest	Pharma Plus Drugs Ltd.; Holland Cross Dental Centre; Rexall Pharmacy Group Ltd.	GEN - Ontario Regulation 347 Waste Generators Summary	Listed as generator of pharmaceuticals and pathological wastes
OT #1: Spill	409 Parkdale Avenue	240 m southeast	Not Applicable	INC – Fuel Oil Spills and Leaks	Commercial property; CO release
OT #1: Spill	129 Hinton Avenue North	240 m southeast	Not Applicable	INC – Fuel Oil Spills and Leaks	Multi-unit residential boiler sooted up, producing CO
28. Gasoline and Associated Products Storage in Fixed Tanks OT #1: Spill	320 Parkdale Avenue	140 m northwest	Not Applicable	INC – Fuel Oil Spills and Leaks	Multi-unit residential fuel oil leaking from piping at the fuel oil storage tank
55. Transformer Manufacturing, Processing and Use 58. Waste Disposal and Waste Management, including thermal treatment, landfilling and transfer of waste, other than use of biosoils as soil conditioners	1156 Wellington Street	250 m east	Salvation Army Grace Hospital	NPCB – National PCB Inventory	School/Care/Facility; PCB type/code: Askarel; stored for disposal
55. Transformer Manufacturing, Processing and Use	1156 Wellington Street	250 m east	Grace General Hospital	OPCB - Inventory of PCB Storage Sites	Bulk liquid with high levels of PCBs; transformer and drum of ballasts
40. Pesticides Manufacturing, Processing, Bulk Storage and Large-Scale Applications	1226 Wellington Street	200 m south	Morris Hardware	PES – Pesticide Register	Retail pesticides vendor
OT #1: Spill	72 Holland Avenue	150 m southwest	Not Available	PINC - Pipeline Incidents	Natural gas pipeline hit ½" incident
OT #1: Spill	137 Huron Avenue North	200 m southwest	Manotick Tree Movers Inc.	PINC - Pipeline Incidents	Pipeline incident
OT #1: Spill	131 Holland Avenue	220 m south	Not Available	PINC - Pipeline Incidents	Pipeline Incident
OT #1: Spill	228 Armstrong Street	100 m northeast	Not Available	PINC - Pipeline Incidents	Pipeline Incident; pipeline hit 1.25"
Not Applicable	1233 Wellington Street	150 m southwest	1592541 Ontario Inc.	RSC – Record of Site Condition	Full Depth Site Conditions Standard, with Non-potable Ground Water, Medium/Fine Textured Soil, for Residential/Parkland/Institutional property use



Not Applicable	131 Holland Avenue	220 m south	ONE3ONE Holland Residences Inc.	RSC – Record of Site Condition	Full Depth Site Conditions Standard, with Non-potable Ground Water, Coarse Textured Soil, for Residential/Parkland/Institutional property use
OT #1: Spill	83 Holland Avenue	90 m southwest	Tomlinson Environmental Services Ltd.	SPL – Ontario Spills	Fire water flooded the basement
OT #1: Spill	79 Holland Avenue	100 m southwest	Private residence	SPL – Ontario Spills	450 L of fuel oil to floor of gravel basement
OT #1: Spill	72 Holland Avenue	150 m southwest	Enbridge Gas Distribution Inc.	SPL – Ontario Spills	Human error leading to line damage
OT #1: Spill	Parkdale Avenue and Wellington Street	180 m southeast	Not Available	SPL – Ontario Spills	Valve/Fitting leak or failure
OT #1: Spill	1190 Wellington Street	180 m southeast	Rexall Drug Store	SPL – Ontario Spills	Freon R-22 leak to atmosphere
28. Gasoline and Associated Products Storage in Fixed Tanks OT #1: Spill	120 Holland Avenue	180 m southwest	Westboro Group of Companies	SPL – Ontario Spills	Fuel oil to ground from underground storage tank
28. Gasoline and Associated Products Storage in Fixed Tanks OT #1: Spill	1186 Wellington Street	190 m southeast	Imperial Oil	SPL – Ontario Spills	Gasoline leak to soil from underground storage tank due to corrosion
28. Gasoline and Associated Products Storage in Fixed Tanks OT #1: Spill	1186 Wellington Street	190 m southeast	ESSO Petroleum Canada	SPL – Ontario Spills	3000 L of furnace oil to ground from underground tank due to corrosion
OT #1: Spill	131 Holland Avenue	220 m south	Tomlinson Environmental Services Ltd.	SPL – Ontario Spills	Approximately 200 L of hydraulic oil to asphalt and catch basin; contained
OT #1: Spill	4 Hamilton Street	75 m northwest	Ottawa Hydro	SPL – Ontario Spills	Pipe/Hose leak leading to 1 L of hydraulic oil to ground
28. Gasoline and Associated Products Storage in Fixed Tanks OT #1: Spill	320 Parkdale Avenue	140 m northeast	Not Available	SPL – Ontario Spills	Equipment failure leading to leaking fuel oil tank
OT #1: Spill	390 Parkdale Avenue	150 m southeast	Suncor Energy Products Inc.	SPL – Ontario Spills	Customer overfill leading to 10 L gas to pad and 1 L to catch basin
OT #1: Spill	383 Parkdale Avenue	170 m east	Not Available	SPL – Ontario Spills	Gasoline odour in office building from sump pump area in the parking garage
OT #1: Spill	395 Parkdale Avenue	170 m east	Private Owner	SPL – Ontario Spills	Tank leak from a pickup truck

### 3.2.3 City Directories

A search of the city directories was completed by LGI Copy Service Canada for the study area for the years 1905, 1911, 1916, 1921, 1926, 1931, 1936, 1941, 1946, 1951, 1956, 1961, 1966, 1971, 1976, 1981-1982, 1987, 1992, 1996-1997, 2001-2002, 2006-2007, and 2010.

Review of the city directories indicated the following notable information:

- Armstrong Street was first listed in directories in 1911;
- The subject property is listed as residential (1 tenant) between 1911 and 1997.
- Capital Wire Cloth Manufacturing Co. located at 2-4 Hamilton Avenue North; north of the subject property (1916-1921) – PCA#54. Textile Manufacturing and Processing;
- Davidson and Crooks Foundry located at 16 Hamilton Avenue North; south of the subject property (1916-1961) – PCA#32. Iron and Steel Manufacturing and Processing, PCA#34. Metal Fabrication;
- Wright & Co Inc. Lime located at 365 Parkdale Avenue; southeast of the subject property (1916) – PCA#12. Concrete, Cement and Lime Manufacturing;
- Greater Ottawa Sash. Door & Lumber Co Ltd. located at 382 Parkdale Avenue; southeast of the subject property (1916) – PCA#59. Wood Treating and Preservative Facility and Bulk Storage of Treated and Preserved Wood Products;
- Carleton Hardware Limited located at 1235 Wellington Street West; southwest of the subject property (1916) – PCA#59. Wood Treating and Preservative Facility and Bulk Storage of Treated and Preserved Wood Products;
- Gerard & Stewart Machine Shop located at 20 Hamilton Avenue North; south of the subject property (1916-1941) – PCA#34. Metal Fabrication; and later changed to The Big 'A' Co. Ltd. (1956-1961) – PCA#19. Electronic and Computer Equipment Manufacturing;
- Leung Chinese Laundry located at 1209 Wellington Street West; south of the subject property (1926-1936) – PCA#37. Operation of Dry Cleaning Equipment (where chemicals are used);
- Higman Hardware located at 1255 Wellington Street West; southwest of the subject property (1926-1982) – PCA#59. Wood Treating and Preservative Facility and Bulk Storage of Treated and Preserved Wood Products;
- Holland Service Station located at 1241 and 1251 Wellington Street West; southwest of the subject property (1926-1931). The location changed to Shell Oil Company (1951-1956) and later to Quinn Marty Service Station (1961-1966) – PCA#10. Commercial Autobody Shop and PCA#28. Gasoline and Associated Products Storage in Fixed Tanks;
- Salvation Army hospital located at 1156 Wellington Street West; southeast of the subject property (1926-1997) – PCA#42. Pharmaceutical manufacturing and processing and PCA#58. Waste Disposal and Waste Management, including thermal treatment, landfilling and transfer of waste, other than use of biosoils as soil conditioners;

