

# Gladstone Village, 933 Gladstone Avenue – Functional Servicing Report

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# **Table of Contents**

1.0	INTRODUCTION	
1.1	OBJECTIVE	1.2
2.0	BACKGROUND	<b>2</b> .1
3.0	WATER SERVICING	3.1
3.1	WATER DEMANDS	
	3.1.1 Domestic Water Demands	
	3.1.2 Fire Flow Demands	
	3.1.3 Boundary Conditions	3.3
4.0	WASTEWATER SERVICING	<b>4</b> .1
4.1	DESIGN CRITERIA	
4.2	ESTIMATED WASTEWATER PEAK FLOWS	4.1
5.0	STORMWATER MANAGEMENT AND SERVICING	5.1
5.1	STORMWATER MANAGEMENT CRITERIA	
5.2	WATER QUANTITY CONTROL	
	5.2.1 Target Release Rate	
	5.2.2 Storage Requirements	
5.3	WATER QUALITY CONTROL	5.5
6.0	BACKGROUND STUDIES	6.1
6.1	GEOTECHNICAL INVESTIGATION	6.1
6.2	ENVIRONMENTAL SITE ASSESSMENTS (PHASE I & II ESA)	6.2
7.0	SITE GRADING AND DRAINAGE	7.1
8.0	UTILITIES	8.1
9.0	EROSION CONTROL DURING CONSTRUCTION	9.1
10.0	APPROVALS	10.1
11.0	CONCLUSIONS	11.1
11.1	WATER SERVICING	11.1
11.2	WASTEWATER SERVICING	
11.3	STORMWATER SERVICING AND MANAGEMENT	
11.4	GEOTECHNICAL CONSIDERATIONS	
11.5	GRADING	
11.6	UTILITIES	11.3

# **LIST OF TABLES**

APPE	NDIX F	CONCEPTUAL SERVICING DRAWINGS	F.1
APPE	NDIX E	BACKGROUND REPORTS	E.1
D.3	Correspo	ondence with the City of Ottawa (SWM Criteria)	D.3
D.2		Rational Method Calculations	
D.1	Function	al Storm Sewer Design Sheet	
APPE	NDIX D	STORMWATER MANAGEMENT	D.1
C.2	Correspo	ondence and Background	C.2
C.1	Function	al Sanitary Sewer Design Sheet	C.1
APPE	NDIX C	WASTEWATER SERVICING	C.1
B.3	Boundar	y Conditions (March 2021)	B.3
B.2		Demand Calculations per FUS Guidelines	
<b>В</b> .1		Water Demand Calculations	
APPE	NDIX B	POTABLE WATER SERVICING	B.1
A.3	Site Stati	istics	A.3
A.2	Preferred	d Development Concept	A.2
A.1		d Draft Plan	
APPE	NDIX A	PROPOSED DRAFT PLAN	<b>A</b> .1
LIST	OF APPEN	NDICES	
	<b></b> .		
		I Servicing and Removals Plan	
Figure	e 1: Locatio	on of Gladstone Village OCH Site	1.1
LIST	OF FIGUR	ES	
ıable	υ - 100-Ye	ear Storage Requirements and Release Rates	5.4
		ear Summary of Roof Controls	
		arget Release Rates	
		ited Total Wastewater Peak Flow	
Table	2 - Water	Distribution Boundary Conditions (2021)	3.3
Table	1 - Propos	sed Unit Mix 933 Gladstone Ave. Development	3.1

Introduction

# 1.0 INTRODUCTION

The Ottawa Community Housing Corporation (OCHC) has commissioned Stantec Consulting Ltd. to prepare the following Functional Servicing Report for the Gladstone Village development. The subject property is located at 933 Gladstone Avenue within the City of Ottawa, bounded by Gladstone Avenue to the south, the O-Train Trillium Rail Corridor to the west, Oak Street, Laurel Street East, Larch Street, and Balsam Street to the east and City of Ottawa lands fronting Somerset Street West to the north.

The proposed development site is presently undeveloped but was previously occupied by a large federal government warehouse prior to 2015. The area is designated as a Mixed-Use Centre Zone and **Figure 1** illustrates the location of the proposed Gladstone Village Development. The proposed development land comprises approximately 3.21 ha and is anticipated to be subdivided into thirteen (13) blocks and a public right-of-way (ROW) that bisects the site. Eight (8) blocks will contain a mixture of townhomes, stacked back-to-back townhomes, mid-rise mixed-use buildings, high-rise mixed-use buildings, underground parking, and semi-underground parking. The remainder of the blocks will be designated as parking areas, multi-use pathways and servicing corridors. The proposed draft plan is provided in **Appendix A.1**.



Figure 1: Location of Gladstone Village OCH Site

Introduction

## 1.1 OBJECTIVE

The intent of this report is to develop a functional servicing strategy specific to the subject property that uses the existing infrastructure surrounding the site and meets the design criteria obtained from the City included in **Appendix D.3**. The report will establish criteria for future detailed design of the development in accordance with the associated servicing criteria, City of Ottawa Guidelines, and all other relevant regulations.

Criteria and constraints provided by the City of Ottawa and background studies have been used as a basis for the adequacy of services for the proposed development.

#### Water Servicing

- Estimate water demands to characterize the proposed water services for the 933 Gladstone Avenue development which will be serviced from the existing 203mm diameter PVC watermain along Gladstone Avenue, the existing 406 mm diameter unlined cast iron watermain along Champagne Avenue, and the existing 152 mm diameter PVC watermain on Oak Street.
- Watermain servicing for the development is to provide average day, maximum day, and peak hour demands (i.e., non-emergency conditions) at pressures within the acceptable range of 40 to 80 psi (275 to 552 kPa).
- Under fire flow (emergency) conditions, the water distribution system is to maintain a minimum pressure greater than 20 psi (138 kPa).

#### Wastewater Servicing

 Estimate wastewater generation based on the proposed concept and direct flows to the local combined sewer system on the neighbouring streets.

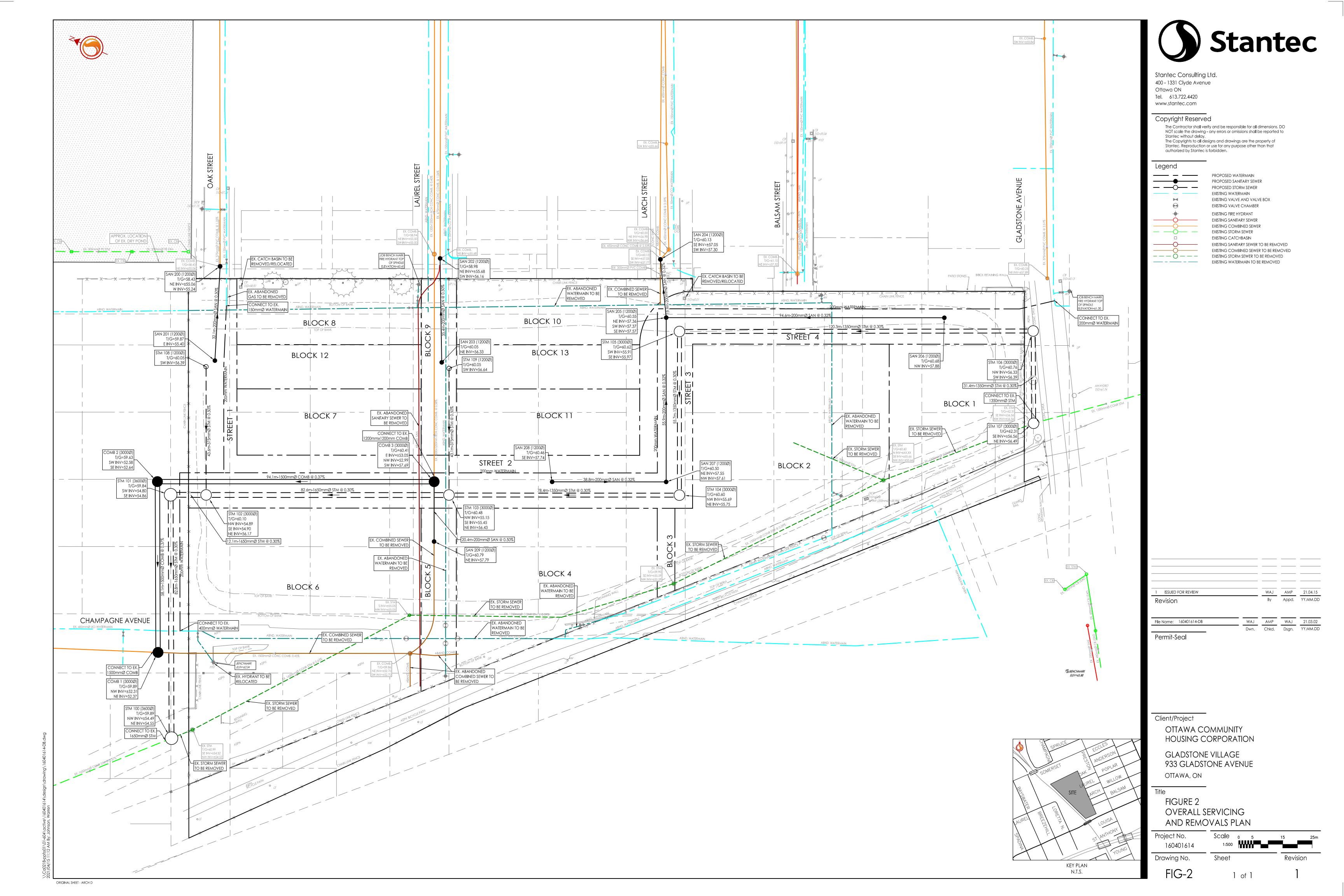
#### • Storm Sewer Servicing

- o Define major and minor conveyance systems in conjunction with the conceptual grading plan.
- o Determine the conceptual stormwater management storage requirements to meet the allowable release rate for the site.
- o Provide quantity and quality control meeting the criteria specified in **Section 5.0**.

#### Grading and Drainage

 Prepare a functional grading plan in accordance with the proposed development plan and grading constraints.

The Overall Servicing and Removals Plan shown in Figure 2 illustrates the proposed block layout within the site, the existing infrastructure within and surrounding the subject property, and the infrastructure proposed to service the site.



Background

# 2.0 BACKGROUND

The following documents were referenced in the preparation of this report:

- Final Report ON Phase One Environmental Site Assessment, 933 Gladstone Avenue, Ottawa, Ontario, Golder Associates Ltd., December 2016.
- Report ON Phase Two Environmental Site Assessment, 933 Gladstone Avenue, Ottawa, ON, Golder Associates Ltd., March 2017.
- Preliminary Geotechnical Investigation *Proposed Development, Gladstone Village, 933 Gladstone Avenue, Ottawa, Ontario, Golder Associates Ltd., June 2018.*
- Preston Street Rehabilitation Albert Street to Carling Avenue Design Brief Sewers, Stantec Consulting Ltd., November 2007.
- Plouffe Park Stormwater Storage Facility Design Brief Sewers, Stantec Consulting Ltd., January 2008.
- Technical Bulletin ISTB-2018-01 Revision to Ottawa Design Guidelines Sewer, City of Ottawa, March 2018
- Technical Bulletin ISTB-2018-02 Revision to Ottawa Design Guidelines Water Distribution, City of Ottawa, March 2018
- Technical Bulletin PIEDTB-2016-01 Revisions to Ottawa Design Guidelines Sewer, City of Ottawa, September 2016
- Technical Bulletin ISTB-2014-02 Revision to Ottawa Design Guidelines Water, City of Ottawa, May 2014
- City of Ottawa Sewer Design Guidelines, 2nd Ed., City of Ottawa, October 2012
- City of Ottawa Design Guidelines Water Distribution, Infrastructure Services Department, City of Ottawa, First Edition, July 2010

Water Servicing

# 3.0 WATER SERVICING

The 933 Gladstone Avenue site is located within the City of Ottawa's 1W pressure zone. The existing watermains available to service the proposed development include a 203 mm diameter watermain within Gladstone Avenue, a 152 mm diameter watermain within Oak Street, and a 403 mm diameter watermain within future Champagne Avenue providing multiple feeds and looping opportunities for the subdivision development as shown on **Drawing OSSP-1**. Fire hydrants will be installed along the public ROW to service the proposed development. Locations will be determined at the detailed design stage based on the results of a hydraulic analysis.

### 3.1 WATER DEMANDS

### 3.1.1 Domestic Water Demands

Water demands for the future developments were estimated based on the unit mix of the preferred development concept plan provided by Hobin Architecture as shown in **Appendix A.2**. The site will consist of approximately 1,087 residential units, noting that additional units have been accounted for based on correspondence with the client and assumptions made for expected future densities. As a result, the expected future densities of the development deviate slightly from the proposed concept plan and the site statistics provided in **Appendix A.3**. **Table 1** indicates the unit mix of the preferred development concept.

Table 1 - Proposed Unit Mix 933 Gladstone Ave. Development

Building ID	Commercial Area (m²)	Residential Area GFA (m²)	Total Area GFA (m²)	No. Residential Units	Population		
Townhomes	-	-	-	=	-		
Block A1 (Block 8)	-	1987	1987	12	32		
Block A2 (Block 10)	-	1987	1987	12	32		
Stacked Townhomes							
Block B1 (Block 7)	-	3237	3237	36	97		
Block B2 (Block 11)	•	3237	3237	36	97		
Block B3 (Block 6)	-	1799	1799	20	54		
Mixed Use - Block C (Block 6)							
C1 Podium Residential	-	4612	4612	40	108		
C1 Podium Retail/Commercial/Institutional	2323	-	2323	-	-		
C2 Midrise	-	5520	5520	67	121		
C3 Highrise	-	12800	12800	156	281		
Mixed Use - Block D (Block 4)	Mixed Use - Block D (Block 4)						
D1 Podium Residential	-	1666	1666	18	49		

Water Servicing

Building ID	Commercial Area (m²)	Residential Area GFA (m²)	Total Area GFA (m²)	No. Residential Units	Population
D1 Podium Retail/Commercial/Institutional	2323	-	2323	-	-
D2 Midrise	-	4320	4320	53	95
D3 Highrise	-	10714	10714	131	236
Mixed Use - Block E (Block 2)					
E1 Podium Residential	-	2911	2911	32	86
E1 Podium Retail/Commercial/Institutional	2323	-	2323	-	-
E2 Midrise	-	4320	4320	53	95
E3 Highrise	-	15840	15840	193	347
Mixed Use - Block F (Block 1)					
F1 Podium Residential <sup>1</sup>	-	1553	1553	18	49
F1 Podium Retail/Commercial	2323	-	2323	-	-
F2 Highrise, Residential/Office	-	15480	15480	189	340
Block C1, C2, C3, and B3 Build-out <sup>2</sup>	-	-	-	21	38
Total	9,290	91,982	101,273	1,087	2,158

Unit count not provided in site statistics for Block F1 residential area (1553m²). Unit count taken from Block D1 podium residential area with comparable footprint.

The City of Ottawa's *Water Distribution Guidelines* (2010) were used to estimate the domestic water demand for the proposed development. An average daily rate of 350 L/c/d for residential units and 28,000 L/ha/d for commercial space were applied to the proposed unit mix provided by Hobin Architecture.

Per the City of Ottawa's Water Distribution Guidelines, peaking factors of 1.5 and 2.5 were applied to the average day demands to calculate maximum day demands for commercial and residential areas, respectively. Peaking factors of 1.8 and 2.2 were applied to the maximum day demands to calculate the peak hour demands for commercial and residential areas, respectively. Based on a total 0.93 ha of commercial space and 1,087 residential units, assuming an average population of 1.8 persons per unit for apartment units and 2.7 persons per unit for townhome units as specified by City of Ottawa guidelines, the average day demand (AVDY) for the entire site was determined to be 11.75 L/s, with a maximum daily demand (MXDY) of 24.58 L/s and a peak hour demand (PKHR) of 52.27 L/s. Refer to **Appendix B.1** for detailed domestic water demand estimates.

#### 3.1.2 Fire Flow Demands

Fire flow requirements were estimated using the Fire Underwriters Survey (FUS) methodology, based on the measured floor areas of proposed buildings, to determine the highest fire flow requirement from the proposed concept plans. The FUS fire flow calculation spreadsheet for the governing fire flow demand

<sup>2.</sup> Intended future revision/expansion to Block C1, C2, C3, and Block B3 unit counts. Total of 21 additional units to be added to blocks for ultimate build-out as per the client's direction, resulting in deviation from the provided architectural statistics.

Water Servicing

scenario, provided in **Appendix B.2**, was produced to calculate the expected fire flow demands from the proposed site.

Using the townhome block with the largest number of stacked units (18 units) as a worst-case scenario, fire flow calculations were performed for Block B2 (Block 11) and the required fire flow was estimated to be 333 L/s. Given that the total ground floor area of Block B2 (Block 11) exceeds the maximum allowable area of 600 m², as per the Ontario Building Code, it is anticipated that fire separation will be required for the stacked back-to-back townhome blocks to meet OBC requirements. As a result, fire flow calculations were completed assuming fire separation within Block B2 (Block 11) resulting in 8-unit and 10-unit clusters. Based on the above fire separation assumptions for the 10-unit cluster, with a single unit ground floor area of 49 m², the required fire flow was determined to be 250.0 L/s as shown in **Appendix B.2**.

# 3.1.3 **Boundary Conditions**

The boundary conditions provided by the City of Ottawa are shown in Table 2.

Location	Oak Street - 152mm	Gladstone - 203mm	Champagne - 406mm	
	Connection	Connection	Connection	
	(Elev. 59.0 m)	(Elev. 60.3 m)	(Elev. 60.4 m)	
Minimum HGL	107.0 m	107.0 m	107.0 m	
	(68.25 psi)	(66.41 psi)	(66.26 psi)	
Maximum HGL	114.9 m	114.9 m	114.9 m	
	(79.49 psi)	(77.64 psi)	(77.50 psi)	
Max Day + Fire	106.2 m	106.4 m	109.1 m	
Demand (167 L/s)	(67.12 psi)	(65.55 psi)	(69.25 psi)	
Max Day + Fire	103.4 m	103.7 m	108.4 m	
Demand (233 L/s)	(63.14 psi)	(61.71 psi)	(68.25 psi)	
Max Day +Fire Demand	102.5 m	102.9 m	108.2 m	
(250 L/s)	(61.86 psi)	(60.58 psi)	(67.97 psi)	

Table 2 - Water Distribution Boundary Conditions (2021)

As shown on **Drawing OGP-1**, the ground elevation at the connections on Oak Street, Gladstone Avenue, and Champagne Avenue are 59.0 m, 60.3 m and 60.4 m, respectively. A residual pressure of **62 psi**, **61 psi**, and **68 psi** at the Oak Street, Gladstone Avenue, and Champagne Avenue connections will be available under the maximum day plus fire flow requirement (250 L/s) which are well above the required minimum pressure of 20 psi.

On-site pressures are expected to range from **66 psi** to **80 psi** under normal operating conditions. These values are within the normal operating pressure range as defined by City of Ottawa design guidelines



Water Servicing

(desired 50 to 80 psi and not less than 40 psi). Booster pumps internal to the buildings will be required to provide adequate pressures for upper storeys. These pumps are to be designed by the buildings' mechanical engineer.

It is anticipated that there is sufficient supply and pressure in the proposed water distribution system to meet the demands expected from the new development concept. A detailed hydraulic model will be provided at the detailed design stage to ensure pressures in the water distribution network meet the applicable City of Ottawa design guidelines.

Wastewater Servicing

# 4.0 WASTEWATER SERVICING

The subject site at 933 Gladstone Avenue is located within a combined sewer area. There are existing combined sewers along Oak Street (375 mm diameter), Laurel Street (675 mm diameter), Larch Street (450 mm diameter), Balsam Street (375 mm diameter), and Gladstone Avenue (375 mm diameter) that connect to the Preston Street Combined Trunk Sewer (PSCTS), as well as a combined sewer known as the Booth Street Sewer (BSS) that runs west along Laurel Street (1200 x 1200 concrete box) and continues through the subject site (1500 mm diameter) and then runs north along Champagne Avenue (1500 mm diameter) to Spruce Street and ultimately runs west to Booth Street (see **Drawing OSSP-1** and **Figure 2**, as well as background report excerpts in **Appendix C.2**).

The proposed private blocks 1, 2 and 4 will be serviced through a 200 mm diameter sanitary sewer along the proposed public ROW that will connect to the existing 450 mm diameter combined sewer on Larch Street. The proposed private blocks 10 and 11 will be serviced through a 200 mm diameter sanitary sewer along Block 9 that will connect to the existing 675 mm diameter combined sewer on Laurel Street to the PSCTS. Similarly, the proposed private blocks 7 and 8 will be serviced through a 200 mm diameter sanitary sewer along Street 1 that will connect to the existing 375 mm diameter combined sewer on Oak Street. Due to crossing conflicts with the proposed infrastructure along Street 2, private block 6 cannot be serviced through the existing combined sewers connected to the PSCTS and as such, it is proposed to service this block through a 200 mm diameter sanitary sewer along Block 5 connected to the proposed relocated 1500 mm diameter combined sewer along Street 2 that will connect to the existing combined sewer on Champagne Avenue and ultimately to the BSS.

### 4.1 DESIGN CRITERIA

As outlined in the City of Ottawa's *Sewer Design Guidelines*, the following criteria were used to calculate estimated wastewater flow rates based on the preferred development concept:

- Average wastewater generation 280 L/cap/day
- Peaking factor 4.0 (Harmon's residential)
- Peaking factor 1.5 (Harmon's commercial)
- Harmon Correction Factor = 0.8
- Extraneous flow allowance 0.33 L/s/ha
- Population density for 1-bedroom apartments 1.4 persons per unit
- Population density for Townhome 2.7 persons per unit
- Population for 'average apartment' 1.8 persons per unit
- Average wastewater generation (commercial) 28,000 L/ha/day of building space

## 4.2 ESTIMATED WASTEWATER PEAK FLOWS

Private sanitary sewers within the private blocks are anticipated to collect all sanitary wastewater from the proposed buildings via separate building services. Connections to the existing combined sewers on Oak



Wastewater Servicing

Street, Laurel Street, and Larch Street will convey sanitary flows from Blocks 1, 2, 4, 7, 8, 10 and 11 to the combined trunk sewer on Preston Street (PSCTS). Given the offsets and elevations required of the large diameter sewers that will be located within the northern segment of Street 2, the local sanitary sewer system cannot be extended to service Block 6. Block 6 will be serviced by a connection to the existing combined collector sewer to be relocated within Street 2 as shown on **Drawing OSA-1**.

Based on available background reports for the Preston Street Sewer Rehabilitation (Stantec, November 2007) and the Plouffe Park Stormwater Storage Facility (Stantec, January 2008) which are included in **Appendix C.2**, the existing 1500 mm diameter combined sewer (BSS), which will be relocated along the proposed public ROW, serviced the previous building within the subject site and also serves as a storm relief sewer to drain the Preston Street profile sag. As shown in Figure 3-1 of the Plouffe Park Design Brief included in **Appendix C.2**, the existing combined sewer crossing the site is used mostly for storm underground storage and is equipped with a flow control at the Somerset Street crossing that restricts peak flows to 300 L/s, which is well above the expected sanitary peak flows from the proposed private Block 6 (6.9 L/s).

A functional sanitary sewer design sheet was prepared and is included in **Appendix C.1.** The estimated wastewater flows expected to be generated are based on the preferred development concept of the site which includes 224 stacked townhome units and 863 residential apartment units with an estimated population of 2,158 persons and 0.93 ha of commercial space. The anticipated wastewater peak flow generated from the proposed development is summarized in the following table:

Table 3 - Estimated Total Wastewater Peak Flow

	Residential Units			Commercial Areas				Total	
Outlet Location	Number of Units	Population	Peak Factor	Peak Flow (L/s)	Area (ha)	Peak Factor	Peak Flow (L/s)	Inf. Flow (L/s)	Peak Flow (L/s)
Oak St. Connection	48	130	3.57	1.5	0.00	1.50	0.00	0.20	1.7
Laurel St. Connection	48	130	3.57	1.5	0.00	1.50	0.00	0.10	1.6
Larch St. Connection	687	1,298	3.18	13.4	0.70	1.50	0.30	0.50	14.2
Total Estimated Wast	Total Estimated Wastewater Peak Flow (L/s) to the PSCTS							17.5	
Champagne Ave. Connection	304	601	3.35	6.5	0.23	1.50	0.10	0.30	6.9
Total Estimated Wastewater Peak Flow (L/s) to BSS							6.9	•	

- 1. Intended future revision/expansion to Block 6-unit counts. Total of 21 additional units added to this block.
- 2. Unit count not provided for Block 1 residential area (1553m²). Unit count adapted from Block D1 podium residential area with comparable footprint.
- 3. Design residential flow based on 280 L/p/day and design commercial flow based on 28,000L/ha/day.
- 4. Peak factor for residential units calculated using Harmon's formula and taken as 1.50 for commercial areas.
- 5. Average apartment population assumed to be 1.8 persons/unit.
- 6. Townhome population assumed to be 2.7 persons/unit.
- 7. Infiltration design flow equals 0.33 L/s/ha.

The peak wastewater design flows generated from the proposed development will be conveyed east to the existing combined trunk sewer within Preston Street (PSCTS), and north to the existing combined trunk



Wastewater Servicing

sewer within Champagne Avenue (BSS). Confirmation from the City of Ottawa regarding conveyance capacity of the connecting sewers will be included in the next submission. Full port backflow preventers should be specified for each building service to protect from flooding in the event the combined sewer network surcharges

Stormwater Management and Servicing

# 5.0 STORMWATER MANAGEMENT AND SERVICING

The proposed 3.21 ha mixed-use development consists of thirteen (13) development blocks, where blocks 1, 2, 4 and 6 will consist of mixed residential and commercial use with underground parking, blocks 7 and 11 will consist of stacked back-to-back townhomes with semi-underground parking, and blocks 8 and 10 will consist of standard townhomes with garage and basements. The remaining five (5) blocks will be used as multi-use pathways, above ground parking areas and servicing corridors. Access to the development will be provided via a public roadway from Oak Street to Gladstone Avenue. The property is currently zoned as Mixed-Use and will contain four (4) high-rise mixed-use buildings, three (3) mid-rise mixed-use buildings, and a combination of traditional townhomes and stacked townhomes (see concept plan in **Appendix A.3**).

The proposed development is within a combined sewer area. There are existing combined sewers within and adjacent to the site along Oak Street, Laurel Street, Larch Street, Balsam Street, and Gladstone Avenue, as outlined in **Drawing OSSP-1**. However, as established through correspondence with City of Ottawa (see **Appendix D.3**), stormwater flows from the proposed site have been included in the stormwater model for the Nepean storm trunk sewer that runs north along the western property line as shown on **Drawing OSD-1**. As part of the proposed development, the existing storm trunk sewer running north along the western property line will be removed and relocated along the proposed public ROW and will connect the existing manhole on Gladstone Avenue to the existing 1650 mm diameter storm sewer west of Champagne Avenue. Based on correspondence with City of Ottawa staff (see **Appendix D.3**), there is approximately a 20-ha drainage tributary to this trunk sewer system (starting at highway 417) with a peak flow of about 2 m³/s. **Appendix D** contains the functional storm sewer design sheet.

Emergency overland flow from the proposed private blocks will be directed to adjacent streets, while major system peak flows from the proposed public ROW will be directed to Oak Street and ultimately to the Preston Street storm relief system.

## 5.1 STORMWATER MANAGEMENT CRITERIA

The criteria used to design the stormwater management (SWM) component will ensure that post-development stormwater peak flows from the site do not exceed the allowable target release rate set forth by the stormwater management criteria. The SWM criteria for the proposed development have been determined through consultation with City of Ottawa staff and the review of background information. **Appendix D.3** contains correspondence with City of Ottawa staff confirming the stormwater management criteria to be used. The stormwater management (SWM) criteria are summarized as follows:

- Restrict inflows to the receiving storm sewer to the 2-year peak flow based on a maximum runoff coefficient (C) of 0.60.
- Stormwater runoff in excess of the target release rate to be stored on-site up to and including the 100-year event for all private blocks.
- Minimum time of concentration of 10 minutes used for target release rate calculations based on previous development conditions (2014).



Stormwater Management and Servicing

- Major system peak flows from public ROWs to be directed east towards Oak Street and ultimately to the Preston Street storm relief system.
- Enhanced Level of quality control (i.e., 80% TSS removal) to be provided for all above ground parking areas within the proposed private blocks.

# 5.2 WATER QUANTITY CONTROL

The Modified Rational Method (MRM) has been used to assess the rate and volume of runoff expected to be generated during post-development and pre-development conditions.

# 5.2.1 Target Release Rate

The target release rate for the site area has been determined using the 2-year storm event IDF curves as provided within the City of Ottawa's *Sewer Design Guidelines*. Prior to 2015, the site was occupied by a Federal Government Warehouse which encompassed most of the property parcel as illustrated on **Drawing EXSD-1**. However, as confirmed through correspondence with City of Ottawa, the Nepean Bay SWM model assumed an imperviousness equivalent to a runoff coefficient (C) of 0.60. Therefore, the runoff coefficient value of 0.60 was used to determine the target peak outflow for the site as per the criteria established during pre-consultation. A time of concentration of 10 minutes for the pre-development area was assigned based on the previously existing building that occupied most of the site which provided little to no pervious area.

An overall target release rate of **411.2 L/s** from the entire site was obtained based on the rational method equation shown below.

$$Q = 2.78 (C)(I)(A)$$

Where:

Q = peak flow rate, L/s

C = site runoff coefficient

I = rainfall intensity, mm/hr (per City of Ottawa 2 - year IDF curves)

A = drainage area, ha

Intensity 
$$(mm/hr) = \frac{732.951}{(10 + 6.199)^{0.81}} = 76.81 \, mm/hr$$

$$Q = 2.78(0.6)(76.81mm/hr)(3.21 ha) = 411.2 L/s$$

The overall site target release rate was divided by the total site area to determine the target release rate per hectare (128.1 L/s/ha). Target release rates for the site are summarized in Table 4 below:

**Table 4 - Site Target Release Rates** 

Development Parcel	Subcatchment Area Target Flow Rate to Storm Sewer (L/s)¹		Pre-Development Target (L/s/ha)			
	Blocks					
Block 1	0.21	26.90	128.1			



Stormwater Management and Servicing

Development Parcel	Subcatchment Area (ha)	Target Flow Rate to Storm Sewer (L/s) <sup>1</sup>	Pre-Development Target (L/s/ha)
Block 2	0.47	60.21	
Block 3	0.02	2.56	
Block 4	0.30	38.43	
Block 5	0.07	8.97	
Block 6	0.62	79.43	
Block 7	0.14	17.94	
Block 8	0.14	17.94	
Block 9	0.07	8.97	
Block 10	0.15	19.22	
Block 11	0.14	17.94	
Block 12	0.09	11.53	
Block 13	0.09	11.53	
	Public Right-of-W	ay	
Street 1	0.11	14.09	]
Street 2	0.15	19.22	]
Street 2	0.13	16.65	]
Street 3	0.11	14.09	1
Street 4	0.20	25.62	]
Total	3.21	411.2	

<sup>1.</sup> Target flow rate (L/s) from each block/street is the product of the allowable pre-development target rate (L/s/ha) and the subcatchment area (ha)

## **5.2.2 Storage Requirements**

A runoff coefficient (C value) between 0.65 to 0.85 was assumed for the proposed catchments based on the expected land use, which resulted in an overall runoff coefficient of 0.79 for the entire site. Post-development peak flows up to the 100-year storm from the proposed private blocks will be restricted to the allowable release rates using a combination of rooftop storage and/or underground cisterns and pipe storage, while post-development peak flows from the proposed ROW and public Block catchments will be restricted to the target release rates using inlet control devices (ICDs) and major system overflows will be directed overland to Oak Street and eventually to the Preston Street storm relief system.

Rooftop storage is expected to be provided on Blocks 1, 2, 4, and 6, not exceeding 150 mm depth of storage with conservative assumptions adopted for the usable roof area and number of drains. Stormwater will first be detained on the roofs via roof drains, then it is assumed to be controlled by underground storage tanks/cisterns before discharging to the downstream sewer. **Appendix D** contains the functional storm sewer design sheet and the preliminary modified rational method calculations.

Stormwater Management and Servicing

Roof storage calculations assume the roofs will be equipped with standard Watts Model R1100 Accuflow Single Notch Roof Drains (50%-75% open) and that 80% of the roof areas are usable. **Table 5** summarizes the conceptual 100-year roof release rates and storage requirements.

Table 5 - 100-Year S	ummary of Roof Controls
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Block ID	Area ID	Usable Roof Area (m²)	Discharge (L/s)	Storage Volume (m³)	Maximum Depth (m)
Block 1	L106B	1,518	10.7	69.5	145.0
Block 2 <sup>1</sup>	L105B	1,409	10.6	62.8	143.6
Block 4 <sup>1</sup>	L104B	1,204	7.5	57.8	147.7
Block 6 <sup>1</sup>	L103B	1,729	12.2	79.0	144.9
	20	69			

<sup>1.</sup> Block 2, 4 & 6 building roof areas assume podium roof area is available for storage.

Additional storage is required within most private blocks to restrict post-development peak flows up to the 100-year storm to the target release rates. It is assumed that uncontrolled surface areas within the proposed private blocks will be equipped with catchbasins/drains that will either direct runoff to underground parking cisterns or to oversized pipes for storage. **Table 6** demonstrates that the target release rates can be achieved for the proposed site and shows the resultant minimum stormwater storage requirements for each block.

Table 6 - 100-Year Storage Requirements and Release Rates

Disak ID	Area Area		100-Year Volume Requirements (m³)		100-Year	Target Release	Underground
Block ID	ID	(ha)	Cistern	Underground Storage Release Rate (L/s)		Rate (L/s)	Storage Req. (m³/ha)
Block 1	L106B	0.21	0.0	-	14.50	26.90	0.0
Block 2	L105B	0.47	57.8	-	60.21	60.21	122.9
Block 3	L104C	0.02	-	-	2.56	2.56	-
Block 4	L104B	0.30	22.4	-	38.43	38.43	74.6
Block 5	L103C	0.07	-	-	8.97	8.97	-
Block 6	L103B	0.62	80.6	-	79.43	79.43	129.9
Block 7	L108D	0.14	34.5	-	17.94	17.94	246.4
Block 8	L108B	0.14	-	-	To Block 12	17.94	-
Block 9	L109A	0.07	-	-	8.97	8.97	-
Block 10	L109B	0.15	-	-	To Block 13	19.22	-
Block 11	L109D	0.14	34.5	-	17.94	17.94	246.4
Block 12 <sup>1</sup>	L108C	0.09	-	46.2	29.47	11.53	200.8
Block 13 <sup>2</sup>	L109C	0.09	-	47.9	30.75	11.53	199.5
Street 1	L108A	0.11	-	-	14.09	14.09	-
Street 2	L103A	0.15	-	-	19.22	19.22	-
Street 2	L104A	0.13	-	-	16.65	16.65	-
Street 3	L105A	0.11	-	-	14.09	14.09	-
Street 4	L106A	0.20	-	-	25.62	25.62	-
	Totals:	3.21	229.8	94.1	398.83	411.24	-

<sup>1.</sup> Block 8 100-year release rate allocated to underground storage within Block 12.

<sup>2.</sup> Block 10 100-year release rate allocated to underground storage within Block 13.



Stormwater Management and Servicing

A detailed hydraulic analysis will be completed at the detailed design stage to ensure the minimum 0.3 m clearance between the 100-year HGL and the underside of footing (USF) for the townhome units within Blocks 8 and 10 can be achieved.

# 5.3 WATER QUALITY CONTROL

Enhanced level of quality control equivalent to 80% total suspended solids (TSS) removal will be provided within each private site to treat runoff from all above-ground parking areas through oil/grit separators that will be sized at the detailed design stage.

**Background Studies** 

# 6.0 BACKGROUND STUDIES

## 6.1 GEOTECHNICAL INVESTIGATION

A preliminary geotechnical investigation report was prepared by Golder Associates Ltd. in June 2018 (**Appendix E**) to assess the subsurface conditions found at borehole locations. Five (5) boreholes numbered 18-01 to 18-05, were advanced to auger refusal to depths ranging from about 3.0 to 7.5 metres below the existing ground surface. The information obtained from the field investigation will guide the detailed design of the site and identify development constraints.

Based on the field investigation for the proposed development area, the subsurface conditions at the site are characterized primarily by a surficial layer of topsoil and fill, over sand or silty clay, glacial till, and shallow bedrock consisting of interbedded limestone and shale. The field work for this investigation was carried out on April 27 to May 1, 2018. The geotechnical investigation report details the methodology adopted, analysis of subsurface conditions, and a chemical analysis of the groundwater to examine the corrosion potential of the subsurface soils. Borehole 18-01 was advanced through the existing pavement structure which consisted of approximately 80 millimetres of asphaltic concrete with gravelly sand base and gravel fill material underneath. Additionally, a layer of fill was encountered below the topsoil at boreholes 18-02 to 18-05 that ranges in depth from approximately 0.4 to 1.8 metres below the existing ground surface. The fill primarily consists of clayey silt with some gravel to sand with detectable amounts concrete fragments, brick, mortar, cinders, ash, organics, fibre insulation, and construction waste.

Upon auger refusal in boreholes 18-01 to 18-05, the boreholes were subsequently advanced into the bedrock via diamond coring techniques for an additional 2.0 metres while retrieving NQ sized core samples. The results of the rock core sampling at boreholes 18-01 to 18-05 indicate that the bedrock material encountered consisted of fresh, medium to thick bedded, grey limestone with shale interbeds. The bedrock quality, based on the measured RQD values, indicated excellent rock quality. Bedrock removal, via drilling and blasting procedures, will be required for basement and foundation construction within designated blocks. Due to the shallow depth of the bedrock underlying the site, no grade raise restrictions are recommended.

Groundwater levels were measured from monitoring wells within boreholes from the previous Phase II ESA on February 6<sup>th</sup> and 7<sup>th</sup>, 2017 and on April 30<sup>th</sup>, 2018. The groundwater level was encountered at depths ranging from approximately 1.0 to 4.9 metres below the existing ground surface, however, groundwater levels are subject seasonal fluctuations with higher groundwater levels anticipated during wet seasonal periods. One soil sample from borehole 18-03 was analyzed by an accredited laboratory institute for basic chemical analysis where it was determined that there is an elevated potential for the corrosion of exposed ferrous metal. The results also indicate that concrete made with Type GU Portland cement should be acceptable for substructures within the proposed development lands.

**Background Studies** 

# 6.2 ENVIRONMENTAL SITE ASSESSMENTS (PHASE I & II ESA)

A Phase I and Phase II Environmental Site Assessment (ESA) were completed for the site by Golder Associates in 2016 and 2017, respectively. The Phase I & II ESA, attached in **Appendix E**, identified 15 areas of potential environmental concern (APECs) within the proposed development location. Through soil and groundwater sampling, the reported concentrations of contaminants posing possible concern were below the applicable site conditions standards as of February 7, 2017 (Certification Date). Elevated levels of Vanadium were found in soil samples, however, based on Golder's analysis it was determined that the exceedance was attributed to the presence of Ottawa marine clays and not a result of the APEC associated with the site. Accordingly, the exceedance of the applicable site condition standard was not considered a contaminant of possible concern.

The site does not require the completion of a risk assessment or remediation. The Record of Site Condition (RSC) has been filed in the Environmental Site Registry.

Site Grading and Drainage

# 7.0 SITE GRADING AND DRAINAGE

The proposed development site measures approximately 3.21 ha in area and was previously occupied by a Federal Government Ordnance Depot prior to 2015. The subject site is currently vacant land with a relatively flat topography that gradually slopes downward from the southern property limit near Gladstone Avenue to the northern property limit toward Somerset Street West and gradually slopes downward from the western property limits towards the residential properties along Oak, Laurel, Larch and Balsam Street with marginally higher elevations within the middle of the site. Based on a topographic survey completed by Stantec Geomatics, the grade difference from the south limit to the north limit of the site is approximately 1 meter, with an elevation of approximately 60.99 meters at the southeast corner of the site and slightly lower elevations at the northwest corner of the site (approx. 59.84 m).

Please refer to **Drawing OGP-1** in **Appendix F** for the conceptual site grading plan, which maintains the general drainage pattern of the existing condition site and matches all perimeter grades.

The proposed site layout may limit the ability to achieve a significant volume of storage on the surface of the site, therefore, underground storage options have been considered for the private development blocks.

Given that the proposed development includes re-routing the existing 1350-1650 mm diameter storm sewer and the existing 1500 mm diameter combined sewer along the proposed public roadways, special street cross-sections have been generated as shown on **Drawing DS-1**. Streets 3 and 4 will consist of 18.5m right of way (ROW) residential roads in order to accommodate the re-routed storm trunk sewer, while Street 2 that will accommodate both the large storm trunk sewer and the realigned 1500 mm diameter combined sewer will consist of a 20.0 m ROW residential road.

Utilities

# 8.0 UTILITIES

Enbridge gas, Bell services, and Hydro Ottawa utilities exist within the vicinity of the proposed site. The site is expected to be serviced through connections to these existing services.