- Imperial Oil Service Station located at 1186 Wellington Street West; southeast of the subject property (1926-1936). The location changed to Minion's Service Station (1941-1961) and later to ESSO (1966-1992) – PCA#28. Gasoline and Associated Products Storage in Fixed Tanks;
- Pattons Cleaners and Dryers located at 1200 Wellington Street West; south of the subject property (1931-1966) - PCA#37. Operation of Dry Cleaning Equipment (where chemicals are used);
- Canadian Under Feed Coal Burners machine shop located at 20 Hamilton Avenue North; south of the subject property (1936-1951) – PCA#9. Coal Gasification;
- Joynt Drugs/Joynt's Pharmacy Limited located at 1234 Wellington Street West; south of the subject property (1941-1997) – PCA#58. Waste Disposal and Waste Management, including thermal treatment, landfilling and transfer of waste, other than use of biosoils as soil conditioners, PCA#42. Pharmaceutical Manufacturing and Processing;
- Morris Hardware located at 1226 and 1249 Wellington Street West; south of the subject property (1951-1997) – PCA#59. Wood Treating and Preservative Facility and Bulk Storage of Treated and Preserved Wood Products;
- Instruments Limited located at 300 Parkdale Avenue; north of the subject property (1951-1966) – PCA#58. Waste Disposal and Waste Management, including thermal treatment, landfilling and transfer of waste, other than use of biosoils as soil conditioners;
- Electric Motor Services located at 22 Hamilton Avenue North; south of the subject property (1951-1971), and later changed to Wellington Electric Company Limited (1981-1987) – PCA#19. Electronic and Computer Equipment Manufacturing;
- Armstrong Motors located at 24 Hamilton Avenue North; south of the subject property (1951-2007) - PCA#10. Commercial Autobody Shop;
- Sperry Gyroscope Ottawa located at 3 Hamilton Avenue North; north of the subject property (1951-1987). Name for "Sperry Gyroscope Ottawa" also changed to Sperry Inc. Aerospace and Marine Group" – PCA#19. Electronic and Computer Equipment Manufacturing;
- Stanley Harold Fuel Ltd. Located at 65 Holland Avenue; northwest of the subject property (1966-1976) – PCA#28. Gasoline and Associated Products Storage in Fixed Tanks;
- Alec's Sunoco Serve Station located at 390 Parkdale Avenue; southeast of the subject property (1966-2010) – PCA#28. Gasoline and Associated Products Storage in Fixed Tanks;
- Shell located at 1175 Wellington Street West; southeast of the subject property (1971-1987) – PCA#28. Gasoline and Associated Products Storage in Fixed Tanks;
- Lacasse Custom Metal Fabrication located at 2 Hinton Avenue North; north of the subject property (1976-1992) – PCA#34. Metal Fabrication;
- Valetor Cleaners located at 1233 Wellington Street West; south of the subject property (1981-1982) and later changed to Capital Dry Cleaners (1992) – PCA#37. Operation of Dry Cleaning Equipment (where chemicals are used); and,

- Scintrex Corporation located at 300 Parkdale Avenue; north of the subject property (2006-2020) – PCA#19. Electronic and Computer Equipment Manufacturing.

### 3.3 Regulatory Information

#### 3.3.1 Freedom of Information

A Freedom of Information (FOI) request for records on the subject property was sent to the MECP in April 2021. FOI responses consist of information obtained from documents and records from the Ottawa District Office, Investigations and Enforcement Branch, Environmental Assessment and Permissions Branch, Environmental Monitoring and Reporting Branch, Sector Compliance Branch and Safe Drinking Water Branch.

A response to the FOI request has not yet been received from the MECP. If the MECP's response identifies records with respect to the subject property which indicate areas of potential environmental concern, the client will be notified.

#### 3.3.2 Technical Standards and Safety Authority

The Technical Standards and Safety Authority (TSSA) was contacted on March 25, 2021 to request available records regarding the subject property (262 Armstrong Street) and adjacent properties located at 65 Holland Avenue; 366 and 390 Parkdale Avenue; 7 and 85 Hinton Avenue; and 1191, 1195, 1205 and 1239 Wellington Street in Ottawa, Ontario.

All listings in the TSSA report were reviewed and the report summary pertaining to potentially contaminating activities is as follows:

**Table 3.2: TSSA Report Summary**

PCA	Address; location from the subject property	Status	Install Date	Out of Service Date	Capacity	Material of Construction	Fuel Type
28. Gasoline and Associated Products Storage in Fixed Tanks	390 Parkdale Avenue; 150 m southeast	Active	April 2020	-	65000 L	Fiberglass (FRP) and double wall underground tank (UST)	Gasoline
		Active	April 2020	-	50000 L	FRP and double wall UST	Gasoline
		Expired	April 2012	July 2020	50000 L	FRP and double wall UST	Gasoline
		Expired	April 2012	July 2020	50000 L	FRP and double wall UST	Gasoline
		Expired	May 2009	April 2012	25000 L	FRP and double wall UST	Gasoline
		Expired	May 2009	April 2012	25000 L	FRP and double wall UST	Gasoline
		Expired	May 2009	April 2012	50000 L	FRP and double wall UST	Gasoline

A report was submitted to TSSA in accordance with the TSSA Liquid Fuel Handling Code upon removal of three underground fuel storage tanks (USTs) from 390 Parkdale Avenue in Ottawa, Ontario. The report is titled "*Petroleum Infrastructure Removal, Petro-Canada Outlet# 03885, 390 Parkdale Avenue, Ottawa, Ontario*" prepared by Terrapex Environmental Ltd. (Terrapex), dated June 30, 2020. The report provided the following information:

Three (3) double-walled USTs, each with an estimated capacity of 1 X 50,000 L, 2 x 25,000 L, fuel dispensers and associated fuel lines were removed from the property by ECS Engineering and Construction Ltd. (ECS) prior to Terrapex' s arrival on May 25 , 2020.

Forty-two (42) soil samples were collected from the tank excavation for screening purposes. No soil samples were collected from the bottom of the tank nest excavation due to presence of bedrock. The combustible headspace vapour readings measured in the collected soil samples ranged from less than 10 to 530 parts per million (ppm).

Terrapex selected the Ministry of the Environment Conservation and Parks (MECP) Table 3 Site Condition Standards (SCS) for industrial/commercial/community property use in a non-potable groundwater condition, and coarse textured soils as being applicable for the site.

Five (5) soil samples and one field duplicate soil sample were submitted to AGAT Laboratories (AGAT), an accredited laboratory by the Canadian Association for Laboratory Accreditation Inc. (CALA) for laboratory analysis benzene, toluene, ethylbenzene, xylenes (BTEX) and petroleum hydrocarbon fractions F1 to F4 (PHC F1 - F4). In addition, three (3) soil samples were also analyzed for pH and grain size.

The analytical results of the submitted soil samples were reported to be below the selected MECP Table 3 SCS for all analyzed parameters and one soil sample was submitted to AGAT for the toxicity characteristics of leaching procedure (TCLP), to facilitate the soil disposal process, for the analysis of metals, BTEX and PHC F1-F4.

Terrapex reported the analyzed soil as non-hazardous and approximately 291.41 metric tonnes of soils collected from the excavation were disposed of offsite at the GFL Environmental Inc. (GFL) facility in Moose Creek, Ontario.

A copy of the search request and the response from the TSSA are provided in Appendix E.

### **3.3.3 Mapping of Federal Contaminated Sites**

A Government of Canada, Treasury Board of Canada Secretariat, interactive map of contaminated sites was reviewed. The database provides an inventory of over 4000 federally owned contaminated sites across the country. The database did not identify any federally owned contaminated sites on the subject site or within the study area.

### 3.3.4 Ontario Inventory of PCB Storage Sites

The Waste Management Branch of the Ontario Ministry of the Environment, Conservation and Parks (MECP) published an Ontario Inventory of PCB Storage Sites in October 1991. The publication includes information of PCB storage sites collected under O.Reg 11/82 through MECP district and regional offices.

The following information was obtained from EcoLog ERIS Database – Inventory of PCB Storage Sites and the report summary pertaining to potentially contaminating activities is as follows:

**Table 3.3: Summary for Ontario Inventory of PCB Storage Sites**

PCA	Address / Location	Distance from Subject Property	Company / Name	Database	Description
55. Transformer Manufacturing, Processing and Use	1156 Wellington Street	250 m east	Grace General Hospital	OPCB - Inventory of PCB Storage Sites	Bulk liquid with high levels of PCBs; transformer and drum of ballasts

### 3.3.5 Landfills

Golder Associates Ltd. published an Old Landfill Management Strategy – Phase 1 – Identification of Sites, City of Ottawa, Ontario dated October 2004. The publication includes information to identify old landfill sites for potential environmental considerations within the boundary of the amalgamated City of Ottawa. The database did not identify any landfills on the subject site or within the study area.

## 3.4 Physical Setting Sources

### 3.4.1 Aerial Photographs

Aerial photographs were obtained at regular intervals and were selected considering suitable scale for analysis and coverage area. The earliest aerial photograph obtained was from 1928. Observations made with respect to the selected aerial photographs are summarized in Table 3.4.

**Table 3.4: Summary of Aerial Photograph Review**

Date	Photograph Number	Observations
1928	A968-42	The subject site appears to be occupied by a residential dwelling; Surrounding areas appear to have mixed (residential and industrial/commercial) land use; A commercial/industrial building adjoins the subject property to the north across the Armstrong Street; and, The subject property appears to be adjoined by residential dwellings to the east, the west and the south.
1938	A6351	No significant changes compared to 1928 aerial photograph, however the photograph resolution is poor.
1965	A18740-202	No significant changes observed from 1938 aerial photograph.
1976	GeoOttawa – Publically Available	No significant changes observed from the 1965 aerial photograph.

Date	Photograph Number	Observations
1991	GeoOttawa – Publically Available	No significant changes observed from the 1976 aerial photograph.
2007	GeoOttawa – Publically Available	No significant changes observed from the 1991 aerial photograph.
2011	GeoOttawa – Publically Available	No significant changes observed from the 2007 aerial photograph.
2019	GeoOttawa – Publically Available	No significant changes observed from the 2017 aerial photograph.

Based on the review of selected historical aerial photographs, the subject property was developed and occupied by a residential dwelling since at least 1928, which is consistent with the testimonial evidence provided by the current property owner.

Land use in the study area has been mixed (combination of residential and commercial properties) since at least 1928 and has remained unchanged since that time.

### 3.4.2 Topography, Hydrology and Geology

A site topography map based on Ontario Basic Mapping is illustrated on the Topographic Map, Figure A.3, Appendix A. The subject property has a relatively flat topography and is at an elevation of approximately 65 metres above sea level. Surrounding topography generally slopes gradually downwards towards the Ottawa River, which is located approximately 1.2 kilometres to the north of the subject property.

Surficial soil and bedrock geology maps of the Ottawa area indicate that the overburden in the vicinity of the subject property generally consists of till defined as stone-poor, sandy silt to silty sand-textured till on Paleozoic terrain with a thickness of between 0 to 3 metres. The bedrock is mapped as Limestone, dolostone, shale, arkose, sandstone of the Gull River Formation.

Groundwater flow often reflects topographic features and typically flows toward nearby lakes, rivers and wetland areas. Based on the topography of the area, it is expected that regional local shallow groundwater flow will trend northerly, towards the Ottawa River.

### 3.4.3 Fill Materials

No fill materials were observed on the subject property during the site reconnaissance. However fill material is anticipated to be present on the subject property based on historical development of the subject property and study area. *PCA#30 - Importation of Fill Material of Unknown Quality.*

### 3.4.4 Provincially Significant Wetlands and Areas of Natural Significance

No provincially significant wetland (PSWs) or Areas of Natural of Scientific Interest (ANSIs) were identified on the subject site or within the study area.



### 3.4.5 Well Records

A copy of the Ministry of Environment, Conservation and Parks (MECP) Well Records for the subject property is provided in Appendix F; 95 wells were identified within this search radius however only 34 wells records were available. The locations of the adjacent wells, based on the UTM coordinates provided in the water well records, have been plotted on Figure A.3, Appendix A. The MECP well records indicate that the soil stratigraphy in the area generally consists of gravel and limestone. Given the built up urban nature of the study area, and the dates of the available water well records, it is likely that the wells as listed in the database are no longer in use, and reflect the water supply conditions prior to the urbanization of this area.

## 4.0 INTERVIEWS

### 4.1 Interviews

An in person interview was carried out with Mr. Lance Lunetta on April 20, 2021. Mr. Lunetta was identified as an interview candidate because he has approximately 10 years of knowledge with respect to the history and operations at the subject property. Details of the interview are summarized in the following sections.

- Mr. Lunetta confirmed that the subject property was developed as a residential dwelling sometime before 1928, and the subject property may be developed into a future multi-unit residential development;
- Mr. Lunetta indicated that the subject property was historically heated by a source not known to him. At present, the building is heated using natural gas;
- Mr. Lunetta confirmed that, to his knowledge, there were no underground and aboveground tanks on the subject property;
- Mr. Lunetta indicated that, to his knowledge, there was no fill brought onto the subject property;
- Mr. Lunetta indicated that the subject property is currently leased to tenants;
- Mr. Lunetta confirmed that municipal water and sanitary sewers are provided to the property by the City of Ottawa.
- Mr. Lunetta mentioned that he is not aware of any prior environmental concerns/issues on the subject property; and,
- Mr. Lunetta stated that the apartment on the first floor of the house was almost the same as the apartment on the second floor. The first floor apartment was not accessed due to an occupant working from home because of COVID-19 and health and safety restrictions.

### 4.2 E-mail Correspondence with Don Urquhart

E-mail correspondence was carried out with Mr. Don Urquhart on April 20, 2021. Mr. Urquhart was the former property owner, before Mr. Lunetta. Mr. Urquhart has approximately 6 years of



knowledge about the subject property. Information provided by Mr. Urquhart is summarized below:

- Mr. Urquhart indicated that the subject property had been leased to the tenants long before he purchased it;
- Mr. Urquhart confirmed that he is not aware for any underground or aboveground tanks on the subject property;
- Mr. Urquhart indicated that, to his knowledge, there was no fill brought onto the subject property;
- Mr. Urquhart indicated that the subject property was historically heated by a source not known to him. During the time he owned the property, the building was heated using natural gas;
- Mr. Urquhart mentioned that he is not aware of any prior environmental concerns/issues on the subject property; and,
- Mr. Urquhart mentioned that he was unaware of any material that may contain asbestos. Although he did mention that there are lath and plaster walls and that all of the plaster reportedly has asbestos embedded within.

#### **4.3 Assessment and Evaluation of Interview**

Both the interview and the e-mail correspondence are consistent with historical records, and other information sources.

No PCAs were identified during the site interviews/correspondence.

### **5.0 SITE RECONNAISSANCE**

#### **5.1 General Requirements**

A site reconnaissance was carried out on April 20, 2021, from approximately 2:00 pm to 3:00 pm. The weather at the time of the site reconnaissance was overcast with a temperature of approximately 8 degrees Celsius.

The site reconnaissance was completed by Mr. Mohit Bhargav, MScE, EIT and Ms. Nicole Soucy, M.A.Sc, P.Eng. of GEMTEC. The site reconnaissance was carried out to determine if there were visually observable environmental concerns with the subject property and/or surrounding property uses.

##### **5.1.1 Site Photographs**

Photographs of the subject property were taken during the course of the site reconnaissance to document the general condition of the site. Selected relevant photographs are presented in Appendix G. A discussion of the photographs is provided in the Table 5.1.

**Table 5.1: Summary of Site Photographs**

Plate Number	Orientation	Description
G1	Interior Spaces - Basement	Photographs of basement. The basement is used as a storage for wooden shelves and has electrical panels and water heaters.
G2	Interior Spaces - Basement	Photographs of basement. The basement is used as a storage for tires, and has water heaters and air ventilation system.
G3	Interior Spaces – Second Floor Apartment	Photographs of second floor apartment with bedroom, living area and air conditioning unit.
G4	Interior Spaces – Second Floor Apartment	Photographs of second floor apartment with kitchen and cleaning supplies stored under the sink.
G5	Outside area– Deck for second floor apartment	Photograph of the deck for second floor apartment.
G6	Outside the building	Photographs of the gas gauge; an opening to the western side of the building can possibly be a chute; a repair was noticed on the left side of the chute.
G7	Outside the building	Catch basin along Armstrong Street; Waste barrels in the parking lot of the Parkdale Market.