According to the City of Ottawa-provided UCC plans there is an existing 200mm gas main along Gladstone Avenue fronting the site, a 200mm gas main along Preston Street, and a 100mm gas main along Somerset Street West. Additionally, local streets adjacent to the proposed development contain existing 35mm gas mains within Balsam Street and Laurel Street, and existing 50mm gas mains within Larch and Oak Street.

Bell utilities exist near the subject site along Gladstone Avenue, Preston Street, and Somerset West. It is anticipated that the future development will be serviced by Bell fibre optic cables which will be extended to the site.

Hydro Ottawa utilities exist in proximity to the site along Gladstone Avenue, Preston Street, and Somerset Street West. Future correspondence will determine whether the existing service has available capacity, or if the installation of a new 13.2kV 3-phase circuit will be required to service the future development.

Detailed design of the required utility services will be completed by the respective utility companies as part of the future development of the lands.

**Erosion Control During Construction** 

# 9.0 EROSION CONTROL DURING CONSTRUCTION

In order to protect downstream water quality and prevent sediment build up in catch basins and storm sewers, erosion and sediment control measures must be implemented during construction. The following recommendations will be included in the contract documents and communicated to the Contractor.

- 1. Implement best management practices to provide appropriate protection of the existing and proposed drainage system and the receiving water course(s).
- 2. Limit the extent of the exposed soils at any given time.
- 3. Re-vegetate exposed areas as soon as possible.
- 4. Minimize the area to be cleared and grubbed.
- 5. Protect exposed slopes with geotextiles, geogrid, or synthetic mulches.
- 6. Provide sediment traps and basins during dewatering works.
- 7. Install sediment traps (such as SiltSack® by Terrafix) between catch basins and frames.
- 8. Schedule the construction works at times which avoid flooding due to seasonal rains.

The Contractor will also be required to complete inspections and guarantee the proper performance of their erosion and sediment control measures at least after every rainfall. The inspections are to include:

- Verification that water is not flowing under silt barriers.
- Cleaning and changing the sediment traps placed on catch basins.

The proposed location of silt fences, straw bales, and other erosion control measures are to be provided at the detailed design stage.

Approvals

# 10.0 APPROVALS

The proposed subdivision development will be serviced by an existing municipal combined sewer network. As such, the site will require approval through the Ministry of the Environment, Conservation and Parks (MECP) Environmental Compliance Application (ECA) process under direct submission.

Based on groundwater levels outlined in the geotechnical report for the site, ground or surface water volumes may require to be pumped during the construction phase. A Permit to Take Water (PTTW) through the MECP would be required for dewatering in excess of 400,000 L/day. Alternatively, an Environmental Activity and Sector Registry (EASR) is required for dewatering in excess of 50,000 L/day.

Conclusions

# 11.0 CONCLUSIONS

## 11.1 WATER SERVICING

The proposed watermain design will achieve the level of service required by the City of Ottawa. The following conclusions related to the potable water servicing for the Gladstone Village site were made:

- The proposed development will be serviced through connections to the existing 203mm diameter watermain within Gladstone Avenue, the 152mm diameter watermain within Oak Street, and the existing 406mm diameter watermain within the future Champagne Avenue.
- The boundary conditions provided by the City of Ottawa demonstrate that the existing municipal
  watermain can provide sufficient domestic flow to meet the requirements of the development. Onsite pressures are expected to range from 66 psi to 80 psi under normal operating conditions
  which is within the targets outlined in City of Ottawa Water Distribution Guidelines.
- The boundary conditions provided by the City of Ottawa demonstrate that the existing municipal watermain can provide sufficient fire flow to meet the requirements of the development while maintaining minimum residual pressures of 20 psi. A residual pressure of 62 psi, 61 psi, and 68 psi will be available during fire flow conditions (250 L/s) at the Oak Street, Gladstone Avenue, and future Champagne Avenue connections, respectively.

# 11.2 WASTEWATER SERVICING

The subject site at 933 Gladstone Avenue is located within a combined sewer area with proposed connections that convey wastewater flows to the Preston Street Combined Trunk Sewer (PSCTS), as well as the combined sewer known as the Booth Street Sewer (BSS). The following conclusions related to the wastewater servicing for the Gladstone Village site were made:

- The estimated wastewater flows expected to be generated are based on the preferred development concept of the site which includes 224 stacked townhome units and 863 residential apartment units with an estimated population of 2,158 persons and 0.93 ha of commercial space.
- Private blocks 1, 2 and 4 will be serviced through a 200 mm diameter sanitary sewer along the proposed public ROW that will connect to the existing 450 mm diameter combined sewer on Larch Street to the PSCTS.
- Private block 6 will be serviced through a 200 mm diameter sanitary sewer along Block 5 connected
  to the proposed relocated 1500 mm diameter combined sewer along Street 2 that will connect to
  the existing combined sewer on Champagne Avenue and ultimately to the BSS.

Conclusions

- Private blocks 7 and 8 will be serviced through a 200 mm diameter sanitary sewer along Street 1 that will connect to the existing 375 mm diameter combined sewer on Oak Street to the PSCTS.
- Private blocks 10 and 11 will be serviced through a 200 mm diameter sanitary sewer along Block
   9 that will connect to the existing 675 mm diameter combined sewer on Laurel Street to the PSCTS.
- Estimated wastewater peak flow to the PSCTS are 17.5 L/s.
- Estimated wastewater peak flow to the BSS are 6.9 L/s.
- Private sanitary sewers within the subject site are anticipated to collect all sanitary wastewater from the proposed buildings via individual building services.

Confirmation from the City of Ottawa regarding conveyance capacity of the connecting sewers will be included in the next submission, however, it is anticipated that the functional wastewater servicing strategy will achieve the level of service required by the City of Ottawa.

## 11.3 STORMWATER SERVICING AND MANAGEMENT

The proposed stormwater management plan complies with the requirements outlined in the background documents, the City of Ottawa Sewer Design Guidelines, and through correspondence with the City. The following conclusions associated with the stormwater management for the subject site were made:

- A target release rate of 411.2 L/s for the development area was determined using the 2-year storm event IDF curves, a C of 0.60, and a time of concentration of 10 minutes for the 3.21 ha site area.
- A runoff coefficient (C value) between 0.65 to 0.85 was assumed for the proposed catchments based on the expected land use, resulting in an overall runoff coefficient of 0.79 for the entire site.
- Enhanced level of quality control equivalent to 80% total suspended solids (TSS) removal will be
  provided within each private site to treat runoff from all above-ground parking areas through
  oil/grit separators that will be sized at the detailed design stage.
- Stormwater flows to be directed to the proposed storm sewer along the proposed public ROW that will direct flow to the existing 1650 mm diameter storm sewer along the western property line.
- Emergency overflow from private blocks will be directed to adjacent streets, while major system peak flows within the public ROW will be directed to Oak Street and conveyed to Preston Street.
- Post-development peak flows up to the 100-year storm from the proposed private blocks will be
  restricted to the allowable release rates using a combination of rooftop storage and/or underground
  cisterns and pipe storage, while post-development peak flows from the proposed ROW and public
  block catchments will be restricted to the target release rates using inlet control devices (ICDs).

Conclusions

- Based on the concept plan for the development, it is estimated that a total of 269 m³ of storage can
  provided on the four (4) building roofs within Block 1, 2, 4, and 6; assuming podium roof areas are
  available to provide storage.
- Stormwater captured on the roofs will be detained via roof drains and released at a controlled release rate to the provided underground storage before discharging to the downstream sewer.
   The discharge rate from the site's stormwater storage was set to match the maximum allowable target release rate.

With on-site storage and a controlled release rate as detailed in **Section 5.0**, the stormwater servicing design for the site can meet the discharge criteria established for the downstream storm sewer system.

## 11.4 GEOTECHNICAL CONSIDERATIONS

A preliminary geotechnical investigation was conducted by Golder Associates Ltd. to identify the general subsurface conditions at the site by means of boreholes (five (5) boreholes, numbered 18-01 to 18-05 to depths ranging from about 3.0 to 7.5 metres below ground surface until auger refusal).

## 11.5 GRADING

The subject site is currently vacant land with a relatively flat topography that gradually slopes downward from the southern property limit near Gladstone Avenue to the northern property limit toward Somerset Street West and gradually slopes downward from the western property limits towards the residential properties along Oak, Laurel, Larch and Balsam Street with marginally higher elevations within the middle of the site.

The conceptual site grading plan maintains the general drainage pattern of the existing condition site and matches all perimeter grades. Additionally, the proposed site layout may limit the ability to achieve a significant volume of storage on the surface of the site, therefore, underground storage options have been considered.

#### 11.6 UTILITIES

Enbridge Gas, Bell and Hydro Ottawa services all exist within the vicinity of the proposed site. The site is anticipated to be serviced through connections to these existing services.

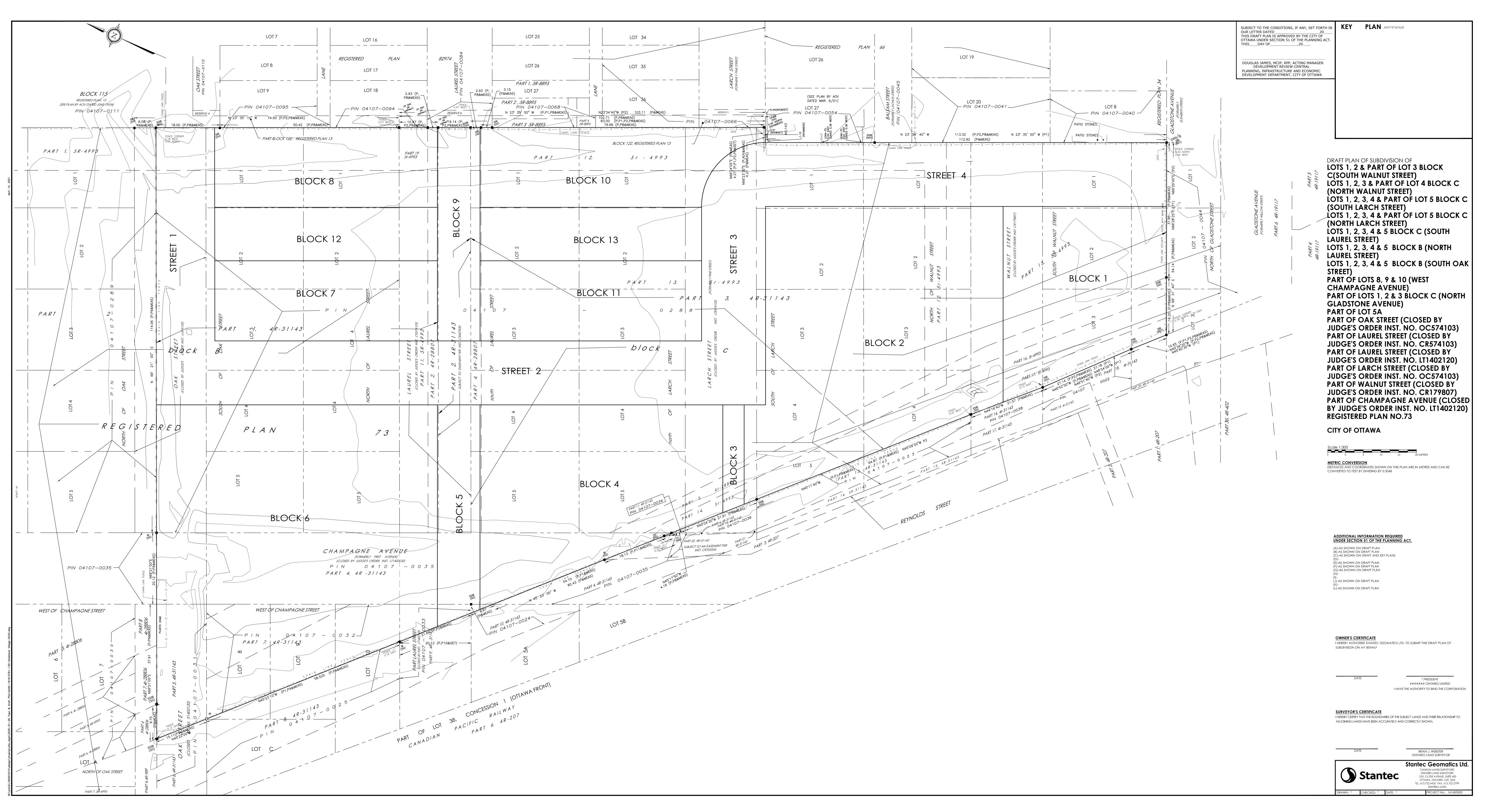
Detailed design of the required utility services will be completed by the respective utility companies at the detailed design stage.

# **APPENDICES**

# Appendix A PROPOSED DRAFT PLAN

# A.1 PROPOSED DRAFT PLAN





# A.2 PREFERRED DEVELOPMENT CONCEPT







Gladstone Village

Site Plan

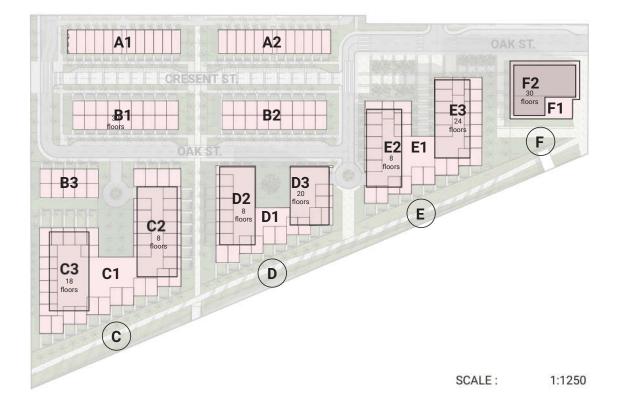
# A.3 SITE STATISTICS



# GLADSTONE VILLAGE - DEVELOPMENT STATS CURRENT OPTION

DIOCK 41 TOWNHOLDS	GFA		UNITS +/-
BLOCK A1 - TOWNHOMES	21,384	SQ.FT.	12
TOTAL	21,304	30(.11.	12
BLOCK A2 - TOWNHOMES			
TOTAL	21,384	SQ.FT.	12
BLOCK B1 - STACKED TOWNHOMES			
TOTAL	34,848	SQ.FT.	36
BLOCK B2 - STACKED TOWNHOMES			
TOTAL	34,848	SQ.FT.	36
BLOCK B3 - STACKED TOWNHOMES			
TOTAL	19,360	SQ.FT.	20
IOIAL	17,360	30.71.	20
BLOCK C - MIXED USE			
C1 PODUIM RES	49,640	SQ.FT.	40
C1 PODIUM RETAIL / COMMERCIAL / INSTITUTIONAL	25,000	SQ.FT.	
C2 MID-RISE	59,412	SQ.FT.	67
C3 HIGH RISE TOTAL	137,776 271,828	SQ.FT.	156 263
	27 1,020	04.711	
BLOCK D - MIXED USE			
D1 PODUIM RES	17,938	SQ.FT.	18
D1 PODIUM RETAIL / COMMERCIAL / INSTITUTIONAL	25,000	SQ.FT.	
D2 MID-RISE D3 HIGH RISE	46,500 115,326	SQ.FT.	53 131
TOTAL	204,764	SQ.FT.	201
BLOCK E - MIXED USE			
E1 PODUIM RES	31,330	SQ.FT.	32
E1 PODIUM RETAIL / COMMERCIAL / INSTITUTIONAL	25,000	SQ.FT.	
E2 MID-RISE	46,500	SQ.FT.	53
E3 HIGH RISE TOTAL	170,500 <b>273,330</b>	SQ.FT.	193 278
BLOCK F - MIXED USE			
F1 PODUIM RES	16,714	SQ.FT.	
F1 PODIUM RETAIL / COMMERCIAL	25,000	SQ.FT.	
F2 HIGH RISE, RES / OFFICE	166,629	SQ.FT.	189
TOTAL GROSS	208,343	SQ.FT.	189
TOTALS	GFA		UNITS
	1,090,089		1048

OVERALL UNIT TYPOLOGY BREAKDOWN		
TRADITIONAL TOWNHOMES:	24	UNITS
BACK TO BACK STACKED TOWNHOMES:	92	UNITS
TOWNHOMES AT PODIUM BASE :	90	UNITS
MID-RISE APARTMENT/CONDO UNITS :	173	UNITS
HIGH-RISE APARTMENT/CONDO UNITS :	669	UNITS
	1048	UNITS



# Appendix B POTABLE WATER SERVICING

# **B.1 DOMESTIC WATER DEMAND CALCULATIONS**



# Gladstone Village (933 Gladstone Ave.) OCH Development - Domestic Water Demand Estimates

Based on conceptual development plans by Hobin Architecture (2021-03-15)

Last updated on March 16, 2021

Densities as per City Guidelines:												
Townhomes	2.7	ppu										
Apartments	1.8	ppu										

	Commercial	Number of		Daily Demand	Avg. Day [	Demand <sup>1,2</sup>	Max. Day	Demand 1, 2	Peak Hour Demand			
Development Block/Area ID	Area (m²)	Residential Units	Population	Rate (L/cap/day or L/ha/d)	(L/min)	(L/s)	(L/min)	(L/s)	(L/min)	(L/s)		
Townhomes												
Block A1 (Block 8)	-	12	32	350	7.9	0.13	19.7	0.33	43.3	0.72		
Block A2 (Block 10)	-	12	32	350	7.9	0.13	19.7	0.33	43.3	0.72		
Stacked Townhomes												
Block B1 (Block 7)	-	36	97	350	23.6	0.39	59.1	0.98	129.9	2.17		
Block B2 (Block 11)	-	36	97	350	23.6	0.39	59.1	0.98	129.9	2.17		
Block B3 (Block 6)	-	20	54	350	13.1	0.22	32.8	0.55	72.2	1.20		
Mixed Use - Block C (Block 6)												
C1 Podium Residential	-	40	108	350	26.3	0.44	65.6	1.09	144.4	2.41		
C1 Podium Retail/Commercial/Institutional	2323	-	-	28000	45.2	0.8	67.7	1.1	121.9	2.03		
C2 Midrise	-	67	121	350	29.3	0.49	73.3	1.22	161.2	2.69		
C3 Highrise	-	156	281	350	68.3	1.14	170.6	2.84	375.4	6.26		
Mixed Use - Block D (Block 4)												
D1 Podium Residential	-	18	49	350	11.8	0.20	29.5	0.49	65.0	1.08		
D1 Podium Retail/Commercial/Institutional	2323	-	-	28000	45.2	0.8	67.7	1.1	121.9	2.03		
D2 Midrise	-	53	95	350	23.2	0.4	58.0	1.0	127.5	2.13		
D3 Highrise	-	131	236	350	57.3	1.0	143.3	2.4	315.2	5.25		
Mixed Use - Block E (Block 2)												
E1 Podium Residential	-	32	86	350	21.0	0.35	52.5	0.88	115.5	1.93		
E1 Podium Retail/Commercial/Institutional	2323	-	-	28000	45.2	0.8	67.7	1.1	121.9	2.03		
E2 Midrise	-	53	95	350	23.2	0.4	34.8	0.6	76.5	1.28		
E3 Highrise	-	193	347	350	84.4	1.41	126.7	2.1	278.6	4.64		
Mixed Use - Block F (Block 1)												
F1 Podium Residential ⁴	-	18	49	350	11.8	0.20	29.5	0.5	65.0	1.08		
F1 Podium Retail/Commercial	2323	-	-	28000	45.2	0.8	67.7	1.1	121.9	2.03		
F2 Highrise, Residential/Office	-	189	340	350	82.7	1.4	206.7	3.4	454.8	7.58		
Block C1, C2, C3, and B3 Build-out <sup>5</sup>		21	38	350	9.2	0.2	23.0	0.4	50.5	0.84		
Total Site :	9290	1087	2158	_	705.2	11.75	1474.7	24.58	3136.1	52.27		

<sup>1</sup> Water demand criteria used to estimate peak demand rates for residential areas are as follows:

maximum daily demand rate = 2.5 x average day demand rate peak hour demand rate = 2.2 x maximum day demand rate

Water demand criteria used to estimate peak demand rates for commercial/amenity/lobby areas are as follows: maximum daily demand rate = 1.5 x average day demand rate peak hour demand rate = 1.8 x maximum day demand rate

<sup>3</sup> Population density for all residential units based on an 'average apartment' population density from Table 4.1 of the City of Ottawa Water Distribution Design Guidelines (2010).

<sup>4</sup> Unit count not provided for Block F1 residential area (1553m²). Unit count taken from Block D1 podium residential area with comparable footprint.

<sup>5</sup> Intended future revision/expansion to Block C1, C2, C3, and Block B3 unit counts. Total of 21 additional units to be added to these blocks.

# **B.2** FIRE FLOW DEMAND CALCULATIONS PER FUS GUIDELINES





### **FUS Fire Flow Calculation Sheet**

Stantec Project #: 160401614 Project Name: Gladstone Village OCH Development

Date: 2021-04-08

Fire Flow Calculation #: 1

Description: Residential Stacked Towns, Block B2

Notes: Stacked residential townhomes assuming 3-storeys above grade. Building information from Conceptual Architectural Drawings by Hobin Arcitecture. No fire seperation provided between adjacent units.

Step	Task			Value Used	Req'd Fire Flow (L/min)						
1	Determine Type of Construction			1.5	-						
2	Determine Ground Floor Area of One Unit (m2)			49	-						
2	Determine Number of Adjoining Units		Includes o	adjacent wo	od frame stru	ctures separc	ated by 3m or less	18	-		
3	Determine Height in Storeys		Does no	3	-						
4	Determine Required Fire Flow		(	F = 220 x C x	( A <sup>1/2</sup> ). Round	to nearest 10	00 L/min	-	17000		
5	Determine Occupancy Charge			-15%	14450						
					None	<b>;</b>		0%			
6	Determine Sprinkler Reduction			0%	0						
				0%							
				100%							
		Direction	Exposure Distance (m)	Exposed Length (m)	Exposed Height (Stories)	Length-Height Factor (m x stories)	Construction of Adjacent Wall	-	-		
		North	20.1 to 30	15	3	31-60	Wood Frame or Non-Combustible	8%			
7	Determine Increase for Exposures (Max. 75%)	East	20.1 to 30	52	3	> 120	Wood Frame or Non-Combustible	10%	5925		
		South	20.1 to 30	15	3	31-60	Wood Frame or Non-Combustible	8%	3723		
		West	10.1 to 20	52	3	> 120	Wood Frame or Non-Combustible	15%			
		Total Required Fire Flow in L/min, Rounded to Nearest 1000L/min									
8	Determine Final Required Fire Flow	Total Required Fire Flow in L/s									
	botomino final kequilea file now				Required D	uration of Fire	Flow (hrs)		4.50		
					Required V	olume of Fire	Flow (m <sup>3</sup> )		5400		



### **FUS Fire Flow Calculation Sheet**

Stantec Project #: 160401614
Project Name: Gladstone Village OCH Development

Date: 2021-04-08

Fire Flow Calculation #: 2

Description: Residential Stacked Towns, Block B2

Stacked residential townhomes assuming 3-storeys above grade. Building information from Conceptual Architectural Drawings Notes: by Hobin Arcitecture. Fire separation provided seperating Block B2 into clusters of 8 units and 10 Units. Fire separation to reduce building footprint below 600m² as per building code requirements.

Step	Task			Value Used	Req'd Fire Flow (L/min)						
1	Determine Type of Construction			1.5	-						
2	Determine Ground Floor Area of One Unit (m2)			49	-						
2	Determine Number of Adjoining Units		Includes o	adjacent wo	od frame stru	ictures separ	ated by 3m or less	10	-		
3	Determine Height in Storeys		Does no	3	-						
4	Determine Required Fire Flow		(	F = 220 x C x	(A <sup>1/2</sup> ). Round	to nearest 10	000 L/min	-	13000		
5	Determine Occupancy Charge			-15%	11050						
					None	•		0%			
6	Determine Sprinkler Reduction			0%	0						
ľ	Determine Sprinkler Reduction			0%	O						
				100%							
		Direction	Exposure Distance (m)	Exposed Length (m)	Exposed Height (Stories)	Length-Height Factor (m x stories)	Construction of Adjacent Wall	-	-		
		North	0 to 3	15	3	31-60	Ordinary or Fire Resistive (Blank Wall)	0%			
7	Determine Increase for Exposures (Max. 75%)	East	20.1 to 30	52	3	> 120	Wood Frame or Non-Combustible	10%	3647		
		South	20.1 to 30	15	3	31-60	Wood Frame or Non-Combustible	8%	3047		
		West	10.1 to 20	52	3	> 120	Wood Frame or Non-Combustible	15%			
		Total Required Fire Flow in L/min, Rounded to Nearest 1000L/min									
8	Determine Final Required Fire Flow	Total Required Fire Flow in L/s									
	2010Hillio Filia Roquilla Filo Flow				Required D	uration of Fire	Flow (hrs)		3.00		
					Required \	olume of Fire	Flow (m <sup>3</sup> )		2700		

# **B.3 BOUNDARY CONDITIONS (MARCH 2021)**



 From:
 Wessel, Shawn

 To:
 Mott, Peter

 Cc:
 Paerez, Ana

**Subject:** Gladstone Village OCH Boundary Conditions Request Draft

Date:Tuesday, March 23, 2021 2:13:52 PMAttachments:Gladstone Village OCH March 2021.pdf

#### Good afternoon Mr. Mott.

#### Please find water boundary conditions, as requested:

The following are boundary conditions, HGL, for the hydraulic analysis at Gladstone Village OCH (zone 1W) assumed to be internally looped and connected to the 406 mm on Champagne Avenue, 152 mm on Oak Street and 203 mm on Gladstone Avenue (see attached PDF for location).

All Connections:

Minimum HGL = 107.0 m

Maximum HGL = 114.9 m

Max Day + Fire Flow	Fire Demand (167 L/s)	Fire Demand (233 L/s)	Fire Demand (250 L/s)
Champagne 406mm Connection	109.1 m	108.4 m	108.2 m
Oak 152mm Connection	106.2 m	103.4 m	102.5 m
Gladstone 203mm Connection	106.4 m	103.7 m	102.9 m

These are for current conditions and are based on computer model simulation.

Disclaimer: The boundary condition information is based on current operation of the city water distribution system. The computer model simulation is based on the best information available at the time. The operation of the water distribution system can change on a regular basis, resulting in a variation in boundary conditions. The physical properties of watermains deteriorate over time, as such must be assumed in the absence of actual field test data. The variation in physical watermain properties can therefore alter the results of the computer model simulation.

If you require additional information or clarification, please do not hesitate to contact me anytime.

Thank you

Regards,

Shawn Wessel, A.Sc.T.,rcji **Project Manager - Infrastructure Approvals** Gestionnaire de projet – Approbation des demandes d'infrastructures

Development Review Central Branch | Direction de l'examen des projets d'aménagement, Centrale Planning, Infrastructure and Economic Development Department | Direction générale de la planification de l'infrastructure et du développement économique City of Ottawa | Ville d'Ottawa 110 Laurier Ave. W. | 110, avenue Laurier Ouest, Ottawa ON K1P 1J1 (613) 580 2424 Ext. | Poste 33017 Int. Mail Code | Code de Courrier Interne 01-14 shawn.wessel@ottawa.ca



Please consider the environment before printing this email

\*\*\*Please also note that, while my work hours may be affected by the current situation and am working from home, I still have access to email, video conferencing and telephone. Feel free to schedule video conferences and/or telephone calls, as necessary.\*\*\*

**From:** Mott, Peter < <u>Peter.Mott@stantec.com</u>>

**Sent:** March 17, 2021 11:10 AM

**To:** Wessel, Shawn <<u>shawn.wessel@ottawa.ca</u>> Cc: Paerez, Ana <<u>Ana.Paerez@stantec.com</u>>

**Subject:** RE: Gladstone Village OCH Boundary Conditions Request Draft

CAUTION: This email originated from an External Sender. Please do not click links or open attachments unless you recognize the source.

ATTENTION: Ce courriel provient d'un expéditeur externe. Ne cliquez sur aucun lien et n'ouvrez pas de pièce jointe, excepté si vous connaissez l'expéditeur.

Hello Mr. Wessel.

I would like to request the hydraulic boundary conditions for the proposed Gladstone Village OCH Development (933 Gladstone Avenue). Please find attached the concept plan, the key map showing the location of the proposed development, domestic water demand calculations, and fire flow calculations.

A summary of the proposed site is provided below:

We anticipate that three (3) connections to the existing watermain infrastructure will be required to service the site. The following connections are expected for servicing:

- ➤ Connection to existing 152 mm (PVC) watermain on Oak Street;
- ➤ Connection to existing 403 mm (UCI) watermain on the North West corner of property (Champagne Avenue):
- ➤ Connection to existing 203 mm (PVC) watermain on Gladstone Avenue.

\*Existing hydrants on Somerset Street West, Laurel, Larch and Balsam Street, and Gladstone Avenue.

# For the purpose of the boundary conditions request, may you please provide us with the boundary conditions for the following servicing options:

- i. Watermain connections to the existing 152 mm (PVC) watermain on Oak Street, the existing 403 mm (UCI) watermain on the North West corner of property (Champagne Avenue), and to the existing 203 mm (PVC) watermain on Gladstone Avenue; assuming a fire flow requirement of 10,000 L/min for the site in addition to the domestic water demands provided below.
- ii. Watermain connections to the existing 152 mm (PVC) watermain on Oak Street, the existing 403 mm (UCI) watermain on the North West corner of property (Champagne Avenue), and to the existing 203 mm (PVC) watermain on Gladstone Avenue; assuming a fire flow of 14,000 L/min for the site in addition to the domestic water demands provided below.
- The intended land use is a combination of commercial and residential, per the summary provided in the Domestic Demands spreadsheet. (See attached Concept Plan with project stats)
- Estimated fire flow demand per the FUS methodology: 14000 L/min (250 L/s) for the worst-case scenario (Block B2)
- Domestic water demands for the entire development:

Average day: 681.6 L/min (11.36 L/s)Maximum day: 1415.7 L/min (23.59 L/s)

Peak hour: 2941.5 L/min (49.03 L/s)

Thank you for your time and please contact me at your earliest convenience if any additional information or clarification is required.

Best regards,

#### Peter Mott FIT

Engineering Intern, Community Development

Mobile: 613-897-0445

Peter.Mott@stantec.com Stantec 400 - 1331 Clyde Avenue Ottawa ON K2C 3G4

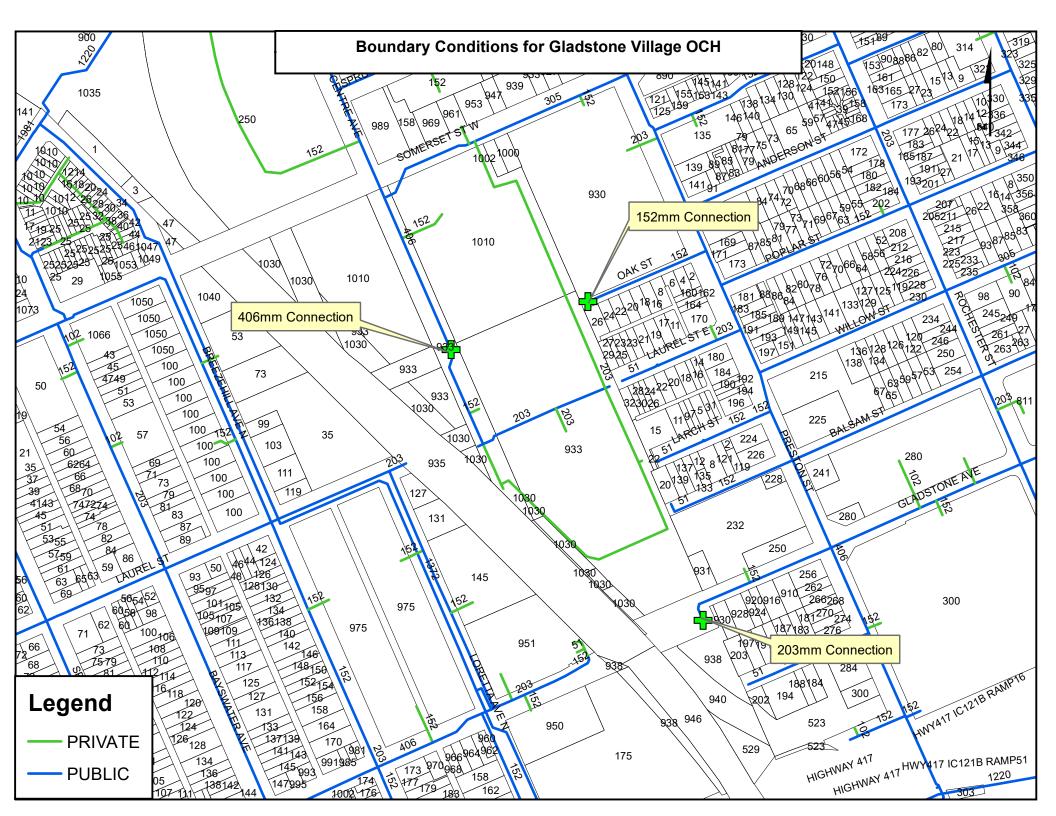


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# Appendix C WASTEWATER SERVICING

# C.1 FUNCTIONAL SANITARY SEWER DESIGN SHEET



		SUBDIVISIO	N:						SANIT	ARY S	EWER	?			DESIGN PARAMETERS																				
		Gladst	one Villag	ge - 933 (	Gladstone					GN SI		•																							
			Av	enue											MAX PEAK F	FACTOR (RE	S.)=	4.0 AVG. DAILY FLOW / PERSON			280 L/p/day MINIMUM VELOCITY					0.60 m/s									
Stantec		DATE:		4/	14/2021											MIN PEAK FACTOR (RES.)= 2.0 COMMERCIAL 28,00					28,000	L/ha/day	MAXIMUM VELOCITY				3.00	m/s							
		REVISION			2										PEAKING FA	PEAKING FACTOR (INDUSTRIAL):				INDUSTRIAL (HEAVY) 55,000 L/ha/day					MANNINGS	n		0.013							
		DESIGNE			WAJ	FILE NU		160401614							PEAKING FA	ACTOR (ICI >	20%):	1.5		INDUSTRIAL	,		35,000 L/ha/day BEDDING C				_ASS B								
		CHECKED BY: AMP F												PERSONS /			3.4	ļ	INSTITUTION	IAL		28,000 L/ha/day MINIMUM C				OVER		2.50	) m						
															PERSONS /			2.7	,	INFILTRATIO	N		0.33	L/s/ha		HARMON CO	ORRECTION I	ACTOR	0.8						
																APARTMENT		1.8	3	_						_									
LOCATION	FDOM		1051		LINUTO	RESIDENTI		POPULATION		DEAL	DEAL	COMMI			TRIAL (L)		STRIAL (H)	INSTIT	UTIONAL	GREEN /		C+I+I	TOTAL	INFILTRATION		TOTAL	LENGTH	DIA	MATERIAL		PE		\ (E)	) (E1	
AREA ID NUMBER	FROM M.H.	10 M.H.	AREA	SINGLE	UNITS TOWN	APT	POP.	AREA	ILATIVE POP.	PEAK FACT.	PEAK FLOW	AREA	ACCU. AREA	AREA	ACCU. AREA	AREA	ACCU. AREA	AREA	ACCU. AREA	AREA	ACCU. AREA	PEAK FLOW	TOTAL AREA	ACCU. AREA	INFILT. FLOW	FLOW	LENGTH	DIA	MATERIAL	CLASS	SLOPE	(FULL)	CAP. V PEAK FLOW	VEL. (FULL)	VEL. (ACT.)
			(ha)					(ha)			(l/s)	(ha)	(ha)	(ha)	(ha)	(ha)	(ha)	(ha)	(ha)	(ha)	(ha)	(L/s)	(ha)	(ha)	(L/s)	(L/s)	(m)	(mm)			(%)	(L/s)	(%)	(m/s)	(m/s)
Larch Street Connection												,	,		,		,				,	,	,		,							,		, ,	
R206A (Street 4), C206B (Block 1)**	206	205	0.00	0	18	189	388.8	0.00	389	3.42	4.3	0.23	0.23	0.00	0.00	0.00	0.00	0.00	0.00	0.20	0.20	0.1	0.43	0.43	0.1	4.6	94.6	200	PVC	SDR 35	0.32	18.9	24.15%	0.60	0.41
R208C (Walkway), C208B (Block 4), R208A (Street 2)	208 207	207	0.07	0	18	184 246	379.8	0.07	380	3.43 3.26	4.2	0.23 0.23	0.23	0.00	0.00	0.00	0.00	0.00	0.00	0.15 0.11	0.15	0.1	0.45	0.45	0.1	4.5	38.8	200 200	PVC PVC	SDR 35 SDR 35	0.32	18.9	23.68% 53.78%	0.60	0.40 0.52
C207B (Block 2), R207A (Street 3)	207	205	0.24	U	32	240	529.2	0.31	909	3.20	9.6	0.23	0.46	0.00	0.00	0.00	0.00	0.00	0.00	0.11	0.26	0.2	0.58	1.03	0.3	10.2	55.9	200	PVC	20K 32	0.32	18.9	53.78%	0.60	0.52
	205	204	0.00	0	0	0	0.0	0.31	1298	3.18	13.4	0.00	0.70	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.46	0.3	0.00	1.46	0.5	14.2	19.9	200	PVC	SDR 35	0.32	18.9	75.04%	0.60	0.58
Champagne Avenue Connection																												450							
R209B (Walkway), R209A* (Block 6)	209	3	0.39	0	60	244	601.2	0.39	601	3.35	6.5	0.23	0.23	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.07	0.1	0.69	0.69	0.2	6.9	20.4	200	PVC	SDR 35	0.50	23.6	29.01%	0.74	0.54
R3A (Street 2)	3	2	0.00	0	0	0	0.0	0.39	601	3.35	6.5	0.00	0.23	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.22	0.1	0.15	0.84	0.3	6.9	94.1	1500	CONCRETE		0.37	4533.5		2.49	0.40
Lowel Chest Connection	2	1	0.00	0	0	0	0.0	0.39	601	3.35	6.5	0.00	0.23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.22	0.1	0.00	0.84	0.3	6.9	58.1	1500	CONCRETE	100-D	0.37	4533.5	0.15%	2.49	0.40
Laurel Street Connection																												1500							
R203D (Blk11), R203C (Road), R203A(Walkway), R203B (Blk10)	203	202	0.29	0	48	0	129.6	0.29	130	3.57	1.5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.16	0.16	0.0	0.45	0.45	0.1	1.6	35.4	200	PVC	SDR 35	0.50	23.6	6.97%	0.74	0.36
Oak Street Connection																												675							
R201B (Blk8), R201C (Road), R201A (Street 1), R201D (Blk7)	201	200	0.28	0	48	0	129.6	0.28	130	3.57	1.5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.20	0.20	0.0	0.48	0.48	0.2	1.7	32.1	200	PVC	SDR 35	0.50	23.6	7.01%	0.74	0.36
\					224	863	2158																3.23					375							

<sup>\*</sup>Intended future revision/expansion to Block 6 unit counts. Total of 21 additional units to be added to this block .

<sup>\*\*</sup>Unit count not provided for Block 1 residential area (1553m²). Unit count taken from Block D1 podium residential area with comparable footprint.

# C.2 CORRESPONDENCE AND BACKGROUND



#### 1 INTRODUCTION

The City of Ottawa has retained Stantec Consulting to prepare a detailed design for the rehabilitation of Preston Street, Albert St. to Carling Ave. The project involves the complete road reconstruction and replacement of old watermains and sewers. This design brief has been prepared as supporting documentation for the Ministry of Environment Certificate of Approval for Sewage. Covered in this design brief and application are the trunk sewers scheduled for replacement as part of the Preston Street Rehabilitation project. The installation of catchbasin inlet control devices outside of the Preston St right of way will be covered in a separate application.

The project is scheduled for construction in six parts over the years 2008-2010. Because of the stormwater management component and the large scale of the project the planning and design of the whole project proceeded in accordance with the requirements of a Municipal Class Environmental Assessment and more specifically according to the Schedule B Class EA process. A Technical Advisory Committee and Public Advisory Group have been formed to provide guidance during the design and construction process.

### 1.1 Background

#### 1.1.1 Previous Studies

Preston Street Drainage Flooding Remediation, Environmental Assessment Summary Report (Stantec, March 2004)

Stantec undertook this project to complete the 2003 study and advance both the Class EA process and the Canadian Environmental Assessment Act (CEAA) process. The report outlines the existing conditions, the problem identification, the evaluation of alternatives, the selection of the preferred alternative, the environmental impacts and the required monitoring and mitigation measures. The report also included agency, stakeholder and public consultation information.

At the time, the evaluation of alternatives concluded that the combined trunk sewer upgrade alternatives do not provide adequate or cost-effective improvements to the existing level of service.

The preferred alternative identified in the EA document included:

- Installation of inlet control devices in catch-basins to restrict flows into the minor system;
- Minor street re-grading and curb modifications to ensure that private property is protected from overland flow:
- Local high-level relief sewers to drain excess storm runoff from low-lying areas to Brown's Inlet;
- Diversion of flow to the Booth Street system at Laurel Street to improve the hydraulic conditions in the Preston Street Sewer; and,

 Improvements to the existing Spruce Street diversion structure to improve local hydraulics in the Preston Street Sewer.