### 5.1.2 Observations

The following observations were made for subject property:

- The subject property has been a residential dwelling since at least 1928;
- The first and the second floor were inhabited by tenants whereas the basement was used as a storage space;
- The basement contains wooden shelves, glass bottles, water heaters and the ventilation system;
- A floor drain exists in the basement of the building;
- An opening to the western side of the building was observed, possibly a chute;
- A repair was noticed on the left side of the chute, possibly a former fill pipe for a heating oil tank (PCA#28 - Gasoline and Associated Products Storage in Fixed Tanks); and,
- A catch basin was observed along Armstrong Street.

## 5.2 Specific Observations within the Study Area

### 5.2.1 Services

The subject site water and sewer services are being municipally provided by the City of Ottawa. Other utilities including hydro and gas are being provided by utility providers. A catch basin is located in front of the subject property on the Armstrong Street.

### 5.2.2 Water Bodies and Areas of Natural Significance

No provincially significant wetland (PSWs), Water Bodies, or Areas of Natural of Scientific Interest (ANSIs) were identified on the subject site or within the study area.

### 5.2.3 Surrounding Properties

The following general observations were made for the properties surrounding the subject property:

- Armstrong Street is present along the north boundary of the subject property followed by a commercial property with a civic address 7 Hinton Avenue North (with establishments such as CanvasPop and DNA11);
- A residential dwelling (260 Armstrong Street) is present along the east of the subject property;
- A residential dwelling (79 Hinton Avenue North) is present along the south of the subject property; and,
- A residential dwelling (75 Hinton Avenue North) is present to the west of the subject property.

No potentially contaminating activities (PCAs) were identified on the subject property, however sealed barrels were located in the parking lot of the Parkdale Market, close to Parkdale Park approximately 100 m east of the subject property during site reconnaissance (Photograph Plate G7, Appendix G). The barrels were labelled as soil and purge water. *PCA#58 – Waste Disposal and Waste Management, including thermal treatment, landfilling and transfer of waste, other than use of biosolids as soil conditioners.*

## 5.3 Hazardous Materials

### 5.3.1 Lead

Under the federal Hazardous Products Act, the lead content in interior paint was limited to 0.5% by weight in 1976. After 1980, lead was not used in interior paints; however, exterior paints may have still contained lead. All consumer paints produced and imported into Canada were virtually lead-free as of 1992.

Based on the initial site development (anticipated before 1920s) and additions since, it is possible that lead based paints have been used on the subject property in the past.

### 5.3.2 Mercury

Mercury is commonly found in thermostats and electrical switches, as well as mercury vapour-containing fluorescent light bulbs.

Based on the initial site development (anticipated before 1920s) and additions since, it is possible that mercury containing items have been present on the subject property in the past.

### **5.3.3 Storage Tanks**

No storage tanks were observed on the site during the site reconnaissance. Mr. Lunetta and Mr. Don Urquhart, both indicated that to the best of their knowledge, there were no tanks on the subject property.

### **5.3.4 Polychlorinated Biphenyl (PCBs)**

From the 1930s to the 1970s, PCBs were used to make coolants and lubricants for certain kinds of electrical equipment, including transformers and capacitors, and were widely used in a number of industrial materials including sealing and caulking compounds, inks, and paint additives. PCBs are an environmental concern as they do not readily degrade and have been identified to bio-accumulate. In Canada, the Federal Environmental Contaminants Act (1976) prohibited the use of PCBs in heat transfer and electrical equipment installed after September 1, 1977, and in transformers and capacitors installed after July 1, 1980. In addition, the storage and disposal of PCB waste materials is regulated.

Pole mounted transformers were identified in the study area. The transformers appeared to be in good condition with no evidence of leaking.

### **5.3.5 Asbestos Containing Materials (ACM)**

Asbestos has been used in many products in buildings and continues to be used in some building products today. Two categories of asbestos were used in building construction (i) non-friable asbestos-containing materials (ACMs), and (ii) friable ACMs. Products that contain non-friable (hard or non-crumbly) asbestos include floor tiles, cement sheeting and pipes, motor vehicle brakes, and roofing materials. The use of these products has declined significantly since the 1970s; however, these products are still legal and are still used in Canada today. Friable asbestos materials can be crumbled, pulverized, or reduced to powder by hand pressure. Due to the softer nature of these products, the fibres can more readily be released to the air where they can be inhaled. Most friable products were withdrawn from the Canadian market in the 1970s, and production of friable products ceased, and they were commercially unavailable by 1982. However, it was not until 1985 that provincial regulatory bodies enforced a complete ban on friable asbestos products. Common friable products included sprayed fireproofing, sprayed acoustic or decorative finishes, and thermal insulation on piping or mechanical systems.

Based on the initial site development (anticipated before 1920s) and additions since, it is possible that ACM building materials have been present on the subject property in the past.

### **5.3.6 Urea Formaldehyde Foam Insulation (UFFI)**

UFFI became an insulation product for existing houses in Canada in the 1970s; however, it was banned in Canada in 1980 under the Hazardous Products Act. UFFI can begin to deteriorate if exposed to water and moisture, and its degradation can also result in formaldehyde gas emissions.

Based on the initial site development (anticipated before 1920s) and additions since, it is possible that UFFIs have been present on the subject property in the past.

### **5.3.7 Solid Waste Disposal Practices**

No waste or disposal locations were identified on the subject property at the time of site reconnaissance. Waste bins were identified south of the existing structure. Regular municipal waste collection is available in the study area.

### **5.3.8 Ozone Depleting Substances**

In 1998, the Federal government filed the Ozone-Depleting Substances Regulations. The Regulations reflect Canada's commitment to meet its requirements under the Montreal Protocol on Substances that Deplete the Ozone Layer. The Montreal Protocol is an international agreement signed by over 180 countries to control the production and exchange of certain ozone-depleting substances. The Regulations are intended to further reduce emissions of ozone-depleting substances. The Regulations were amended in 2001, 2002, and 2004.

Domestic air conditioning units and refrigerators were present in the building at the subject property. Type of refrigerant used was unknown, but the presence of ozone depleting substances is unlikely.

### **5.3.9 Radon Gas**

Radon is a colourless, tasteless radioactive gas with a very short half-life of 3.8 days. The health risk potential of radon is associated with its rate of accumulation within confined areas, particularly confined areas near or in the ground, such as basements, where vapours can readily transfer to indoor air from the ground through foundation cracks or other pathways. Large, adequately ventilated rooms generally present limited risk for radon exposure.

Based on GEMTECs review of the map entitled 'Radon Potential Map Ontario', the subject property is within a guarded potential (Zone 3) radon hazard area (REMC, 2011).

Actual radon concentrations can only be determined using Long-term Measurement techniques, as described within Health Canada's 'Guide for Radon Measurements in Public Buildings' document (Health Canada, 2016).

## **5.4 Unidentified Substances**

No unidentified substances were identified at the time of the site reconnaissance.

## **5.5 Odours**

No odours were identified at the time of the site reconnaissance.

## **5.6 Water, Wastewater and Storm Water**

The subject property is serviced for municipal water and sewer service by the City of Ottawa.

## **5.7 Pits, Ponds and Lagoons**

No pits, ponds or lagoons were observed at the time of the site reconnaissance.

## **5.8 Stained Materials and Stressed Vegetation**

No stained materials and stressed vegetation were observed at the time of the site reconnaissance.

## **5.9 Watercourses, Ditches or Standing Water**

No watercourses, ditches or standing water were identified during site reconnaissance.

## **6.0 REVIEW AND EVALUATION OF INFORMATION**

### **6.1 Current and Past Uses**

The property has been owned by Ms. Lisa Fudge-Lunetta since 2016. Donald Urquhart owned the property before that for approximately 6 years.

### **6.2 Potentially Contaminating Activities**

PCAs within the Phase One ESA study area and resulting APECs on the subject property are summarized in Table 6.1. PCA locations are shown on Figure A.1, Appendix A.