Preston Street Drainage Area Flooding Remediation, Preliminary Design Report (Stantec, August 2004)

This report outlines the preliminary design for the preferred alternatives outlined in the Preston Street Drainage Flooding Remediation EA Summary Report (Stantec, March 2004).

Specifically detailed in the report are the following flood control measures:

- Installation of inlet control devices in catch-basins throughout most of the Preston Street Drainage Area;
- High-level sewers in Brown's Inlet area to convey excess surface runoff:
- Major Drainage Improvements in Brown's Inlet area;
- Reinstatement of the Laurel Street diversion to relieve the PSCTS during periods of surcharge; and,
- Modifications to the Spruce Street flow control chamber to divert all of the PSCTS flows to the Booth Street sewer.

Storage of excess surface runoff in the portion North of Carling Ave was not addressed as part of the original EA or Pre-design study, given that the measures proposed in the EA did not lead to a worsening of existing ponding.

Preston Street Drainage Area Flooding Remediation Environmental Assessment Summary Report Addendum (November 2007)

This addendum has recently been completed and is within a 30 day review period. The addendum addresses the mitigation of existing and future surface flooding risks near the Preston Street sag (near Anderson Street). The recommended solution is to lower Plouffe Park (located to the north west of the Preston and Oak Street intersection) to provide storage of excess surface runoff. The proposed works would provide flooding relief for runoff events between the 1:10 and 1:50-yr return period. It is the City's intention to initiate the design of the recommended works in 2008.

#### 1.1.2 In Summary

The capacity of the existing combined trunk sewer along Preston St. between Carling Ave. and Albert St. is deficient and there have been numerous reports of basement flooding along Preston St. and a few of the side streets. Since the filing of the original Environmental Assessment (EA) in 2004, the City has reconsidered the combined sewer upgrade alternatives for the segment between Carling Ave. and Albert St. in combination with implementation of the inlet control devices to limit sewer inflows to the 1:5-year level. Assessments undertaken by the City Water Resources Group indicated that such a combination would result in a higher level of service than each alternative implemented separately.

It is the intention of the City of Ottawa that the portion of the PSCTS drainage area north of Somerset Street will be, to the extent possible, separated (Combined Sewer Area Pollution

Control Planning Study, City of Ottawa/MOE, 1993). This separation process has already started and is progressing as part of infrastructure rehabilitation projects.

#### 2 EXISTING CONDITIONS

The tributary area to the Preston Street Combined Trunk Sewer (PSCTS) within the proposed project limits is bounded by Cambridge St. to the east, Albert St. to the north, the O-Train corridor to the west and Brown's Inlet/Dow's Lake to the south (**refer to Figure 1**). The land use within the project limits can be described primarily as a mix of residential and commercial.

The existing PSCTS, which was constructed in 1899, is of brick construction between 1200 and 1500 mm in diameter and, with the exception of the section to the north of Somerset St., is installed with approximately 2m of cover. A sewer condition assessment (GA Clark, 2006) of the existing trunk sewer south of Somerset St. revealed that this section is in poor condition.

The majority of the sewers along the side streets have been replaced in conjunction with previous infrastructure renewal projects and are relatively new. Some exceptions are Larch St., Laurel St., Norfolk St., Young St. and Sidney St. which will be rehabilitated as part of the Preston Street Rehabilitation project. Note separate C of A applications will be submitted for the side streets.

There is an existing 1500 mm dia. combined sewer within the Laurel R-O-W that received the combined flows from the Willow St. catchment and also serves as an overflow for the Preston Combined sewer. This sewer, known as the Booth St. Sewer (BSS), runs west along Laurel Street; then under federally owned lands (Public Works Canada partially vacant warehouses); then runs north along Champagne to Spruce Street; then runs east along Spruce St. to Booth St. To our knowledge, there are currently only a few sanitary connections to the BBS from the federally owned lands. This land is poised for redevelopment and will ultimately be serviced by new outlets toward Larch, Laurel Streets.

PSCTS wet weather flows are diverted to the BSS at Spruce Street through the use of a bulkhead in the PSCTS and an overflow weir to the BSS. Under extreme runoff events, the PSCTS and BSS currently operate under surcharge conditions due to capacity constraints of both the PSCTS and the BSS (1800 diameter sewer d/s of Preston St.). As confirmed by the recent CCTV inspections, the BSS is in good structural condition.

#### 3 DESCRIPTION OF PROPOSED WORKS

The proposed sewerage works included as part of this application are:

- the upgrade of the PSCTS, Carling Ave to Spruce St.;
- the lowering of the PSCTS between Young and Spruce Streets;
- the conversion of the existing PSCTS from Spruce St to Albert St. to a storm sewer;
- the provision of a new sanitary sewer from Somerset St. to Albert St.;

- the provision of a new high-level storm relief sewer between Laurel and Spruce Streets including an in-line flow control device at its outlet at Spruce St.; and,
- the provision of an in-line flow control device in the Booth St. sewer near its intersection with Somerset St.

These works are described in more detail below.

#### 3.1 Preston Street Combined Trunk Sewer Upgrade

The PSCTS section between Carling Ave and Spruce Street will be upgraded and lowered to provide an enhanced level of service reducing the health and safety risks associated with basement flooding.

The PSCTS will be replaced with:

- a 1500 mm diameter combined sewer between Carling Ave. and Aberdeen St.;
- a 1650 mm diameter combined sewer between Aberdeen St. and Young St. Note that presence of a large diameter watermain at Young St. forces us to match inverts at Aberdeen St.;
- a deeper 1,800 mm diameter combined sewer between Young St. and Willow St.;
- a deeper 2100 mm diameter sewer between Willow St. and Spruce St. with all flows from Willow St. sewer directed to the PSCTS; and,
- removal of the interconnection (overflow) between the PSCTS and the Booth St. sewer at Laurel St.

The combination of storm inflow restriction into the combined sewers along with an upgraded trunk sewer down to the Booth St. sewer (slightly larger and deeper trunk) provides a significant reduction in hydraulic grade line and risk of basement flooding during infrequent events. Furthermore, the proposed PSCTS upgrade between Willow and Spruce Streets eliminates the reliance on the existing overflow to the Booth St. sewer at Laurel St.

The catchbasins along Preston St., with the exception of the catchbasins in the sag area near Anderson St., will be fitted with 20L/sec inlet control devices to control the flows into the PSCTS (Refer to **Section 4.1.1**).

#### 3.2 Preston Street Sewer Separation - North of Somerset

The area north of Somerset St. will be serviced by separated sewers. The existing combined trunk sewer will be converted to a storm sewer while a new sanitary sewer will be provided between Somerset and Albert Streets. Note that the flows from the newly converted storm sewer and from the new sanitary sewer will be temporarily recombined immediately south of Albert Street and will continue to flow to the Cave Creek Collector until such time that a new storm sewer outlet is provided from Albert St.

Note that the Somerset St. and Spruce St. combined sewers west of Preston Streets are too deep to be serviced by the proposed separated storm and sanitary sewers. The Somerset St. combined sewer west of Preston St. will drain to the upgraded PSCTS whereas the Spruce St. combined sewer west of Preston St. will continue to drain to the Booth St. sewer.

Details of the storm and sanitary sewers are provided below.

#### 3.2.1 Sanitary Sewer

A new sanitary sewer will be provided on Preston St. between Somerset and Albert Streets. The new sewer will range in size from 375mm diameter at Somerset St. to a 525 mm diameter sewer near Albert St. This sewer will collect sanitary sewage from the side streets which have already been separated. Sanitary sub-headers (250 mm diameter) are proposed between Spruce St. and a point 36 m north of Primrose Ave. These are provided to collect the sewage from the properties fronting onto Preston St. and to facilitate future connections of sanitary laterals thereby avoiding excessively deep excavations (up to 7m deep). These high-level sub-headers flow in a north to south direction to the nearest manhole junction with the new sanitary sewer.

#### 3.2.2 Storm Sewer

The existing 1500 mm diameter PSCTS between Spruce and Albert Streets will be converted to a storm sewer which will service the side streets which are for the most part separated.

A new high-level storm relief sewer will be provided between Spruce and Laurel Streets as the existing PSCTS has been found to be in poor condition south of Spruce St. where the overburden thickness decreases and the upgrade of the PSCTS south of Spruce St. requires the removal of the old trunk sewer. This new 1050 mm diameter high-level storm sewer will serve as an extension of the converted storm sewer past Spruce St. The high-level sewer will be located to the west of the upgraded PSCTS alignment and will collect the future storm drainage from Somerset St. east of Preston St. when it is separated. The main purpose of the high-level sewer past Somerset St. is to provide flooding relief from excess surface runoff which tends to accumulate at the Preston St. sag near its intersection with Anderson St. Roadway drainage along Preston Street, between Spruce and Laurel Streets, will be directed to the new high-level sewer.

Details of the proposed high-level sewer and related appurtenances include:

- a 1050 mm diameter high-level storm sewer extending between Spruce and Laurel Streets. The new sewer would have a high point at Oak Street and storm flows would be split between the Preston St. brick storm sewer immediately north of Spruce Street and the Booth Street sewer at Laurel St. Note that the high-level sewer is oversized to provide up to 160 m³ of in-line storage;
- the discharge from the high-level sewer to the Preston St. storm sewer north of Spruce St. must be controlled to the existing allowable peak discharge in an effort to prevent increased combined sewer overflows from the Cave Creek collector and to prevent surcharging of the sewer downstream of Spruce St. It is therefore necessary to provide a bulkhead at Spruce Street to allow a maximum discharge of approximately 700 L/sec when the high-level sewer is under surcharge conditions;
- the interconnection of the high-level storm sewer to the existing Booth Street sewer at Laurel St. provides for approximately 800 m³ of pipe storage. The discharge from the Booth Street sewer must be controlled to prevent surcharging of the Booth St. sewer and ultimately the Preston St. Trunk sewer. A discharge rate of approximately

300 L/sec can be accommodated within the Booth St. sewer downstream of Somerset St. without adversely impacting downstream hydraulic grade lines. Since this interconnection will link the combined system (BSS) with a storm sewer system, it could offer the remote possibility of combined sewage backing up into the storm sewer system. To prevent this, a check valve will be provided along with the orifice in the Booth Street sewer at Somerset Street, upstream of the 900 mm diameter sewer entering from the west on Somerset St.; and,

the catchbasins located within the large sag area (i.e. Preston St. between Laurel and Somerset Streets, Anderson St. immediately east of Preston Street and Oak St. immediately west of Preston St.) will be connected to the high-level storm relief sewer without inlet control devices.

#### 4 DESIGN BASIS

#### 4.1 Hydrologic and Hydraulic Modeling

#### 4.1.1 Major System Drainage Assessment

A dual drainage hydrologic and hydraulic model was developed (DDSWMM release 2.1) for the sewershed as part of the Preston Street Drainage Area Study (Stantec, 2003). This model was updated as part of the Preston Street Drainage Area Flooding Remediation, Preliminary Design Report (Stantec, August 2004) and further refined as part of the ongoing Preston Street Rehabilitation Project between Carling Avenue and Albert Street. This refinement was undertaken in an effort to reflect recent and proposed road reconstruction activity within the study area and to better characterize street level flow during high intensity storm events. The intent of the proposed stormwater management plan is to limit sewer inflows throughout the sewershed to approximately the 5-year level in order to prevent surcharging of the Preston St. Combined Trunk Sewer and reduce the associated risk of basement and surface flooding. Model input and output files are provided in **Attachment A**.

The criteria used for the DDSWMM model included selected catchbasin capture rates to achieve an average 1:5-year capture rate equivalent to the existing 1:5-year minor system capture rate of 102 L/s/ha for the area north of Carling Ave. and south of Spruce St. The inlet control rates were selected among preset control rates (6, 10, 15 and 20 L/sec) based on City accepted standard designs, rates lower than 15 L/sec are a vortex type ICD. The capture rates selected for catchbasins located along major arterials including Preston St. were set to 20 L/sec to ensure a high level of service. Prescribed inlet restriction rates are illustrated in **Attachment A**.

The resultant future conditions for the 1:5-year and 1:100-year capture rates are estimated at 97 and 134 L/s/ha respectively. The dual drainage model indicates that the implementation of inlet control devices is not expected to result in significant increases in runoff flow depths on the streets for the frequent runoff events up to and including the 1:5-year event.

With the exception of the main profile sag on Preston St. (between Anderson St. and Oak St.) most roadway sag areas are located on side streets where minor inconveniences are expected during major runoff events. A high-level relief storm sewer is proposed between

Laurel and Spruce Streets to help mitigate surface flooding at the Preston St. sag. This high-level sewer will provide an outlet, independent of the PSCTS/Booth St. sewer system, for the Preston St. sag. In-line storage will be provided within the high-level sewer and a section of the Booth St. sewer. Catchbasins located within this sag will drain to the high-level sewer and will not be fitted with ICD.

#### 4.1.2 Hydraulic Analysis

As described in the previous sub-section, a dual drainage model was used to determine the allocation of flows between the sewer system (minor) and roadway system (major). The hydraulic behaviour of the flows within the trunk sewer network was modeled by the City with the use of the XPSWMM model. The sewer system inflows were imported from the dual drainage model (DDSWMM) into the City hydraulic model.

The hydraulic model was set up to assess the hydraulic performance of a few alternative trunk profiles and arrangements. With the lowering of the trunk sewer profile downstream of Young St, the upstream section becomes hydraulically independent due to the significant drop at Young St. The governing factor for the sewer profile upstream of Young St. is the presence of a 1200 mm diameter watermain that cannot be lowered. Hence, the new trunk would have to match the existing invert at this location.

The results of the hydraulic modeling indicate that the use of a 1500 mm diameter sewer at a 0.2% gradient between Carling Ave. and Aberdeen St. and a 1650 mm diameter sewer at a 0.2% gradient between Aberdeen St. and Young St, (while matching inverts at Aberdeen) provides the most efficient use of the infrastructure while reducing the hydraulic grade line during the 1:100-year event. **Figure 2** illustrates the proposed combined trunk sewer profile and estimated hydraulic grade line. The resulting hydraulic grade line is below the surveyed basement elevations and therefore basement flooding risks from sewer surcharge should be eliminated during the 1:100-year event.

For the trunk section downstream of Young St. it was determined that a lowered 1800 mm diameter sewer between Young St. and Willow St. and a 2100 mm diameter sewer between Willow St. and Spruce St. provides the best hydraulic performance. Furthermore, this configuration eliminates the reliance on the overflow to the BSS at Laurel St.

#### 4.2 Sewer Sizing

The new sanitary sewers north of Somerset St. - were sized based on the current City of Ottawa Sewer Design Guidelines (2004). Sewer design spreadsheet and associated drainage plans are attached (**Attachment B**).

The PSCTS being converted to a storm sewer between Spruce and Albert Streets - this segment of 1500 mm diameter sewer currently services 25 ha of area to the north of Somerset St. (which will ultimately be separated) while accepting a maximum combined flow from upstream of Spruce St. of approximately 700 L/sec. Therefore, the conversion of this sewer to a storm sewer while maintaining the flow control at Spruce St. will essentially maintain peak discharges at existing levels. The peak flow capacity of this sewer is approximately 3.3 m³/sec (1500 @ 0.2% gradient).

The upgraded PSCTS between Carling Ave and Spruce St. - was sized through the use of the XPSWMM hydrodynamic model (refer to **Section 4.1.2**).

The high-level storm relief sewer between Spruce and Laurel Streets - has been oversized in order to provide some in-line storage capacity. The flow past Spruce St. in the existing PSCTS is currently controlled by an orifice (bulkhead) within the PSCTS immediately downstream of its interconnection with the Booth St. sewer. It is estimated that the current bulkhead which restricts flows to the lower 230 mm of the 1500 mm diameter circular section controls the outflow to approximately 700 L/sec when the hydraulic grade line is at the obvert of the sewer. It is proposed to maintain such a flow control device at the outlet of the high-level storm relief sewer into the newly converted storm sewer in order to prevent excessive flows from reaching the Cave Creek Collector resulting in an increase in combined sewer overflow occurrences. The need for this flow control may be re-evaluated by the City in the future when a new storm outlet is provided at Albert Street.

#### 4.3 Design Issues

All sanitary and storm services will be replaced to the property line along Preston St. Catchbasins and catchbasin leads will be also replaced and fitted for the most part with 20 L/sec inlet control devices complete with odour traps (**Attachment A**).

#### 4.3.1 Temporary sewer arrangements

As mentioned previously, the flows from the newly converted storm sewer and from the new sanitary sewer north of Somerset St. will be temporarily recombined immediately south of Albert St. and will continue to flow to the Cave Creek Collector until such time that a new storm sewer outlet is provided at Albert St.

Since Somerset St. east of Preston St. is not yet separated, it will continue to drain to the PSCTS until it is separated. Once separated, the sanitary sewer will discharge to the new sanitary sewer north of Somerset St. This sewer connection will be built as part of this project and a temporary bulkhead will direct to the flow to the PSCTS.

#### 4.3.2 Somerset St. Storm Servicing

Upon the future sewer separation, the storm flows from Somerset St. east of Preston St. will be split between the new high-level storm relief sewer on Preston St. and the PSCTS. By using a flap gate at the outlet of the Somerset St. storm sewer to the high-level sewer, low flows would be allowed to continue through to the storm system on Preston St. For large events when the high-level storm sewer on Preston St. fills up and surcharges due to the 700 L/s restriction, the flap would close and storm flows would be diverted to the PSCTS.

The proposed setup has the advantage of not taking away from combined sewage capacity at the Booth regulator during frequent events and making use of the combined sewage capture capacity at the Lloyd-Preston Regulator on the Cave Creek Collector. Note that the infrastructure necessary to split the future storm flows from Somerset St. will be constructed as part of this project to avoid the future need to dig up Preston St.

Design Brief - Sewers

November 2007

#### 5 MITIGATION MEASURES DURING CONSTRUCTION

The contract documents will stipulate that sediment and erosion control will be the responsibility of the Contractor. The Contractor, prior to carrying out the proposed works, shall implement erosion control measures. The Contractor will be required to submit to the Contract Administrator for review a detailed staging and sediment control plan indicating how he intends to control site runoff and secure the site against erosion. The submission will also ensure that the contractor has a complete understanding of the contract requirements. Contract specifications will indicate that exposed grading shall be protected against erosion.





Stantec Consulting Ltd. 1505 Laperriere Avenue Ottawa ON Canada K1Z 7T1

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CITY OF OTTAWA
PRESTON STREET
RECONSTRUCTION

Figure No.

Title

PRESTON ST. SANITARY CONTRIBUTING AREAS





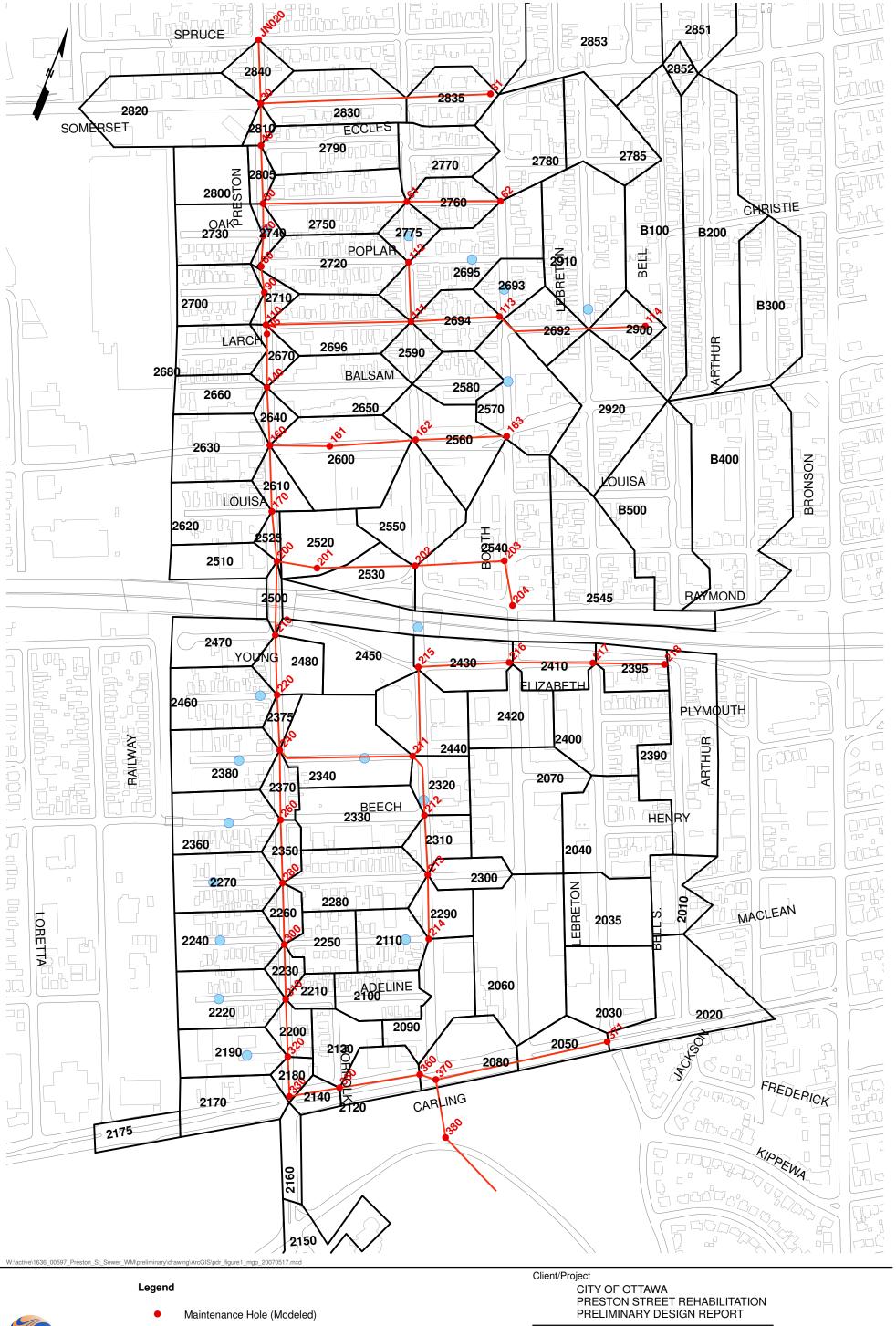
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CITY OF OTTAWA
PRESTON STREET
RECONSTRUCTION

Figure No.

PRESTON ST.
FLAT ROOF STORM
CONTRIBUTING AREAS





Maintenance Hole (Modeled)Sewer (Modeled)DDSWMM Ponding Area

DDSWMM Subarea

Figure No.

Title

**Revised DDSWMM System** 

1



#### 1 INTRODUCTION

The City of Ottawa has retained Stantec Consulting to prepare a detailed design for the Preston Street Rehabilitation Project which involves the complete road reconstruction including replacement of old watermains and sewers. A stormwater storage facility has been recommended as part of the larger Preston Street Rehabilitation Project to protect private and public property from excessive surface flooding. This design brief has been prepared as supporting documentation for the Ministry of Environment Certificate of Approval for Sewage Works for the stormwater storage facility component of the Preston Street Rehabilitation project. Certificate of Approval applications for the proposed sewer works and installation of catchbasin inlet control devices for the Preston Street Rehabilitation Project have already been submitted under separate cover.

The project is scheduled for construction in 2008. Because of the stormwater management component and the large scale of the overall project, the planning and design of the whole project proceeded in accordance with the requirements of a Municipal Class Environmental Assessment and more specifically according to the Schedule B Class EA process. A Technical Advisory Committee and Public Advisory Group have been formed to provide guidance during the design and construction process. A notice of filing of an Addendum to the original approved Schedule "B" Class EA was issued on November 9, 2007.

#### 2 BACKGROUND

#### 2.1 Previous Studies

Preston Street Drainage Flooding Remediation, Environmental Assessment Summary Report (Stantec, March 2004)

Stantec undertook this project to complete the 2003 study and advance both the Class EA process and the Canadian Environmental Assessment Act (CEAA) process. The recommended alternatives identified, among other things, the installation of inlet control devices in catch-basins within the entire sewershed to restrict flows into the minor system. The other recommendations focused primarily on surface drainage improvements in the Brown's Inlet area and on hydraulic improvements to the sewer system.

Preston Street Drainage Area Flooding Remediation, Preliminary Design Report (Stantec, August 2004)

This report presents the preliminary design of the recommended alternatives outlined in the Preston Street Drainage Flooding Remediation EA Summary Report (Stantec, March 2004). The majority of those measures deal with surface flooding in the area south of Carling Avenue or improvement of the minor system hydraulics. Specifically detailed in the report is the installation of inlet control devices in catch-basins throughout most of the Preston Street Drainage Area.

While the need for management of excess surface runoff in the portion North of Carling Ave was identified, no specific mitigation measures were presented.

Preston Street Drainage Area Flooding Remediation Environmental Assessment Summary Report Addendum (November 2007)

This recent addendum issued on November 9, 2007 addresses the mitigation of existing and future surface flooding risks near the Preston Street sag (near Anderson Street). The recommended solution, and the subject of this application, is to lower Plouffe Park (located to the north west of the Preston and Oak Street intersection) to provide storage of excess surface runoff. The proposed works would provide flooding relief for runoff events between the 1:10 and 1:50-yr return period.

#### 2.2 Existing Conditions

The capacity of the existing minor and major drainage system along Preston Street (Carling Ave. to Albert St.) is deficient and there have been numerous reports of basement and surface flooding along Preston Street and a few of the side streets. The catchment area for the major surface drainage on Preston Street is approximately 70 ha and is roughly bounded by the railroad cut to the west, Bell Avenue to the east, Somerset Street to the north and Norman Street to the south (refer to **Figure 2-1**). The low-point north of Norman Street along Preston Street where excess surface runoff accumulates is located between Anderson and Oak Streets adjacent to the City owned Plouffe Park. An estimate of the current flooding extents along Preston Street for a 1:100-yr event is illustrated in **Figure 2-2**. The land use adjacent to the Preston Street profile sag can be described primarily as a mix of residential, commercial and parkland.

#### 2.3 Preston Street Rehabilitation

In order to alleviate basement flooding, the City is upgrading the combined sewer for the segment between Carling Avenue and Spruce Street in combination with the implementation of inlet control devices in the catchbasins to limit sewer inflows to the 1:5-year level. Dual drainage and hydraulic assessments undertaken by the City indicate that such a combination would result in a higher minor system level of service than if these mitigation measures were implemented separately. While the implementation of inlet control devices do not lead to a worsening of the extent of surface flooding, they will not improve the existing situation.

In order to alleviate the extent and duration of surface flooding to some degree, the City intends to provide a high-level storm relief sewer which will drain the Preston Street profile sag, located in the vicinity of Anderson St., to a storm sewer and provide some in-line storage as well. This high-level storm relief sewer will increase the level of service to approximately the 1:10-yr event i.e. major surface drainage will be contained within the roadway right-of-way up to the 1:10-yr event. An estimate of the flooding extents along Preston Street with the implementation of the high-level sewer alone is illustrated in **Figure 2-3**. Current and future surface flooding extents do not meet current City of Ottawa design quidelines.

Note that the proposed infrastructure upgrades within the roadway right-of-ways, including the combined sewer upgrade, the high-level sewer and the inlet control devices, are currently under MOE review for Certificates of Approval for Sewage Works.

#### 3 DESCRIPTION OF PROPOSED WORKS

In an effort to increase the level of service of the surface drainage beyond the 1:10-yr level being offered by the proposed high-level storm relief sewer, the City is proposing to lower the Plouffe Park playing fields in order to temporarily store excess surface runoff in an effort to prevent excessive flood levels within the Preston Street right-of-way and reduce the risk of flooding of private properties (refer to **Figure 3-1**).

The proposed works are presented on **Drawing No. SWM1** and include:

- Lowering of the Plouffe Park;
- Provision of an underdrain system for the fields; and,
- Provision of an outflow control device.

These works are described in more detail below.

As illustrated on the attached design **Drawing No. SWM1**, the surface runoff storage area will be provided by lowering the playing fields by an average depth of 0.7 m with the low points along the east and west edges having an elevation of 56.70m. Further lowering of the fields is not possible without compromising the size of the soccer fields or necessitating an extensive length of retaining walls. The field surfaces will be sloped at 0.5% toward the east and west with a ridge running in a north-south direction in the center of the area. The majority of the field edges will be sloped at 3H:1V slopes with portions of the south, east and west edges being provided with terraced retaining walls to provide seating area and to act as grade control.

An underdrain system in the form of "French drains" will be provided below the playing fields to ensure adequate drainage. 300 mm diameter perforated drains will collect the drainage from the "French drains" and from catchbasins located along the low edges of the fields and convey the flow to the high-level storm relief sewer running north along Preston Street. An orifice plate is proposed to control the outflow from the storage area to the high-level storm relief sewer.

#### 4 DESIGN BASIS

#### 4.1 Hydrologic and Hydraulic Modeling

#### 4.1.1 Major System Drainage Assessment

A dual drainage hydrologic and hydraulic model was developed (DDSWMM release 2.1) for the sewershed as part of the Preston Street Drainage Area Study (Stantec, 2003). This model was updated as part of the Preston Street Drainage Area Flooding Remediation, Preliminary Design Report (Stantec, August 2004) and further refined as part of the ongoing Preston Street Rehabilitation Project between Carling Avenue and Albert Street. This refinement was undertaken in an effort to reflect recent and proposed road reconstruction activity within the study area and to better characterize street level flow during high intensity storm events. The intent of the proposed stormwater management plan is to limit sewer inflows throughout the sewershed to approximately the 5-year level in order to prevent

surcharging of the Preston St. Combined Trunk Sewer and reduce the associated risk of basement and surface flooding. Model input and output files are provided in **Attachment A**.

The criteria used for the DDSWMM model included selected catchbasin capture rates to achieve an average 1:5-year capture rate equivalent to the existing 1:5-year minor system capture rate of 102 L/s/ha for the area north of Carling Ave. and south of Spruce St. The inlet control rates were selected among preset control rates (6, 10, 15 and 20 L/sec) based on City accepted standard designs, rates lower than 15 L/sec are a vortex type ICD. The capture rates selected for catchbasins located along major arterials including Preston St. were set to 20 L/sec to ensure a high level of service. Prescribed inlet restriction rates are illustrated in **Attachment A**.

The dual drainage model indicates that the implementation of inlet control devices is not expected to result in significant increases in runoff flow depths on the streets for the frequent runoff events up to and including the 1:5-year event. It is estimated that approximately 5,400 and 7,400 m³ of surface runoff (major drainage) reaches the Preston Street profile sag area when the catchment is subject to the 1:50 and the 1:100-yr rainfall events, respectively. These volumes are comparable to previous flooding estimates prepared for the City (Stantec, August 2004) where approximately half of the water in the sag originated from combined sewer breakout. Hence, the implementation of inlet control devices combined with the proposed Preston Street combined sewer upgrade is expected to provide for a net improvement in surface floodwater quality (i.e. no combined sewer breakout) and it is **not** expected to increase the volume of surface flooding at the sag area.

#### 4.1.2 Hydraulic Analysis

In order to estimate the level of surface flooding to be expected, the major system hydrographs from the DDSWMM model and routed through the sag/high-level storm relief sewer and Plouffe Park storage facility using the HydroCAD software. relationships for the roadway right-of-way and stage discharge curves for the flow from the roadway to the park were entered into the model along with the flow controls from the highlevel sewer and park storage facility. This routing indicated that excess runoff is only expected to spill into the park storage facility for events with a recurrence interval greater than the 1:10-yr and that 1:50-yr events may be accommodated with reasonable amounts of surface flooding on Preston Street. Attachment B provides the 1:50-yr HydroCAD output which indicate that a peak discharge of 5.25m<sup>3</sup>/sec reaches the street sags resulting in a flood elevation of approximately 57.30 m within the right-of-way. Refer to Figure 4-1 for the estimated extent of flooding under future conditions. Approximately 1.0m<sup>3</sup>/sec is evacuated from the sag by the high-level sewer via the Preston Street storm sewer (0.7m<sup>3</sup>/sec) and the Booth St. sewer (0.3m<sup>3</sup>/sec). Excess runoff spills to the Plouffe Park storage facility at a peak discharge of approximately 4.1m<sup>3</sup>/sec. The maximum level reached in the storage facility is approximately 57.24 m for a peak storage volume of 2,425 m<sup>3</sup>. The drawdown time is expected to be in the order of 8 hours for the 50-yr event.

The 1:100-yr event is expected to lead to flooding elevations in the sag area of approximately 57.45 m which may impact private property. Hence, the proposed storage facility will provide a 50-yr level of service against surface flooding. The drawdown time for the storage facility is expected to be in the order of 13 hours for the 1:100-yr event. Refer to **Figure 4-2** for the estimated extent of flooding under these conditions.

Design Brief January 2008

#### 4.2 Collection System and Flow Control Orifice Sizing

The collection system proposed for the park field is designed to provide good drainage of the field during the spring snowmelt and for frequent rainfall events. The system is composed of a series of parallel "French drains" (300mm x 300 mm cross section at 8m spacing) and a perforated collection pipe around the west, north and east edge of the field. The collection piping discharges to the high-level storm relief sewer running along Preston Street. Catchbasins are provided along the perforated collection piping at the low edges of the field to evacuate surface runoff during rainfall and storage events. Each branch of the collection piping can convey approximately 60 L/s (300 mm diameter @ 0.35%) for a total flow of 120 L/sec into the manhole containing the outflow control orifice.

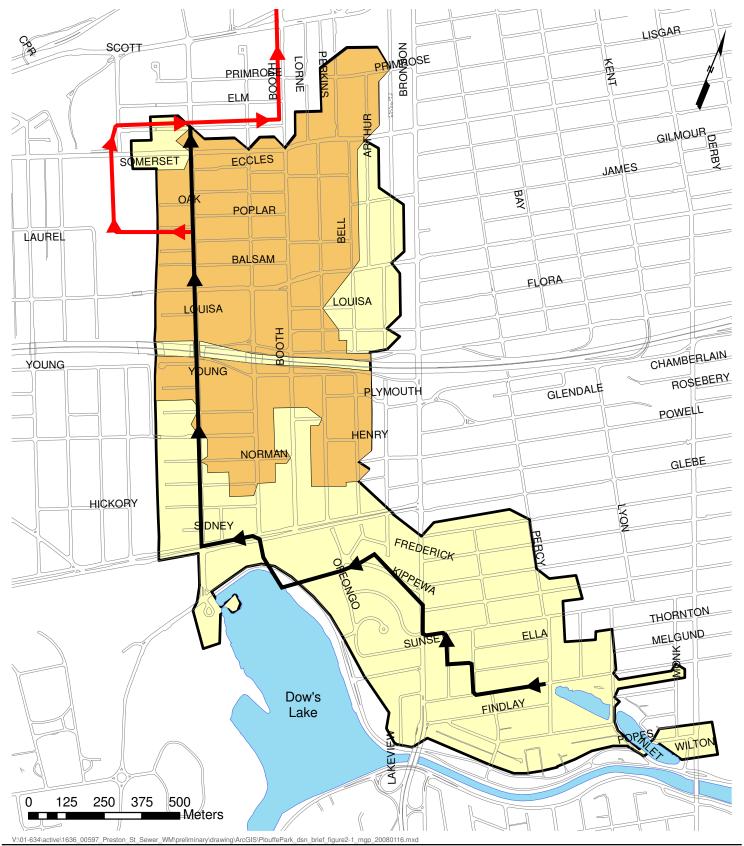
A 155 mm x 155 mm diamond shape orifice plate is proposed to control the outflow from the storage area to the high-level storm relief sewer. This orifice is sized to allow a relatively small outflow rate from the storage facility (approximately 100 L/sec under the design event) while providing reasonable dewatering times. Attachment C provides the rating curve for the outlet orifice. As mentioned previously, the estimated dewatering time for the 1:50-yr design event is 8 hours. It is also worth noting that a backflow valve has been specified at the outlet of the collection system at its interconnection with a new high-level storm relief sewer along Preston Street.

#### 4.3 Design Issues

Due to the fact that large maintenance vehicles may access the playing field from time to time, French drains were selected for the underdrain system as opposed to the traditional perforated pipe systems. The French drains were sized to provide an equivalent void end area to that of a 100 mm diameter pipe.

#### 5 MITIGATION MEASURES DURING CONSTRUCTION

The contract documents will stipulate that sediment and erosion control will be the responsibility of the Contractor. The Contractor, prior to carrying out the proposed works, shall implement erosion control measures. The Contractor will be required to submit to the Contract Administrator for review a detailed staging and sediment control plan indicating how he intends to control site runoff and secure the site against erosion. The submission will also ensure that the contractor has a complete understanding of the contract requirements. Contract specifications will indicate that exposed grading shall be protected against erosion.



Legend





Preston St Combined Sewer

**Booth St Combined Sewer** 

Major Drainage Area to Preston Street Sag

Preston St Sewer Drainage Area

Client/Project

CITY OF OTTAWA PLOUFFE PARK STORMWATER STORAGE FACILITY

Figure No.