**Table 6.1: Summary of Potentially Contaminating Activities**

Type of PCA	Address / Location	Distance from Subject Property	Company / Name	Description	PCA Resulted in APEC / No APEC Rationale
28. Gasoline and Associated Products Storage in Fixed Tanks	On-site, near repaired chute on western site of building	On-site	N/A	Repair near chute on western side of building, potentially used for heating oil tank in the past	Yes, based on PCA located on the subject property
30: Importation of Fill Material of Unknown Quality	On-site, possibly across the subject property	On-site	N/A	Building present on site, importation of fill from historical development is possible	Yes, based on PCA located on the subject property
28. Gasoline and Associated Products Storage in Fixed Tanks	1186 Wellington Street	195 m southeast	Parkdale ESSO Ron Aspeck & Son Ltd.	Four underground single wall steel gasoline storage tanks with varying volumes (13600 L and 22700 L)	Yes, based on likely bulk storage and anticipated groundwater flow direction
28. Gasoline and Associated Products Storage in Fixed Tanks	390 Parkdale Avenue	150 m southeast	6205429 Canada Inc.; Suncor Energy Products Partnership	Seven underground double wall fibreglass gasoline storage tanks with varying volumes (25000 L, 50000 L and 65000 L)	Yes, based on likely bulk storage and anticipated groundwater flow direction
58. Waste Disposal and Waste Management, including thermal treatment, landfilling and transfer of waste, other than use of biosoils as soil conditioners	16 Hamilton Avenue	58 m southeast	CAA North & East Ontario	Listed as generator of waste oil and lubricants	No, based on type of business and anticipated volumes of waste oils
58. Waste Disposal and Waste Management, including thermal treatment, landfilling and transfer of waste, other than use of biosoils as soil conditioners	1203 Wellington Street	140 m southeast	Vic's Hardrock Cycle	Listed as generator of petroleum distillates, waste oil and lubricants	No, based on type of business and anticipated volumes of waste oils
31. Ink Manufacturing, Processing and Bulk Storage 58. Waste Disposal and Waste Management, including thermal treatment, landfilling and transfer of waste, other than use of biosoils as soil conditioners	1195 Wellington Street	140 m southeast	Marquardt Printing	Listed as generator of photoprocessing wastes	Yes, based on nature of business and anticipated groundwater flow direction
58. Waste Disposal and Waste Management, including thermal treatment, landfilling and transfer of waste, other than use of biosoils as soil conditioners	1221 Wellington Street	140 m south	Wellington Medical Clinic	Listed as generator of pathological wastes	No, based on type of waste generated
42. Pharmaceutical manufacturing and processing 58. Waste Disposal and Waste Management, including thermal treatment, landfilling and transfer of waste, other than use of biosoils as soil conditioners	1200B Wellington Street	150 m southeast	Carvers Drug Store Ltd; Pharma Plus Drugmarts Ltd.	Listed as generator of pharmaceuticals and pathological wastes	No, based on type of waste generated
58. Waste Disposal and Waste Management, including thermal treatment, landfilling and transfer of waste, other than use of biosoils as soil conditioners	1227 Wellington Street	150 m southwest	Apollo Property Management	Real Estate Property Managers listed as generator of oil skimmings and sludges	No, based on type of business and anticipated volume of waste oils
37. Operation of Dry Cleaning Equipment (where chemicals are stored)	1233 Wellington Street C/O 1764 Woodward Drive	150 m southwest	Spic & Span	Listed as user and generator of halogenated solvents	Yes, based on nature of business and anticipated groundwater flow direction
37. Operation of Dry Cleaning Equipment (where chemicals are stored)	1233 Wellington Avenue C/O 6008 Voyageur Drive	150 m southwest	VIP Drycleaners	Listed as user and generator of halogenated solvents	Yes, based on nature of business and anticipated groundwater flow direction
37. Operation of Dry Cleaning Equipment (where chemicals are stored)	1233 Wellington Street	150 m southwest	898742 Ontario Inc.	Listed as user and generator of halogenated solvents	Yes, based on nature of business and anticipated groundwater flow direction
58. Waste Disposal and Waste Management, including thermal treatment, landfilling and transfer of waste, other than use of biosoils as soil conditioners	1233 Wellington Street	150 m southwest	Quantum Remediation Inc.	Listed as generator of oil skimmings and sludges	No, based on anticipated groundwater flow direction
42. Pharmaceutical manufacturing and processing 58. Waste Disposal and Waste Management, including thermal treatment, landfilling and transfer of waste, other than use of biosoils as soil conditioners	1190 Wellington Street	180 m southeast	Rexall Pharmacy Group Ltd.; Pharma Plus Drugmarts Ltd.	Pharmacies listed as generator of pharmaceuticals and pathological wastes	No, based on type of waste generated
58. Waste Disposal and Waste Management, including thermal treatment, landfilling and transfer of waste, other than use of biosoils as soil conditioners	1166 Wellington Street West	210 m southeast	Doran Contractors Ltd.	Contractor listed as generator of light fuels	No, based on distance from site and anticipated volumes generated
31. Ink Manufacturing, Processing and Bulk Storage 58. Waste Disposal and Waste Management, including thermal treatment, landfilling and transfer of waste, other than use of biosoils as soil conditioners	1242 ½ Wellington Street	230 m southwest	Focus Photographic Services	Photography Equipment/Supplier listed as generator of photoprocessing wastes	No, based on distance from site and anticipated groundwater flow direction
NA	1244 Wellington Street	240 m southwest	The Property Group	NA	No, based on nature of business
42. Pharmaceutical manufacturing and processing 58. Waste Disposal and Waste Management, including thermal treatment, landfilling and transfer of waste, other than use of biosoils as soil conditioners	1156 Wellington Street	240 m southeast	The Salvation Army Ottawa Grace Manor; Salvation Army Grace General Hospital	Nurse care facilities and hospital listed as generator of pharmaceuticals and pathological wastes	No, based on type of waste generated
58. Waste Disposal and Waste Management, including thermal treatment, landfilling and transfer of waste, other than use of biosoils as soil conditioners	7 Hinton Avenue	75 m northwest	Metcalfe Realty Limited	Real estate property managers listed as generator of waste oil and lubricants; organic laboratory chemicals	No, based on type of business, and anticipated groundwater flow direction
19. Electronic and Computer Equipment Manufacturing	3 Hamilton Avenue	95 m northeast	Honeywell Ltd.	Listed as generator of halogenated solvents, inorganic laboratory chemicals, aliphatic solvents, petroleum distillates, oil skimmings and sludges	No, based on anticipated groundwater flow direction



31. Ink Manufacturing, Processing and Bulk Storage 58. Waste Disposal and Waste Management, including thermal treatment, landfilling and transfer of waste, other than use of biosoils as soil conditioners	45 Spencer Street	140 m northeast	Graphic Display Canada	Listed as generator of photoprocessing wastes	No, based on anticipated groundwater flow direction
58. Waste Disposal and Waste Management, including thermal treatment, landfilling and transfer of waste, other than use of biosoils as soil conditioners	383 Parkdale Avenue	170 m east	Rosemount Family Health Organization; GEM Health Care Services	Listed as generator of pathological wastes	No, based on type of waste generated
58. Waste Disposal and Waste Management, including thermal treatment, landfilling and transfer of waste, other than use of biosoils as soil conditioners	85 Spencer Street	180 m west	Ottawa Greenbelt Construction Ltd.	Site preparation contractors listed as generator of light fuels	No, based on distance from site and anticipated groundwater flow direction
58. Waste Disposal and Waste Management, including thermal treatment, landfilling and transfer of waste, other than use of biosoils as soil conditioners	45 Holland Avenue	190 m northwest	CCC476	Leasors of non-residential buildings listed as generator of oil skimmings and sludges	No, based on distance from site and anticipated groundwater flow direction
1. Acid and Alkali Manufacturing, Processing and Bulk Storage 19. Electronic and Computer Equipment Manufacturing	300 Parkdale Avenue	220 m north	Scintrex Trace Corp.	Listed as generator of acid waste, alkaline waste and aliphatic solvents	No, based on distance from site and anticipated groundwater flow direction
31. Ink Manufacturing, Processing and Bulk Storage 58. Waste Disposal and Waste Management, including thermal treatment, landfilling and transfer of waste, other than use of biosoils as soil conditioners	300 Parkdale Avenue	220 m north	M.O.M. Printing	Listed as generator of petroleum distillates and photoprocessing waste	No, based on distance from site and anticipated groundwater flow direction
58. Waste Disposal and Waste Management, including thermal treatment, landfilling and transfer of waste, other than use of biosoils as soil conditioners	1 Hamilton Avenue North	230 m north	Ontario Petroleum Pump	Listed as generator of light fuels	No, based on distance from site and anticipated groundwater flow direction
58. Waste Disposal and Waste Management, including thermal treatment, landfilling and transfer of waste, other than use of biosoils as soil conditioners	1600 Scott St	250 m northwest	Colonnade Development Inc.	Not Applicable	No, based on nature of business
58. Waste Disposal and Waste Management, including thermal treatment, landfilling and transfer of waste, other than use of biosoils as soil conditioners	11 Holland Avenue	250 m northwest	Hetz Medicine Professional Corporation	Listed as generator of pathological wastes	No, based on type of waste generated, distance from site and anticipated groundwater flow direction
58. Waste Disposal and Waste Management, including thermal treatment, landfilling and transfer of waste, other than use of biosoils as soil conditioners	11 Holland Avenue	250 m northwest	ITF CJPT Real Estate No. 1 Trust	Listed as generator of wastes from the use of pigments, coatings and paints	No, based on distance from site and anticipated groundwater flow direction
58. Waste Disposal and Waste Management, including thermal treatment, landfilling and transfer of waste, other than use of biosoils as soil conditioners	11 Holland Avenue	250 m northwest	Colonnade Development Inc.	Real estate property managers listed as generator of aliphatic solvents and paint/pigment/coating residues	No, based on distance from site and anticipated groundwater flow direction
42. Pharmaceutical Manufacturing and Processing 58. Waste Disposal and Waste Management, including thermal treatment, landfilling and transfer of waste, other than use of biosoils as soil conditioners	1600 Scott Street	250 m northwest	Pharma Plus Drugs Ltd.; Holland Cross Dental Centre; Rexall Pharmacy Group Ltd.	Listed as generator of pharmaceuticals and pathological wastes	No, based on type of waste generated, distance from site and anticipated groundwater flow direction
OT #1: Spill	409 Parkdale Avenue	240 m southeast	Not Applicable	Commercial property; CO release	No, based on nature of release
OT #1: Spill	129 Hinton Avenue North	240 m southeast	Not Applicable	Multi-unit residential boiler sooted up, producing CO	No, based on nature of release
28. Gasoline and Associated Products Storage in Fixed Tanks OT #1: Spill	320 Parkdale Avenue	140 m northwest	Not Applicable	Multi-unit residential fuel oil leaking from piping at the fuel oil storage tank	No, based on distance from site and anticipated groundwater flow direction
55. Transformer Manufacturing, Processing and Use 58. Waste Disposal and Waste Management, including thermal treatment, landfilling and transfer of waste, other than use of biosoils as soil conditioners	1156 Wellington Street	250 m east	Salvation Army Grace Hospital	School/Care/Facility; PCB type/code: Askarel; stored for disposal	No, based on nature of business, distance from site, and anticipated groundwater flow direction
55. Transformer Manufacturing, Processing and Use	1156 Wellington Street	250 m east	Grace General Hospital	Bulk liquid with high levels of PCBs; transformer and drum of ballasts	No, based on nature of business, distance from site and anticipated groundwater flow direction
40. Pesticides Manufacturing, Processing, Bulk Storage and Large-Scale Applications	1226 Wellington Street	200 m south	Morris Hardware	Retail pesticides vendor	No, based on nature of business, distance from site and small volumes anticipated
OT #1: Spill	72 Holland Avenue	150 m southwest	NA	Natural gas pipeline hit ½" incident	No, based on nature of release
OT #1: Spill	137 Huron Avenue North	200 m southwest	Manotick Tree Movers Inc.	Pipeline incident	No, based on distance from site and nature of release
OT #1: Spill	131 Holland Avenue	220 m south	NA	Pipeline Incident	No, based on distance from site and nature of release
OT #1: Spill	228 Armstrong Street	100 m northeast	NA	Pipeline Incident; pipeline hit 1.25"	No, based on distance from site and nature of release
Not Applicable	1233 Wellington Street	150 m southwest	1592541 Ontario Inc.	Full Depth Site Conditions Standard, with Non-potable Ground Water, Medium/Fine Textured Soil, for Residential/Parkland/Institutional property use	N/A



Not Applicable	131 Holland Avenue	220 m south	ONE3ONE Holland Residences Inc.	Full Depth Site Conditions Standard, with Non-potable Ground Water, Coarse Textured Soil, for Residential/Parkland/Institutional property use	N/A
OT #1: Spill	83 Holland Avenue	90 m southwest	Tomlinson Environmental Services Ltd.	Fire water flooded the basement	No, based on nature of release
OT #1: Spill	79 Holland Avenue	100 m southwest	Private residence	450 L of fuel oil to floor of gravel basement	No, based on cross gradient distance from site and anticipated groundwater flow direction
OT #1: Spill	72 Holland Avenue	150 m southwest	Enbridge Gas Distribution Inc.	Human error leading to line damage	No, based on nature of release
OT #1: Spill	Parkdale Avenue and Wellington Street	180 m southeast	NA	Valve/Fitting leak or failure	No, based on nature of release
OT #1: Spill	1190 Wellington Street	180 m southeast	Rexall Drug Store	Freon R-22 leak to atmosphere	No, based on nature of release
28. Gasoline and Associated Products Storage in Fixed Tanks OT #1: Spill	120 Holland Avenue	180 m southwest	Westboro Group of Companies	Fuel oil to ground from underground storage tank	No, based on anticipated groundwater flow direction
28. Gasoline and Associated Products Storage in Fixed Tanks OT #1: Spill	1186 Wellington Street	190 m southeast	Imperial Oil	Gasoline leak to soil from underground storage tank due to corrosion	Yes, based on nature of business and anticipated groundwater flow direction
28. Gasoline and Associated Products Storage in Fixed Tanks OT #1: Spill	1186 Wellington Street	190 m southeast	ESSO Petroleum Canada	3000 L of furnace oil to ground from underground tank due to corrosion	Yes, based on nature of business and anticipated groundwater flow direction
OT #1: Spill	131 Holland Avenue	220 m south	Tomlinson Environmental Services Ltd.	Approximately 200 L of hydraulic oil to asphalt and catch basin; contained	No, based on distance from site and reportedly contained
OT #1: Spill	4 Hamilton Street	75 m northwest	Ottawa Hydro	Pipe/Hose leak leading to 1 L of hydraulic oil to ground	No, based on small volume of release and distance from site
28. Gasoline and Associated Products Storage in Fixed Tanks OT #1: Spill	320 Parkdale Avenue	140 m northeast	NA	Equipment failure leading to leaking fuel oil tank	No, based on location downgradient from site and anticipated groundwater flow direction
OT #1: Spill	390 Parkdale Avenue	150 m southeast	Suncor Energy Products Inc.	Customer overfill leading to 10 L gas to pad and 1 L to catch basin	No, based on small volume of release and catch basin containment
OT #1: Spill	383 Parkdale Avenue	170 m east	NA	Gasoline odour in office building from sump pump area in the parking garage	No, based on nature of report and uncertainty with reportable release volumes
OT #1: Spill	395 Parkdale Avenue	170 m east	Private Owner	Tank leak from a pickup truck	No, based on distance from site and anticipated small volume of release
OT #1: Spill	383 Parkdale Avenue	170 m east	NA	Gasoline odour in office building from sump pump area in the parking garage	No, based on nature of report and uncertainty with reportable release volumes
54. Textile Manufacturing and Processing	2-4 Hamilton Avenue North	50 m northeast	Capital Wire Cloth Manufacturing Co.	Historical Textiles Manufacturing 1916-1921	No, based on anticipated direction of groundwater flow
34. Metal Fabrication 32. Iron and Steel Manufacturing and Processing	16 Hamilton Avenue North	65 m southeast	Davidson and Crooks Foundry	Historical foundry 1916-1961	Yes, based on nature of business, proximity to site and anticipated groundwater flow direction
12. Concrete, Cement and Lime Manufacturing	365 Parkdale Avenue	130 m southeast	Wright & Co Inc. Lime	Historical Cement and Lime Manufacturing 1916	No, based on nature of business and anticipated wastes
59. Wood Treating and Preservative Facility and Bulk Storage of Treated and Preserved Wood Products	382 Parkdale Avenue	135 m southeast	Greater Ottawa Sash. Door & Lumber Co Ltd	Historical lumber company 1916	Yes, based on nature of business and anticipated groundwater flow direction
59. Wood Treating and Preservative Facility and Bulk Storage of Treated and Preserved Wood Products	1235 Wellington Street West	200 m southwest	Carleton Hardware Limited	Historical Hardware Store 1916	No, based on anticipated groundwater flow and distance from site
34. Metal Fabrication; 19. Electronic and Computer Equipment Manufacturing	20 Hamilton Avenue North	85 m south	Gerard & Stewart Machine Shop	Historical Machine Shop 1916 - 1941	Yes, based on nature of business, proximity to site, and anticipated groundwater flow direction
37. Operation of Dry Cleaning Equipment (where chemicals are used)	1209 Wellington Street West	130 m south	Leung Chinese Laundry	Historical Dry Cleaners 1926 - 1936	Yes, based on nature of business and anticipated groundwater flow direction
59. Wood Treating and Preservative Facility and Bulk Storage of Treated and Preserved Wood Products	1255 Wellington Street West	250 m southwest	Higman Hardware	Historical Hardware Store 1926-1982	No, based on anticipated groundwater flow and distance from site
10. Commercial Autobody Shop and 28. Gasoline and Associated Products Storage in Fixed Tanks	1241 and 1251 Wellington Street West	210 m southwest	Holland Service Station, Shell Oil Company, Quinn Marty Service Station	Historical Service Stations 1926-1931, 1951-1956, 1961-1966	No, based on anticipated groundwater flow and distance from site
42. Pharmaceutical manufacturing and processing 58. Waste Disposal and Waste Management, including thermal treatment, landfilling and transfer of waste, other than use of biosoils as soil conditioners	1156 Wellington Street West	240 m southeast	Salvation Army hospital	Historical Hospital 1926-1997	No, based on type of wastes anticipated and distance from site