2-1

Title

**Drainage Area Plan** 

Figure 2-2: Current and Future (do nothing) estimated flooding extents along Preston St. for 1:100-yr event

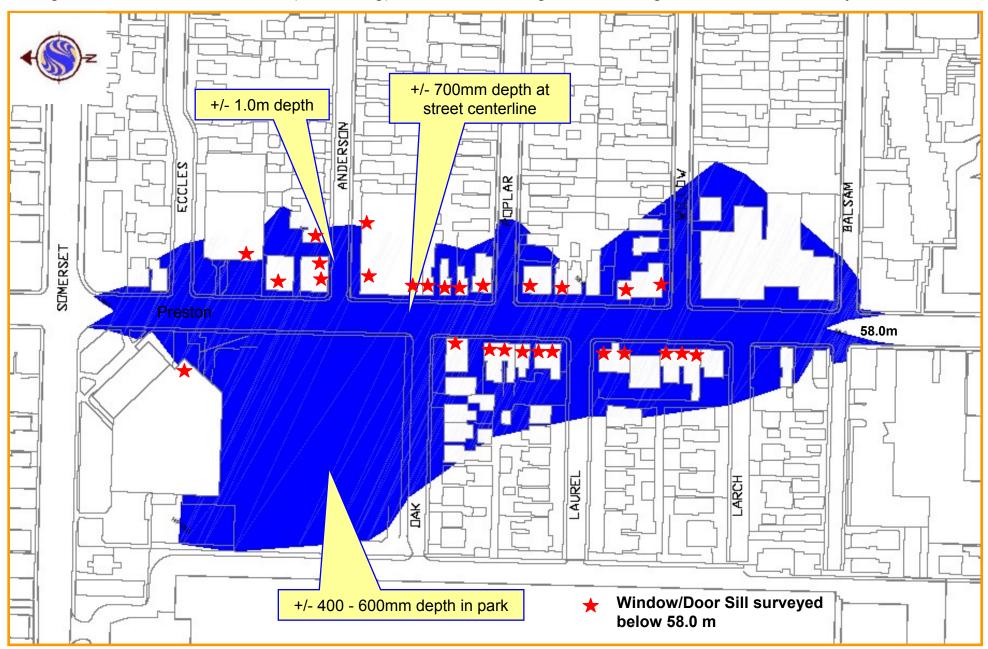


Figure 2-3: Future estimated flooding extents along Preston St. for 1:100-yr event with high-level storm relief sewer to Preston and Booth St. sewers and <u>no</u> surface storage facility

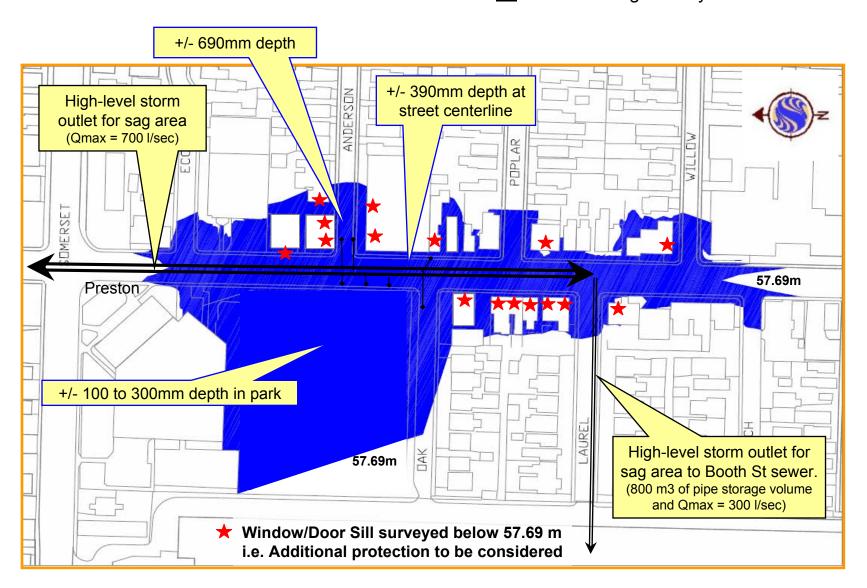




Figure 3-1: Proposed Stormwater Storage Facility

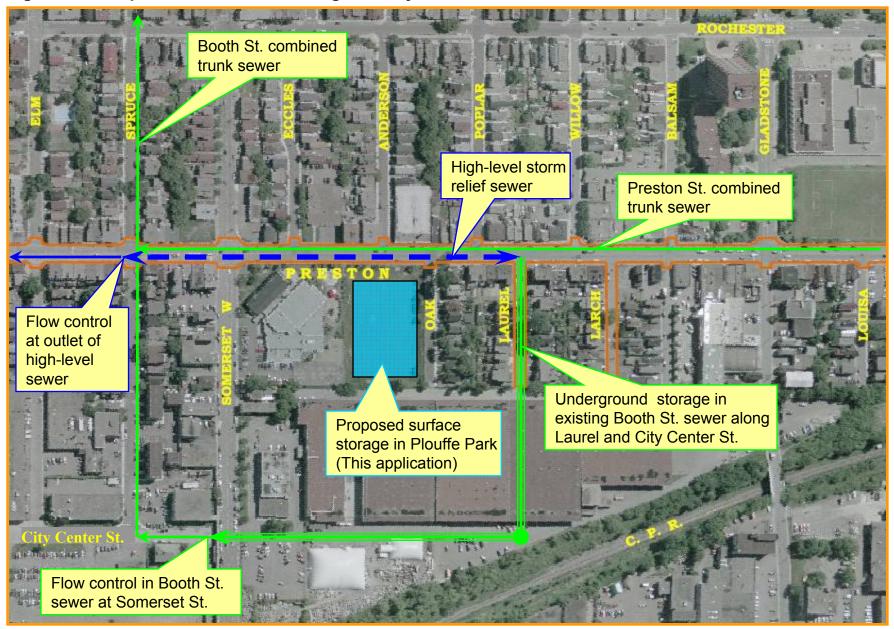


Figure 4-1: Future estimated flooding extents along Preston St. for 1:50-yr event with high-level sewer to Preston and Booth St. sewers and surface storage in park

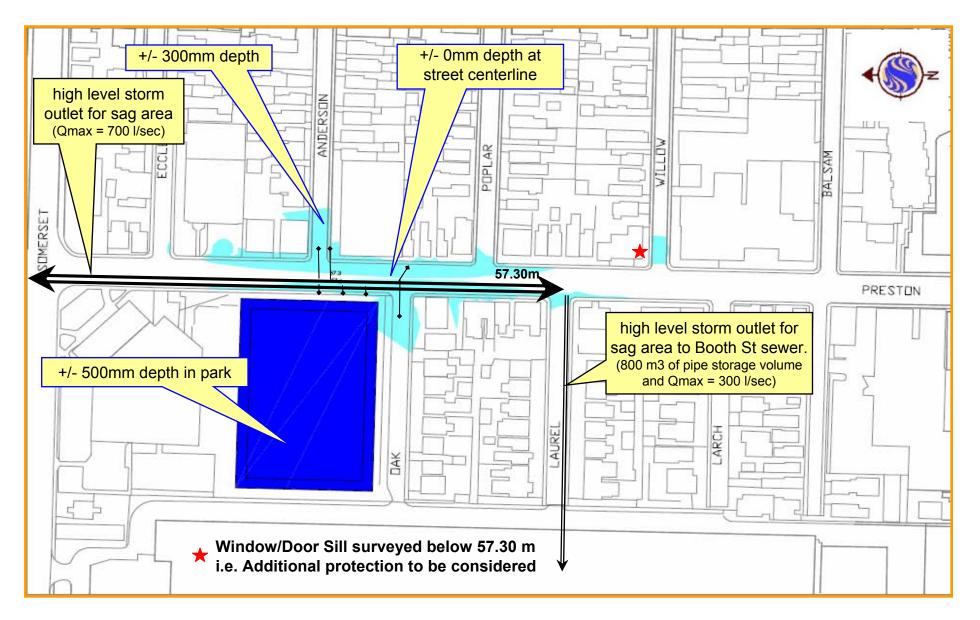
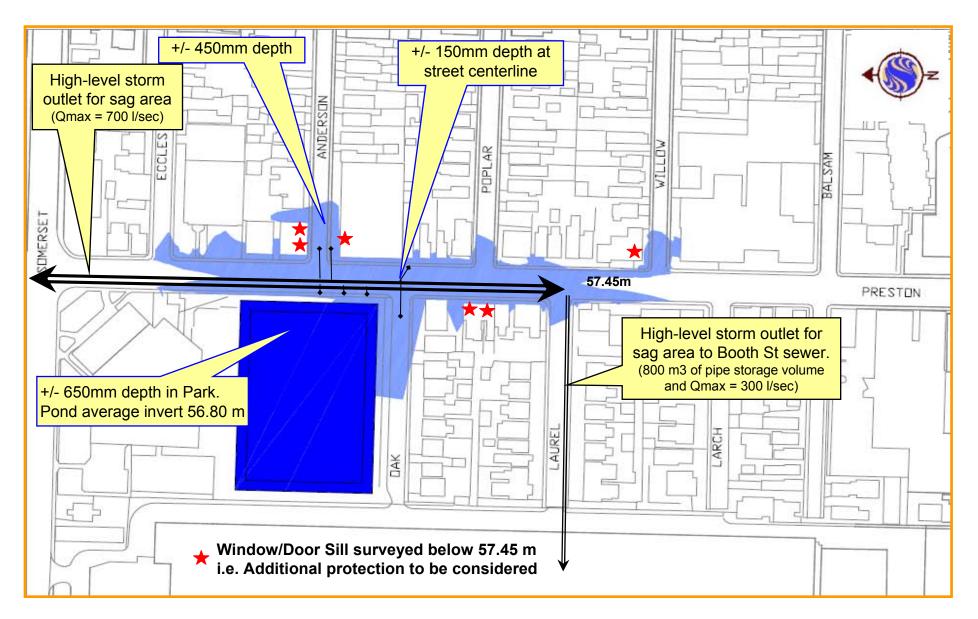
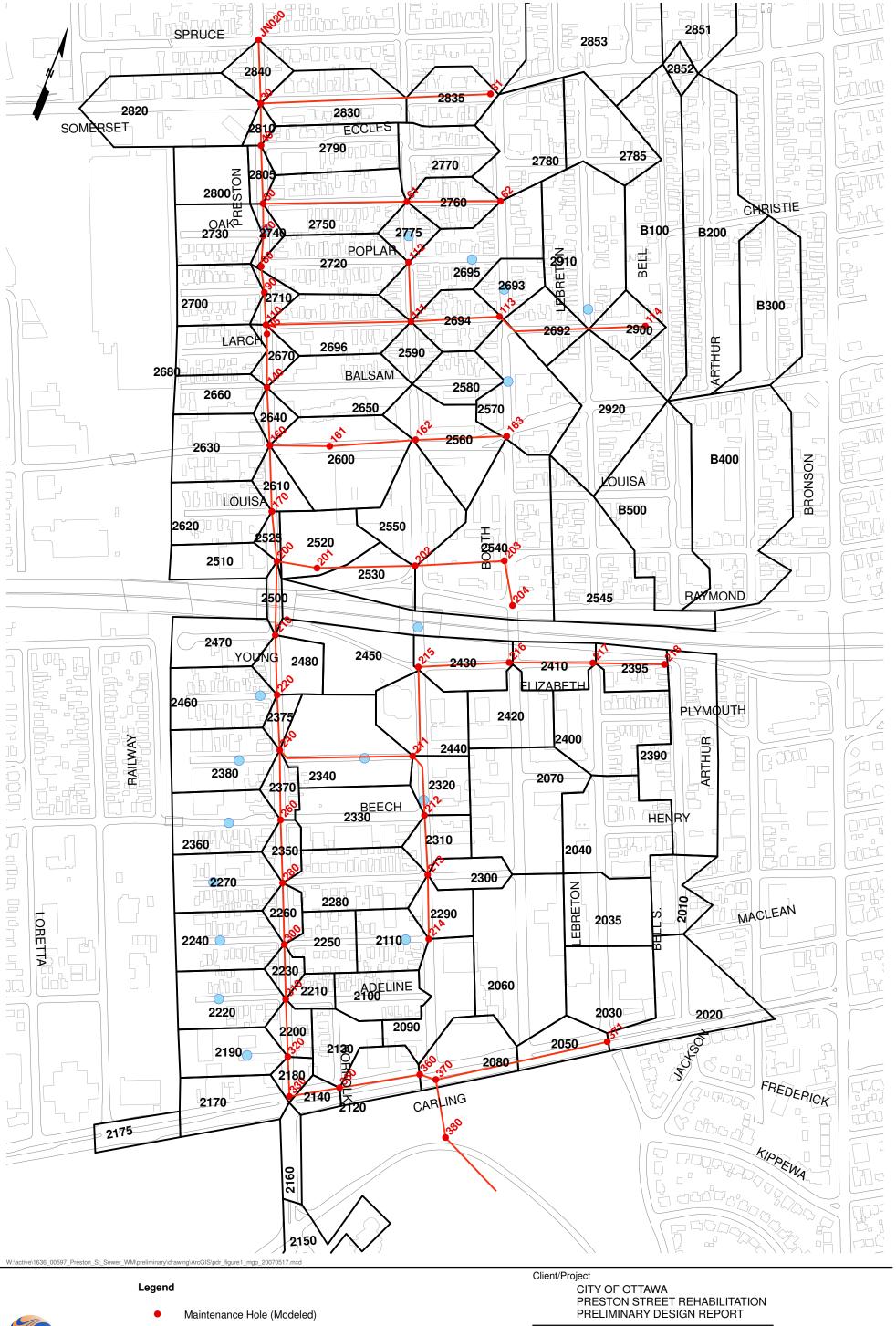


Figure 4-2: Future estimated flooding extents along Preston St. for 1:100-yr event with high-level sewer to Preston and Booth St. sewers and surface storage in park







Maintenance Hole (Modeled)Sewer (Modeled)DDSWMM Ponding Area

DDSWMM Subarea

Figure No.

Title

**Revised DDSWMM System** 

1

## Appendix D STORMWATER MANAGEMENT

#### D.1 FUNCTIONAL STORM SEWER DESIGN SHEET



Ctantas			age - 933 Gi	adstone				TORM :				DESIGN	PARAME		(As per 0	City of Otta	wa Guide	ines 2012	2)																					
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LOCATION														-	DF	RAINAGE AI	REA																	PIPE SELEC	CTION					
AREA ID NUMBER	FROM M.H.	TO M.H.	AREA (2-YEAR) (ha)	AREA (5-YEAF (ha)	R) (10-Y	EA A EAR) (100	AREA 0-YEAR)	AREA (ROOF) (ha)	C (2-YEAR)	C (5-YEAR)	C (10-YEAR)	C (100-YEAR	A x C ) (2-YEAR) (ha)	ACCUM AxC (2YR)	A x C (5-YEAR)	ACCUM. AxC (5YR)	A x C (10-YEAR)	ACCUM. AxC (10YR) (ha)	A x C (100-YEAR)	ACCUM. AxC (100YR)	T of C	I <sub>2-YEAR</sub>	I <sub>S-YEAR</sub>	I <sub>10-YEAR</sub>	I <sub>100-YEAR</sub>	Q <sub>CONTROL</sub>	ACCUM. QCONTROL (L/s)	Q <sub>ACT</sub> (CIA/360) (L/s)	LENGTH (m)	PIPE WIDTH OR DIAMETE (mm)	HEIGHT (mm)	PIPE SHAPE	MATERIAL (-)	CLASS	SLOPE	Q <sub>CAP</sub> (FULL) (L/s)	% FULL	VEL. (FULL) (m/s)	VEL. (ACT) (m/s)	TIME OF FLOW (min)
L106B, L106A L105B, L105A L104C, L104A, L104B	107 106 105 104	104	0.00	0.00 0.00 0.00 0.00	0.0	00 (0 00 (0 00 (0	0.00 0.00 0.00 0.00	0.00 0.00 0.00 0.00	0.00 0.78 0.82 0.81	0.00 0.00 0.00 0.00	0.00 0.00 0.00 0.00	0.00 0.00 0.00 0.00	0.000 0.321 0.478 0.360	0.000 0.321 0.799 1.160	0.000 0.000 0.000 0.000	0.000 0.000 0.000 0.000	0.000 0.000 0.000 0.000	0.000 0.000 0.000 0.000	0.000 0.000 0.000 0.000	0.000 0.000 0.000 0.000	10.00 10.27 11.31 11.78 12.44	76.81 75.77 72.11 70.57	104.19 102.77 97.74 95.63	122.14 120.47 114.55 112.05		2000.0 0.0 0.0 0.0	2000.0 2000.0 2000.0 2000.0	2000.0 2067.6 2160.2 2227.4	31.4 120.3 55.7 78.4	1350 1350 1350 1350	1350 1350 1350 1350	CIRCULAR CIRCULAR CIRCULAR CIRCULAR	CONCRETE CONCRETE CONCRETE CONCRETE	100-D 100-D 100-D 100-D	0.30 0.30 0.30 0.30	3049.8 3049.8 3049.8 3049.8		2.06 2.06 2.06 2.06 2.06	1.92 1.93 1.96 1.99	0.27 1.04 0.47 0.66
L109B, L109A, L109C, L109D	109	103	0.46	0.00	0.0	00 (	0.00	0.00	0.77	0.00	0.00	0.00	0.354	0.354	0.000	0.000	0.000	0.000	0.000	0.000	10.00 <b>10.70</b>	76.81	104.19	122.14	178.56	0.0	0.0	75.6	43.1	375	375	CIRCULAR	PVC	SDR 35	0.50	116.6	64.84%	1.11	1.02	0.70
L103A, L103C, L103B	103	102	0.84	0.00	0.0	00 (	0.00	0.00	0.82	0.00	0.00	0.00	0.691	2.205	0.000	0.000	0.000	0.000	0.000	0.000	12.44 13.14	68.55	92.85	108.78	158.94	0.0	2000.0	2419.9	82.6	1650	1650	CIRCULAR	CONCRETE	100-D	0.30	5208.0	46.46%	2.36	1.98	0.70
L108B, L108A, L108C, L108D	108	102	0.49	0.00	0.0	00 (	0.00	0.00	0.74	0.00	0.00	0.00	0.364	0.364	0.000	0.000	0.000	0.000	0.000	0.000	10.00 <b>10.70</b>	76.81	104.19	122.14	178.56	0.0	0.0	77.8	43.6	375	375	CIRCULAR	PVC	SDR 35	0.50	116.6	66.71%	1.11	1.03	0.70
	102 101	101 100	0.00	0.00			0.00	0.00	0.00	0.00	0.00	0.00	0.000	2.570 2.570	0.000	0.000 0.000	0.000	0.000 0.000	0.000	0.000 0.000	13.14 13.24 13.94	66.54 66.26	90.10 89.71	105.55 105.09	154.19 153.52	0.0	2000.0 2000.0	2475.0 2473.0	12.1 82.8	1650 1650 1650	1650 1650 1650	CIRCULAR	CONCRETE	100-D 100-D	0.30 0.30	5208.0 5208.0	47.52% 47.48%	2.36 2.36	1.98 1.98	0.10 0.70
			Note: 1. Based	on corres	spondenc	e with Cit	ty of Otta	wa staff, a	constant (	upstream p	eak flow of	2 cms froi	m the Nepe	an storm se	ewer has be	een include	d to assess	the convey	ance capac	ity of the p	roposed tru	ınk storm s	sewer.																	

#### D.2 MODIFIED RATIONAL METHOD CALCULATIONS



File No: **160401614** 

Project: 933 Gladstone Avenue - Gladstone Village OCH

Date: **15-Apr-21** 

SWM Approach:
Restrict 100-year peak flows from entire site to 411.2 L/s/ (128.1 L/s/ha)

## Post-Development Site Conditions:

### **Overall Runoff Coefficient for Site and Sub-Catchment Areas**

Sub-catchme Area	nt	Area (ha)		Runoff Coefficient			Overall Runoff
Catchment Type	ID / Description	"A"		"C"	" <b>A</b> 2	« С"	Coefficien
Tributary to Cistern Block 1 Block 1	L106B - UNC Hard Soft Subtotal	0.005 0.015	0.02	0.9 0.2	0.00 0.00	0.01	0.38
Controlled Roof Block 1	L106B -Roof Hard Soft Subtotal	0.190 0.000	0.19	0.9 0.2	0.17 0.00	0.17	0.90
Tributary to Cistern Block 2	L105B - UNC Hard	0.260	0.19	0.9	0.23	0.17	0.90
Block 2	Soft Subtotal	0.034	0.29	0.2	0.01	0.24	0.82
Controlled Roof Block 2	L105B - Roof Hard Soft Subtotal	0.176 0.000	0.18	0.9 0.2	0.16 0.00	0.16	0.90
Tributary to Preston Street Block 3	L104C - UNC Hard Soft Subtotal	0.019 0.001	0.02	0.9 0.2	0.02 0.00	0.017	0.85
Tributary to Cistern Block 4 Block 4	L104B - UNC Hard Soft Subtotal	0.128 0.021	0.02	0.9 0.2	0.12 0.00	0.12	0.80
Controlled Roof Block 4	L104B - Roof Hard Soft Subtotal	0.151 0.000	0.13	0.9 0.2	0.14 0.00	0.12	0.90
Tributary to Preston Street Block 5	L103C - UNC Hard Soft Subtotal	0.065 0.005	0.07	0.9 0.2	0.06 0.00	0.06	0.85
Tributary to Cistern Block 6 Block 6	L103B - UNC Hard Soft Subtotal	0.360 0.044	0.40	0.9 0.2	0.32 0.01	0.33	0.82
Controlled Roof Block 6	L103B - Roof Hard Soft Subtotal	0.216 0.000	0.40	0.9 0.2	0.19 0.00	0.19	0.90
Tributary to Cistern Block 7 Block 7	L108D - UNC Hard Soft Subtotal	0.120 0.020	0.14	0.9 0.2	0.11 0.00	0.11	0.80
Tributary to Underground Storage Block 8 (To Block 12)	L108B - UNC Hard Soft Subtotal	0.090 0.050	0.14	0.9 0.2	0.08 0.01	0.091	0.65
Tributary to Prestion Street Block 9	L109A - UNC Hard Soft Subtotal	0.065 0.005	0.07	0.9 0.2	0.06 0.00	0.06	0.85
Fributary to Underground Storage Block 10 (To Block 13)	L109B - UNC Hard Soft Subtotal	0.096 0.054	0.15	0.9 0.2	0.09 0.01	0.10	0.65
Tributary to Cistern Block 11 Block 11	L109D - UNC Hard Soft Subtotal	0.120 0.020	0.14	0.9 0.2	0.11 0.00	0.11	0.80
Tributary to Underground Storage Block 12	L108C - UNC Hard Soft Subtotal	0.084 0.006	0.09	0.9 0.2	0.08 0.00	0.08	0.85
Fributary to Underground Stroage Block 13	L109C - UNC Hard Soft Subtotal	0.084 0.006	0.09	0.9 0.2	0.08 0.00	0.08	0.85
Tributary to Preston Street Street 4	L106A - UNC Hard Soft Subtotal	0.143 0.057	0.20	0.9 0.2	0.13 0.01	0.14	0.70
Tributary to Preston Street Street 3	L105A - UNC Hard Soft Subtotal	0.079 0.031	0.11	0.9 0.2	0.07 0.01	0.08	0.70
Tributary to Preston Street Street 2	L104A - UNC Hard Soft Subtotal	0.093 0.037	0.13	0.9 0.2	0.08 0.01	0.09	0.70
Tributary to Preston Street Street 2	L103A - UNC Hard Soft Subtotal	0.107 0.043	0.15	0.9 0.2	0.10 0.01	0.11	0.70
Tributary to Preston Street Street 1	L108A - UNC Hard Soft Subtotal	0.079 0.031	0.11	0.9 0.2	0.07 0.01	0.08	0.70
Total			3.210			2.552	

Total Block 1 (Roof Storage & Cistern)	0.21	ha
Total Block 2 (Roof Storage & Cistern)	0.47	ha
Total Block 3 (Underground Storage)	0.02	ha
Total Block 4 (Roof Storage & Cistern)	0.30	ha
Total Block 5 (Underground Storage)	0.07	ha
Total Block 6 (Roof Storage & Cistern)	0.62	ha
Total Block 7 (Cistern)	0.14	ha
Total Block 8 (Cistern)	0.14	ha
Total Block 9 (Underground Storage)	0.07	ha
Total Block 10 (Cistern)	0.15	ha
Total Block 11 (Cistern)	0.14	ha
Total Block 12 (Cistern)	0.09	ha
Total Block 13 (Cistern)	0.09	ha
Street 1	0.11	ha
Street 2 (L103A)	0.15	ha
Street 2 (L104A)	0.13	ha
Street 3	0.11	ha
Street 4	0.20	ha
Total Site	3.210	ha

## Project #160401614, 933 Gladstone Avenue - Gladstone Village OCH

	2 yr Intensity		$I = a/(t + b)^{c}$	a =	732.9	` '	l (mm/hr)	
	City of Ottawa			b = c =	6.1	99 10 81 20 30 40 50 60 70 80 90 100 110 120	76.81 52.03 40.04 32.86 28.04 24.56 21.91 19.83 18.14 16.75 15.57	
		2 YEAR Pred	evelopment	Target Rele	ase from F	ortion of Site		
estrict Sai	-	-		entire site to 2	-year pre-de	velopment with C	of 0.60	
	Area (ha): C:	3.2100 0.60						
	tc (min)	l (2 yr) (mm/hr)	Q2-yr (L/s)	Qall (L/s)				
	10	76.81	411.2	411.2	12	3.1 L/s/ha		
	2 YEAR MOD	lified Rational I	Method for E	intire Site				
Sub	odrainage Area: Area (ha): C:	L106B - UNC 0.02 0.38					Block 1 y to Cistern Block	1
	tc (min)	l (2 yr) (mm/hr)	Qactual (L/s)	Qrelease (L/s)	Qstored (L/s)	Vstored (m^3)		
	10 20 30	76.81 52.03 40.04	1.64 1.11 0.85	1.64 1.11 0.85				
	40 50	40.04 32.86 28.04	0.85 0.70 0.60	0.85 0.70 0.60				
	60 70	24.56 21.91	0.52 0.47	0.52 0.47				
	80 90	19.83 18.14	0.42 0.39	0.42 0.39				
	100 110	16.75 15.57	0.36 0.33	0.36 0.33				
Sub	drainage Area: Area (ha): C:	14.56 L106B -Roof 0.19 0.90	0.31	0.31	Max	imum Storage De	Controlled Ro	of mm
	tc	l (2 yr)	Qactual	Qrelease	Qstored	Vstored	Depth (mm)	7
	(min) 10 20	(mm/hr) 76.81 52.03	(L/s) 36.5 24.7	<b>(L/s)</b> 7.1 7.5	(L/s) 29.4 17.2	( <b>m^3</b> ) 17.6 20.7	(mm) 90.6 96.5	0.00
	30 40	40.04 32.86	19.0 15.6	7.5 7.5 7.4	17.2 11.5 8.2	20.7 20.7 19.7	96.5 <b>96.6</b> 94.7	0.00
	50 60	28.04 24.56	13.3 11.7	7.4 7.2 7.0	6.1 4.7	18.3 16.8	92.0 89.0	0.00
	70 80	21.91 19.83	10.4 9.4	6.8 6.6	3.6 2.8	15.2 13.6	85.9 82.8	0.00
	90 100	18.14 16.75	8.6 8.0	6.4 6.2	2.2 1.8	12.0 10.5	79.8 77.0	0.00
	110 120	15.57 14.56	7.4 6.9	6.0 5.8	1.4 1.1	9.2 8.3	73.9 70.4	0.00
torage:	Roof Storage							
	ſ	Depth (mm)	Head (m)	Discharge (L/s)	Vreq (cu. m)	Vavail (cu. m)	Discharge Check	
2-y	ear Water Level	96.6	0.10	7.5	20.7	75.9	0.0	<u></u>
Sub	odrainage Area: Area (ha):	Block 1 Tributar 0.210	y to Internal C		3) Release Ra	te: 26.90	L/s	
	tc (min)	l (2 yr) (mm/hr)	Qactual (L/s)	Qrelease (L/s)	Qstored (L/s)	Vstored (m^3)		03/h
	10 20 30	76.81 52.03 40.04	8.75 8.61 8.36	<b>8.75</b> 8.61 8.36	0.00 0.00 0.00	0.00 0.00 0.00		0 m <sup>3</sup> /ha
	40 50	40.04 32.86 28.04	8.36 8.08 7.80	8.36 8.08 7.80	0.00 0.00 0.00	0.00 0.00 0.00		
	60 70	24.56 21.91	7.53 7.26	7.53 7.26	0.00 0.00	0.00 0.00 0.00		
	80 90	19.83 18.14	7.01 6.78	7.01 6.78	0.00 0.00	0.00 0.00		
	100 110	16.75 15.57	6.56 6.33	6.56 6.33	0.00	0.00 0.00		
Sub	odrainage Area:	14.56 L105B - UNC	6.08	6.08	0.00	0.00	Block 2	2
	Area (ha): C:	0.29 0.82	Qactual	Qrelease	Qstored	Tributar  Vstored	y to Cistern Block	۷
	<b>(min)</b> 10	<b>(mm/hr)</b> 76.81	<b>(L/s)</b> 51.5	<b>(L/s)</b> 51.5	(L/s)	(m^3)		
	20 30	52.03 40.04	34.9 26.8	34.9 26.8				
	40 50	32.86 28.04 24.56	22.0 18.8 16.5	22.0 18.8 16.5				
	60 70 80	24.56 21.91 19.83	16.5 14.7 13.3	16.5 14.7 13.3				
	90 100	18.14 16.75	12.2 11.2	12.2 11.2				
	110 120	15.57 14.56	10.4 9.8	10.4 9.8				
Sub	odrainage Area: Area (ha): C:	L105B - Roof 0.18 0.90			Max	imum Storage De	Controlled Rop pth: 15	of 60 mm
	tc (min)	l (2 yr) (mm/hr)	Qactual (L/s)	Qrelease (L/s)	Qstored (L/s)	Vstored (m^3)	Depth (mm)	
	10 20	76.81 52.03	33.84 22.93	7.07 7.42	26.77 15.51	16.06 18.61	90.0 <b>95.3</b>	0.00 0.00
	30 40	40.04 32.86	17.64 14.48	7.40 7.25	10.25 7.23	18.45 17.36	95.0 92.7	0.00 0.00
	50 60	28.04 24.56	12.35 10.82	7.05 6.83	5.31 3.99	15.92 14.35	89.7 86.5	0.00
	70 80	21.91 19.83	9.65 8.74 7.00	6.62 6.40	3.04 2.33	12.76 11.21	83.2 80.0 76.9	0.00
	90 100 110	18.14 16.75 15.57	7.99 7.38 6.86	6.20 5.97 5.72	1.80 1.41 1.14	9.71 8.43 7.50	76.9 73.5 69.7	0.00
	110	15.57	6.42	5.72 5.49	1.14 0.92	6.64	66.3	0.00
storage:	Roof Storage							
		Depth (mm)	Head (m)	Discharge (L/s)	Vreq	Vavail	Discharge Check	
	ear Water Level	95.3	0.10	7.4	(cu. m) 18.6	(cu. m) 70.4	0.0	_

	100 yr Inten	sity	I = a/(t + b)	a =	1735.688	t (min)	I (mm/hr)	
	City of Otta	-		b = c =	6.014 0.820	10 20	178.56 119.95	
				0-1	0.020	30 40	91.87 75.15	
						50 60	63.95 55.89	
						70 80	49.79 44.99	
						90 100	41.11 37.90	
						110 120	35.20 32.89	
	100 YEAR	Modified Rat	ional Metho	od for Entire S	Site			
Subdrai	nage Area: Area (ha):	L106B - UNC 0.02				Tributary to	Block 1 Cistern Block 1	
ı	C:	0.48					Cisterii biock i	
	tc (min)	I (100 yr) (mm/hr)	Qactual (L/s)	Qrelease (L/s)	Qstored (L/s)	Vstored (m^3)	<u> </u>	
	10 20	178.56 119.95	4.77 3.20	4.77 3.20				
	30 40	91.87 75.15	2.45 2.01	2.45 2.01				
	50 60	63.95 55.89	1.71 1.49	1.71 1.49				
	70 80	49.79 44.99	1.33 1.20	1.33 1.20				
	90 100	41.11 37.90	1.10	1.10 1.01				
	110 120	35.20 32.89	0.94 0.88	0.94 0.88				
Subdrai	Area (ha):	L106B -Roof 0.19			Maximun	n Storage Depth	Controlled Roof n: 150 mm	
	tc (min)	1.00	Qactual	Qrelease	Qstored	Vstored	Depth	
	(min) 10	(mm/hr) 178.56	94.2	9.7	(L/s) 84.5	(m^3) 50.7	(mm) 130.3	0.00
	20 30	119.95 91.87	63.3 48.5	10.4 10.6	52.9 37.8	63.5 68.1	140.3 143.9	0.00 0.00
	40 50	75.15 63.95	39.6 33.7	10.7 10.7	28.9 23.1	69.5 69.2	<b>145.0</b> 144.7	0.00 0.00
	60 70	55.89 49.79	29.5 26.3	10.6 10.5	18.9 15.7	67.9 66.1	143.7 142.3	0.00
	80 90	44.99 41.11	23.7 21.7	10.4 10.3	13.7 13.3 11.4	63.9 61.5	142.3 140.6 138.8	0.00 0.00 0.00
	100	37.90	20.0	10.2	9.8	59.0	136.8	0.00
	110 120	35.20 32.89	18.6 17.4	10.0 9.9	8.5 7.5	56.4 53.7	134.7 132.7	0.00
orage:	Roof Storage	e						
100-vear \	Vater Level	Depth (mm) 145.0	Head (m) 0.14	Discharge (L/s) 10.7	Vreq (cu. m) 69.5	Vavail (cu. m) 75.9	Discharge Check 0.0	
				al Cistern (L106		. 5.0		
	Area (ha):	0.210	Qactual	Qrelease	Qstored	Vstored	7	
	(min) 10	(mm/hr) 178.56	(L/s) 14.50	(L/s) 14.50	(L/s) 0.00	(m^3) 0.00	 0 m <sup>3</sup> /h	a
	20 30	178.56 119.95 91.87	13.60 13.09	13.60 13.09	0.00 0.00 0.00	0.00 0.00 0.00	O ili /n	
	40	75.15	12.71	12.71	0.00	0.00		
	50 60	63.95 55.89	12.40 12.12	12.40 12.12	0.00 0.00	0.00 0.00		
	70 80	49.79 44.99	11.86 11.62	11.86 11.62	0.00 0.00	0.00		
	90 100	41.11 37.90	11.39 11.18	11.39 11.18	0.00 0.00	0.00 0.00		
	110 120	35.20 32.89	10.97 10.77	10.97 10.77	0.00 0.00	0.00 0.00		
Subdrai		L105B - UNC				Talkers	Block 2	
ı	Area (ha): C:	0.29 1.00		L 01	0-1	-	Cistern Block 2	
	tc (min) 10	I (100 yr) (mm/hr) 178.56	<b>Qactual</b> (L/s) 145.9	<b>Qrelease</b> (L/s) 145.9	Qstored (L/s)	Vstored (m^3)		
	20 30	119.95 91.87	98.0 75.1	98.0 75.1				
	40 50	75.15 63.95	61.4 52.3	61.4 52.3				
	60 70	55.89 49.79	45.7 40.7	45.7 40.7				
	80 90	44.99 41.11	36.8 33.6	36.8 33.6				
	100 110	37.90 35.20	31.0 28.8	31.0 28.8				
	120	32.89	26.9	26.9			2aut 11 1 7	
Subdrai	nage Area: Area (ha): C:	L105B - Roof 0.18 1.00			Maximun	) Storage Depth	Controlled Roof n: 150 mm	
	tc (min)	I (100 yr) (mm/hr)	Qactual (L/s)	Qrelease (L/s)	Qstored (L/s)	Vstored (m^3)	Depth (mm)	
	10 20	178.56 119.95	87.4 58.7	9.7 10.3	77.7 48.4	46.6 58.0	129.9 139.6	0.00 0.00
	30 40	91.87 75.15	45.0 36.8	10.6 10.6	34.4 26.2	61.9 62.8	142.8 <b>143.6</b>	0.00 0.00
	50 60	63.95 55.89	31.3 27.4	10.6 10.5	20.7 16.9	62.2 60.7	143.0 141.8	0.00
	70	49.79 44.99	24.4	10.4	14.0	58.7 56.5	140.1	0.00
	80 90	41.11	22.0 20.1	10.3 10.1	11.8 10.0	54.0	138.2 136.2	0.00
	100 110	37.90 35.20	18.6 17.2	10.0 9.8	8.6 7.4	51.4 48.8	134.0 131.8	0.00
	120	32.89	16.1	9.7	6.4	46.2	129.6	0.00
	Roof Storage	Э						
orage:	_	D	11	Dia de	V	17- "	Discharge	
orage:	Vater Level	Depth (mm) 143.6	Head (m) 0.14	Discharge (L/s) 10.6	Vreq (cu. m) 62.8	Vavail (cu. m) 70.4	Discharge Check 0.0	