28. Gasoline and Associated Products Storage in Fixed Tanks	1186 Wellington Street West	170 m southeast	Imperial Oil Service Station, Minion's Service Station, ESSO	Historical Service Stations (1926-1936). (1941-1961) (1966-1992)	Yes, based on nature of business, likely bulk fuel storage, long term operation and anticipated groundwater flow direction
37. Operation of Dry Cleaning Equipment (where chemicals are used)	1200 Wellington Street West	170 m south	Pattons Cleaners and Dryers	Historical Dry Cleaners 1931-1966	Yes, based on nature of business and anticipated groundwater flow direction
9. Coal Gasification	20 Hamilton Avenue North	70 m south	Canadian Under Feed Coal Burners machine shop	Historical Coal Burners / Machine Shop 1936-1951	Yes, based on nature of business, proximity to site, and anticipated groundwater flow direction
42. Pharmaceutical Manufacturing and Processing 58. Waste Disposal and Waste Management, including thermal treatment, landfilling and transfer of waste, other than use of biosoils as soil conditioners,	1234 Wellington Street West	155 m south	Joynt Drugs/Joynt's Pharmacy Limited	Historical Pharmacy 1941-1997	No, based on type of wastes anticipated
58. Waste Disposal and Waste Management, including thermal treatment, landfilling and transfer of waste, other than use of biosoils as soil conditioners	Parkdale Market	100 m east	Parkdale Market	Waste barrels for soil and purge water	No, based on nature of waste and proper containment
59. Wood Treating and Preservative Facility and Bulk Storage of Treated and Preserved Wood Products	1226 and 1249 Wellington Street West	190 m southwest	Morris Hardware	Historical Hardware Store 1951-1997	No, based on anticipated groundwater flow and distance from site
58. Waste Disposal and Waste Management, including thermal treatment, landfilling and transfer of waste, other than use of biosoils as soil conditioners	300 Parkdale Avenue	230 m northeast	Instruments Limited	Historical Manufacturing 1951-1966	No, based on anticipated groundwater flow and distance from site
19. Electronic and Computer Equipment Manufacturing;	22 Hamilton Avenue North	80 m south	Electric Motor Services, Wellington Electric Company Limited	Historical Manufacturing 1951-1971, 1981-1987	Yes, based on nature of business, proximity to site, and anticipated groundwater flow direction
10. Commercial Autobody Shop	24 Hamilton Avenue North	98 m south	Armstrong Motors	Historical Autobody Shop 1951-2007	Yes, based on nature of business, proximity to site, and anticipated groundwater flow direction
19. Electronic and Computer Equipment Manufacturing	3 Hamilton Avenue North	65 m northeast	Sperry Gyroscope Ottawa	Historical Manufacturing 1951-1987	No, based on anticipated groundwater flow
28. Gasoline and Associated Products Storage in Fixed Tanks	65 Holland Avenue	125 m northwest	Stanley Harold Fuel Ltd.	Historical Service and Fueling Station 1966-1976	No, based on anticipated groundwater flow
28. Gasoline and Associated Products Storage in Fixed Tanks	390 Parkdale Avenue	130 m southeast	Alec's Sunoco Serve Station	Historical Service and Fueling Station 1966-2010	Yes, based on nature of business, long term operations, likely bulk fuel storage and anticipated groundwater flow direction
28. Gasoline and Associated Products Storage in Fixed Tanks	1175 Wellington Street West	190 m southeast	Shell	Historical Service and Fueling Station 1971-1987	Yes, based on nature of business, likely bulk fuel storage and anticipated groundwater flow direction
34. Metal Fabrication	2 Hinton Avenue North	95 m northwest	Lacasse Custom Metal Fabrication	Historical Fabrication 1976-1992	No, based on anticipated groundwater flow
37. Operation of Dry Cleaning Equipment (where chemicals are used)	1233 Wellington Street West	155 m southwest	Valetor Cleaners, Capital Dry Cleaners	Historical Dry Cleaners 1981-1982, 1992	No, based on anticipated groundwater flow
19. Electronic and Computer Equipment Manufacturing	300 Parkdale Avenue	230 m northeast	Scintrex Corporation	Historical Manufacturing 2006-2020	No, based on anticipated groundwater flow

### 6.3 Areas of Potential Environmental Concern

The available information was reviewed in a comprehensive manner starting with historical environmental records and information, followed by the results of the site reconnaissance and the results of the interviews. These three components were evaluated using professional experience, judgment and available documentation to determine PCAs. Available historical records were cross-referenced with other records to verify their accuracy. The observations from the site reconnaissance and information provided through the interview validated the available historical records for the subject property, and vice versa. The PCAs were reviewed in order to identify APECs for the subject property.

Seven APECs were identified on the subject property, as summarized below in Table 6.2.

**Table 6.2: Summary of Areas of Potential Environmental Concern.**

APEC #	Type of PCA	Description	Material of Concern	Contaminants of Potential Concern (COPC)
1	PCA #30: Importation of Fill Material of Unknown Quality	Building present on site, importation of fill from historical development is possible	Soil / Fill, Groundwater	PAHs M&I PHC F1-F4 VOCs
2	PCA #28: Gasoline and Associated Products Storage in Fixed Tanks	Source of heating unknown before the use of natural gas heating; determined during site visit, multiple upgradient commercial fueling stations in study area reported in historical records and ERIS	Soil Groundwater	PHC F1-F4 BTEX Metals
3	PCA #10 Commercial Autobody Shop PCA#19. Electronic and Computer Equipment Manufacturing, PCA#31. Ink Manufacturing, Processing and Bulk Storage	Multiple upgradient commercial autobody shops, printers, and electronics and computer manufacturers in study area reported in historical records and ERIS	Soil Groundwater	VOCs Metals
4	PCA#37. Operation of Dry Cleaning Equipment (where chemicals are stored)	Multiple upgradient dry cleaners in study area reported in historical records and ERIS	Soil Groundwater	VOCs
5	PCA#9. Coal Gasification	Historical Coal Burners / Machine Shop 1936-1951 located upgradient of site	Soil Groundwater	BTEX PAHs Metals Phenols Metals
6	PCA#32. Iron and Steel Manufacturing and Processing PCA#34. Metal Fabrication	Historical foundry 1916-1961 located upgradient of site	Soil Groundwater	VOCs PAHs PHC F1-F4 PCBs
7	PCA#59. Wood Treating and Preservative Facility and Bulk Storage of Treated and Preserved Wood Products	Multiple upgradient businesses with potential wood treating and preserving operations in study area reported in historical records and ERIS	Soil Groundwater	Metals PAHs VOCs

**Notes:**

PAHs – Polycyclic Aromatic Hydrocarbons  
M&I – Metals and Inorganics  
PCBs - Polychlorinated biphenyls  
PHCs F1-F4 – Petroleum Hydrocarbons Fractions F1- F4  
BTEX – Benzene, Toluene, Ethylbenzene, and Xylene  
VOCs – Volatile Organic Compounds

### **6.3.1 APEC 1 – Importation of Fill Material of Unknown Quality**

Through a review of aerial photographs and knowledge that the subject property has had an on-site residential dwelling since at least 1920s, fill of unknown quality has likely been used during development. The associated contaminants of potential concern are PAHs, M&I, PHC F1-F4, and VOCs in soil and groundwater.

### **6.3.2 APEC 2 – Gasoline and Associated Products Storage in Fixed Tanks**

Through observations made during site reconnaissance, a repair was noticed on the left of an opening (possibly a chute) on the western side of the building. This repair could possibly have been a result of former fill/vent pipes for the tank. Although it should be noted that FIPs were reviewed, for year 1912, 1948 and 1956, and they do not show the presence of the tank on the subject property. The potentially associated contaminants of concern are metals, PHC F1-F4, and BTEX in soil and groundwater. This APEC is present closer to the northern boundary of the subject property, close to Armstrong Street.

Through a review of the ERIS report and available historical documents and records, many commercial fueling stations, with bulk underground storage of fuels, have been present upgradient of the site and within the study area. The potentially associated contaminants of concern are metals, PHC F1-F4, and BTEX in soil and groundwater. This APEC is present across the subject property, although higher concentrations may be observed on the southern portion of the property parcel.

### **6.3.3 APEC 3 – Commercial Autobody Shops, Electronic and Computer Manufacturing, and Ink Manufacturing, Processing and Bulk Storage**

Through a review of the ERIS report and available historical documents and records, many commercial Autobody Shops, Electronic and Computer Manufacturing Companies and Businesses (i.e., Printers) involving ink manufacturing, processing and bulk storage have been present upgradient of the site and within the study area. The potentially associated contaminants of concern are VOCs and metals in soil and groundwater. This APEC is present across the subject property, although higher concentrations may be observed on the southern portion of the property parcel.

### **6.3.4 APEC 4 – Operation of Dry Cleaning Equipment (where chemicals are stored)**

Through a review of the ERIS report and available historical documents and records, many commercial dry cleaning establishments have been present upgradient of the site and within the study area. The potentially associated contaminants of concern are VOCs in soil and groundwater. This APEC is present across the subject property, although higher concentrations may be observed on the southern portion of the property parcel.

### **6.3.5 APEC 5 – Coal Gasification**

Through a review of the city directories, the Canadian Under Feed Coal Burners machine shop was listed as being located at 20 Hamilton Avenue North (south of the subject property) from approximately 1936-1951. The potentially associated contaminants of concern are BTEX, PAHs, Metals, and Phenols in soil and groundwater. This APEC is present across the subject property, although higher concentrations may be observed on the southern portion of the property parcel.

### **6.3.6 APEC 6 – Iron and Steel Manufacturing and Processing, Metal Fabrication**

Through a review of the ERIS report and available historical documents and records, foundries and machine shops have been present upgradient of the site and within the study area. The potentially associated contaminants of concern are Metals, VOCs, PAHs, PHC F1-F4, and PCBs in soil and groundwater. This APEC is present across the subject property, although higher concentrations may be observed on the southern portion of the property parcel.

### **6.3.7 APEC 7 – Wood Treating and Preservative Facility and Bulk Storage of Treated and Preserved Wood Products**

Through a review of the ERIS report and available historical documents and records, operations involving wood treatment and preserving, and potentially bulk storage of treated and preserved wood products have been present upgradient of the site and within the study area. The potentially associated contaminants of concern are Metals, PAHs, and VOCs in soil and groundwater. This APEC is present across the subject property, although higher concentrations may be observed on the southern portion of the property parcel.

## **6.4 Phase One Conceptual Site Model**

Based on the historical review, site interviews, and site reconnaissance, GEMTEC concludes that there is potential for soil and groundwater contamination at the subject property. Information presented in this report that contributes to the development of the CSM is presented as applicable in Figures A.1 through A.3 and summarized as follows:

- The subject property has been a residential dwelling since at least 1928. The site is proposed to be redeveloped into multi-unit residential;
- The building on the subject property is fully serviced by the municipality and utility providers;
- Surrounding properties are a mix of residential and commercial properties;
- The MECP Well Records search identified 95 wells were identified within the study area however, only 34 wells records were available. The MECP well records indicate that the soil stratigraphy in the area generally consists of gravel and limestone;
- No provincially significant wetlands (PSWs) were identified on the subject site or within the study area;

- No Areas of Natural or Scientific Interest (ANSIs) was identified on the subject site or within the study area;
- The subject property has a relatively flat topography and is at an elevation of approximately 65 metres above sea level. Surrounding topography generally slopes gradually downwards towards the Ottawa River, which is located approximately 1.2 kilometres to the north of the subject property. It is anticipated that shallow local groundwater flow may have a northwards flow direction component;
- Surficial soil and bedrock geology maps of the Ottawa area indicate that the overburden in the vicinity of the subject property generally consists of till defined as stone-poor, sandy silt to silty sand-textured till on Paleozoic terrain with a thickness of between 0 to 3 metres. The bedrock is mapped as Limestone, dolostone, shale, arkose, sandstone of the Shadow Lake Formation;
- Based on the review of records, the interview and the site reconnaissance completed as part of the Phase One ESA, GEMTEC identified eighty-three PCAs for the study area; and,
- Seven APECs were identified as being present on the subject property.

Information considered for the development of this CSM was gathered from numerous sources (i.e. aerial photographs, city directories, environmental database searches, physical setting sources, interview and a site reconnaissance), which reduces the potential for not identifying a former property use or PCA.

#### **6.4.1 Underground Utilities**

There is potential for underground utilities to affect contaminant transport for the subject property, if contaminants are present.

#### **6.4.2 Discussion of Uncertainty**

There is uncertainty with the Phase One Conceptual Site Model associated with using well record data, topographic and geology maps from external sources. Information based on these sources may have changed since publishing due to construction, seasonal variations, or other factors.

## **7.0 CONCLUSIONS**

Based on GEMTEC's review of available historical information pertaining to the subject site and adjacent properties, the interview completed and site reconnaissance undertaken, seven APECs were identified to be present on the subject property.

## **8.0 REFERENCES**

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## **9.0 LIMITATIONS OF LIABILITY**

This Phase One ESA was carried out in general accordance with CSA Group’s “Z768-01 Phase One Environmental Site Assessment” and O.Reg. 153/04. The results of this Phase One 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 Mr. Lance Lunetta and is based on data and information collected during the Phase One ESA of the property conducted by GEMTEC Consulting Engineers and Scientists Ltd. This report may not be relied upon by any other person or entity without the express written consent of GEMTEC Consulting Engineers and Scientists Limited and Mr. Lance Lunetta. In evaluating this subject property, GEMTEC Consulting Engineers and Scientists Limited has relied in good faith on information provided by others. We accept no responsibility for any deficiencies or inaccuracies in this report as a result of omissions, misinterpretations, or fraudulent acts of others.

The assessment of environmental conditions and possible site hazards presented has been made using the available historical and technical data collected and provided by others. The conclusions provided herein represent the best judgment of GEMTEC Consulting Engineers and Scientists

Limited based on current environmental standards. Due to the nature of the investigation and the limited data available, we cannot warrant against undiscovered environmental liabilities.

The scope of the Phase One ESA is sufficient to identify existing and/or potential environmental liabilities that are obvious from visual examination of surface features and from available sources of information. This level of work is a method of risk reduction, not risk elimination. No building materials, water, liquid, gas, products or chemical sampling and/or testing on or in the vicinity of the subject property was carried out as part of this assessment. The Phase One ESA does not include a program of intrusive observation/testing. These activities would be carried out as part of a Phase Two ESA. This environmental assessment included only a cursory overview of the neighbouring land uses from public right of ways and from the subject property and does not constitute a complete assessment of the adjacent sites.

## 10.0 CLOSURE

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



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