	drainage Area: Area (ha):	Block 2 Tributary 0.470	/ to Internal (	•	B) Release Rate:	60.21	L/s	
	tc (min)	l (2 yr) (mm/hr)	Qactual (L/s)	Qrelease (L/s)	Qstored (L/s)	Vstored (m^3)	7	
	10 20	76.81 52.03	58.53 42.28	<b>58.53</b> 42.28	0.00 0.00	<b>0.00</b> 0.00	_	0 m <sup>3</sup> /ha
	30	40.04	34.23	34.23	0.00	0.00		
	40 50	32.86 28.04	29.27 25.84	29.27 25.84	0.00 0.00	0.00 0.00		
	60 70	24.56 21.91	23.29 21.30	23.29 21.30	0.00 0.00	0.00 0.00		
	80 90	19.83 18.14	19.69 18.35	19.69 18.35	0.00 0.00	0.00 0.00		
	100	16.75	17.19	17.19	0.00	0.00		
	110 120	15.57 14.56	16.15 15.25	16.15 15.25	0.00 0.00	0.00 0.00		
Sub	odrainage Area: Area (ha): C:	L104C - UNC 0.02 0.85		Allowable	Release Rate:	Tributary <b>2.56</b>	Block to Preston Stree	
		1/2 vm	Operuol	Orologo				
	tc (min)	l (2 yr) (mm/hr) 76.81	Qactual (L/s) 3.63	Qrelease (L/s) 2.56				
	20	52.03	2.46	2.46				
	30 40	40.04 32.86	1.89 1.55	1.89 1.55				
	50 60	28.04 24.56	1.33 1.16	1.33 1.16				
	70	21.91	1.04	1.04				
	80 90	19.83 18.14	0.94 0.86	0.94 0.86				
	100 110	16.75 15.57	0.79 0.74	0.79 0.74				
	120	14.56	0.69	0.69				
Sub	odrainage Area: Area (ha): C:	L104B - UNC 0.15 0.80				Tributary	Block 4 to Cistern Block	4
	tc (min)	l (2 yr) (mm/hr)	Qactual (L/s)	Qrelease (L/s)	Qstored (L/s)	Vstored (m^3)		
	10 20	76.81 52.03	25.5 17.3	25.5 17.3			_	
	30 40	40.04 32.86	13.3 10.9	13.3 10.9				
	50 60	28.04 24.56	9.3 8.2	9.3 8.2				
	70	21.91	7.3	7.3				
	80 90	19.83 18.14	6.6 6.0	6.6 6.0				
	100 110	16.75 15.57	5.6 5.2	5.6 5.2				
	120	14.56	4.8	4.8				
Sub	odrainage Area: Area (ha): C:	L104B - Roof 0.15 0.90			Maximum	Storage Dept	Controlled Rooth: 15	of 60 mm
	tc (min)	l (2 yr) (mm/hr)	Qactual (L/s)	Qrelease (L/s)	Qstored (L/s)	Vstored (m^3)	Depth (mm)	
	10 20	76.81 52.03	28.9 19.6	5.3 5.6	23.6 14.0	14.1 16.8	91.1 97.5	0.00
	30	40.04	15.1	5.6	9.5	17.1	98.1	0.0
	40 50	32.86 28.04	12.4 10.6	5.5 5.4	6.8 5.1	16.4 15.3	96.5 93.9	0.00
	60 70	24.56 21.91	9.2 8.3	5.3 5.2	3.9 3.0	14.1 12.8	90.9 87.7	0.00
	80	19.83	7.5	5.1	2.4	11.4	84.4	0.0
	90 100	18.14 16.75	6.8 6.3	5.0 4.8	1.9 1.5	10.1 8.8	81.2 78.0	0.0
				4.7	1.1	7.5	74.9 70.6	0.0
	110 120	15.57 14.56	5.9 5.5		0.9	0.0		0.0
rage:	120	15.57 14.56	5.9 5.5	4.6	0.9	6.6		
rage:		14.56  Depth	5.5 Head	4.6  Discharge	Vreq	Vavail	Discharge	$\neg$
	120	Depth (mm)	5.5	4.6			Discharge Check 0.0	
	120 Roof Storage ear Water Level	Depth (mm)	5.5 Head (m) 0.10	4.6  Discharge (L/s) 5.6  Cistern (L104E	Vreq (cu. m) 17.1	Vavail (cu. m)	Check	
2-y	120 Roof Storage ear Water Level odrainage Area:	Depth (mm) 98.1  Block 4 Tributary 0.300  I (2 yr) (mm/hr)	Head (m) 0.10  y to Internal (  Qactual (L/s)	4.6  Discharge (L/s) 5.6  Cistern (L104E Allowable  Qrelease (L/s)	Vreq (cu. m) 17.1  3) Release Rate:  Qstored (L/s)	Vavail (cu. m) 60.2 38.43 Vstored (m^3)	Check 0.0	
2-y	120 Roof Storage ear Water Level edrainage Area: Area (ha):  tc (min) 10 20	Depth (mm) 98.1  Block 4 Tributary 0.300  I (2 yr) (mm/hr) 76.81 52.03	5.5  Head (m) 0.10  y to Internal ( Qactual (L/s) 30.87 22.88	4.6  Discharge (L/s) 5.6  Cistern (L104E Allowable  Qrelease (L/s) 30.87 22.88	Vreq (cu. m) 17.1 3) Release Rate: Qstored (L/s) 0.00 0.00	Vavail (cu. m) 60.2 38.43 Vstored (m^3) 0.00 0.00	Check 0.0	0 m³/ha
2-y	near Water Level  odrainage Area: Area (ha):  tc (min)  10 20 30	Depth (mm) 98.1  Block 4 Tributary 0.300  I (2 yr) (mm/hr) 76.81 52.03 40.04	5.5  Head (m) 0.10  y to Internal ( Qactual (L/s) 30.87 22.88 18.91	4.6  Discharge (L/s) 5.6  Cistern (L104E Allowable  Qrelease (L/s) 30.87 22.88 18.91	Vreq (cu. m) 17.1 3) Release Rate: Qstored (L/s) 0.00 0.00 0.00	Vavail (cu. m) 60.2  38.43  Vstored (m^3) 0.00 0.00 0.00	Check 0.0	0 m³/ha
2-y	ndrainage Area: Area (ha):  tc (min) 10 20 30 40 50	Depth (mm) 98.1  Block 4 Tributary 0.300  I (2 yr) (mm/hr) 76.81 52.03 40.04 32.86 28.04	Head (m) 0.10  y to Internal (  Qactual (L/s) 30.87 22.88 18.91 16.47 14.77	4.6  Discharge (L/s) 5.6  Cistern (L104E Allowable  Qrelease (L/s) 30.87 22.88 18.91 16.47 14.77	Vreq (cu. m) 17.1  3) Release Rate:  Qstored (L/s) 0.00 0.00 0.00 0.00 0.00 0.00	Vavail (cu. m) 60.2  38.43  Vstored (m^3) 0.00 0.00 0.00 0.00 0.00	Check 0.0	0 m³/ha
2-y	near Water Level  redrainage Area: Area (ha):  tc (min)  10 20 30 40 50 60 70	Depth (mm) 98.1  Block 4 Tributary 0.300  I (2 yr) (mm/hr)  76.81 52.03 40.04 32.86 28.04 24.56 21.91	5.5  Head (m) 0.10  y to Internal ( L/s) 30.87 22.88 18.91 16.47 14.77 13.50 12.50	4.6  Discharge (L/s) 5.6  Cistern (L104E Allowable  Qrelease (L/s) 30.87 22.88 18.91 16.47 14.77 13.50 12.50	Vreq (cu. m) 17.1 3) Release Rate: Qstored (L/s) 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.	Vavail (cu. m) 60.2  38.43  Vstored (m^3)  0.00 0.00 0.00 0.00 0.00 0.00 0.00 0	Check 0.0	0 m³/ha
2-y	ndrainage Area: Area (ha):  tc (min) 10 20 30 40 50 60	Depth (mm) 98.1  Block 4 Tributary 0.300  I (2 yr) (mm/hr) 76.81 52.03 40.04 32.86 28.04 24.56	5.5  Head (m) 0.10  y to Internal (  Qactual (L/s) 30.87 22.88 18.91 16.47 14.77 13.50	4.6  Discharge (L/s) 5.6  Cistern (L104E Allowable  Qrelease (L/s) 30.87 22.88 18.91 16.47 14.77 13.50	Vreq (cu. m) 17.1 3) Release Rate: Qstored (L/s) 0.00 0.00 0.00 0.00 0.00 0.00 0.00	Vavail (cu. m) 60.2  38.43  Vstored (m^3) 0.00 0.00 0.00 0.00 0.00 0.00 0.00	Check 0.0	0 m³/ha
2-y	ndrainage Area: Area (ha):  tc (min) 10 20 30 40 50 60 70 80 90 100	Depth (mm) 98.1  Block 4 Tributary 0.300  I (2 yr) (mm/hr) 76.81 52.03 40.04 32.86 28.04 24.56 21.91 19.83 18.14 16.75	Head (m) 0.10  y to Internal ( L/s) 30.87 22.88 18.91 16.47 14.77 13.50 12.50 11.68 11.00 10.41	4.6  Discharge (L/s) 5.6  Cistern (L104E Allowable  Qrelease (L/s) 30.87 22.88 18.91 16.47 14.77 13.50 12.50 11.68 11.00 10.41	Vreq (cu. m) 17.1  3) Release Rate:  Qstored (L/s) 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.	Vavail (cu. m) 60.2  38.43  Vstored (m^3) 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.	Check 0.0	0 m³/ha
2-y	near Water Level  redrainage Area: Area (ha):  tc (min)  10 20 30 40 50 60 70 80 90	Depth (mm) 98.1  Block 4 Tributary 0.300  I (2 yr) (mm/hr) 76.81 52.03 40.04 32.86 28.04 24.56 21.91 19.83 18.14	Fig. 5.5  Head (m) 0.10  y to Internal (L/s) 30.87 22.88 18.91 16.47 14.77 13.50 12.50 11.68 11.00	4.6  Discharge (L/s) 5.6  Cistern (L104E Allowable  Qrelease (L/s) 30.87 22.88 18.91 16.47 14.77 13.50 12.50 11.68 11.00	Vreq (cu. m) 17.1  3) Release Rate:  Qstored (L/s) 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.	Vavail (cu. m) 60.2  38.43  Vstored (m^3) 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.	Check 0.0	0 m <sup>3</sup> /ha
2-y	120 Roof Storage ear Water Level odrainage Area:	Depth (mm) 98.1  Block 4 Tributary 0.300  I (2 yr) (mm/hr) 76.81 52.03 40.04 32.86 28.04 24.56 21.91 19.83 18.14 16.75 15.57	Head (m) 0.10  y to Internal (  Qactual (L/s) 30.87 22.88 18.91 16.47 14.77 13.50 12.50 11.68 11.00 10.41 9.90	4.6  Discharge (L/s) 5.6  Cistern (L104E Allowable  Qrelease (L/s) 30.87 22.88 18.91 16.47 14.77 13.50 12.50 11.68 11.00 10.41 9.90 9.41	Vreq (cu. m) 17.1  3) Release Rate:  Qstored (L/s)  0.00 0.00 0.00 0.00 0.00 0.00 0.00 0	Vavail (cu. m) 60.2  38.43  Vstored (m^3) 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.	Check 0.0	5
2-y	rear Water Level  rear Water L	Depth (mm) 98.1  Block 4 Tributary 0.300  I (2 yr) (mm/hr) 76.81 52.03 40.04 32.86 28.04 24.56 21.91 19.83 18.14 16.75 15.57 14.56  L103C - UNC 0.07 0.85	Head (m) 0.10  y to Internal (  Qactual (L/s) 30.87 22.88 18.91 16.47 14.77 13.50 12.50 11.68 11.00 10.41 9.90 9.41  Qactual	4.6  Discharge (L/s) 5.6  Cistern (L104E Allowable  Qrelease (L/s) 30.87 22.88 18.91 16.47 14.77 13.50 12.50 11.68 11.00 10.41 9.90 9.41  Allowable  Qrelease	Vreq (cu. m) 17.1  3) Release Rate:  Qstored (L/s) 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.	Vavail (cu. m) 60.2  38.43  Vstored (m^3) 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.	L/s Block to Preston Street	5
2-y	rear Water Level  rear Water Level  rear Water Level  rear (ha):  tc (min)  10 20 30 40 50 60 70 80 90 100 110 120  rdrainage Area: Area (ha):  cc:	Depth (mm) 98.1  Block 4 Tributary 0.300  I (2 yr) (mm/hr) 76.81 52.03 40.04 32.86 28.04 24.56 21.91 19.83 18.14 16.75 15.57 14.56  L103C - UNC 0.07 0.85	Head (m) 0.10  y to Internal (  Qactual (L/s) 30.87 22.88 18.91 16.47 14.77 13.50 12.50 11.68 11.00 10.41 9.90 9.41	4.6  Discharge (L/s) 5.6  Cistern (L104E Allowable  Qrelease (L/s) 30.87 22.88 18.91 16.47 14.77 13.50 12.50 11.68 11.00 10.41 9.90 9.41  Allowable	Vreq (cu. m) 17.1  3) Release Rate:  Qstored (L/s) 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.	Vavail (cu. m) 60.2  38.43  Vstored (m^3) 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.	L/s Block to Preston Street	5
2-y	Roof Storage ear Water Level drainage Area: Area (ha):  tc (min)  10 20 30 40 50 60 70 80 90 100 110 120  drainage Area: Area (ha):  C:  tc (min)  10 20 30	Depth (mm) 98.1  Block 4 Tributary 0.300  I (2 yr) (mm/hr) 76.81 52.03 40.04 32.86 28.04 24.56 21.91 19.83 18.14 16.75 15.57 14.56  L103C - UNC 0.07 0.85  I (2 yr) (mm/hr) 76.81 52.03 40.04	Head (m) 0.10  y to Internal ( Qactual (L/s) 30.87 22.88 18.91 16.47 14.77 13.50 12.50 11.68 11.00 10.41 9.90 9.41  Qactual (L/s) 12.70 8.61 6.62	4.6  Discharge (L/s) 5.6  Cistern (L104E Allowable  Qrelease (L/s) 30.87 22.88 18.91 16.47 14.77 13.50 12.50 11.68 11.00 10.41 9.90 9.41  Allowable  Qrelease (L/s) 8.97 8.61 6.62	Vreq (cu. m) 17.1  3) Release Rate:  Qstored (L/s) 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.	Vavail (cu. m) 60.2  38.43  Vstored (m^3) 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.	L/s Block to Preston Street	5
2-y	120 Roof Storage ear Water Level drainage Area:	Depth (mm) 98.1  Block 4 Tributary 0.300  I (2 yr) (mm/hr) 76.81 52.03 40.04 32.86 28.04 24.56 21.91 19.83 18.14 16.75 15.57 14.56  L103C - UNC 0.07 0.85  I (2 yr) (mm/hr) 76.81 52.03 40.04 32.86 28.04	Head (m) 0.10  y to Internal ( Qactual (L/s) 30.87 22.88 18.91 16.47 14.77 13.50 12.50 11.68 11.00 10.41 9.90 9.41  Qactual (L/s) 12.70 8.61 6.62 5.44 4.64	4.6  Discharge (L/s) 5.6  Cistern (L104E Allowable  Qrelease (L/s) 30.87 22.88 18.91 16.47 14.77 13.50 12.50 11.68 11.00 10.41 9.90 9.41  Allowable  Qrelease (L/s) 8.61 6.62 5.44 4.64	Vreq (cu. m) 17.1  3) Release Rate:  Qstored (L/s) 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.	Vavail (cu. m) 60.2  38.43  Vstored (m^3)  0.00 0.00 0.00 0.00 0.00 0.00 0.00 0	L/s Block to Preston Street	5
2-y	120 Roof Storage ear Water Level drainage Area:	Depth (mm) 98.1  Block 4 Tributary 0.300  I (2 yr) (mm/hr) 76.81 52.03 40.04 32.86 28.04 24.56 21.91 19.83 18.14 16.75 15.57 14.56  L103C - UNC 0.07 0.85  I (2 yr) (mm/hr) 76.81 52.03 40.04 32.86	Head (m) 0.10  y to Internal ( Qactual (L/s) 30.87 22.88 18.91 16.47 14.77 13.50 12.50 11.68 11.00 10.41 9.90 9.41  Qactual (L/s) 12.70 8.61 6.62 5.44	4.6  Discharge (L/s) 5.6  Cistern (L104E Allowable  Qrelease (L/s) 30.87 22.88 18.91 16.47 14.77 13.50 12.50 11.68 11.00 10.41 9.90 9.41  Allowable  Qrelease (L/s) 8.97 8.61 6.62 5.44	Vreq (cu. m) 17.1  3) Release Rate:  Qstored (L/s) 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.	Vavail (cu. m) 60.2  38.43  Vstored (m^3)  0.00 0.00 0.00 0.00 0.00 0.00 0.00 0	L/s Block to Preston Street	5
2-y	120 Roof Storage ear Water Level drainage Area:	Depth (mm) 98.1  Block 4 Tributary 0.300  I (2 yr) (mm/hr) 76.81 52.03 40.04 32.86 28.04 24.56 21.91 19.83 18.14 16.75 15.57 14.56  L103C - UNC 0.07 0.85  I (2 yr) (mm/hr) 76.81 52.03 40.04 32.86 28.04 24.56	Head (m) 0.10  y to Internal ( Qactual (L/s) 30.87 22.88 18.91 16.47 14.77 13.50 12.50 11.68 11.00 10.41 9.90 9.41  Qactual (L/s) 12.70 8.61 6.62 5.44 4.64 4.06	4.6  Discharge (L/s) 5.6  Cistern (L104E Allowable  Qrelease (L/s) 30.87 22.88 18.91 16.47 14.77 13.50 12.50 11.68 11.00 10.41 9.90 9.41  Allowable  Qrelease (L/s) 8.97 8.61 6.62 5.44 4.64 4.06	Vreq (cu. m) 17.1  3) Release Rate:  Qstored (L/s) 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.	Vavail (cu. m) 60.2  38.43  Vstored (m^3)  0.00 0.00 0.00 0.00 0.00 0.00 0.00 0	L/s Block to Preston Street	5

Subdra	ninage Area: I	Block 2 Tributa	ry to Interna	ıl Cistern (L105	В)			
	Area (ha):	0.470	Operual	Oralogo	Octored	Votored	l	
	tc (min)	I (100 yr) (mm/hr) 178.56	Qactual (L/s) 155.60	Qrelease (L/s) 60.21	Qstored (L/s) 95.39	Vstored (m^3) 57.23		
	20 30	119.95 91.87	108.35 85.63	<b>60.21</b> 60.21	48.14 25.41	<b>57.77</b> 45.75	123 m <sup>3</sup> /h	a
	40	75.15	72.01	60.21	11.80	28.32		
	50 60	63.95 55.89	62.83 56.17	60.21 56.17	2.62 0.00	7.86 0.00		
	70 80	49.79 44.99	51.07 47.02	51.07 47.02	0.00 0.00	0.00 0.00		
	90 100	41.11 37.90	43.71 40.95	43.71 40.95	0.00 0.00	0.00 0.00		
	110	35.20	38.60	38.60	0.00	0.00		
	120	32.89	36.56	36.56	0.00	0.00		
Subdra	ninage Area: Area (ha): C:	L104C - UNC 0.02 1.00				Tributary to F	Block 3 Preston Street	
	tc (min)	l (100 yr) (mm/hr)	Qactual (L/s)	Qrelease (L/s)				
	10 20	178.56 119.95	9.93 6.67	<b>2.56</b> 2.56				
	30 40	91.87 75.15	5.11 4.18	2.56 2.56				
	50 60	63.95 55.89	3.56 3.11	2.56 2.56				
	70 80	49.79 44.99	2.77 2.50	2.56 2.50				
	90	41.11	2.29	2.29 2.11				
	100 110	37.90 35.20	2.11 1.96	1.96				
	120	32.89	1.83	1.83				
Subdra	ninage Area: Area (ha): C:	L104B - UNC 0.15 1.00				Tributary to C	Block 4 istern Block 4	
	tc (min)	l (100 yr) (mm/hr)	Qactual (L/s)	Qrelease (L/s)	Qstored (L/s)	Vstored (m^3)		
	10 20	178.56 119.95	74.2 49.8	74.2 49.8				
	30 40	91.87 75.15	38.2 31.2	38.2 31.2				
	50 60	63.95 55.89	26.6 23.2	26.6 23.2				
	70	49.79	20.7	20.7				
	80 90	44.99 41.11	18.7 17.1	18.7 17.1				
	100 110	37.90 35.20	15.7 14.6	15.7 14.6				
Subdra	Area (ha):	32.89 L104B - Roof 0.15	13.7	13.7	Maximu	Co m Storage Depth:	ontrolled Roof 150 mm	
	C:	1.00 I (100 yr)	Qactual	Qrelease	Qstored	Vstored	Depth	
	<b>(min)</b> 10	(mm/hr) 178.56	(L/s) 74.7	(L/s) 6.8	(L/s) 67.9	(m^3) 40.7	(mm) 130.8	0.00
	20				_ · · · ·			0.00
		119.95 91.87	50.2 38.4	7.2 7.4	42.9 31.0	51.5	141.5 145.7	
	30 40	91.87 75.15	38.4 31.4	7.4 7.5	31.0 24.0	51.5 55.9 57.5	145.7 147.4	0.00 0.00
	30	91.87	38.4	7.4	31.0	51.5 55.9	145.7	0.00
	30 40 50 60 70	91.87 75.15 63.95 55.89 49.79	38.4 31.4 26.8 23.4 20.8	7.4 7.5 7.5 7.5 7.4	31.0 24.0 19.3 15.9 13.4	51.5 55.9 57.5 57.8 57.3 56.3	145.7 147.4 <b>147.7</b> 147.2 146.2	0.00 0.00 0.00 0.00 0.00
	30 40 50 60 70 80 90	91.87 75.15 63.95 55.89 49.79 44.99 41.11	38.4 31.4 26.8 23.4 20.8 18.8 17.2	7.4 7.5 7.5 7.5 7.4 7.4 7.3	31.0 24.0 19.3 15.9 13.4 11.4 9.9	51.5 55.9 57.5 57.8 57.3 56.3 55.0 53.4	145.7 147.4 <b>147.7</b> 147.2 146.2 144.8 143.3	0.00 0.00 0.00 0.00 0.00 0.00
	30 40 50 60 70 80 90 100	91.87 75.15 63.95 55.89 49.79 44.99 41.11 37.90 35.20	38.4 31.4 26.8 23.4 20.8 18.8 17.2 15.9	7.4 7.5 7.5 7.5 7.4 7.4 7.3 7.3	31.0 24.0 19.3 15.9 13.4 11.4 9.9 8.6 7.5	51.5 55.9 57.5 57.8 57.3 56.3 55.0 53.4 51.6 49.8	145.7 147.4 <b>147.7</b> 147.2 146.2 144.8 143.3 141.6 139.7	0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.0
Storage:	30 40 50 60 70 80 90 100 110	91.87 75.15 63.95 55.89 49.79 44.99 41.11 37.90 35.20 32.89	38.4 31.4 26.8 23.4 20.8 18.8 17.2	7.4 7.5 7.5 7.5 7.4 7.4 7.3 7.3	31.0 24.0 19.3 15.9 13.4 11.4 9.9 8.6	51.5 55.9 57.5 57.8 57.3 56.3 55.0 53.4 51.6	145.7 147.4 <b>147.7</b> 147.2 146.2 144.8 143.3 141.6	0.00 0.00 0.00 0.00 0.00 0.00 0.00
Storage:	30 40 50 60 70 80 90 100	91.87 75.15 63.95 55.89 49.79 44.99 41.11 37.90 35.20 32.89	38.4 31.4 26.8 23.4 20.8 18.8 17.2 15.9 14.7 13.8	7.4 7.5 7.5 7.5 7.4 7.4 7.3 7.3 7.2 7.1	31.0 24.0 19.3 15.9 13.4 11.4 9.9 8.6 7.5 6.7	51.5 55.9 57.5 57.8 57.3 56.3 55.0 53.4 51.6 49.8 47.9	145.7 147.4 <b>147.7</b> 147.2 146.2 144.8 143.3 141.6 139.7 137.9	0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.0
	30 40 50 60 70 80 90 100 110	91.87 75.15 63.95 55.89 49.79 44.99 41.11 37.90 35.20 32.89	38.4 31.4 26.8 23.4 20.8 18.8 17.2 15.9 14.7 13.8	7.4 7.5 7.5 7.4 7.4 7.3 7.3 7.2 7.1	31.0 24.0 19.3 15.9 13.4 11.4 9.9 8.6 7.5 6.7	51.5 55.9 57.5 57.8 57.3 56.3 55.0 53.4 51.6 49.8 47.9	145.7 147.4 <b>147.7</b> 147.2 146.2 144.8 143.3 141.6 139.7 137.9	0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.0
100-year	30 40 50 60 70 80 90 100 110 120 Roof Storag	91.87 75.15 63.95 55.89 49.79 44.99 41.11 37.90 35.20 32.89 e	38.4 31.4 26.8 23.4 20.8 18.8 17.2 15.9 14.7 13.8	7.4 7.5 7.5 7.5 7.4 7.4 7.3 7.3 7.2 7.1	31.0 24.0 19.3 15.9 13.4 11.4 9.9 8.6 7.5 6.7 Vreq (cu. m) 57.8	51.5 55.9 57.5 57.8 57.3 56.3 55.0 53.4 51.6 49.8 47.9	145.7 147.4 <b>147.7</b> 147.2 146.2 144.8 143.3 141.6 139.7 137.9	0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.0
100-year	30 40 50 60 70 80 90 100 110 120 Roof Storag Water Level	91.87 75.15 63.95 55.89 49.79 44.99 41.11 37.90 35.20 32.89  e  Depth (mm) 147.7  Block 4 Tributa 0.300  I (100 yr) (mm/hr)	38.4 31.4 26.8 23.4 20.8 18.8 17.2 15.9 14.7 13.8 Head (m) 0.15	7.4 7.5 7.5 7.4 7.4 7.3 7.3 7.2 7.1 Discharge (L/s) 7.5	31.0 24.0 19.3 15.9 13.4 11.4 9.9 8.6 7.5 6.7 Vreq (cu. m) 57.8	51.5 55.9 57.5 57.8 57.3 56.3 55.0 53.4 51.6 49.8 47.9 Vavail (cu. m) 60.2	145.7 147.4 <b>147.7</b> 147.2 146.2 144.8 143.3 141.6 139.7 137.9	0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.0
•	30 40 50 60 70 80 90 100 110 120 Roof Storag Water Level	91.87 75.15 63.95 55.89 49.79 44.99 41.11 37.90 35.20 32.89  e  Depth (mm) 147.7  Block 4 Tributa 0.300  I (100 yr) (mm/hr) 178.56 119.95	38.4 31.4 26.8 23.4 20.8 18.8 17.2 15.9 14.7 13.8 Head (m) 0.15	7.4 7.5 7.5 7.5 7.4 7.4 7.4 7.3 7.3 7.2 7.1  Discharge (L/s) 7.5  Clease (L/s) 38.43 38.43	31.0 24.0 19.3 15.9 13.4 11.4 9.9 8.6 7.5 6.7 Vreq (cu. m) 57.8 B)	51.5 55.9 57.5 57.8 57.3 56.3 55.0 53.4 51.6 49.8 47.9 Vavail (cu. m) 60.2 Vstored (m^3) 25.55 22.37	145.7 147.4 <b>147.7</b> 147.2 146.2 144.8 143.3 141.6 139.7 137.9	0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.0
100-year	30 40 50 60 70 80 90 100 110 120 Roof Storage Water Level tinage Area: I Area (ha): tc (min) 10 20 30	91.87 75.15 63.95 55.89 49.79 44.99 41.11 37.90 35.20 32.89  e  Depth (mm) 147.7  Block 4 Tributa 0.300  I (100 yr) (mm/hr) 178.56 119.95 91.87	38.4 31.4 26.8 23.4 20.8 18.8 17.2 15.9 14.7 13.8 Head (m) 0.15	7.4 7.5 7.5 7.5 7.4 7.4 7.4 7.3 7.3 7.2 7.1  Discharge (L/s) 7.5  Al Cistern (L104  Qrelease (L/s) 38.43 38.43 38.43	31.0 24.0 19.3 15.9 13.4 11.4 9.9 8.6 7.5 6.7 Vreq (cu. m) 57.8 B)  Qstored (L/s) 42.59 18.65 7.14	51.5 55.9 57.5 57.8 57.3 56.3 55.0 53.4 51.6 49.8 47.9 Vavail (cu. m) 60.2 Vstored (m^3) 25.55 22.37 12.85	145.7 147.4 147.7 147.2 146.2 144.8 143.3 141.6 139.7 137.9 Discharge Check 0.0	0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.0
100-year	30 40 50 60 70 80 90 100 110 120 Roof Storag Water Level tinage Area: I Area (ha): tc (min) 10 20 30 40 50	91.87 75.15 63.95 55.89 49.79 44.99 41.11 37.90 35.20 32.89  e  Depth (mm) 147.7  Block 4 Tributa 0.300  I (100 yr) (mm/hr) 178.56 119.95 91.87 75.15 63.95	38.4 31.4 26.8 23.4 20.8 18.8 17.2 15.9 14.7 13.8  Head (m) 0.15  Ty to International (L/s) 81.02 57.08 45.57 38.69 34.05	7.4 7.5 7.5 7.5 7.4 7.4 7.3 7.3 7.3 7.2 7.1  Discharge (L/s) 7.5  Al Cistern (L104  Qrelease (L/s) 38.43 38.43 38.43 38.43 38.43 38.43 38.43 34.05	31.0 24.0 19.3 15.9 13.4 11.4 9.9 8.6 7.5 6.7  Vreq (cu. m) 57.8  B)  Qstored (L/s) 42.59 18.65 7.14 0.26 0.00	51.5 55.9 57.5 57.8 57.3 56.3 55.0 53.4 51.6 49.8 47.9 Vavail (cu. m) 60.2 Vstored (m^3) 25.55 22.37 12.85 0.61 0.00	145.7 147.4 147.7 147.2 146.2 144.8 143.3 141.6 139.7 137.9 Discharge Check 0.0	0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.0
100-year	30 40 50 60 70 80 90 100 110 120 Roof Storage Water Level image Area: I Area (ha): tc (min) 10 20 30 40 50 60 70	91.87 75.15 63.95 55.89 49.79 44.99 41.11 37.90 35.20 32.89  e  Depth (mm) 147.7  Block 4 Tributa 0.300  I (100 yr) (mm/hr) 178.56 119.95 91.87 75.15 63.95 55.89 49.79	38.4 31.4 26.8 23.4 20.8 18.8 17.2 15.9 14.7 13.8 Head (m) 0.15 Try to Internal (L/s) 81.02 57.08 45.57 38.69 34.05 30.68 28.11	7.4 7.5 7.5 7.5 7.4 7.4 7.4 7.3 7.3 7.2 7.1  Discharge (L/s) 7.5  Al Cistern (L104  Qrelease (L/s) 38.43	31.0 24.0 19.3 15.9 13.4 11.4 9.9 8.6 7.5 6.7  Vreq (cu. m) 57.8  B)  Qstored (L/s) 42.59 18.65 7.14 0.26 0.00 0.00 0.00 0.00	51.5 55.9 57.5 57.8 57.3 56.3 55.0 53.4 51.6 49.8 47.9  Vavail (cu. m) 60.2  Vstored (m^3) 25.55 22.37 12.85 0.61 0.00 0.00 0.00 0.00	145.7 147.4 147.7 147.2 146.2 144.8 143.3 141.6 139.7 137.9 Discharge Check 0.0	0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.0
100-year	30 40 50 60 70 80 90 100 110 120 Roof Storage Water Level tinage Area: I Area (ha): tc (min) 10 20 30 40 50 60 70 80 90	91.87 75.15 63.95 55.89 49.79 44.99 41.11 37.90 35.20 32.89  e  Depth (mm) 147.7  Block 4 Tributa 0.300  I (100 yr) (mm/hr) 178.56 119.95 91.87 75.15 63.95 55.89 49.79 44.99 41.11	38.4 31.4 26.8 23.4 20.8 18.8 17.2 15.9 14.7 13.8  Head (m) 0.15  Ty to Internal (L/s) 81.02 57.08 45.57 38.69 34.05 30.68 28.11 26.07 24.40	7.4 7.5 7.5 7.5 7.4 7.4 7.3 7.3 7.3 7.2 7.1  Discharge (L/s) 7.5  Al Cistern (L104  Qrelease (L/s) 38.43 38.43 38.43 38.43 38.43 38.43 38.43 38.43 38.43 38.43 34.05 30.68 28.11 26.07 24.40	31.0 24.0 19.3 15.9 13.4 11.4 9.9 8.6 7.5 6.7  Vreq (cu. m) 57.8  B)  Qstored (L/s) 42.59 18.65 7.14 0.26 0.00 0.00 0.00 0.00 0.00 0.00 0.00	51.5 55.9 57.5 57.8 57.3 56.3 55.0 53.4 51.6 49.8 47.9  Vavail (cu. m) 60.2  Vstored (m^3) 25.55 22.37 12.85 0.61 0.00 0.00 0.00 0.00 0.00 0.00 0.00	145.7 147.4 147.7 147.2 146.2 144.8 143.3 141.6 139.7 137.9 Discharge Check 0.0	0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.0
100-year	30 40 50 60 70 80 90 100 110 120 Roof Storage Water Level tinage Area: I Area (ha): tc (min) 10 20 30 40 50 60 70 80	91.87 75.15 63.95 55.89 49.79 44.99 41.11 37.90 35.20 32.89  e  Depth (mm) 147.7  Block 4 Tributa 0.300  I (100 yr) (mm/hr) 178.56 119.95 91.87 75.15 63.95 55.89 49.79 44.99	38.4 31.4 26.8 23.4 20.8 18.8 17.2 15.9 14.7 13.8  Head (m) 0.15  Try to Internal (L/s) 81.02 57.08 45.57 38.69 34.05 30.68 28.11 26.07	7.4 7.5 7.5 7.5 7.4 7.4 7.4 7.3 7.3 7.2 7.1  Discharge (L/s) 7.5  Al Cistern (L104  Qrelease (L/s) 38.43	31.0 24.0 19.3 15.9 13.4 11.4 9.9 8.6 7.5 6.7  Vreq (cu. m) 57.8  B)  Qstored (L/s) 42.59 18.65 7.14 0.26 0.00 0.00 0.00 0.00 0.00 0.00	51.5 55.9 57.5 57.8 57.3 56.3 55.0 53.4 51.6 49.8 47.9  Vavail (cu. m) 60.2  Vstored (m^3) 25.55 22.37 12.85 0.61 0.00 0.00 0.00 0.00 0.00 0.00	145.7 147.4 147.7 147.2 146.2 144.8 143.3 141.6 139.7 137.9 Discharge Check 0.0	0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.0
100-year	30 40 50 60 70 80 90 100 110 120 Roof Storage Water Level tinage Area: I Area (ha): tc (min) 10 20 30 40 50 60 70 80 90 100	91.87 75.15 63.95 55.89 49.79 44.99 41.11 37.90 35.20 32.89  e  Depth (mm) 147.7  Block 4 Tributa 0.300  I (100 yr) (mm/hr) 178.56 119.95 91.87 75.15 63.95 55.89 49.79 44.99 41.11 37.90	38.4 31.4 26.8 23.4 20.8 18.8 17.2 15.9 14.7 13.8 Head (m) 0.15 Try to Internal (L/s) 81.02 57.08 45.57 38.69 34.05 30.68 28.11 26.07 24.40 23.00	7.4 7.5 7.5 7.5 7.4 7.4 7.3 7.3 7.3 7.2 7.1  Discharge (L/s) 7.5  Al Cistern (L104  Qrelease (L/s) 38.43	31.0 24.0 19.3 15.9 13.4 11.4 9.9 8.6 7.5 6.7  Vreq (cu. m) 57.8  B)  Qstored (L/s) 42.59 18.65 7.14 0.26 0.00 0.00 0.00 0.00 0.00 0.00 0.00	51.5 55.9 57.5 57.8 57.3 56.3 55.0 53.4 51.6 49.8 47.9  Vavail (cu. m) 60.2  Vstored (m^3) 25.55 22.37 12.85 0.61 0.00 0.00 0.00 0.00 0.00 0.00 0.00	145.7 147.4 147.7 147.2 146.2 144.8 143.3 141.6 139.7 137.9 Discharge Check 0.0	0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.0
100-year  Subdra	30 40 50 60 70 80 90 100 110 120 Roof Storage Water Level tc (min) 10 20 30 40 50 60 70 80 90 100 110	91.87 75.15 63.95 55.89 49.79 44.99 41.11 37.90 35.20 32.89  e  Depth (mm) 147.7  Block 4 Tributa 0.300  I (100 yr) (mm/hr) 178.56 119.95 91.87 75.15 63.95 55.89 49.79 44.99 41.11 37.90 35.20	38.4 31.4 26.8 23.4 20.8 18.8 17.2 15.9 14.7 13.8  Head (m) 0.15  ry to Internal (L/s) 81.02 57.08 45.57 38.69 34.05 30.68 28.11 26.07 24.40 23.00 21.81	7.4 7.5 7.5 7.5 7.4 7.4 7.3 7.3 7.3 7.2 7.1  Discharge (L/s) 7.5  Al Cistern (L104  Qrelease (L/s) 38.43	31.0 24.0 19.3 15.9 13.4 11.4 9.9 8.6 7.5 6.7  Vreq (cu. m) 57.8  B)  Qstored (L/s) 42.59 18.65 7.14 0.26 0.00 0.00 0.00 0.00 0.00 0.00 0.00	51.5 55.9 57.5 57.8 57.3 56.3 55.0 53.4 51.6 49.8 47.9  Vavail (cu. m) 60.2  Vstored (m^3) 25.55 22.37 12.85 0.61 0.00 0.00 0.00 0.00 0.00 0.00 0.00	145.7 147.4 147.7 147.2 146.2 144.8 143.3 141.6 139.7 137.9 Discharge Check 0.0	0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.0
100-year  Subdra	30 40 50 60 70 80 90 100 110 120  Roof Storage  Water Level  tc (min) 10 20 30 40 50 60 70 80 90 100 110 120  tinage Area: Area (ha):  C: tc	91.87 75.15 63.95 55.89 49.79 44.99 41.11 37.90 35.20 32.89  e  Depth (mm) 147.7  Block 4 Tributa 0.300  I (100 yr) (mm/hr) 178.56 119.95 91.87 75.15 63.95 55.89 49.79 44.99 41.11 37.90 35.20 32.89  L103C - UNC 0.07 1.00  I (100 yr)	38.4 31.4 26.8 23.4 20.8 18.8 17.2 15.9 14.7 13.8  Head (m) 0.15  Ty to Internal (L/s) 81.02 57.08 45.57 38.69 34.05 30.68 28.11 26.07 24.40 23.00 21.81 20.78	7.4 7.5 7.5 7.5 7.4 7.4 7.4 7.3 7.3 7.2 7.1  Discharge (L/s) 7.5  Al Cistern (L104  Qrelease (L/s) 38.43	31.0 24.0 19.3 15.9 13.4 11.4 9.9 8.6 7.5 6.7  Vreq (cu. m) 57.8  B)  Qstored (L/s) 42.59 18.65 7.14 0.26 0.00 0.00 0.00 0.00 0.00 0.00 0.00	51.5 55.9 57.5 57.8 57.3 56.3 55.0 53.4 51.6 49.8 47.9  Vavail (cu. m) 60.2  Vstored (m^3) 25.55 22.37 12.85 0.61 0.00 0.00 0.00 0.00 0.00 0.00 0.00	145.7 147.4 147.7 147.2 146.2 144.8 143.3 141.6 139.7 137.9  Discharge Check 0.0  75 m³/h	0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.0
100-year  Subdra	30 40 50 60 70 80 90 100 110 120  Roof Storag  Water Level  inage Area: I Area (ha):  tc (min) 10 20 30 40 50 60 70 80 90 100 110 120  inage Area: Area (ha):  C:  tc (min) 10	91.87 75.15 63.95 55.89 49.79 44.99 41.11 37.90 35.20 32.89  e  Depth (mm) 147.7  Block 4 Tributa 0.300  I (100 yr) (mm/hr) 178.56 119.95 91.87 75.15 63.95 55.89 49.79 44.99 41.11 37.90 35.20 32.89  L103C - UNC 0.07 1.00  I (100 yr) (mm/hr) 178.56	38.4 31.4 26.8 23.4 20.8 18.8 17.2 15.9 14.7 13.8  Head (m) 0.15  Ty to Internation (L/s) 81.02 57.08 45.57 38.69 34.05 30.68 28.11 26.07 24.40 23.00 21.81 20.78  Qactual (L/s) 34.75	7.4 7.5 7.5 7.5 7.4 7.4 7.4 7.3 7.3 7.2 7.1  Discharge (L/s) 7.5  Al Cistern (L104  Qrelease (L/s) 38.43 38.83	31.0 24.0 19.3 15.9 13.4 11.4 9.9 8.6 7.5 6.7  Vreq (cu. m) 57.8  B)  Qstored (L/s) 42.59 18.65 7.14 0.26 0.00 0.00 0.00 0.00 0.00 0.00 0.00	51.5 55.9 57.5 57.8 57.3 56.3 55.0 53.4 51.6 49.8 47.9  Vavail (cu. m) 60.2  Vstored (m^3) 25.55 22.37 12.85 0.61 0.00 0.00 0.00 0.00 0.00 0.00 0.00	145.7 147.4 147.7 147.2 146.2 144.8 143.3 141.6 139.7 137.9  Discharge Check 0.0  75 m³/h	0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.0
100-year  Subdra	30 40 50 60 70 80 90 100 110 120  Roof Storage  Water Level  tc (min) 10 20 30 40 50 60 70 80 90 100 110 120  sinage Area: Area (ha):	91.87 75.15 63.95 55.89 49.79 44.99 41.11 37.90 35.20 32.89  e  Depth (mm) 147.7  Block 4 Tributa 0.300  I (100 yr) (mm/hr) 178.56 119.95 91.87 75.15 63.95 55.89 49.79 44.99 41.11 37.90 35.20 32.89  L103C - UNC 0.07 1.00  I (100 yr) (mm/hr) 178.56 119.95 91.87	38.4 31.4 26.8 23.4 20.8 18.8 17.2 15.9 14.7 13.8  Head (m) 0.15  Try to Internation (L/s) 81.02 57.08 45.57 38.69 34.05 30.68 28.11 26.07 24.40 23.00 21.81 20.78  Qactual (L/s) 34.75 23.34 17.88	7.4 7.5 7.5 7.5 7.4 7.4 7.4 7.3 7.3 7.2 7.1  Discharge (L/s) 7.5  Al Cistern (L104  Qrelease (L/s) 38.43 38.43 38.43 38.43 38.43 38.43 38.43 38.43 38.43 38.43 38.43 38.43 38.43 38.43 38.43 38.7 20.78	31.0 24.0 19.3 15.9 13.4 11.4 9.9 8.6 7.5 6.7  Vreq (cu. m) 57.8  B)  Qstored (L/s) 42.59 18.65 7.14 0.26 0.00 0.00 0.00 0.00 0.00 0.00 0.00	51.5 55.9 57.5 57.8 57.3 56.3 55.0 53.4 51.6 49.8 47.9  Vavail (cu. m) 60.2  Vstored (m^3) 25.55 22.37 12.85 0.61 0.00 0.00 0.00 0.00 0.00 0.00 0.00	145.7 147.4 147.7 147.2 146.2 144.8 143.3 141.6 139.7 137.9  Discharge Check 0.0  75 m³/h	0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.0
100-year  Subdra	30 40 50 60 70 80 90 100 110 120  Roof Storag  Water Level  image Area: I Area (ha):  tc (min) 10 20 30 40 50 60 70 80 90 100 110 120  ainage Area: Area (ha): C: tc (min) 10 20	91.87 75.15 63.95 55.89 49.79 44.99 41.11 37.90 35.20 32.89  e  Depth (mm) 147.7  Block 4 Tributa 0.300  I (100 yr) (mm/hr) 178.56 119.95 91.87 75.15 63.95 55.89 49.79 44.99 41.11 37.90 35.20 32.89  L103C - UNC 0.07 1.00  I (100 yr) (mm/hr) 178.56 119.95	38.4 31.4 26.8 23.4 20.8 18.8 17.2 15.9 14.7 13.8  Head (m) 0.15  Ty to Internal  Qactual (L/s) 81.02 57.08 45.57 38.69 34.05 30.68 28.11 26.07 24.40 23.00 21.81 20.78  Qactual (L/s) 34.75 23.34	7.4 7.5 7.5 7.5 7.4 7.4 7.4 7.3 7.3 7.2 7.1  Discharge (L/s) 7.5  Al Cistern (L104  Qrelease (L/s) 38.43 38.97 8.97 8.97	31.0 24.0 19.3 15.9 13.4 11.4 9.9 8.6 7.5 6.7  Vreq (cu. m) 57.8  B)  Qstored (L/s) 42.59 18.65 7.14 0.26 0.00 0.00 0.00 0.00 0.00 0.00 0.00	51.5 55.9 57.5 57.8 57.3 56.3 55.0 53.4 51.6 49.8 47.9  Vavail (cu. m) 60.2  Vstored (m^3) 25.55 22.37 12.85 0.61 0.00 0.00 0.00 0.00 0.00 0.00 0.00	145.7 147.4 147.7 147.2 146.2 144.8 143.3 141.6 139.7 137.9  Discharge Check 0.0  75 m³/h	0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.0
100-year  Subdra	30 40 50 60 70 80 90 100 110 120  Roof Storag  Water Level  inage Area: I Area (ha):  tc (min) 10 20 30 40 50 60 70 80 90 100 110 120  inage Area: Area (ha):  C:  tc (min) 10 20 30 40 50 60 60	91.87 75.15 63.95 55.89 49.79 44.99 41.11 37.90 35.20 32.89  e  Depth (mm) 147.7  Block 4 Tributa 0.300  I (100 yr) (mm/hr) 178.56 119.95 91.87 75.15 63.95 55.89 49.79 44.99 41.11 37.90 35.20 32.89  L103C - UNC 0.07 1.00  I (100 yr) (mm/hr) 178.56 119.95 91.87 75.15 63.95 55.89	38.4 31.4 26.8 23.4 20.8 18.8 17.2 15.9 14.7 13.8  Head (m) 0.15  Ty to Internation (L/s) 81.02 57.08 45.57 38.69 34.05 30.68 28.11 26.07 24.40 23.00 21.81 20.78  Qactual (L/s) 34.75 23.34 17.88 14.62 12.45 10.88	7.4 7.5 7.5 7.5 7.4 7.4 7.3 7.3 7.3 7.2 7.1  Discharge (L/s) 7.5  Al Cistern (L104  Qrelease (L/s) 38.43 38.43 38.43 38.43 38.43 38.43 38.43 38.43 38.43 38.43 38.43 38.43 38.43 38.43 38.43 38.7 24.40 23.00 21.81 20.78  Qrelease (L/s) 8.97 8.97 8.97 8.97 8.97 8.97 8.97 8.97	31.0 24.0 19.3 15.9 13.4 11.4 9.9 8.6 7.5 6.7  Vreq (cu. m) 57.8  B)  Qstored (L/s) 42.59 18.65 7.14 0.26 0.00 0.00 0.00 0.00 0.00 0.00 0.00	51.5 55.9 57.5 57.8 57.3 56.3 55.0 53.4 51.6 49.8 47.9  Vavail (cu. m) 60.2  Vstored (m^3) 25.55 22.37 12.85 0.61 0.00 0.00 0.00 0.00 0.00 0.00 0.00	145.7 147.4 147.7 147.2 146.2 144.8 143.3 141.6 139.7 137.9  Discharge Check 0.0  75 m³/h	0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.0
100-year  Subdra	30 40 50 60 70 80 90 100 110 120  Roof Storage  Water Level  image Area:	91.87 75.15 63.95 55.89 49.79 44.99 41.11 37.90 35.20 32.89  e  Depth (mm) 147.7  Block 4 Tributa 0.300  I (100 yr) (mm/hr) 178.56 119.95 91.87 75.15 63.95 55.89 49.79 44.99 41.11 37.90 35.20 32.89  L103C - UNC 0.07 1.00  I (100 yr) (mm/hr) 178.56 119.95 91.87 75.15 63.95 55.89 49.79 44.99 41.11 37.90 35.20 32.89	38.4 31.4 26.8 23.4 20.8 18.8 17.2 15.9 14.7 13.8  Head (m) 0.15  Ty to Internal  Qactual (L/s) 81.02 57.08 45.57 38.69 34.05 30.68 28.11 26.07 24.40 23.00 21.81 20.78  Qactual (L/s) 34.75 23.34 17.88 14.62 12.45 10.88 9.69 8.76	7.4 7.5 7.5 7.5 7.4 7.4 7.4 7.3 7.3 7.2 7.1  Discharge (L/s) 7.5  Al Cistern (L104  Qrelease (L/s) 38.43 38.43 38.43 38.43 38.43 38.43 38.43 38.43 38.43 38.43 38.43 38.43 38.43 38.43 38.43 38.7 20.78  Qrelease (L/s) 8.97 8.97 8.97 8.97 8.97 8.97 8.97 8.97	31.0 24.0 19.3 15.9 13.4 11.4 9.9 8.6 7.5 6.7  Vreq (cu. m) 57.8  B)  Qstored (L/s) 42.59 18.65 7.14 0.26 0.00 0.00 0.00 0.00 0.00 0.00 0.00	51.5 55.9 57.5 57.8 57.3 56.3 55.0 53.4 51.6 49.8 47.9  Vavail (cu. m) 60.2  Vstored (m^3) 25.55 22.37 12.85 0.61 0.00 0.00 0.00 0.00 0.00 0.00 0.00	145.7 147.4 147.7 147.2 146.2 144.8 143.3 141.6 139.7 137.9  Discharge Check 0.0  75 m³/h	0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.0
100-year  Subdra	30 40 50 60 70 80 90 100 110 120  Roof Storag  Water Level  image Area: I Area (ha):  tc (min) 10 20 30 40 50 60 70 80 90 100 110 120  image Area: Area (ha): C:  tc (min)  10 20 30 40 50 60 70 70 80 90 100 110 120	91.87 75.15 63.95 55.89 49.79 44.99 41.11 37.90 35.20 32.89  e  Depth (mm) 147.7  Block 4 Tributa 0.300  I (100 yr) (mm/hr) 178.56 119.95 91.87 75.15 63.95 55.89 49.79 44.99 41.11 37.90 35.20 32.89  L103C - UNC 0.07 1.00  I (100 yr) (mm/hr) 178.56 119.95 91.87 75.15 63.95 55.89 49.79 44.99 41.71 37.90 35.20 32.89	38.4 31.4 26.8 23.4 20.8 18.8 17.2 15.9 14.7 13.8  Head (m) 0.15  Ty to Internal  Qactual (L/s) 81.02 57.08 45.57 38.69 34.05 30.68 28.11 26.07 24.40 23.00 21.81 20.78  Qactual (L/s) 34.75 23.34 17.88 14.62 12.45 10.88 9.69	7.4 7.5 7.5 7.5 7.4 7.4 7.4 7.3 7.3 7.2 7.1  Discharge (L/s) 7.5  Al Cistern (L104  Qrelease (L/s) 38.43 38.43 38.43 38.43 38.43 38.43 38.43 38.43 38.43 38.43 38.43 38.43 38.43 38.43 38.43 38.7 8.97 24.40 23.00 21.81 20.78  Qrelease (L/s) 8.97 8.97 8.97 8.97 8.97 8.97 8.97 8.97	31.0 24.0 19.3 15.9 13.4 11.4 9.9 8.6 7.5 6.7  Vreq (cu. m) 57.8  B)  Qstored (L/s) 42.59 18.65 7.14 0.26 0.00 0.00 0.00 0.00 0.00 0.00 0.00	51.5 55.9 57.5 57.8 57.3 56.3 55.0 53.4 51.6 49.8 47.9  Vavail (cu. m) 60.2  Vstored (m^3) 25.55 22.37 12.85 0.61 0.00 0.00 0.00 0.00 0.00 0.00 0.00	145.7 147.4 147.7 147.2 146.2 144.8 143.3 141.6 139.7 137.9  Discharge Check 0.0  75 m³/h	0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.0

## Project #160401614, 933 Gladstone Avenue - Gladstone Village OCH

Subdrainage Area: Area (ha): C:	L103B - UNC 0.40 0.82				Tributary	Block 6 to Cistern Block 6
tc (min) 10 20 30 40 50 60 70 80	76.81 52.03 40.04 32.86 28.04 24.56 21.91 19.83	Qactual (L/s) 71.0 48.1 37.0 30.4 25.9 22.7 20.3 18.3	Qrelease (L/s) 71.0 48.1 37.0 30.4 25.9 22.7 20.3 18.3	Qstored (L/s)	Vstored (m^3)	
90 100 110 120	18.14 16.75 15.57 14.56	16.8 15.5 14.4 13.5	16.8 15.5 14.4 13.5			
Subdrainage Area: Area (ha): C:	L103B - Roof 0.22 0.90			Maxim	um Storage Dept	Controlled Roof th: 150 mm
tc (min) 10 20	I (2 yr) (mm/hr) 76.81 52.03	Qactual (L/s) 41.5 28.1	Qrelease (L/s) 8.1 8.6	Qstored (L/s) 33.4 19.6	Vstored (m^3) 20.0 23.5	Depth (mm) 90.6 0.00 96.4 0.00
30 40	40.04 32.86	21.7 17.8	8.6 8.4	13.1 9.3	<b>23.5</b> 22.4	96.5 0.00 94.6 0.00
50 60	28.04 24.56	15.2 13.3	8.2 8.0	6.9 5.3	20.8 19.0	91.9 0.00 88.9 0.00
70 80	21.91 19.83	11.8 10.7	7.8 7.5	4.1 3.2	17.2 15.4	85.8 0.00 82.7 0.00
90 100	18.14 16.75	9.8 9.1	7.3 7.1	2.5 2.0	13.6 11.9	79.7 0.00 76.8 0.00
110 120	15.57 14.56	8.4 7.9	6.8 6.6	1.6 1.3	10.4 9.3	73.7 0.00 70.2 0.00
e: Roof Storage						
2-year Water Level	Depth (mm) 96.5	Head (m) 0.10	Discharge (L/s) 8.6	Vreq (cu. m) 23.5	Vavail (cu. m) 86.4	Discharge Check 0.0
Subdrainage Area: Area (ha):	0.620		Allowable	Release Rate		L/s
tc (min)	l (2 yr) (mm/hr)	Qactual (L/s)	Qrelease (L/s)	Qstored (L/s)	Vstored (m^3)	
10 20	76.81 52.03	79.12 56.66	<b>79.43</b> 56.66	0.00 0.00	<b>0.00</b> 0.00	0 m³/ha
30 40	40.04 32.86	45.58 38.80	45.58 38.80	0.00 0.00	0.00 0.00	
50 60	28.04 24.56	34.14 30.69	34.14 30.69	0.00 0.00	0.00 0.00	
70 80	21.91 19.83	28.01 25.85	28.01 25.85	0.00 0.00	0.00 0.00	
90 100	18.14 16.75	24.07 22.56	24.07 22.56	0.00 0.00	0.00 0.00	
110 120	15.57 14.56	21.23 20.04	21.23 20.04	0.00 0.00	0.00 0.00	
Subdrainage Area: Area (ha): C:	L108D - UNC 0.14 0.80		Allowable	Release Rate	•	Block 7 to Cistern Block 7 <b>L/s</b>
tc	l (2 yr)	Qactual	Qrelease	Qstored	Vstored	٦
(min) 10	(mm/hr) 76.81	(L/s) 23.9	(L/s) 17.94	(L/s) 5.98	3.59	<b></b> 26 m³/ha
20 30	52.03 40.04	16.2 12.5	16.20 12.47	0.00	0.00 0.00	
40 50	32.86 28.04	10.2 8.7	10.23 8.73	0.00	0.00 0.00	
60 70	24.56 21.91	7.6 6.8	7.65 6.82	0.00 0.00	0.00 0.00	
80 90	19.83 18.14	6.2 5.6	6.17 5.65	0.00 0.00	0.00 0.00	
			5.21	0.00		
100 110	16.75 15.57	5.2 4.8	4.85	0.00	0.00 0.00	
110	15.57	4.8	4.85 4.53	0.00	0.00 0.00 Bloc Tributary to Unc	ck 8 (To Block 12) lerground Storage <b>L/s</b>
110 120 Subdrainage Area: Area (ha):	15.57 14.56 L108B - UNC 0.14	4.8	4.85 4.53	0.00 0.00 Release Rate	0.00 0.00 Bloc Tributary to Unc	lerground Storage
Subdrainage Area: Area (ha): C:	15.57 14.56 L108B - UNC 0.14 0.65	4.8 4.5	4.85 4.53 Allowable Qrelease	0.00 0.00 Release Rate	0.00 0.00  Block Tributary to Uncertainty 17.94  Vstored	lerground Storage
Subdrainage Area: Area (ha): C: tc (min) 10	15.57 14.56 L108B - UNC 0.14 0.65 I (2 yr) (mm/hr) 76.81	4.8 4.5 <b>Qactual</b> (L/s) 19.4	4.85 4.53  Allowable  Qrelease (L/s) 19.4	0.00 0.00 Release Rate	0.00 0.00  Block Tributary to Uncertainty 17.94  Vstored	lerground Storage
110 120 Subdrainage Area: Area (ha): C: tc (min) 10 20 30 40 50	15.57 14.56 L108B - UNC 0.14 0.65 I (2 yr) (mm/hr) 76.81 52.03 40.04 32.86 28.04	4.8 4.5 Qactual (L/s) 19.4 13.2 10.1 8.3 7.1	4.85 4.53 Allowable  Qrelease (L/s)  19.4 13.2 10.1 8.3 7.1	0.00 0.00 Release Rate	0.00 0.00  Block Tributary to Uncertainty 17.94  Vstored	lerground Storage
110 120 Subdrainage Area: Area (ha): C: tc (min) 10 20 30 40 50 60 70	15.57 14.56 L108B - UNC 0.14 0.65 I (2 yr) (mm/hr) 76.81 52.03 40.04 32.86 28.04 24.56 21.91	4.8 4.5 4.5 <b>Qactual</b> (L/s) 19.4 13.2 10.1 8.3 7.1 6.2 5.5	4.85 4.53 Allowable  Qrelease (L/s)  19.4 13.2 10.1 8.3 7.1 6.2 5.5	0.00 0.00 Release Rate	0.00 0.00  Block Tributary to Uncertainty 17.94  Vstored	lerground Storage
110 120 Subdrainage Area: Area (ha): C: tc (min) 10 20 30 40 50 60	15.57 14.56 L108B - UNC 0.14 0.65 I (2 yr) (mm/hr) 76.81 52.03 40.04 32.86 28.04 24.56	4.8 4.5 <b>Qactual</b> (L/s) 19.4 13.2 10.1 8.3 7.1 6.2	4.85 4.53 Allowable  Qrelease (L/s)  19.4 13.2 10.1 8.3 7.1 6.2	0.00 0.00 Release Rate	0.00 0.00  Block Tributary to Uncertainty 17.94  Vstored	lerground Storage
110 120 Subdrainage Area: Area (ha): C: tc (min) 10 20 30 40 50 60 70 80 90	15.57 14.56 L108B - UNC 0.14 0.65 I (2 yr) (mm/hr) 76.81 52.03 40.04 32.86 28.04 24.56 21.91 19.83 18.14	4.8 4.5 <b>Qactual</b> (L/s) 19.4 13.2 10.1 8.3 7.1 6.2 5.5 5.0 4.6	4.85 4.53 Allowable  Qrelease (L/s)  19.4 13.2 10.1 8.3 7.1 6.2 5.5 5.0 4.6	0.00 0.00 Release Rate	0.00 0.00  Block Tributary to Uncertainty 17.94  Vstored	lerground Storage
110 120 Subdrainage Area: Area (ha): C: tc (min) 10 20 30 40 50 60 70 80 90 100 110	15.57 14.56 L108B - UNC 0.14 0.65 I (2 yr) (mm/hr) 76.81 52.03 40.04 32.86 28.04 24.56 21.91 19.83 18.14 16.75 15.57	4.8 4.5 4.5 <b>Qactual</b> (L/s) 19.4 13.2 10.1 8.3 7.1 6.2 5.5 5.0 4.6 4.2 3.9	4.85 4.53 Allowable  Qrelease (L/s)  19.4 13.2 10.1 8.3 7.1 6.2 5.5 5.0 4.6 4.2 3.9 3.7	0.00 0.00 Release Rate	O.00 O.00  Block Tributary to Unce Tributary to Unce (m^3)	lerground Storage
110 120  Subdrainage Area: Area (ha): C:  tc (min)  10 20 30 40 50 60 70 80 90 100 110 120  Subdrainage Area: Area (ha): C:  tc (min)	15.57 14.56  L108B - UNC 0.14 0.65  I (2 yr) (mm/hr)  76.81 52.03 40.04 32.86 28.04 24.56 21.91 19.83 18.14 16.75 15.57 14.56  L108C - UNC 0.09 0.85  I (2 yr) (mm/hr)	4.8 4.5 Qactual (L/s) 19.4 13.2 10.1 8.3 7.1 6.2 5.5 5.0 4.6 4.2 3.9 3.7	4.85 4.53  Allowable  Qrelease (L/s)  19.4 13.2 10.1 8.3 7.1 6.2 5.5 5.0 4.6 4.2 3.9 3.7  Allowable  Qrelease (L/s)	0.00 0.00 Release Rate Qstored (L/s)	O.00 O.00  Block Tributary to Unce Tributary to Unce (m^3)	Block 12 lerground Storage
110 120  Subdrainage Area: Area (ha):	15.57 14.56  L108B - UNC 0.14 0.65  I (2 yr) (mm/hr)  76.81 52.03 40.04 32.86 28.04 24.56 21.91 19.83 18.14 16.75 15.57 14.56  L108C - UNC 0.09 0.85  I (2 yr) (mm/hr) 76.81 52.03	4.8 4.5  Qactual (L/s) 19.4 13.2 10.1 8.3 7.1 6.2 5.5 5.0 4.6 4.2 3.9 3.7  Qactual (L/s) 16.3 11.1	4.85 4.53  Allowable  Qrelease (L/s)  19.4 13.2 10.1 8.3 7.1 6.2 5.5 5.0 4.6 4.2 3.9 3.7  Allowable  Qrelease (L/s) 16.3 11.1	0.00 0.00  Release Rate Qstored (L/s)  Release Rate	O.00 O.00  Block Tributary to Unce (m^3)  Tributary to Unce 11.53  Vstored	Block 12 lerground Storage
110 120  Subdrainage Area: Area (ha):	15.57 14.56  L108B - UNC 0.14 0.65  I (2 yr) (mm/hr)  76.81 52.03 40.04 32.86 28.04 24.56 21.91 19.83 18.14 16.75 15.57 14.56  L108C - UNC 0.09 0.85  I (2 yr) (mm/hr)  76.81 52.03 40.04 32.86	4.8 4.5  Qactual (L/s) 19.4 13.2 10.1 8.3 7.1 6.2 5.5 5.0 4.6 4.2 3.9 3.7  Qactual (L/s) 16.3 11.1 8.5 7.0	4.85 4.53  Allowable  Qrelease (L/s)  19.4 13.2 10.1 8.3 7.1 6.2 5.5 5.0 4.6 4.2 3.9 3.7  Allowable  Qrelease (L/s)  16.3 11.1 8.5 7.0	0.00 0.00  Release Rate Qstored (L/s)  Release Rate	O.00 O.00  Block Tributary to Unce (m^3)  Tributary to Unce 11.53  Vstored	Block 12 lerground Storage
110 120  Subdrainage Area:	15.57 14.56  L108B - UNC 0.14 0.65  I (2 yr) (mm/hr)  76.81 52.03 40.04 32.86 28.04 24.56 21.91 19.83 18.14 16.75 15.57 14.56  L108C - UNC 0.09 0.85  I (2 yr) (mm/hr)  76.81 52.03 40.04	4.8 4.5  Qactual (L/s) 19.4 13.2 10.1 8.3 7.1 6.2 5.5 5.0 4.6 4.2 3.9 3.7  Qactual (L/s) 16.3 11.1 8.5	4.85 4.53  Allowable  Qrelease (L/s)  19.4 13.2 10.1 8.3 7.1 6.2 5.5 5.0 4.6 4.2 3.9 3.7  Allowable  Qrelease (L/s)  16.3 11.1 8.5	0.00 0.00  Release Rate Qstored (L/s)  Release Rate	O.00 O.00  Block Tributary to Unce (m^3)  Tributary to Unce 11.53  Vstored	Block 12 lerground Storage
110 120  Subdrainage Area: Area (ha):	15.57 14.56  L108B - UNC 0.14 0.65  I (2 yr) (mm/hr) 76.81 52.03 40.04 32.86 28.04 24.56 21.91 19.83 18.14 16.75 15.57 14.56  L108C - UNC 0.09 0.85  I (2 yr) (mm/hr) 76.81 52.03 40.04 32.86 28.04	4.8 4.5  Qactual (L/s)  19.4 13.2 10.1 8.3 7.1 6.2 5.5 5.0 4.6 4.2 3.9 3.7  Qactual (L/s) 16.3 11.1 8.5 7.0 6.0	4.85 4.53  Allowable  Qrelease (L/s)  19.4 13.2 10.1 8.3 7.1 6.2 5.5 5.0 4.6 4.2 3.9 3.7  Allowable  Qrelease (L/s)  16.3 11.1 8.5 7.0 6.0	0.00 0.00  Release Rate Qstored (L/s)  Release Rate	O.00 O.00  Block Tributary to Unce (m^3)  Tributary to Unce 11.53  Vstored	Block 12 lerground Storage
110 120  Subdrainage Area: Area (ha):	15.57 14.56  L108B - UNC 0.14 0.65  I (2 yr) (mm/hr) 76.81 52.03 40.04 32.86 28.04 24.56 21.91 19.83 18.14 16.75 15.57 14.56  L108C - UNC 0.09 0.85  I (2 yr) (mm/hr) 76.81 52.03 40.04 32.86 28.04 24.56 21.91	4.8 4.5  Qactual (L/s) 19.4 13.2 10.1 8.3 7.1 6.2 5.5 5.0 4.6 4.2 3.9 3.7  Qactual (L/s) 16.3 11.1 8.5 7.0 6.0 5.2 4.7	4.85 4.53  Allowable  Qrelease (L/s)  19.4 13.2 10.1 8.3 7.1 6.2 5.5 5.0 4.6 4.2 3.9 3.7  Allowable  Qrelease (L/s)  16.3 11.1 8.5 7.0 6.0 5.2 4.7	0.00 0.00  Release Rate Qstored (L/s)  Release Rate	O.00 O.00  Block Tributary to Unce (m^3)  Tributary to Unce 11.53  Vstored	Block 12 lerground Storage

## Project #160401614 933 Gladstone Avenue - Gladstone Village OCH

	inage Area: Area (ha): C:	L103B - UNC 0.40 1.00				Tributary to	Block 6 Cistern Block 6	
	tc (min)  10 20 30 40 50 60 70 80 90 100 110	I (100 yr) (mm/hr) 178.56 119.95 91.87 75.15 63.95 55.89 49.79 44.99 41.11 37.90 35.20	Qactual (L/s) 200.5 134.7 103.2 84.4 71.8 62.8 55.9 50.5 46.2 42.6 39.5	Qrelease (L/s) 200.5 134.7 103.2 84.4 71.8 62.8 55.9 50.5 46.2 42.6 39.5	Qstored (L/s)	Vstored (m^3)		
Subdra	inage Area: Area (ha): C:	32.89 L103B - Roof 0.22 1.00	36.9	36.9	Maximu	( um Storage Depth	Controlled Roof n: 150 r	nm
	tc	l (100 yr)	Qactual	Qrelease	Qstored	Vstored	Depth	
	10 20	(mm/hr) 178.56 119.95	(L/s) 107.3 72.1	(L/s) 11.1 11.9	(L/s) 96.1 60.2	(m^3) 57.7 72.2	(mm) 130.3 140.2	0.00 0.00
	30	91.87	55.2	12.2	43.0	77.5	143.8	0.00
	40 50	75.15 63.95	45.1 38.4	12.2 12.2	32.9 26.2	79.0 78.6	<b>144.9</b> 144.6	0.00 0.00
	60 70	55.89 49.79	33.6 29.9	12.1 12.0	21.4 17.9	77.2 75.1	143.7 142.2	0.00 0.00
	80 90	44.99 41.11	27.0 24.7	11.9 11.8	15.1 12.9	72.6 69.9	140.5 138.6	0.00 0.00
	100 110	37.90 35.20	22.8 21.1	11.6 11.5	11.2 9.7	67.0 64.0	136.6 134.6	0.00
	120	32.89	19.8	11.3	8.5	61.0	132.5	0.00
age:	Roof Storag	Depth	Head	Discharge	Vreq	Vavail	Discharge	
00-year	Water Level	(mm) 144.9	(m) 0.14	(L/s) 12.2	(cu. m) 79.0	(cu. m) 86.4	Check 0.0	
Subdra	inage Area: Area (ha):	Block 6 Tributa 0.620	ry to Interna	ıl Cistern (L103	В)			
	tc (min)	l (100 yr) (mm/hr)	Qactual (L/s)	Qrelease (L/s)	Qstored (L/s)	Vstored (m^3)		
	10 20	178.56 119.95	211.62 146.56	79.43 <b>79.43</b>	132.19 67.14	79.31 <b>80.56</b>	— 130 n	n <sup>3</sup> /ha
	30 40	91.87 75.15	115.31 96.61	79.43 79.43	35.88 17.18	64.58 41.23		
	50	63.95	84.02	79.43	4.59	13.78		
	60 70	55.89 49.79	74.90 67.93	74.90 67.93	0.00 0.00	0.00 0.00		
	80 90	44.99 41.11	62.42 57.92	62.42 57.92	0.00 0.00	0.00 0.00		
	100 110	37.90 35.20	54.17 50.98	54.17 50.98	0.00 0.00	0.00 0.00		
	120	32.89	48.23	48.23	0.00	0.00		
	•	L108D - UNC					Block 7	
Subdra	Area (ha): C:	0.14 1.00				Tributary to	Cistern Block 7	
Subdra	Area (ha): C: tc (min)	0.14 1.00 I (100 yr) (mm/hr)	Qactual (L/s)	Qrelease (L/s)	Qstored (L/s)	Vstored (m^3)	Cistern Block 7	
Subdra	Area (ha): C: tc (min) 10 20	0.14 1.00 I (100 yr) (mm/hr) 178.56 119.95	(L/s) 69.5 46.7	(L/s) 17.94 1 <b>7.94</b>	(L/s) 51.56 28.75	Vstored (m^3) 30.94 34.50	Cistern Block 7	n <sup>3</sup> /ha
Subdra	Area (ha): C: tc (min)	0.14 1.00 I (100 yr) (mm/hr) 178.56	<b>(L/s)</b> 69.5	<b>(L/s)</b> 17.94	<b>(L/s)</b> 51.56	Vstored (m^3) 30.94		n <sup>3</sup> /ha
Subdra	tc (min) 10 20 30 40 50	0.14 1.00 I (100 yr) (mm/hr) 178.56 119.95 91.87 75.15 63.95	(L/s) 69.5 46.7 35.8 29.2 24.9	(L/s) 17.94 17.94 17.94 17.94 17.94	(L/s) 51.56 28.75 17.82 11.31 6.96	Vstored (m^3) 30.94 34.50 32.08 27.15 20.87		n <sup>3</sup> /ha
Subdra	Area (ha): C: tc (min) 10 20 30 40 50 60 70	0.14 1.00 I (100 yr) (mm/hr) 178.56 119.95 91.87 75.15 63.95 55.89 49.79	(L/s) 69.5 46.7 35.8 29.2 24.9 21.8 19.4	(L/s) 17.94 17.94 17.94 17.94 17.94 17.94 17.94	(L/s) 51.56 28.75 17.82 11.31 6.96 3.82 1.44	Vstored (m^3) 30.94 34.50 32.08 27.15 20.87 13.75 6.06		n³/ha
Subdra	Area (ha): C: tc (min) 10 20 30 40 50 60 70 80 90	0.14 1.00 I (100 yr) (mm/hr) 178.56 119.95 91.87 75.15 63.95 55.89 49.79 44.99 41.11	(L/s) 69.5 46.7 35.8 29.2 24.9 21.8 19.4 17.5 16.0	(L/s) 17.94 17.94 17.94 17.94 17.94 17.94 17.51 16.00	51.56 28.75 17.82 11.31 6.96 3.82 1.44 0.00 0.00	Vstored (m^3) 30.94 34.50 32.08 27.15 20.87 13.75 6.06 0.00 0.00		n <sup>3</sup> /ha
Subdra	Area (ha): C: tc (min) 10 20 30 40 50 60 70 80	0.14 1.00 I (100 yr) (mm/hr) 178.56 119.95 91.87 75.15 63.95 55.89 49.79 44.99	(L/s) 69.5 46.7 35.8 29.2 24.9 21.8 19.4 17.5	(L/s) 17.94 17.94 17.94 17.94 17.94 17.94 17.94 17.51	51.56 28.75 17.82 11.31 6.96 3.82 1.44 0.00	Vstored (m^3) 30.94 34.50 32.08 27.15 20.87 13.75 6.06 0.00		n <sup>3</sup> /ha
Subdra	tc (min) 10 20 30 40 50 60 70 80 90 100	0.14 1.00 I (100 yr) (mm/hr) 178.56 119.95 91.87 75.15 63.95 55.89 49.79 44.99 41.11 37.90	(L/s) 69.5 46.7 35.8 29.2 24.9 21.8 19.4 17.5 16.0 14.8	(L/s) 17.94 17.94 17.94 17.94 17.94 17.94 17.51 16.00 14.75	(L/s) 51.56 28.75 17.82 11.31 6.96 3.82 1.44 0.00 0.00 0.00	Vstored (m^3) 30.94 34.50 32.08 27.15 20.87 13.75 6.06 0.00 0.00		n <sup>3</sup> /ha
	tc (min)  10 20 30 40 50 60 70 80 90 100 110 120  inage Area: Area (ha):	0.14 1.00 I (100 yr) (mm/hr) 178.56 119.95 91.87 75.15 63.95 55.89 49.79 44.99 41.11 37.90 35.20 32.89	(L/s) 69.5 46.7 35.8 29.2 24.9 21.8 19.4 17.5 16.0 14.8 13.7	(L/s) 17.94 17.94 17.94 17.94 17.94 17.94 17.51 16.00 14.75 13.70	(L/s) 51.56 28.75 17.82 11.31 6.96 3.82 1.44 0.00 0.00 0.00 0.00 0.00	Vstored (m^3) 30.94 34.50 32.08 27.15 20.87 13.75 6.06 0.00 0.00 0.00 0.00 0.00 0.00	246 n	n <sup>3</sup> /ha
	tc (min)  10 20 30 40 50 60 70 80 90 100 110 120  inage Area: Area (ha): C:	0.14 1.00 I (100 yr) (mm/hr) 178.56 119.95 91.87 75.15 63.95 55.89 49.79 44.99 41.11 37.90 35.20 32.89 L108B - UNC 0.14 0.81	(L/s) 69.5 46.7 35.8 29.2 24.9 21.8 19.4 17.5 16.0 14.8 13.7 12.8	(L/s)  17.94  17.94  17.94  17.94  17.94  17.94  17.51  16.00  14.75  13.70  12.80   Qrelease	(L/s) 51.56 28.75 17.82 11.31 6.96 3.82 1.44 0.00 0.00 0.00 0.00 0.00 0.00 T	Vstored (m^3) 30.94 34.50 32.08 27.15 20.87 13.75 6.06 0.00 0.00 0.00 0.00 0.00 0.00 Vstored	246 n	n <sup>3</sup> /ha
	tc (min)  10 20 30 40 50 60 70 80 90 100 110 120  inage Area: Area (ha): C:  tc (min)  10 20	0.14 1.00 I (100 yr) (mm/hr) 178.56 119.95 91.87 75.15 63.95 55.89 49.79 44.99 41.11 37.90 35.20 32.89 L108B - UNC 0.14 0.81 I (100 yr) (mm/hr) 178.56 119.95	(L/s) 69.5 46.7 35.8 29.2 24.9 21.8 19.4 17.5 16.0 14.8 13.7 12.8  Qactual (L/s) 56.5 37.9	(L/s)  17.94  17.94  17.94  17.94  17.94  17.94  17.51  16.00  14.75  13.70  12.80  Qrelease (L/s)  56.5  37.9	(L/s) 51.56 28.75 17.82 11.31 6.96 3.82 1.44 0.00 0.00 0.00 0.00 0.00 0.00	Vstored (m^3) 30.94 34.50 32.08 27.15 20.87 13.75 6.06 0.00 0.00 0.00 0.00 0.00 0.00 0.0	246 n	n <sup>3</sup> /ha
	Area (ha):	0.14 1.00  I (100 yr) (mm/hr) 178.56 119.95 91.87 75.15 63.95 55.89 49.79 44.99 41.11 37.90 35.20 32.89  L108B - UNC 0.14 0.81  I (100 yr) (mm/hr) 178.56 119.95 91.87 75.15	(L/s) 69.5 46.7 35.8 29.2 24.9 21.8 19.4 17.5 16.0 14.8 13.7 12.8  Qactual (L/s) 56.5 37.9 29.1 23.8	(L/s)  17.94  17.94  17.94  17.94  17.94  17.94  17.51  16.00  14.75  13.70  12.80   Qrelease (L/s)  56.5  37.9  29.1  23.8	(L/s) 51.56 28.75 17.82 11.31 6.96 3.82 1.44 0.00 0.00 0.00 0.00 0.00 0.00 T	Vstored (m^3) 30.94 34.50 32.08 27.15 20.87 13.75 6.06 0.00 0.00 0.00 0.00 0.00 0.00 Vstored	246 n	n <sup>3</sup> /ha
	tc (min)  10 20 30 40 50 60 70 80 90 100 110 120  inage Area: Area (ha): C:  tc (min)  10 20 30	0.14 1.00  I (100 yr) (mm/hr)  178.56 119.95 91.87 75.15 63.95 55.89 49.79 44.99 41.11 37.90 35.20 32.89  L108B - UNC 0.14 0.81  I (100 yr) (mm/hr) 178.56 119.95 91.87	(L/s) 69.5 46.7 35.8 29.2 24.9 21.8 19.4 17.5 16.0 14.8 13.7 12.8  Qactual (L/s) 56.5 37.9 29.1	(L/s)  17.94  17.94  17.94  17.94  17.94  17.94  17.51  16.00  14.75  13.70  12.80   Qrelease (L/s)  56.5  37.9  29.1	(L/s) 51.56 28.75 17.82 11.31 6.96 3.82 1.44 0.00 0.00 0.00 0.00 0.00 0.00 T	Vstored (m^3) 30.94 34.50 32.08 27.15 20.87 13.75 6.06 0.00 0.00 0.00 0.00 0.00 0.00 Vstored	246 n	n <sup>3</sup> /ha
	Area (ha):	0.14 1.00  I (100 yr) (mm/hr)  178.56 119.95 91.87 75.15 63.95 55.89 49.79 44.99 41.11 37.90 35.20 32.89  L108B - UNC 0.14 0.81  I (100 yr) (mm/hr) 178.56 119.95 91.87 75.15 63.95 55.89 49.79	(L/s) 69.5 46.7 35.8 29.2 24.9 21.8 19.4 17.5 16.0 14.8 13.7 12.8  Qactual (L/s) 56.5 37.9 29.1 23.8 20.2 17.7 15.7	(L/s)  17.94  17.94  17.94  17.94  17.94  17.94  17.51  16.00  14.75  13.70  12.80   Qrelease (L/s)  56.5  37.9  29.1  23.8  20.2  17.7  15.7	(L/s) 51.56 28.75 17.82 11.31 6.96 3.82 1.44 0.00 0.00 0.00 0.00 0.00 0.00 T	Vstored (m^3) 30.94 34.50 32.08 27.15 20.87 13.75 6.06 0.00 0.00 0.00 0.00 0.00 0.00 Vstored	246 n	n <sup>3</sup> /ha
	Area (ha):	0.14 1.00  I (100 yr) (mm/hr)  178.56 119.95 91.87 75.15 63.95 55.89 49.79 44.99 41.11 37.90 35.20 32.89  L108B - UNC 0.14 0.81  I (100 yr) (mm/hr)  178.56 119.95 91.87 75.15 63.95 55.89 49.79 44.99 41.11	(L/s) 69.5 46.7 35.8 29.2 24.9 21.8 19.4 17.5 16.0 14.8 13.7 12.8  Qactual (L/s) 56.5 37.9 29.1 23.8 20.2 17.7 15.7 14.2 13.0	(L/s)  17.94  17.94  17.94  17.94  17.94  17.94  17.51  16.00  14.75  13.70  12.80   Qrelease (L/s)  56.5  37.9  29.1  23.8  20.2  17.7  15.7  14.2  13.0	(L/s) 51.56 28.75 17.82 11.31 6.96 3.82 1.44 0.00 0.00 0.00 0.00 0.00 0.00 T	Vstored (m^3) 30.94 34.50 32.08 27.15 20.87 13.75 6.06 0.00 0.00 0.00 0.00 0.00 0.00 Vstored	246 n	n <sup>3</sup> /ha
	Area (ha):	0.14 1.00  I (100 yr) (mm/hr)  178.56 119.95 91.87 75.15 63.95 55.89 49.79 44.99 41.11 37.90 35.20 32.89  I (100 yr) (mm/hr)  178.56 119.95 91.87 75.15 63.95 55.89 49.79 44.99 41.11 37.90 35.20	(L/s) 69.5 46.7 35.8 29.2 24.9 21.8 19.4 17.5 16.0 14.8 13.7 12.8  Qactual (L/s) 56.5 37.9 29.1 23.8 20.2 17.7 15.7 14.2 13.0 12.0 11.1	(L/s)  17.94  17.94  17.94  17.94  17.94  17.94  17.95  13.70  12.80  Qrelease (L/s)  56.5  37.9  29.1  23.8  20.2  17.7  15.7  14.2  13.0  12.0  11.1	(L/s) 51.56 28.75 17.82 11.31 6.96 3.82 1.44 0.00 0.00 0.00 0.00 0.00 0.00 T	Vstored (m^3) 30.94 34.50 32.08 27.15 20.87 13.75 6.06 0.00 0.00 0.00 0.00 0.00 0.00 Vstored	246 n	n <sup>3</sup> /ha
Subdra	tc (min)  10 20 30 40 50 60 70 80 90 100 110 120  inage Area: Area (ha): C:  tc (min)  10 20 30 40 50 60 70 80 90 100 110 120 110 120	0.14 1.00  I (100 yr) (mm/hr)  178.56 119.95 91.87 75.15 63.95 55.89 49.79 44.99 41.11 37.90 35.20 32.89  L108B - UNC 0.14 0.81  I (100 yr) (mm/hr)  178.56 119.95 91.87 75.15 63.95 55.89 49.79 44.99 41.11 37.90 35.20 32.89	GL/s) 69.5 46.7 35.8 29.2 24.9 21.8 19.4 17.5 16.0 14.8 13.7 12.8   Qactual (L/s)  56.5 37.9 29.1 23.8 20.2 17.7 15.7 14.2 13.0 12.0	(L/s)  17.94  17.94  17.94  17.94  17.94  17.94  17.51  16.00  14.75  13.70  12.80   Qrelease (L/s)  56.5  37.9  29.1  23.8  20.2  17.7  15.7  14.2  13.0  12.0	(L/s) 51.56 28.75 17.82 11.31 6.96 3.82 1.44 0.00 0.00 0.00 0.00 0.00 0.00 T	Vstored (m^3) 30.94 34.50 32.08 27.15 20.87 13.75 6.06 0.00 0.00 0.00 0.00 0.00 0.00 Vstored	246 n	n <sup>3</sup> /ha
Subdra	tc (min)  10 20 30 40 50 60 70 80 90 100 110 120  inage Area: Area (ha): C:  tc (min)  10 20 30 40 50 60 70 80 90 100 110 120 110 120	0.14 1.00  I (100 yr) (mm/hr)  178.56 119.95 91.87 75.15 63.95 55.89 49.79 44.99 41.11 37.90 35.20 32.89  I (100 yr) (mm/hr)  178.56 119.95 91.87 75.15 63.95 55.89 49.79 44.99 41.11 37.90 35.20	(L/s) 69.5 46.7 35.8 29.2 24.9 21.8 19.4 17.5 16.0 14.8 13.7 12.8  Qactual (L/s) 56.5 37.9 29.1 23.8 20.2 17.7 15.7 14.2 13.0 12.0 11.1	(L/s)  17.94  17.94  17.94  17.94  17.94  17.94  17.95  13.70  12.80  Qrelease (L/s)  56.5  37.9  29.1  23.8  20.2  17.7  15.7  14.2  13.0  12.0  11.1	(L/s) 51.56 28.75 17.82 11.31 6.96 3.82 1.44 0.00 0.00 0.00 0.00 0.00 T  Qstored (L/s)	Vstored (m^3) 30.94 34.50 32.08 27.15 20.87 13.75 6.06 0.00 0.00 0.00 0.00 0.00 0.00 Vstored	246 n  8 (To Block 12) ground Storage	n <sup>3</sup> /ha
Subdra	tc (min)  10 20 30 40 50 60 70 80 90 100 110 120  inage Area: Area (ha): C:  tc (min)  10 20 30 40 50 60 70 80 90 100 110 120 inage Area: Area (ha): C:  tc (min)  10 20 30 40 50 60 70 80 90 100 110 120  inage Area: Area (ha): C:	0.14 1.00  I (100 yr) (mm/hr)  178.56 119.95 91.87 75.15 63.95 55.89 49.79 44.99 41.11 37.90 35.20 32.89  L108B - UNC 0.14 0.81  I (100 yr) (mm/hr) 178.56 119.95 91.87 75.15 63.95 55.89 49.79 44.99 41.11 37.90 35.20 32.89  L108C - UNC 0.090 1.00  I (100 yr) (mm/hr)	(L/s) 69.5 46.7 35.8 29.2 24.9 21.8 19.4 17.5 16.0 14.8 13.7 12.8  Qactual (L/s) 56.5 37.9 29.1 23.8 20.2 17.7 15.7 14.2 13.0 12.0 11.1 10.4  Qactual (L/s)	(L/s)  17.94  17.94  17.94  17.94  17.94  17.94  17.51  16.00  14.75  13.70  12.80  Qrelease (L/s)  56.5  37.9  29.1  23.8  20.2  17.7  15.7  14.2  13.0  12.0  11.1  10.4  Qrelease (L/s)	(L/s) 51.56 28.75 17.82 11.31 6.96 3.82 1.44 0.00 0.00 0.00 0.00 0.00 T  Qstored (L/s)	Vstored (m^3) 30.94 34.50 32.08 27.15 20.87 13.75 6.06 0.00 0.00 0.00 0.00 0.00 0.00 Vstored (m^3)	246 n  8 (To Block 12) ground Storage	n <sup>3</sup> /ha
Subdra	tc (min)  10 20 30 40 50 60 70 80 90 100 110 120  inage Area: Area (ha): C:  tc (min)  10 20 30 40 50 60 70 80 90 100 110 120 inage Area: Area (ha): C:  tc (min)	0.14 1.00  I (100 yr) (mm/hr)  178.56 119.95 91.87 75.15 63.95 55.89 49.79 44.99 41.11 37.90 35.20 32.89  L108B - UNC 0.14 0.81  I (100 yr) (mm/hr)  178.56 119.95 91.87 75.15 63.95 55.89 49.79 44.99 41.11 37.90 35.20 32.89  L108C - UNC 0.090 1.00  I (100 yr)	(L/s) 69.5 46.7 35.8 29.2 24.9 21.8 19.4 17.5 16.0 14.8 13.7 12.8  Qactual (L/s) 56.5 37.9 29.1 23.8 20.2 17.7 15.7 14.2 13.0 12.0 11.1 10.4	(L/s)  17.94  17.94  17.94  17.94  17.94  17.94  17.51  16.00  14.75  13.70  12.80   Qrelease (L/s)  56.5  37.9  29.1  23.8  20.2  17.7  15.7  14.2  13.0  12.0  11.1  10.4	(L/s) 51.56 28.75 17.82 11.31 6.96 3.82 1.44 0.00 0.00 0.00 0.00 0.00 T  Qstored (L/s)	Vstored (m^3)  30.94  34.50  32.08  27.15  20.87  13.75  6.06  0.00  0.00  0.00  0.00  0.00  Vstored (m^3)  Vstored  (m^3)	246 n  8 (To Block 12) ground Storage	n <sup>3</sup> /ha
Subdra	Area (ha):	0.14 1.00  I (100 yr) (mm/hr)  178.56 119.95 91.87 75.15 63.95 55.89 49.79 44.99 41.11 37.90 35.20 32.89  L108B - UNC 0.14 0.81  I (100 yr) (mm/hr)  178.56 119.95 91.87 75.15 63.95 55.89 49.79 44.99 41.11 37.90 35.20 32.89  L108C - UNC 0.090 1.00  I (100 yr) (mm/hr)  178.56 119.95 91.87	Qactual (L/s)  69.5 46.7 35.8 29.2 24.9 21.8 19.4 17.5 16.0 14.8 13.7 12.8  Qactual (L/s) 56.5 37.9 29.1 23.8 20.2 17.7 15.7 14.2 13.0 12.0 11.1 10.4  Qactual (L/s) 44.7 30.0 23.0	(L/s)  17.94 17.94 17.94 17.94 17.94 17.94 17.94 17.51 16.00 14.75 13.70 12.80  Qrelease (L/s)  56.5 37.9 29.1 23.8 20.2 17.7 15.7 14.2 13.0 12.0 11.1 10.4  Qrelease (L/s)  44.7 30.0 23.0	(L/s) 51.56 28.75 17.82 11.31 6.96 3.82 1.44 0.00 0.00 0.00 0.00 0.00 T  Qstored (L/s)	Vstored (m^3)  30.94  34.50  32.08  27.15  20.87  13.75  6.06  0.00  0.00  0.00  0.00  0.00  Vstored (m^3)  Vstored  (m^3)	246 n  8 (To Block 12) ground Storage	n <sup>3</sup> /ha
Subdra	tc (min)   10   20   30   40   50   60   70   80   90   100   110   120   120   100   110   120   120   100   110   120   120   100   110   120   100   110   120   100   110   120   100   110   120   100   110   120   100   110   120   10	0.14 1.00  I (100 yr) (mm/hr)  178.56 119.95 91.87 75.15 63.95 55.89 49.79 44.99 41.11 37.90 35.20 32.89  L108B - UNC 0.14 0.81  I (100 yr) (mm/hr)  178.56 119.95 91.87 75.15 63.95 55.89 49.79 44.99 41.11 37.90 35.20 32.89  L108C - UNC 0.090 1.00  I (100 yr) (mm/hr)  178.56 119.95 91.87 75.15 63.95 55.89 49.79 44.99 41.11 37.90 35.20 32.89	(L/s) 69.5 46.7 35.8 29.2 24.9 21.8 19.4 17.5 16.0 14.8 13.7 12.8  Qactual (L/s) 56.5 37.9 29.1 23.8 20.2 17.7 15.7 14.2 13.0 12.0 11.1 10.4  Qactual (L/s) 44.7 30.0 23.0 18.8 16.0	(L/s)  17.94 17.94 17.94 17.94 17.94 17.94 17.94 17.51 16.00 14.75 13.70 12.80  Qrelease (L/s)  56.5 37.9 29.1 23.8 20.2 17.7 15.7 14.2 13.0 12.0 11.1 10.4  Qrelease (L/s)  44.7 30.0 23.0 18.8 16.0	(L/s) 51.56 28.75 17.82 11.31 6.96 3.82 1.44 0.00 0.00 0.00 0.00 0.00 T  Qstored (L/s)	Vstored (m^3)  30.94  34.50  32.08  27.15  20.87  13.75  6.06  0.00  0.00  0.00  0.00  0.00  Vstored (m^3)  Vstored  (m^3)	246 n  8 (To Block 12) ground Storage	n <sup>3</sup> /ha
Subdra	## Area (ha): ## C: ## C (min) ## 10 ## 20 ## 30 ## 40 ## 50 ## 60 ## 70 ## 80 ## 90 ## 100 ## 110 ## 120 ## 120 ## 100 #	0.14 1.00  I (100 yr) (mm/hr)  178.56 119.95 91.87 75.15 63.95 55.89 49.79 44.99 41.11 37.90 35.20 32.89  L108B - UNC 0.14 0.81  I (100 yr) (mm/hr)  178.56 119.95 91.87 75.15 63.95 55.89 49.79 44.99 41.11 37.90 35.20 32.89  L108C - UNC 0.090 1.00  I (100 yr) (mm/hr)  178.56 119.95 91.87 75.15 63.95 55.89 49.79  L108C - UNC 0.090 1.00  I (100 yr) (mm/hr)  178.56 119.95 91.87 75.15 63.95 55.89 49.79	Qactual (L/s)  69.5 46.7 35.8 29.2 24.9 21.8 19.4 17.5 16.0 14.8 13.7 12.8  Qactual (L/s) 56.5 37.9 29.1 23.8 20.2 17.7 15.7 14.2 13.0 12.0 11.1 10.4  Qactual (L/s) 44.7 30.0 23.0 18.8 16.0 14.0 12.5	(L/s)  17.94 17.94 17.94 17.94 17.94 17.94 17.94 17.51 16.00 14.75 13.70 12.80  Qrelease (L/s)  56.5 37.9 29.1 23.8 20.2 17.7 15.7 14.2 13.0 12.0 11.1 10.4  Qrelease (L/s)  44.7 30.0 23.0 18.8 16.0 14.0 12.5	(L/s) 51.56 28.75 17.82 11.31 6.96 3.82 1.44 0.00 0.00 0.00 0.00 0.00 T  Qstored (L/s)	Vstored (m^3)  30.94  34.50  32.08  27.15  20.87  13.75  6.06  0.00  0.00  0.00  0.00  0.00  Vstored (m^3)  Vstored  (m^3)	246 n  8 (To Block 12) ground Storage	n <sup>3</sup> /ha
Subdra	## Area (ha):    C:   tc (min)	0.14 1.00  I (100 yr) (mm/hr)  178.56 119.95 91.87 75.15 63.95 55.89 49.79 44.99 41.11 37.90 35.20 32.89  L108B - UNC 0.14 0.81  I (100 yr) (mm/hr) 178.56 119.95 91.87 75.15 63.95 55.89 49.79 44.99 41.11 37.90 35.20 32.89  L108C - UNC 0.090 1.00  I (100 yr) (mm/hr)  178.56 119.95 91.87 75.15 63.95 55.89  L108C - UNC 0.090 1.00  I (100 yr) (mm/hr)  178.56 119.95 91.87 75.15 63.95 55.89	Qactual (L/s)  Qactual (L/s)  56.5  37.9  29.1  23.8  20.2  17.7  15.7  14.2  13.0  12.0  11.1  10.4  Qactual (L/s)  44.7  30.0  23.0  18.8  16.0  14.0	(L/s)  17.94 17.94 17.94 17.94 17.94 17.94 17.94 17.51 16.00 14.75 13.70 12.80  Qrelease (L/s)  56.5 37.9 29.1 23.8 20.2 17.7 15.7 14.2 13.0 12.0 11.1 10.4  Qrelease (L/s)  44.7 30.0 23.0 18.8 16.0 14.0	(L/s) 51.56 28.75 17.82 11.31 6.96 3.82 1.44 0.00 0.00 0.00 0.00 0.00 T  Qstored (L/s)	Vstored (m^3)  30.94  34.50  32.08  27.15  20.87  13.75  6.06  0.00  0.00  0.00  0.00  0.00  Vstored (m^3)  Vstored  (m^3)	246 n  8 (To Block 12) ground Storage	n <sup>3</sup> /ha

## Project #160401614, 933 Gladstone Avenue - Gladstone Village OCH

Subdra	ainage Area: E Area (ha):	Block 8 & 12 Tri 0.23	butary to Und		rage (L108B & L Release Rate:	108C) 29.47	L/s
Г	tc	l (2 yr)	Qactual	Qrelease	Qstored	Vstored	$\neg$
	(min)	(mm/hr)	(L/s)	(L/s)	(L/s)	(m^3)	
	10 20	76.81 52.03	35.76 24.23	<b>29.47</b> 24.23	6.30 0.00	<b>3.78</b> 0.00	16 m <sup>3</sup> /ha
	30	40.04	18.65	18.65	0.00	0.00	
	40 50	32.86 28.04	15.30 13.06	15.30 13.06	0.00 0.00	0.00 0.00	
	60	24.56	11.44	11.44	0.00	0.00	
	70 80	21.91 19.83	10.20 9.23	10.20 9.23	0.00 0.00	0.00 0.00	
	90	18.14	8.45	8.45	0.00	0.00	
	100 110	16.75 15.57	7.80 7.25	7.80 7.25	0.00 0.00	0.00 0.00	
	120	14.56	6.78	6.78	0.00	0.00	
Subdra	ainage Area: Area (ha): C:	L109D - UNC 0.14 0.80		Allowable	Release Rate:	Tributary to	Block 11 o Cistern Block 11 <b>L/s</b>
Γ	tc	l (2 yr)	Qactual	Qrelease	Qstored	Vstored	
L	(min) 10	(mm/hr) 76.81	(L/s) 23.9	(L/s) 17.9	(L/s) 6.0	(m^3) 3.6	
	20 30	52.03 40.04	16.2 12.5	16.2 12.5	0.0 0.0	0.0 0.0	
	40	32.86	10.2	10.2	0.0	0.0	
	50 60	28.04 24.56	8.7 7.6	8.7 7.6	0.0 0.0	0.0 0.0	
	70	21.91	6.8	6.8	0.0	0.0	
	80	19.83	6.2	6.2 5.6	0.0	0.0	
	90 100	18.14 16.75	5.6 5.2	5.6 5.2	0.0 0.0	0.0 0.0	
	110	15.57	4.8	4.8	0.0	0.0	
	120	14.56	4.5	4.5	0.0	0.0	
Subdra	ainage Area: Area (ha): C:	L109B - UNC 0.15 0.65		Allowable	Tri <b>Release Rate:</b>		k 10 (To Block 13) erground Storage L/s
	tc (min)	I (2 yr)	Qactual	Qrelease	Qstored	Vstored	
L	(min) 10	(mm/hr) 76.81	20.8	20.8	(L/s)	(m^3)	
	20 30	52.03 40.04	14.1 10.9	14.1 10.9			
	40	32.86	8.9	8.9			
	50 60	28.04 24.56	7.6 6.7	7.6 6.7			
	70	21.91	5.9	5.9			
		19.83					
	80		5.4	5.4			
	90 100	18.14 16.75	5.4 4.9 4.5	5.4 4.9 4.5			
	90	18.14	4.9	4.9			
Subdra	90 100 110 120 ainage Area: I Area (ha): (	18.14 16.75 15.57 14.56 -109C - UNC	4.9 4.5 4.2	4.9 4.5 4.2 3.9			Block 13 derground Stroage
Subdra	90 100 110 120 ainage Area: I Area (ha): (	18.14 16.75 15.57 14.56 -109C - UNC 0.090	4.9 4.5 4.2 3.9	4.9 4.5 4.2 3.9 <b>Allowable</b>	Release Rate:	11.53	
Subdra	90 100 110 120 ainage Area: L Area (ha): C C: (	18.14 16.75 15.57 14.56 -109C - UNC 0.090 0.85	4.9 4.5 4.2 3.9 Qactual (L/s)	4.9 4.5 4.2 3.9 Allowable Qrelease (L/s)			derground Stroage
Subdra	90 100 110 120 ainage Area: L Area (ha): ( C: ( tc (min) 10 20	18.14 16.75 15.57 14.56 -109C - UNC 0.090 0.85 I (2 yr) (mm/hr) 76.81 52.03	4.9 4.5 4.2 3.9 <b>Qactual</b> (L/s) 16.3 11.1	4.9 4.5 4.2 3.9 Allowable Qrelease (L/s) 16.3 11.1	Release Rate:  Qstored	11.53 Vstored	derground Stroage
Subdr	90 100 110 120 ainage Area: L Area (ha): C C: C tc (min) 10 20 30	18.14 16.75 15.57 14.56 -109C - UNC 0.090 0.85 I (2 yr) (mm/hr) 76.81 52.03 40.04	4.9 4.5 4.2 3.9 Qactual (L/s) 16.3 11.1 8.5	4.9 4.5 4.2 3.9 Allowable Qrelease (L/s) 16.3 11.1 8.5	Release Rate:  Qstored	11.53 Vstored	derground Stroage
Subdra	90 100 110 120 ainage Area: L Area (ha): ( C: ( tc (min) 10 20	18.14 16.75 15.57 14.56 -109C - UNC 0.090 0.85 I (2 yr) (mm/hr) 76.81 52.03	4.9 4.5 4.2 3.9 <b>Qactual</b> (L/s) 16.3 11.1	4.9 4.5 4.2 3.9 Allowable Qrelease (L/s) 16.3 11.1	Release Rate:  Qstored	11.53 Vstored	derground Stroage
Subdra	90 100 110 120 ainage Area: L Area (ha): C C: C tc (min) 10 20 30 40 50 60	18.14 16.75 15.57 14.56 	4.9 4.5 4.2 3.9 Qactual (L/s) 16.3 11.1 8.5 7.0 6.0 5.2	4.9 4.5 4.2 3.9 Allowable  Qrelease (L/s)  16.3 11.1 8.5 7.0 6.0 5.2	Release Rate:  Qstored	11.53 Vstored	derground Stroage
Subdr	90 100 110 120 ainage Area: L Area (ha): C C: C tc (min) 10 20 30 40 50 60 70	18.14 16.75 15.57 14.56 -109C - UNC 0.090 0.85 I (2 yr) (mm/hr) 76.81 52.03 40.04 32.86 28.04 24.56 21.91	4.9 4.5 4.2 3.9 Qactual (L/s) 16.3 11.1 8.5 7.0 6.0 5.2 4.7	4.9 4.5 4.2 3.9 Allowable  Qrelease (L/s)  16.3 11.1 8.5 7.0 6.0 5.2 4.7	Release Rate:  Qstored	11.53 Vstored	derground Stroage
Subdra	90 100 110 120 ainage Area: L Area (ha): C C: C tc (min) 10 20 30 40 50 60 70 80 90	18.14 16.75 15.57 14.56 -109C - UNC 0.090 0.85 I (2 yr) (mm/hr) 76.81 52.03 40.04 32.86 28.04 24.56 21.91 19.83 18.14	4.9 4.5 4.2 3.9 Qactual (L/s) 16.3 11.1 8.5 7.0 6.0 5.2 4.7 4.2 3.9	4.9 4.5 4.2 3.9 Allowable  Qrelease (L/s)  16.3 11.1 8.5 7.0 6.0 5.2 4.7 4.2 3.9	Release Rate:  Qstored	11.53 Vstored	derground Stroage
Subdra	90 100 110 120 ainage Area: I Area (ha): C C: C tc (min) 10 20 30 40 50 60 70 80 90 100	18.14 16.75 15.57 14.56 109C - UNC 0.090 0.85 I (2 yr) (mm/hr) 76.81 52.03 40.04 32.86 28.04 24.56 21.91 19.83 18.14 16.75	4.9 4.5 4.2 3.9 Qactual (L/s) 16.3 11.1 8.5 7.0 6.0 5.2 4.7 4.2 3.9 3.6	4.9 4.5 4.2 3.9 Allowable  Qrelease (L/s)  16.3 11.1 8.5 7.0 6.0 5.2 4.7 4.2 3.9 3.6	Release Rate:  Qstored	11.53 Vstored	derground Stroage
Subdra	90 100 110 120 ainage Area: L Area (ha): C C: C tc (min) 10 20 30 40 50 60 70 80 90	18.14 16.75 15.57 14.56 -109C - UNC 0.090 0.85 I (2 yr) (mm/hr) 76.81 52.03 40.04 32.86 28.04 24.56 21.91 19.83 18.14	4.9 4.5 4.2 3.9 Qactual (L/s) 16.3 11.1 8.5 7.0 6.0 5.2 4.7 4.2 3.9	4.9 4.5 4.2 3.9 Allowable  Qrelease (L/s)  16.3 11.1 8.5 7.0 6.0 5.2 4.7 4.2 3.9	Release Rate:  Qstored	11.53 Vstored	derground Stroage
	90 100 110 120 ainage Area: I Area (ha): C C: C tc (min) 10 20 30 40 50 60 70 80 90 100 110 120	18.14 16.75 15.57 14.56 109C - UNC 0.090 0.85 I (2 yr) (mm/hr) 76.81 52.03 40.04 32.86 28.04 24.56 21.91 19.83 18.14 16.75 15.57 14.56	4.9 4.5 4.2 3.9 Qactual (L/s) 16.3 11.1 8.5 7.0 6.0 5.2 4.7 4.2 3.9 3.6 3.3 3.1	4.9 4.5 4.2 3.9  Allowable  Qrelease (L/s) 16.3 11.1 8.5 7.0 6.0 5.2 4.7 4.2 3.9 3.6 3.3 3.1	Release Rate:  Qstored	11.53 Vstored (m^3)	derground Stroage
	90 100 110 120 ainage Area: I Area (ha): C (min) 10 20 30 40 50 60 70 80 90 100 110 120 ainage Area: I Area (ha):	18.14 16.75 15.57 14.56 	4.9 4.5 4.2 3.9  Qactual (L/s) 16.3 11.1 8.5 7.0 6.0 5.2 4.7 4.2 3.9 3.6 3.3 3.1  ributary to Ur	4.9 4.5 4.2 3.9  Allowable  Qrelease (L/s) 16.3 11.1 8.5 7.0 6.0 5.2 4.7 4.2 3.9 3.6 3.3 3.1  Allowable  Qrelease	Qstored (L/s)  orage (L109B & Release Rate:	11.53  Vstored (m^3)  L109C) 30.75  Vstored	derground Stroage L/s
	90 100 110 120 ainage Area: L Area (ha): C: C (min) 10 20 30 40 50 60 70 80 90 100 110 120 ainage Area: L Area (ha):	18.14 16.75 15.57 14.56  -109C - UNC 0.090 0.85  I (2 yr) (mm/hr)  76.81 52.03 40.04 32.86 28.04 24.56 21.91 19.83 18.14 16.75 15.57 14.56  Block 10 & 13 Tr 0.24  I (2 yr) (mm/hr) 76.81	4.9 4.5 4.2 3.9  Qactual (L/s) 16.3 11.1 8.5 7.0 6.0 5.2 4.7 4.2 3.9 3.6 3.3 3.1  ributary to Ur	4.9 4.5 4.2 3.9  Allowable  Qrelease (L/s) 16.3 11.1 8.5 7.0 6.0 5.2 4.7 4.2 3.9 3.6 3.3 3.1  Allowable  Qrelease (L/s) 30.75	Release Rate:  Qstored (L/s)  orage (L109B & Release Rate:  Qstored (L/s) 6.41	11.53  Vstored (m^3)  L109C) 30.75  Vstored (m^3) 3.84	L/s
	90 100 110 120  ainage Area: L Area (ha): C  tc (min) 10 20 30 40 50 60 70 80 90 100 110 120  ainage Area: E Area (ha):  tc (min) 10 20	18.14 16.75 15.57 14.56  -109C - UNC 0.090 0.85  I (2 yr) (mm/hr) 76.81 52.03 40.04 32.86 28.04 24.56 21.91 19.83 18.14 16.75 15.57 14.56  Block 10 & 13 Ti 0.24  I (2 yr) (mm/hr) 76.81 52.03	4.9 4.5 4.2 3.9  Qactual (L/s) 16.3 11.1 8.5 7.0 6.0 5.2 4.7 4.2 3.9 3.6 3.3 3.1  ributary to Ur	4.9 4.5 4.2 3.9  Allowable  Qrelease (L/s) 16.3 11.1 8.5 7.0 6.0 5.2 4.7 4.2 3.9 3.6 3.3 3.1  Allowable  Qrelease (L/s) 30.75 25.17	Qstored (L/s)  orage (L109B & Release Rate:  Qstored (L/s)  6.41 0.00	11.53  Vstored (m^3)  L109C) 30.75  Vstored (m^3) 3.84 0.00	L/s
	90 100 110 120  ainage Area: I Area (ha): C (min)  10 20 30 40 50 60 70 80 90 100 110 120  ainage Area: I Area (ha):  tc (min)  10 20 30 30 40 50 60 70 80 90 100 110 120	18.14 16.75 15.57 14.56  -109C - UNC 0.090 0.85  I (2 yr) (mm/hr)  76.81 52.03 40.04 32.86 28.04 24.56 21.91 19.83 18.14 16.75 15.57 14.56  Block 10 & 13 Tr 0.24  I (2 yr) (mm/hr)  76.81 52.03 40.04	4.9 4.5 4.2 3.9  Qactual (L/s) 16.3 11.1 8.5 7.0 6.0 5.2 4.7 4.2 3.9 3.6 3.3 3.1  ributary to Ur	4.9 4.5 4.2 3.9  Allowable  Qrelease (L/s) 16.3 11.1 8.5 7.0 6.0 5.2 4.7 4.2 3.9 3.6 3.3 3.1  Allowable  Qrelease (L/s) 30.75 25.17 19.37	Qstored (L/s)  Orage (L109B & Release Rate:  Qstored (L/s)  6.41 0.00 0.00	Vstored (m^3)  Vstored (m^3)  3.84 0.00 0.00	L/s  L/s
	90 100 110 120  ainage Area: L Area (ha): C (min)  10 20 30 40 50 60 70 80 90 100 110 120  ainage Area: E Area (ha):  tc (min)  10 20 30 40 50 60	18.14 16.75 15.57 14.56  -109C - UNC 0.090 0.85  I (2 yr) (mm/hr)  76.81 52.03 40.04 32.86 28.04 24.56 21.91 19.83 18.14 16.75 15.57 14.56  Block 10 & 13 Tr 0.24  I (2 yr) (mm/hr)  76.81 52.03 40.04 32.86 28.04	4.9 4.5 4.2 3.9  Qactual (L/s) 16.3 11.1 8.5 7.0 6.0 5.2 4.7 4.2 3.9 3.6 3.3 3.1  ributary to Ur  Qactual (L/s) 37.15 25.17 19.37 15.90 13.56	4.9 4.5 4.2 3.9  Allowable  Qrelease (L/s) 16.3 11.1 8.5 7.0 6.0 5.2 4.7 4.2 3.9 3.6 3.3 3.1  Allowable  Qrelease (L/s) 30.75 25.17 19.37 15.90 13.56	Release Rate:  Qstored (L/s)  orage (L109B & Release Rate:  Qstored (L/s)  6.41 0.00 0.00 0.00 0.00 0.00	Vstored (m^3)  Vstored (m^3)  3.84 0.00 0.00 0.00 0.00 0.00	L/s  L/s
	90 100 110 120  ainage Area: L Area (ha): C (min) 10 20 30 40 50 60 70 80 90 100 110 120  ainage Area: E Area (ha):  tc (min) 10 20 30 40 50 60 60	18.14 16.75 15.57 14.56  -109C - UNC 0.090 0.85  I (2 yr) (mm/hr) 76.81 52.03 40.04 32.86 28.04 24.56 21.91 19.83 18.14 16.75 15.57 14.56  Block 10 & 13 Tr 0.24  I (2 yr) (mm/hr) 76.81 52.03 40.04 32.86 28.04 24.56	4.9 4.5 4.2 3.9  Qactual (L/s) 16.3 11.1 8.5 7.0 6.0 5.2 4.7 4.2 3.9 3.6 3.3 3.1  ributary to Ur	4.9 4.5 4.2 3.9  Allowable  Qrelease (L/s) 16.3 11.1 8.5 7.0 6.0 5.2 4.7 4.2 3.9 3.6 3.3 3.1  Allowable  Qrelease (L/s) 30.75 25.17 19.37 15.90 13.56 11.88	Release Rate:  Qstored (L/s)  orage (L109B & Release Rate:  Qstored (L/s)  6.41 0.00 0.00 0.00 0.00 0.00 0.00 0.00	11.53  Vstored (m^3)  L109C) 30.75  Vstored (m^3) 3.84 0.00 0.00 0.00 0.00 0.00 0.00	L/s  L/s
	90 100 110 120  ainage Area: L Area (ha): C (min)  10 20 30 40 50 60 70 80 90 100 110 120  ainage Area: E Area (ha):  tc (min)  10 20 30 40 50 60	18.14 16.75 15.57 14.56  -109C - UNC 0.090 0.85  I (2 yr) (mm/hr)  76.81 52.03 40.04 32.86 28.04 24.56 21.91 19.83 18.14 16.75 15.57 14.56  Block 10 & 13 Tr 0.24  I (2 yr) (mm/hr)  76.81 52.03 40.04 32.86 28.04	4.9 4.5 4.2 3.9  Qactual (L/s) 16.3 11.1 8.5 7.0 6.0 5.2 4.7 4.2 3.9 3.6 3.3 3.1  ributary to Ur  Qactual (L/s) 37.15 25.17 19.37 15.90 13.56	4.9 4.5 4.2 3.9  Allowable  Qrelease (L/s) 16.3 11.1 8.5 7.0 6.0 5.2 4.7 4.2 3.9 3.6 3.3 3.1  Allowable  Qrelease (L/s) 30.75 25.17 19.37 15.90 13.56	Release Rate:  Qstored (L/s)  orage (L109B & Release Rate:  Qstored (L/s)  6.41 0.00 0.00 0.00 0.00 0.00	Vstored (m^3)  Vstored (m^3)  3.84 0.00 0.00 0.00 0.00 0.00	L/s  L/s
	90 100 110 120  ainage Area: L Area (ha): C (min)  10 20 30 40 50 60 70 80 90 100 110 120  ainage Area: E Area (ha):  tc (min)  10 20 30 40 50 60 70 80 90 60 70 80 90 90	18.14 16.75 15.57 14.56  -109C - UNC 0.090 0.85  I (2 yr) (mm/hr)  76.81 52.03 40.04 32.86 28.04 24.56 21.91 19.83 18.14 16.75 15.57 14.56  Block 10 & 13 Tr 0.24  I (2 yr) (mm/hr)  76.81 52.03 40.04 32.86 28.04 24.56 21.91 19.83 18.14	4.9 4.5 4.2 3.9  Qactual (L/s) 16.3 11.1 8.5 7.0 6.0 5.2 4.7 4.2 3.9 3.6 3.3 3.1  ributary to Ur  Qactual (L/s) 37.15 25.17 19.37 15.90 13.56 11.88 10.60 9.59 8.78	4.9 4.5 4.2 3.9  Allowable  Qrelease (L/s) 16.3 11.1 8.5 7.0 6.0 5.2 4.7 4.2 3.9 3.6 3.3 3.1  Allowable  Qrelease (L/s) 30.75 25.17 19.37 15.90 13.56 11.88 10.60 9.59 8.78	Release Rate:  Qstored (L/s)  orage (L109B & Release Rate:  Qstored (L/s)  6.41 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0	Vstored (m^3)  Vstored (m^3)  30.75  Vstored (m^3)  3.84 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0	L/s
	90 100 110 120  ainage Area: L Area (ha): C (min) 10 20 30 40 50 60 70 80 90 100 110 120  ainage Area: E Area (ha):  tc (min) 10 20 30 40 50 60 70 80 90 100 110 20 30 40 50 60 70 80 90 100	18.14 16.75 15.57 14.56  -109C - UNC 0.090 0.85  I (2 yr) (mm/hr) 76.81 52.03 40.04 32.86 28.04 24.56 21.91 19.83 18.14 16.75 15.57 14.56  Block 10 & 13 Tr 0.24  I (2 yr) (mm/hr) 76.81 52.03 40.04 32.86 28.04 24.56 21.91 19.83 18.14 16.75	4.9 4.5 4.2 3.9  Qactual (L/s) 16.3 11.1 8.5 7.0 6.0 5.2 4.7 4.2 3.9 3.6 3.3 3.1  ributary to Ur  Qactual (L/s) 37.15 25.17 19.37 15.90 13.56 11.88 10.60 9.59 8.78 8.10	4.9 4.5 4.2 3.9  Allowable  Qrelease (L/s) 16.3 11.1 8.5 7.0 6.0 5.2 4.7 4.2 3.9 3.6 3.3 3.1  Allowable  Qrelease (L/s) 30.75 25.17 19.37 15.90 13.56 11.88 10.60 9.59 8.78 8.10	Release Rate:  Qstored (L/s)  Orage (L109B & Release Rate:  Qstored (L/s)  6.41 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0	Vstored (m^3) 3.84 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0	L/s
	90 100 110 120  ainage Area: L Area (ha): C (min)  10 20 30 40 50 60 70 80 90 100 110 120  ainage Area: E Area (ha):  tc (min)  10 20 30 40 50 60 70 80 90 60 70 80 90 90	18.14 16.75 15.57 14.56  -109C - UNC 0.090 0.85  I (2 yr) (mm/hr)  76.81 52.03 40.04 32.86 28.04 24.56 21.91 19.83 18.14 16.75 15.57 14.56  Block 10 & 13 Tr 0.24  I (2 yr) (mm/hr)  76.81 52.03 40.04 32.86 28.04 24.56 21.91 19.83 18.14	4.9 4.5 4.2 3.9  Qactual (L/s) 16.3 11.1 8.5 7.0 6.0 5.2 4.7 4.2 3.9 3.6 3.3 3.1  ributary to Ur  Qactual (L/s) 37.15 25.17 19.37 15.90 13.56 11.88 10.60 9.59 8.78	4.9 4.5 4.2 3.9  Allowable  Qrelease (L/s) 16.3 11.1 8.5 7.0 6.0 5.2 4.7 4.2 3.9 3.6 3.3 3.1  Allowable  Qrelease (L/s) 30.75 25.17 19.37 15.90 13.56 11.88 10.60 9.59 8.78	Release Rate:  Qstored (L/s)  orage (L109B & Release Rate:  Qstored (L/s)  6.41 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0	Vstored (m^3)  Vstored (m^3)  30.75  Vstored (m^3)  3.84 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0	L/s
Subdra	90 100 110 120  ainage Area: I Area (ha): C (min)  10 20 30 40 50 60 70 80 90 100 110 120  ainage Area: I Area (ha):  tc (min)  10 20 30 40 50 60 70 80 90 110 120  ainage Area: I Area (ha):	18.14 16.75 15.57 14.56  -109C - UNC 0.090 0.85  I (2 yr) (mm/hr)  76.81 52.03 40.04 32.86 28.04 24.56 21.91 19.83 18.14 16.75 15.57 14.56  I (2 yr) (mm/hr)  76.81 52.03 40.04 32.86 28.04 24.56 21.91 19.83 18.14 16.75 15.57 14.56  -109A - UNC 0.07	4.9 4.5 4.2 3.9  Qactual (L/s) 16.3 11.1 8.5 7.0 6.0 5.2 4.7 4.2 3.9 3.6 3.3 3.1  ributary to Ur  Qactual (L/s) 37.15 25.17 19.37 15.90 13.56 11.88 10.60 9.59 8.78 8.10 7.53	4.9 4.5 4.2 3.9  Allowable  Qrelease (L/s) 16.3 11.1 8.5 7.0 6.0 5.2 4.7 4.2 3.9 3.6 3.3 3.1  Allowable  Qrelease (L/s) 30.75 25.17 19.37 15.90 13.56 11.88 10.60 9.59 8.78 8.10 7.53 7.04	Release Rate:  Qstored (L/s)  Orage (L109B & Release Rate:  Qstored (L/s)  6.41 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0	Vstored (m^3)  Vstored (m^3)  3.84 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0	L/s  L/s  16 m³/ha
Subdra	90 100 110 120  ainage Area: L Area (ha): C (min)  10 20 30 40 50 60 70 80 90 100 110 120  ainage Area: L Area (ha):  tc (min)  10 20 30 40 50 60 70 80 90 100 110 120  ainage Area: L Area (ha): C:	18.14 16.75 15.57 14.56  -109C - UNC 0.090 0.85  I (2 yr) (mm/hr)  76.81 52.03 40.04 32.86 28.04 24.56 21.91 19.83 18.14 16.75 15.57 14.56  I (2 yr) (mm/hr)  76.81 52.03 40.04 32.86 28.04 24.56 21.91 19.83 18.14 16.75 15.57 14.56	4.9 4.5 4.2 3.9  Qactual (L/s) 16.3 11.1 8.5 7.0 6.0 5.2 4.7 4.2 3.9 3.6 3.3 3.1  ributary to Ur  Qactual (L/s) 37.15 25.17 19.37 15.90 13.56 11.88 10.60 9.59 8.78 8.10 7.53 7.04	4.9 4.5 4.2 3.9  Allowable  Qrelease (L/s) 16.3 11.1 8.5 7.0 6.0 5.2 4.7 4.2 3.9 3.6 3.3 3.1  Allowable  Qrelease (L/s) 30.75 25.17 19.37 15.90 13.56 11.88 10.60 9.59 8.78 8.10 7.53 7.04  Allowable	Release Rate:  Qstored (L/s)  Orage (L109B & Release Rate:  Qstored (L/s)  6.41 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0	Vstored (m^3)  Vstored (m^3)  30.75  Vstored (m^3)  3.84  0.00  0.00  0.00  0.00  0.00  0.00  0.00  0.00  0.00  0.00  0.00  0.00  0.00  0.00  0.00  0.00  0.00  0.00  0.00	L/s  16 m³/hs
Subdra	90 100 110 120  ainage Area: L Area (ha): C (min)  10 20 30 40 50 60 70 80 90 100 110 120  ainage Area: L Area (ha):  tc (min)  10 20 30 40 50 60 70 80 90 100 110 120  ainage Area: L Area (ha):  C: tc (min)	18.14 16.75 15.57 14.56  -109C - UNC 0.090 0.85  I (2 yr) (mm/hr) 76.81 52.03 40.04 32.86 28.04 24.56 21.91 19.83 18.14 16.75 15.57 14.56  I (2 yr) (mm/hr) 76.81 52.03 40.04 32.86 28.04 24.56 21.91 19.83 18.14 16.75 15.57 14.56  -109A - UNC 0.07 0.85  I (2 yr) (mm/hr)	4.9 4.5 4.2 3.9  Qactual (L/s) 16.3 11.1 8.5 7.0 6.0 5.2 4.7 4.2 3.9 3.6 3.3 3.1  ributary to Ur  Qactual (L/s) 37.15 25.17 19.37 15.90 13.56 11.88 10.60 9.59 8.78 8.10 7.53 7.04	4.9 4.5 4.2 3.9  Allowable  Qrelease (L/s) 16.3 11.1 8.5 7.0 6.0 5.2 4.7 4.2 3.9 3.6 3.3 3.1  Allowable  Qrelease (L/s) 30.75 25.17 19.37 15.90 13.56 11.88 10.60 9.59 8.78 8.10 7.53 7.04  Allowable  Qrelease (L/s)  Allowable	Release Rate:  Qstored (L/s)  Orage (L109B & Release Rate:  Qstored (L/s)  6.41 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0	Vstored (m^3)  Vstored (m^3)  3.84 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0	L/s  L/s  16 m³/hs
Subdra	90 100 110 120  ainage Area: I Area (ha): C (min)  10 20 30 40 50 60 70 80 90 100 110 120  ainage Area: I Area (ha):  tc (min)  10 20 30 40 50 60 70 80 90 100 110 120  ainage Area: I Area (ha):  C: tc (min)  10 120	18.14 16.75 15.57 14.56  -109C - UNC 0.090 0.85  I (2 yr) (mm/hr)  76.81 52.03 40.04 32.86 28.04 24.56 21.91 19.83 18.14 16.75 15.57 14.56  Block 10 & 13 Tr 0.24  I (2 yr) (mm/hr)  76.81 52.03 40.04 32.86 28.04 24.56 21.91 19.83 18.14 16.75 15.57 14.56  -109A - UNC 0.07 0.85  I (2 yr) (mm/hr)  76.81	4.9 4.5 4.2 3.9  Qactual (L/s) 16.3 11.1 8.5 7.0 6.0 5.2 4.7 4.2 3.9 3.6 3.3 3.1  ributary to Ur  Qactual (L/s) 37.15 25.17 19.37 15.90 13.56 11.88 10.60 9.59 8.78 8.10 7.53 7.04  Qactual (L/s) 12.70	4.9 4.5 4.2 3.9  Allowable  Qrelease (L/s) 16.3 11.1 8.5 7.0 6.0 5.2 4.7 4.2 3.9 3.6 3.3 3.1  Allowable  Qrelease (L/s) 30.75 25.17 19.37 15.90 13.56 11.88 10.60 9.59 8.78 8.10 7.53 7.04  Allowable  Qrelease (L/s) 8.97	Release Rate:  Qstored (L/s)  Orage (L109B & Release Rate:  Qstored (L/s)  6.41 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0	Vstored (m^3)  Vstored (m^3)  3.84 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0	L/s  L/s  16 m³/ha
Subdra	90 100 110 120  ainage Area: L Area (ha): C (min)  10 20 30 40 50 60 70 80 90 100 110 120  ainage Area: L Area (ha):  tc (min)  10 20 30 40 50 60 70 80 90 100 110 120  ainage Area: L Area (ha):  C: tc (min)  10 20 30 40 50 60 70 80 90 100 110 20 30 40 50 60 70 80 90 100 110 120	18.14 16.75 15.57 14.56  -109C - UNC 0.090 0.85  I (2 yr) (mm/hr)  76.81 52.03 40.04 32.86 28.04 24.56 21.91 19.83 18.14 16.75 15.57 14.56	4.9 4.5 4.2 3.9  Qactual (L/s) 16.3 11.1 8.5 7.0 6.0 5.2 4.7 4.2 3.9 3.6 3.3 3.1  ributary to Ur  Qactual (L/s) 37.15 25.17 19.37 15.90 13.56 11.88 10.60 9.59 8.78 8.10 7.53 7.04  Qactual (L/s) 12.70 8.61 6.62	4.9 4.5 4.2 3.9  Allowable  Qrelease (L/s) 16.3 11.1 8.5 7.0 6.0 5.2 4.7 4.2 3.9 3.6 3.3 3.1  Allowable  Qrelease (L/s) 30.75 25.17 19.37 15.90 13.56 11.88 10.60 9.59 8.78 8.10 7.53 7.04  Allowable  Qrelease (L/s) 8.97 8.61 6.62	Release Rate:  Qstored (L/s)  Orage (L109B & Release Rate:  Qstored (L/s)  6.41 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0	Vstored (m^3)  Vstored (m^3)  3.84 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0	L/s  L/s  16 m³/ha
Subdra	90 100 110 120  ainage Area: L Area (ha): C (min)  10 20 30 40 50 60 70 80 90 100 110 120  ainage Area: L Area (ha):  tc (min)  10 20 30 40 50 60 70 80 90 100 110 120  ainage Area: L Area (ha):  C: tc (min)	18.14 16.75 15.57 14.56  -109C - UNC 0.090 0.85  I (2 yr) (mm/hr) 76.81 52.03 40.04 32.86 28.04 24.56 21.91 19.83 18.14 16.75 15.57 14.56	4.9 4.5 4.2 3.9  Qactual (L/s) 16.3 11.1 8.5 7.0 6.0 5.2 4.7 4.2 3.9 3.6 3.3 3.1  ributary to Ur  Qactual (L/s) 37.15 25.17 19.37 15.90 13.56 11.88 10.60 9.59 8.78 8.10 7.53 7.04  Qactual (L/s) 12.70 8.61 6.62 5.44	4.9 4.5 4.2 3.9  Allowable  Qrelease (L/s) 16.3 11.1 8.5 7.0 6.0 5.2 4.7 4.2 3.9 3.6 3.3 3.1  Allowable  Qrelease (L/s) 30.75 25.17 19.37 15.90 13.56 11.88 10.60 9.59 8.78 8.10 7.53 7.04  Allowable  Qrelease (L/s) 8.97 8.61 6.62 5.44	Release Rate:  Qstored (L/s)  Orage (L109B & Release Rate:  Qstored (L/s)  6.41 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0	Vstored (m^3)  Vstored (m^3)  3.84 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0	L/s  L/s  16 m³/ha
Subdra	90 100 110 120  ainage Area: L Area (ha): C (min)  10 20 30 40 50 60 70 80 90 100 110 120  ainage Area: L Area (ha):  tc (min)  10 20 30 40 50 60 70 80 90 100 110 120  ainage Area: L Area (ha):  C: tc (min)  10 20 30 40 50 60 70 80 90 100 110 20 30 40 50 60 70 80 90 100 110 120	18.14 16.75 15.57 14.56  -109C - UNC 0.090 0.85  I (2 yr) (mm/hr)  76.81 52.03 40.04 32.86 28.04 24.56 21.91 19.83 18.14 16.75 15.57 14.56	4.9 4.5 4.2 3.9  Qactual (L/s) 16.3 11.1 8.5 7.0 6.0 5.2 4.7 4.2 3.9 3.6 3.3 3.1  ributary to Ur  Qactual (L/s) 37.15 25.17 19.37 15.90 13.56 11.88 10.60 9.59 8.78 8.10 7.53 7.04  Qactual (L/s) 12.70 8.61 6.62	4.9 4.5 4.2 3.9  Allowable  Qrelease (L/s) 16.3 11.1 8.5 7.0 6.0 5.2 4.7 4.2 3.9 3.6 3.3 3.1  Allowable  Qrelease (L/s) 30.75 25.17 19.37 15.90 13.56 11.88 10.60 9.59 8.78 8.10 7.53 7.04  Allowable  Qrelease (L/s) 8.97 8.61 6.62	Release Rate:  Qstored (L/s)  Orage (L109B & Release Rate:  Qstored (L/s)  6.41 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0	Vstored (m^3)  Vstored (m^3)  3.84 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0	L/s  L/s  16 m³/ha
Subdra	90 100 110 120  ainage Area: I Area (ha): C (min)  10 20 30 40 50 60 70 80 90 100 110 120  ainage Area: I Area (ha):  tc (min)  10 20 30 40 50 60 70 80 90 100 110 120  ainage Area: I Area (ha): C: tc (min)  10 20 30 40 50 60 70 80 90 100 110 120	18.14 16.75 15.57 14.56  -109C - UNC -0.090 0.85  I (2 yr) (mm/hr)  76.81 52.03 40.04 32.86 28.04 24.56 21.91 19.83 18.14 16.75 15.57 14.56  -109A - UNC 0.07 0.85  I (2 yr) (mm/hr)  76.81 52.03 40.04 32.86 28.04 24.56 21.91 19.83 18.14 16.75 15.57 14.56  -109A - UNC 0.07 0.85  I (2 yr) (mm/hr)  76.81 52.03 40.04 32.86 22.91 19.83 18.14 16.75 15.57 14.56	4.9 4.5 4.2 3.9  Qactual (L/s) 16.3 11.1 8.5 7.0 6.0 5.2 4.7 4.2 3.9 3.6 3.3 3.1  ributary to Ur  Qactual (L/s) 37.15 25.17 19.37 15.90 13.56 11.88 10.60 9.59 8.78 8.10 7.53 7.04  Qactual (L/s) 12.70 8.61 6.62 5.44 4.06 3.62	4.9 4.5 4.2 3.9  Allowable  Qrelease (L/s) 16.3 11.1 8.5 7.0 6.0 5.2 4.7 4.2 3.9 3.6 3.3 3.1  Allowable  Qrelease (L/s) 30.75 25.17 19.37 15.90 13.56 11.88 10.60 9.59 8.78 8.10 7.53 7.04  Allowable  Qrelease (L/s) 8.97 8.61 6.62 5.44 4.06 3.62	Release Rate:  Qstored (L/s)  Orage (L109B & Release Rate:  Qstored (L/s)  6.41 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0	Vstored (m^3)  Vstored (m^3)  3.84 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0	L/s  L/s  16 m³/ha
Subdra	90 100 110 120  ainage Area: L Area (ha): C (min)  10 20 30 40 50 60 70 80 90 100 110 120  ainage Area: L Area (ha):  tc (min)  10 20 30 40 50 60 70 80 90 100 110 120  ainage Area: L Area (ha):  C:  tc (min)  10 20 30 40 50 60 70 80 90 100 110 120  ainage Area: L Area (ha):  C:	18.14 16.75 15.57 14.56  -109C - UNC -0.090 0.85  I (2 yr) (mm/hr)  76.81 52.03 40.04 32.86 28.04 24.56 21.91 19.83 18.14 16.75 15.57 14.56	4.9 4.5 4.2 3.9  Qactual (L/s) 16.3 11.1 8.5 7.0 6.0 5.2 4.7 4.2 3.9 3.6 3.3 3.1  ributary to Ur  Qactual (L/s) 37.15 25.17 19.37 15.90 13.56 11.88 10.60 9.59 8.78 8.10 7.53 7.04  Qactual (L/s) 12.70 8.61 6.62 5.44 4.64 4.06 3.62 3.28	4.9 4.5 4.2 3.9  Allowable  Qrelease (L/s) 16.3 11.1 8.5 7.0 6.0 5.2 4.7 4.2 3.9 3.6 3.3 3.1  Allowable  Qrelease (L/s) 30.75 25.17 19.37 15.90 13.56 11.88 10.60 9.59 8.78 8.10 7.53 7.04  Allowable  Qrelease (L/s) 3.28	Release Rate:  Qstored (L/s)  Orage (L109B & Release Rate:  Qstored (L/s)  6.41 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0	Vstored (m^3)  Vstored (m^3)  3.84 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0	L/s  L/s  16 m³/ha
Subdra	90 100 110 120  ainage Area: L Area (ha): C (min)  10 20 30 40 50 60 70 80 90 100 110 120  ainage Area: L Area (ha):  tc (min)  10 20 30 40 50 60 70 80 90 100 110 120  ainage Area: L Area (ha):  C:  tc (min)  10 20 30 40 50 60 70 80 90 100 110 120	18.14 16.75 15.57 14.56  -109C - UNC 0.090 0.85  I (2 yr) (mm/hr) 76.81 52.03 40.04 32.86 28.04 24.56 21.91 19.83 18.14 16.75 15.57 14.56  -109A - UNC 0.07 0.85  I (2 yr) (mm/hr) 76.81 52.03 40.04 32.86 28.04 24.56 21.91 19.83 18.14 16.75 15.57 14.56  -109A - UNC 0.07 0.85  I (2 yr) (mm/hr) 76.81 52.03 40.04 32.86 28.04 24.56 21.91 19.83 18.14 16.75 15.57 14.56	4.9 4.5 4.2 3.9  Qactual (L/s) 16.3 11.1 8.5 7.0 6.0 5.2 4.7 4.2 3.9 3.6 3.3 3.1  Tibutary to Ur  Qactual (L/s) 15.90 13.56 11.88 10.60 9.59 8.78 8.10 7.53 7.04  Qactual (L/s) 12.70 8.61 6.62 5.44 4.64 4.06 3.62 3.28 3.00 2.77	4.9 4.5 4.2 3.9  Allowable  Qrelease (L/s) 16.3 11.1 8.5 7.0 6.0 5.2 4.7 4.2 3.9 3.6 3.3 3.1  Allowable  Qrelease (L/s) 30.75 25.17 19.37 15.90 13.56 11.88 10.60 9.59 8.78 8.10 7.53 7.04  Allowable  Qrelease (L/s) 8.61 6.62 5.44 4.64 4.66 3.62 3.28 3.00 2.77	Release Rate:  Qstored (L/s)  Orage (L109B & Release Rate:  Qstored (L/s)  6.41 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0	Vstored (m^3)  Vstored (m^3)  3.84 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0	L/s  L/s  16 m³/ha
Subdra	90 100 110 120  ainage Area: L Area (ha): C (min)  10 20 30 40 50 60 70 80 90 100 110 120  ainage Area: L Area (ha):  tc (min)  10 20 30 40 50 60 70 80 90 100 110 120  ainage Area: L Area (ha):  C: tc (min)  10 20 30 40 50 60 70 80 90 100 110 120  ainage Area: L Area (ha):  70 80 90 100 110 120  ainage Area: L Area (ha):  70 80 90 100 110 120  ainage Area: L Area (ha):  70 80 90 100 90 100 90 90	18.14 16.75 15.57 14.56  -109C - UNC -0.090 -0.85  I (2 yr) (mm/hr)  76.81 52.03 40.04 32.86 28.04 24.56 21.91 19.83 18.14 16.75 15.57 14.56	4.9 4.5 4.2 3.9  Qactual (L/s) 16.3 11.1 8.5 7.0 6.0 5.2 4.7 4.2 3.9 3.6 3.3 3.1  ributary to Ur  Qactual (L/s) 37.15 25.17 19.37 15.90 13.56 11.88 10.60 9.59 8.78 8.10 7.53 7.04  Qactual (L/s) 12.70 8.61 6.62 5.44 4.64 4.06 3.32 3.28 3.00	4.9 4.5 4.2 3.9  Allowable  Qrelease (L/s) 16.3 11.1 8.5 7.0 6.0 5.2 4.7 4.2 3.9 3.6 3.3 3.1  Allowable  Qrelease (L/s) 30.75 25.17 19.37 15.90 13.56 11.88 10.60 9.59 8.78 8.10 7.53 7.04  Allowable  Qrelease (L/s) 3.7 4.2 3.9 3.6 3.3 3.1	Release Rate:  Qstored (L/s)  Orage (L109B & Release Rate:  Qstored (L/s)  6.41 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0	Vstored (m^3)  Vstored (m^3)  3.84 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0	L/s  L/s  16 m³/h  Block 9

Zanica ix	ational M						
	age Area: I Area (ha):	Block 8 & 12 Ti 0.23	ributary to Ui	nderground St	orage (L108B	s & L108C)	
	tc (min)	l (100 yr) (mm/hr)	Qactual (L/s)	Qrelease (L/s)	Qstored (L/s)	Vstored (m^3)	
_	10 20	178.56 119.95	101.14 67.94	29.47 <b>29.47</b>	71.67 38.48	43.00 <b>46.17</b>	 201 m³/ha
	30	91.87	52.04	29.47	22.57	40.63	201/
	40 50	75.15 63.95	42.56 36.23	29.47 29.47	13.10 6.76	31.44 20.28	
	60	55.89	31.66	29.47	2.19	7.90	
	70 80	49.79 44.99	28.20 25.48	28.20 25.48	0.00 0.00	0.00 0.00	
	90	41.11	23.29	23.29	0.00	0.00	
	100 110	37.90 35.20	21.47 19.94	21.47 19.94	0.00 0.00	0.00 0.00	
	120	32.89	18.63	18.63	0.00	0.00	
	age Area: Area (ha): C:	L109D - UNC 0.14 1.00				Tributary to 0	Block 11 Cistern Block 11
Γ	tc	l (100 yr)	Qactual	Qrelease	Qstored	Vstored	7
L	(min) 10	(mm/hr) 178.56	(L/s) 69.5	17.9	(L/s) 51.6	(m^3) 30.9	
	20 30	119.95 91.87	46.7 35.8	<b>17.9</b> 17.9	28.7 17.8	<b>34.5</b> 32.1	
	40 50	75.15 63.95	29.2 24.9	17.9 17.9	11.3 7.0	27.1 20.9	
	60	55.89	24.9	17.9	3.8	13.7	
	70 80	49.79 44.99	19.4 17.5	17.9 17.5	1.4 0.0	6.1 0.0	
	90	41.11	16.0	16.0	0.0	0.0	
	100 110	37.90 35.20	14.8 13.7	14.8 13.7	0.0 0.0	0.0 0.0	
	120	32.89	12.8	12.8	0.0	0.0	
	age Area: Area (ha): C:	L109B - UNC 0.15 0.81			-	Block 10 (To Bl Tributary to Underç	•
Γ	tc (min)	l (100 yr) (mm/hr)	Qactual (L/s)	Qrelease (L/s)	Qstored (L/s)	Vstored (m^3)	7
L	10	178.56	60.5	60.5	(L/5)	[ (III*3)	_
	20 30	119.95 91.87	40.6 31.1	40.6 31.1			
	40 50	75.15	25.5	25.5			
	50 60	63.95 55.89	21.7 18.9	21.7 18.9			
	70 80	49.79 44.99	16.9 15.2	16.9 15.2			
	90	41.11	13.9	13.9			
	100 110	37.90 35.20	12.8 11.9	12.8 11.9			
	120	32.89	11.9	11.1			
	age Area: I	109C - UNC					
•	Area (ha): ( C: <i>′</i>					Tributary to Under	Block 13 ground Stroage
Γ	C: *	0.090 1.00 I (100 yr)	Qactual	Qrelease	Qstored	Vstored	
	tc (min)	I (100 yr) (mm/hr) 178.56	(L/s) 44.7	(L/s) 44.7			
	tc (min) 10 20	I (100 yr) (mm/hr) 178.56 119.95	(L/s) 44.7 30.0	<b>(L/s)</b> 44.7 30.0	Qstored	Vstored	
	tc (min) 10 20 30 40	1.00 I (100 yr) (mm/hr) 178.56 119.95 91.87 75.15	(L/s) 44.7 30.0 23.0 18.8	(L/s) 44.7 30.0 23.0 18.8	Qstored	Vstored	
	tc (min)  10 20 30 40 50	1,00 yr) (mm/hr) 178.56 119.95 91.87 75.15 63.95	(L/s) 44.7 30.0 23.0 18.8 16.0	(L/s) 44.7 30.0 23.0 18.8 16.0	Qstored	Vstored	
	tc (min)  10 20 30 40 50 60 70	1,00 yr) (mm/hr) 178.56 119.95 91.87 75.15 63.95 55.89 49.79	(L/s) 44.7 30.0 23.0 18.8 16.0 14.0 12.5	(L/s) 44.7 30.0 23.0 18.8 16.0 14.0 12.5	Qstored	Vstored	
	tc (min) 10 20 30 40 50 60 70 80	1.00 I (100 yr) (mm/hr) 178.56 119.95 91.87 75.15 63.95 55.89 49.79 44.99	44.7 30.0 23.0 18.8 16.0 14.0 12.5 11.3	(L/s) 44.7 30.0 23.0 18.8 16.0 14.0 12.5 11.3	Qstored	Vstored	
	tc (min)  10 20 30 40 50 60 70 80 90 100	1,00 yr) (mm/hr) 178.56 119.95 91.87 75.15 63.95 55.89 49.79 44.99 41.11 37.90	(L/s) 44.7 30.0 23.0 18.8 16.0 14.0 12.5 11.3 10.3 9.5	(L/s)  44.7 30.0 23.0 18.8 16.0 14.0 12.5 11.3 10.3 9.5	Qstored	Vstored	
	tc (min)  10 20 30 40 50 60 70 80 90	1,00 yr) (mm/hr) 178.56 119.95 91.87 75.15 63.95 55.89 49.79 44.99 41.11	44.7 30.0 23.0 18.8 16.0 14.0 12.5 11.3 10.3	(L/s)  44.7 30.0 23.0 18.8 16.0 14.0 12.5 11.3 10.3	Qstored	Vstored	
Subdrain	tc (min)  10 20 30 40 50 60 70 80 90 100 110 120	1,00 yr) (mm/hr) 178.56 119.95 91.87 75.15 63.95 55.89 49.79 44.99 41.11 37.90 35.20 32.89	(L/s) 44.7 30.0 23.0 18.8 16.0 14.0 12.5 11.3 10.3 9.5 8.8 8.2	(L/s)  44.7  30.0  23.0  18.8  16.0  14.0  12.5  11.3  10.3  9.5  8.8	Qstored (L/s)	Vstored (m^3)	
Subdrain	tc (min)  10 20 30 40 50 60 70 80 90 100 110 120  age Area: I	1 (100 yr) (mm/hr) 178.56 119.95 91.87 75.15 63.95 55.89 49.79 44.99 41.11 37.90 35.20 32.89 Block 10 & 13 7 0.24	(L/s)  44.7 30.0 23.0 18.8 16.0 14.0 12.5 11.3 10.3 9.5 8.8 8.2   Tributary to U	(L/s)  44.7  30.0  23.0  18.8  16.0  14.0  12.5  11.3  10.3  9.5  8.8  8.2   Junderground S	Qstored (L/s) torage (L109	Vstored (m^3)  B & L109C)	
Subdrain	tc (min)  10 20 30 40 50 60 70 80 90 100 110 120  age Area: I	1,00 yr) (mm/hr) 178.56 119.95 91.87 75.15 63.95 55.89 49.79 44.99 41.11 37.90 35.20 32.89	(L/s)  44.7  30.0  23.0  18.8  16.0  14.0  12.5  11.3  10.3  9.5  8.8  8.2	(L/s)  44.7  30.0  23.0  18.8  16.0  14.0  12.5  11.3  10.3  9.5  8.8  8.2   Jnderground S	Qstored (L/s)	Vstored (m^3)	ground Stroage
Subdrain	tc (min)  10 20 30 40 50 60 70 80 90 100 110 120  age Area: I Area (ha):  tc (min)  10 20	1 (100 yr) (mm/hr) 178.56 119.95 91.87 75.15 63.95 55.89 49.79 44.99 41.11 37.90 35.20 32.89 Block 10 & 13 7 0.24	(L/s)  44.7 30.0 23.0 18.8 16.0 14.0 12.5 11.3 10.3 9.5 8.8 8.2   Tributary to U  Qactual (L/s) 105.17 70.65	(L/s)  44.7  30.0  23.0  18.8  16.0  14.0  12.5  11.3  10.3  9.5  8.8  8.2   Junderground S  Qrelease (L/s)  30.75  30.75	Qstored (L/s) torage (L109 Qstored (L/s) 74.43 39.91	Vstored (m^3)  Vstored (m^3)  44.66 47.89	
Subdrain	tc (min)  10 20 30 40 50 60 70 80 90 100 110 120  age Area: I Area (ha):  tc (min) 10 20 30	I (100 yr) (mm/hr) 178.56 119.95 91.87 75.15 63.95 55.89 49.79 44.99 41.11 37.90 35.20 32.89 I (100 yr) (mm/hr) 178.56 119.95 91.87	(L/s)  44.7  30.0  23.0  18.8  16.0  14.0  12.5  11.3  10.3  9.5  8.8  8.2   Tributary to U  Qactual (L/s)  105.17  70.65  54.11	(L/s)  44.7  30.0  23.0  18.8  16.0  14.0  12.5  11.3  10.3  9.5  8.8  8.2   Junderground S  Qrelease (L/s)  30.75  30.75  30.75	Qstored (L/s) Qstored (L/s) 74.43 39.91 23.36	Vstored (m^3)  Vstored (m^3)  44.66 47.89 42.06	ground Stroage
Subdrain	tc (min)  10 20 30 40 50 60 70 80 90 100 110 120  age Area: I Area (ha):  tc (min)  10 20 30 40 50	I (100 yr) (mm/hr) 178.56 119.95 91.87 75.15 63.95 55.89 49.79 44.99 41.11 37.90 35.20 32.89 Block 10 & 13 7 0.24 I (100 yr) (mm/hr) 178.56 119.95 91.87 75.15 63.95	(L/s)  44.7 30.0 23.0 18.8 16.0 14.0 12.5 11.3 10.3 9.5 8.8 8.2  Tributary to U  Qactual (L/s) 105.17 70.65 54.11 44.26 37.67	(L/s)  44.7  30.0  23.0  18.8  16.0  14.0  12.5  11.3  10.3  9.5  8.8  8.2   Junderground S  Qrelease (L/s)  30.75  30.75  30.75  30.75  30.75  30.75	Qstored (L/s) Qstored (L/s) 74.43 39.91 23.36 13.51 6.92	Vstored (m^3)  Vstored (m^3)  44.66 47.89 42.06 32.44 20.77	ground Stroage
Subdrain	tc (min)  10 20 30 40 50 60 70 80 90 100 110 120  age Area: I Area (ha):  tc (min)  10 20 30 40 50 60	1 (100 yr) (mm/hr) 178.56 119.95 91.87 75.15 63.95 55.89 49.79 44.99 41.11 37.90 35.20 32.89 Block 10 & 13 7 0.24 I (100 yr) (mm/hr) 178.56 119.95 91.87 75.15 63.95 55.89	(L/s)  44.7 30.0 23.0 18.8 16.0 14.0 12.5 11.3 10.3 9.5 8.8 8.2  Tributary to U  Qactual (L/s) 105.17 70.65 54.11 44.26 37.67 32.92	(L/s)  44.7  30.0  23.0  18.8  16.0  14.0  12.5  11.3  10.3  9.5  8.8  8.2   Junderground S  Qrelease (L/s)  30.75  30.75  30.75  30.75  30.75  30.75  30.75	Qstored (L/s) Qstored (L/s) 74.43 39.91 23.36 13.51 6.92 2.18	Vstored (m^3)  Vstored (m^3)  44.66 47.89 42.06 32.44 20.77 7.83	ground Stroage
Subdrain	tc (min)  10 20 30 40 50 60 70 80 90 100 110 120  age Area: I Area (ha):  tc (min)  10 20 30 40 50 60 70 80 80	I (100 yr) (mm/hr) 178.56 119.95 91.87 75.15 63.95 55.89 49.79 44.99 41.11 37.90 35.20 32.89 I (100 yr) (mm/hr) 178.56 119.95 91.87 75.15 63.95 55.89 49.79 44.99	(L/s)  44.7 30.0 23.0 18.8 16.0 14.0 12.5 11.3 10.3 9.5 8.8 8.2  Tributary to U  Qactual (L/s) 105.17 70.65 54.11 44.26 37.67 32.92 29.33 26.50	(L/s)  44.7  30.0  23.0  18.8  16.0  14.0  12.5  11.3  10.3  9.5  8.8  8.2   Junderground S  Qrelease (L/s)  30.75  30.75  30.75  30.75  30.75  30.75  30.75  30.75  29.33  26.50	Qstored (L/s) Qstored (L/s) 74.43 39.91 23.36 13.51 6.92 2.18 0.00 0.00	Vstored (m^3)  Vstored (m^3)  44.66  47.89  42.06  32.44  20.77  7.83  0.00  0.00	ground Stroage
Subdrain	tc (min)  10 20 30 40 50 60 70 80 90 100 110 120  tc (min)  10 20 30 40 50 60 70 80 90	I (100 yr) (mm/hr) 178.56 119.95 91.87 75.15 63.95 55.89 49.79 44.99 41.11 37.90 35.20 32.89 I (100 yr) (mm/hr) 178.56 119.95 91.87 75.15 63.95 55.89 49.79 44.99 41.11	(L/s)  44.7 30.0 23.0 18.8 16.0 14.0 12.5 11.3 10.3 9.5 8.8 8.2  Tributary to U  Qactual (L/s) 105.17 70.65 54.11 44.26 37.67 32.92 29.33 26.50 24.21	(L/s)  44.7  30.0  23.0  18.8  16.0  14.0  12.5  11.3  10.3  9.5  8.8  8.2   Junderground S  Qrelease (L/s)  30.75  30.75  30.75  30.75  30.75  30.75  29.33  26.50  24.21	Qstored (L/s) Qstored (L/s) 74.43 39.91 23.36 13.51 6.92 2.18 0.00 0.00 0.00	Vstored (m^3)  Wstored (m^3)  44.66 47.89 42.06 32.44 20.77 7.83 0.00 0.00 0.00 0.00	ground Stroage
Subdrain	tc (min)  10 20 30 40 50 60 70 80 90 100 110 120  tc (min)  10 20 30 40 50 60 70 80 90 100 110 110 110 110 110 110 110 110	I (100 yr) (mm/hr) 178.56 119.95 91.87 75.15 63.95 55.89 49.79 44.99 41.11 37.90 35.20 32.89 I (100 yr) (mm/hr) 178.56 119.95 91.87 75.15 63.95 55.89 49.79 44.99 41.11 37.90 35.20	(L/s)  44.7 30.0 23.0 18.8 16.0 14.0 12.5 11.3 10.3 9.5 8.8 8.2  Tributary to U  Qactual (L/s)  105.17 70.65 54.11 44.26 37.67 32.92 29.33 26.50 24.21 22.33 20.73	(L/s)  44.7  30.0  23.0  18.8  16.0  14.0  12.5  11.3  10.3  9.5  8.8  8.2   Junderground S  Qrelease (L/s)  30.75  30.75  30.75  30.75  30.75  30.75  29.33  26.50  24.21  22.33  20.73	Qstored (L/s) Qstored (L/s) 74.43 39.91 23.36 13.51 6.92 2.18 0.00 0.00 0.00 0.00 0.00	Vstored (m^3)  Vstored (m^3)  44.66 47.89 42.06 32.44 20.77 7.83 0.00 0.00 0.00 0.00 0.00 0.00 0.00	ground Stroage
Subdrain	tc (min)  10 20 30 40 50 60 70 80 90 100 110 120  age Area: I Area (ha):  tc (min)  10 20 30 40 50 60 70 80 90 100 100	I (100 yr) (mm/hr) 178.56 119.95 91.87 75.15 63.95 55.89 49.79 44.99 41.11 37.90 35.20 32.89 Block 10 & 13 7 0.24 I (100 yr) (mm/hr) 178.56 119.95 91.87 75.15 63.95 55.89 49.79 44.99 41.11 37.90	(L/s)  44.7 30.0 23.0 18.8 16.0 14.0 12.5 11.3 10.3 9.5 8.8 8.2  Tributary to U  Qactual (L/s)  105.17 70.65 54.11 44.26 37.67 32.92 29.33 26.50 24.21 22.33	(L/s)  44.7  30.0  23.0  18.8  16.0  14.0  12.5  11.3  10.3  9.5  8.8  8.2   Junderground S  Qrelease (L/s)  30.75  30.75  30.75  30.75  30.75  30.75  29.33  26.50  24.21  22.33	Qstored (L/s) Qstored (L/s) 74.43 39.91 23.36 13.51 6.92 2.18 0.00 0.00 0.00 0.00 0.00	Vstored (m^3)  Vstored (m^3)  44.66 47.89 42.06 32.44 20.77 7.83 0.00 0.00 0.00 0.00 0.00	ground Stroage
Subdrain	tc (min)  10 20 30 40 50 60 70 80 90 100 110 120  age Area: I Area (ha):  tc (min)  10 20 30 40 50 60 70 80 90 100 110 120	I (100 yr) (mm/hr) 178.56 119.95 91.87 75.15 63.95 55.89 49.79 44.99 41.11 37.90 35.20 32.89 I (100 yr) (mm/hr) 178.56 119.95 91.87 75.15 63.95 55.89 49.79 44.99 41.11 37.90 35.20	(L/s)  44.7 30.0 23.0 18.8 16.0 14.0 12.5 11.3 10.3 9.5 8.8 8.2  Tributary to U  Qactual (L/s)  105.17 70.65 54.11 44.26 37.67 32.92 29.33 26.50 24.21 22.33 20.73	(L/s)  44.7  30.0  23.0  18.8  16.0  14.0  12.5  11.3  10.3  9.5  8.8  8.2   Junderground S  Qrelease (L/s)  30.75  30.75  30.75  30.75  30.75  30.75  29.33  26.50  24.21  22.33  20.73	Qstored (L/s) Qstored (L/s) 74.43 39.91 23.36 13.51 6.92 2.18 0.00 0.00 0.00 0.00 0.00	Vstored (m^3)  Vstored (m^3)  44.66  47.89  42.06  32.44  20.77  7.83  0.00  0.00  0.00  0.00  0.00  0.00  0.00  0.00  0.00	ground Stroage
Subdrain	tc (min)  10 20 30 40 50 60 70 80 90 100 110 120  age Area: I Area (ha):  tc (min)  10 20 30 40 50 60 70 80 90 110 120  age Area: I Area (ha):	I (100 yr) (mm/hr) 178.56 119.95 91.87 75.15 63.95 55.89 49.79 44.99 41.11 37.90 35.20 32.89 I (100 yr) (mm/hr) 178.56 119.95 91.87 75.15 63.95 55.89 49.79 44.99 41.11 37.90 35.20 32.89	(L/s)  44.7 30.0 23.0 18.8 16.0 14.0 12.5 11.3 10.3 9.5 8.8 8.2  Tributary to U  Qactual (L/s)  105.17 70.65 54.11 44.26 37.67 32.92 29.33 26.50 24.21 22.33 20.73	(L/s)  44.7  30.0  23.0  18.8  16.0  14.0  12.5  11.3  10.3  9.5  8.8  8.2   Junderground S  Qrelease (L/s)  30.75  30.75  30.75  30.75  30.75  30.75  29.33  26.50  24.21  22.33  20.73	Qstored (L/s) Qstored (L/s) 74.43 39.91 23.36 13.51 6.92 2.18 0.00 0.00 0.00 0.00 0.00	Vstored (m^3)  Vstored (m^3)  44.66  47.89  42.06  32.44  20.77  7.83  0.00  0.00  0.00  0.00  0.00  0.00  0.00  0.00  0.00	ground Stroage  200 m³/ha  Block 9
Subdrain	tc (min)  10 20 30 40 50 60 70 80 90 100 110 120  age Area: I Area (ha):  tc (min)  10 20 30 40 50 60 70 80 90 100 110 120  age Area: I Area (ha):  c: tc (min) 110 120	I (100 yr) (mm/hr) 178.56 119.95 91.87 75.15 63.95 55.89 49.79 44.99 41.11 37.90 35.20 32.89 I (100 yr) (mm/hr) 178.56 119.95 91.87 75.15 63.95 55.89 49.79 44.99 41.11 37.90 35.20 32.89	(L/s)  44.7 30.0 23.0 18.8 16.0 14.0 12.5 11.3 10.3 9.5 8.8 8.2  Tributary to U  Qactual (L/s)  105.17 70.65 54.11 44.26 37.67 32.92 29.33 26.50 24.21 22.33 20.73 19.38  Qactual (L/s)  Qactual (L/s) 34.75	(L/s)  44.7  30.0  23.0  18.8  16.0  14.0  12.5  11.3  10.3  9.5  8.8  8.2   Junderground S  Qrelease (L/s)  30.75  30.75  30.75  30.75  30.75  30.75  29.33  26.50  24.21  22.33  20.73  19.38  Qrelease (L/s)  8.97	Qstored (L/s) Qstored (L/s) 74.43 39.91 23.36 13.51 6.92 2.18 0.00 0.00 0.00 0.00 0.00	Vstored (m^3)  Vstored (m^3)  44.66  47.89  42.06  32.44  20.77  7.83  0.00  0.00  0.00  0.00  0.00  0.00  0.00  0.00  0.00	ground Stroage  200 m³/ha  Block 9
Subdrain	tc (min)  10 20 30 40 50 60 70 80 90 100 110 120  age Area: I Area (ha):  tc (min)  10 20 30 40 50 60 70 80 90 110 120  age Area: I Area (ha):  c: tc (min)  10 20 30 40 50 60 70 80 90 110 120  age Area: I Area (ha):  c: tc (min)	I (100 yr) (mm/hr)  178.56 119.95 91.87 75.15 63.95 55.89 49.79 44.99 41.11 37.90 35.20 32.89  I (100 yr) (mm/hr)  178.56 119.95 91.87 75.15 63.95 55.89 49.79 44.99 41.11 37.90 35.20 32.89  L109A - UNC 0.07 1.00  I (100 yr) (mm/hr)  178.56 119.95 91.87	(L/s)  44.7 30.0 23.0 18.8 16.0 14.0 12.5 11.3 10.3 9.5 8.8 8.2  Tributary to U  Qactual (L/s) 105.17 70.65 54.11 44.26 37.67 32.92 29.33 26.50 24.21 22.33 20.73 19.38  Qactual (L/s) 34.75 23.34 17.88	(L/s)  44.7 30.0 23.0 18.8 16.0 14.0 12.5 11.3 10.3 9.5 8.8 8.2   Junderground S  Qrelease (L/s) 30.75 30.75 30.75 30.75 30.75 30.75 29.33 26.50 24.21 22.33 20.73 19.38   Qrelease (L/s) 8.97 8.97 8.97 8.97	Qstored (L/s) Qstored (L/s) 74.43 39.91 23.36 13.51 6.92 2.18 0.00 0.00 0.00 0.00 0.00	Vstored (m^3)  Vstored (m^3)  44.66  47.89  42.06  32.44  20.77  7.83  0.00  0.00  0.00  0.00  0.00  0.00  0.00  0.00  0.00	ground Stroage  200 m³/ha  Block 9
Subdrain	tc (min)  10 20 30 40 50 60 70 80 90 100 110 120  age Area: I Area (ha):  tc (min)  10 20 30 40 50 60 70 80 90 100 110 120  age Area: I C: tc (min)  10 20 30 40 50 60 70 80 90 100 110 120  age Area: I	I (100 yr) (mm/hr)  178.56 119.95 91.87 75.15 63.95 55.89 49.79 44.99 41.11 37.90 35.20 32.89  Block 10 & 13 7 0.24  I (100 yr) (mm/hr)  178.56 119.95 91.87 75.15 63.95 55.89 49.79 44.99 41.11 37.90 35.20 32.89  L109A - UNC 0.07 1.00  I (100 yr) (mm/hr)  178.56 119.95 91.87 75.15	(L/s)  44.7 30.0 23.0 18.8 16.0 14.0 12.5 11.3 10.3 9.5 8.8 8.2   Tributary to U  Qactual (L/s)  105.17 70.65 54.11 44.26 37.67 32.92 29.33 26.50 24.21 22.33 20.73 19.38  Qactual (L/s)  Qactual (L/s)  105.17 70.65 54.11 44.26 37.67 32.92 29.33 26.50 24.21 22.33 20.73 19.38	(L/s)  44.7 30.0 23.0 18.8 16.0 14.0 12.5 11.3 10.3 9.5 8.8 8.2   Junderground S  Qrelease (L/s) 30.75 30.75 30.75 30.75 30.75 29.33 26.50 24.21 22.33 20.73 19.38  Qrelease (L/s) 8.97 8.97 8.97 8.97 8.97 8.97	Qstored (L/s) Qstored (L/s) 74.43 39.91 23.36 13.51 6.92 2.18 0.00 0.00 0.00 0.00 0.00	Vstored (m^3)  Vstored (m^3)  44.66  47.89  42.06  32.44  20.77  7.83  0.00  0.00  0.00  0.00  0.00  0.00  0.00  0.00  0.00	ground Stroage  200 m³/ha  Block 9
Subdrain	tc (min)  10 20 30 40 50 60 70 80 90 100 110 120  age Area: I Area (ha):  tc (min)  10 20 30 40 50 60 70 80 90 110 120  age Area: I Area (ha):  c: tc (min)  10 20 30 40 50 60 70 80 90 100 110 120	I (100 yr) (mm/hr) 178.56 119.95 91.87 75.15 63.95 55.89 49.79 44.99 41.11 37.90 35.20 32.89 Block 10 & 13 7 0.24 I (100 yr) (mm/hr) 178.56 119.95 91.87 75.15 63.95 55.89 49.79 44.99 41.11 37.90 35.20 32.89 I (100 yr) (mm/hr) 178.56 119.95 91.87 75.15 63.95 55.89 49.79 44.99 41.11 37.90 35.20 32.89	(L/s)  44.7 30.0 23.0 18.8 16.0 14.0 12.5 11.3 10.3 9.5 8.8 8.2  Tributary to U  Qactual (L/s)  105.17 70.65 54.11 44.26 37.67 32.92 29.33 26.50 24.21 22.33 20.73 19.38  Qactual (L/s)  Qactual (L/s)  105.17 70.65 54.11 44.26 37.67 32.92 29.33 26.50 24.21 22.33 20.73 19.38	(L/s)  44.7  30.0  23.0  18.8  16.0  14.0  12.5  11.3  10.3  9.5  8.8  8.2   Junderground S  Qrelease (L/s)  30.75  30.75  30.75  30.75  30.75  30.75  29.33  26.50  24.21  22.33  20.73  19.38  Qrelease (L/s)  8.97  8.97  8.97  8.97  8.97  8.97  8.97  8.97  8.97  8.97  8.97  8.97  8.97	Qstored (L/s) Qstored (L/s) 74.43 39.91 23.36 13.51 6.92 2.18 0.00 0.00 0.00 0.00 0.00	Vstored (m^3)  Vstored (m^3)  44.66  47.89  42.06  32.44  20.77  7.83  0.00  0.00  0.00  0.00  0.00  0.00  0.00  0.00  0.00	ground Stroage  200 m³/ha  Block 9
Subdrain	tc (min)  10 20 30 40 50 60 70 80 90 100 110 120  age Area: I Area (ha):  tc (min)  10 20 30 40 50 60 70 80 90 100 110 120  age Area: I Area (ha):  c: tc (min) 10 20 30 40 50 60 70 80 90 100 110 120  age Area: I	I (100 yr) (mm/hr) 178.56 119.95 91.87 75.15 63.95 55.89 49.79 44.99 41.11 37.90 35.20 32.89 Block 10 & 13 7 0.24 I (100 yr) (mm/hr) 178.56 119.95 91.87 75.15 63.95 55.89 49.79 44.99 41.11 37.90 35.20 32.89 L109A - UNC 0.07 1.00 I (100 yr) (mm/hr) 178.56 119.95 91.87 75.15 63.95 55.89	(L/s)  44.7 30.0 23.0 18.8 16.0 14.0 12.5 11.3 10.3 9.5 8.8 8.2  Tributary to U  Qactual (L/s)  105.17 70.65 54.11 44.26 37.67 32.92 29.33 26.50 24.21 22.33 20.73 19.38  Qactual (L/s)  Qactual (L/s) 34.75 23.34 17.88 14.62 12.45	(L/s)  44.7 30.0 23.0 18.8 16.0 14.0 12.5 11.3 10.3 9.5 8.8 8.2   Junderground S  Qrelease (L/s) 30.75 30.75 30.75 30.75 30.75 30.75 29.33 26.50 24.21 22.33 20.73 19.38  Qrelease (L/s) 8.97 8.97 8.97 8.97 8.97 8.97 8.97 8.97	Qstored (L/s) Qstored (L/s) 74.43 39.91 23.36 13.51 6.92 2.18 0.00 0.00 0.00 0.00 0.00	Vstored (m^3)  Vstored (m^3)  44.66  47.89  42.06  32.44  20.77  7.83  0.00  0.00  0.00  0.00  0.00  0.00  0.00  0.00  0.00	ground Stroage  200 m³/ha  Block 9
Subdrain	tc (min)  10 20 30 40 50 60 70 80 90 100 110 120  age Area: I Area (ha):  tc (min)  10 20 30 40 50 60 70 80 90 110 120  age Area: I Area (ha):  c: tc (min)  10 20 30 40 50 60 70 80 90 100 110 120  age Area: I Area (ha): 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	I (100 yr) (mm/hr)  178.56 119.95 91.87 75.15 63.95 55.89 49.79 44.99 41.11 37.90 35.20 32.89  Block 10 & 13 1 0.24  I (100 yr) (mm/hr)  178.56 119.95 91.87 75.15 63.95 55.89 49.79 44.99 41.11 37.90 35.20 32.89  L109A - UNC 0.07 1.00  I (100 yr) (mm/hr)  178.56 119.95 91.87 75.15 63.95 55.89 49.79 44.99 41.11 37.90 35.20 32.89	(L/s)  44.7 30.0 23.0 18.8 16.0 14.0 12.5 11.3 10.3 9.5 8.8 8.2   Tributary to U  Qactual (L/s)  105.17 70.65 54.11 44.26 37.67 32.92 29.33 26.50 24.21 22.33 20.73 19.38  Qactual (L/s)  105.17 70.65 54.11 44.26 37.67 32.92 29.33 26.50 24.21 22.33 20.73 19.38	(L/s)  44.7 30.0 23.0 18.8 16.0 14.0 12.5 11.3 10.3 9.5 8.8 8.2   Junderground S  Qrelease (L/s) 30.75 30.75 30.75 30.75 30.75 30.75 29.33 26.50 24.21 22.33 20.73 19.38   Qrelease (L/s) 8.97 8.97 8.97 8.97 8.97 8.97 8.97 8.97	Qstored (L/s) Qstored (L/s) 74.43 39.91 23.36 13.51 6.92 2.18 0.00 0.00 0.00 0.00 0.00	Vstored (m^3)  Vstored (m^3)  44.66  47.89  42.06  32.44  20.77  7.83  0.00  0.00  0.00  0.00  0.00  0.00  0.00  0.00  0.00	ground Stroage  200 m³/ha  Block 9
Subdrain	tc (min)  10 20 30 40 50 60 70 80 90 100 110 120  age Area: I Area (ha):  tc (min)  10 20 30 40 50 60 70 80 90 110 120  age Area: I Area (ha):  C:  tc (min)  10 20 30 40 50 60 70 80 90 100 110 120	I (100 yr) (mm/hr)  178.56 119.95 91.87 75.15 63.95 55.89 49.79 44.99 41.11 37.90 35.20 32.89  Block 10 & 13 7 0.24  I (100 yr) (mm/hr)  178.56 119.95 91.87 75.15 63.95 55.89 49.79 44.99 41.11 37.90 35.20 32.89  L109A - UNC 0.07 1.00  I (100 yr) (mm/hr)  178.56 119.95 91.87 75.15 63.95 55.89 49.79 44.99 41.99	(L/s)  44.7 30.0 23.0 18.8 16.0 14.0 12.5 11.3 10.3 9.5 8.8 8.2  Tributary to U  Qactual (L/s) 105.17 70.65 54.11 44.26 37.67 32.92 29.33 26.50 24.21 22.33 20.73 19.38  Qactual (L/s) 34.75 23.34 17.88 14.62 12.45 10.88 9.69 8.76	(L/s)  44.7 30.0 23.0 18.8 16.0 14.0 12.5 11.3 10.3 9.5 8.8 8.2   Juderground S  Qrelease (L/s) 30.75 30.75 30.75 30.75 30.75 29.33 26.50 24.21 22.33 20.73 19.38   Qrelease (L/s) 8.97 8.97 8.97 8.97 8.97 8.97 8.97 8.97	Qstored (L/s) Qstored (L/s) 74.43 39.91 23.36 13.51 6.92 2.18 0.00 0.00 0.00 0.00 0.00	Vstored (m^3)  Vstored (m^3)  44.66  47.89  42.06  32.44  20.77  7.83  0.00  0.00  0.00  0.00  0.00  0.00  0.00  0.00  0.00	ground Stroage  200 m³/ha  Block 9

## Project #160401614, 933 Gladstone Avenue - Gladstone Village OCH Modified Rational Method Calculators for Storage

Subd	rainage Area: Area (ha):	L108A - UNC 0.11				Tributary	Street 1 y to Preston Street
	C:	0.70		Allowable	Release Rate:	14.09	L/s
	tc	l (2 yr)	Qactual	Qrelease			
	(min)	(mm/hr)	(L/s)	(L/s)			
•	10	76.81	16.4	14.1	•		
	20	52.03	11.1	11.1			
	30	40.04	8.6	8.6			
	40	32.86	7.0	7.0			
	50	28.04	6.0	6.0			
	60	24.56	5.3	5.3			
	70	21.91	4.7	4.7			
	80	19.83	4.2	4.2			
	90	18.14	3.9	3.9			
	100	16.75	3.6	3.6			
	110	15.57	3.3	3.3			
	120	14.56	3.1	3.1			

Subdrainage Area: Area (ha): C:	L103A - UNC 0.15 0.70		Allowable	Release Rate:	Tributar <b>19.22</b>	Street 2 y to Preston Street <b>L/s</b>
tc (min)	l (2 yr) (mm/hr)	Qactual (L/s)	Qrelease (L/s)			
10	76.81	22.4	19.2			
20	52.03	15.2	15.2			
30	40.04	11.7	11.7			
40	32.86	9.6	9.6			
50	28.04	8.2	8.2			
60	24.56	7.2	7.2			
70	21.91	6.4	6.4			
80	19.83	5.8	5.8			
90	18.14	5.3	5.3			
100	16.75	4.9	4.9			
110	15.57	4.5	4.5			
120	14.56	4.3	4.3			

L104A - UNC					Street 2
0.13				Tributar	y to Preston Street
0.70		Allowable	Release Rate:	16.65	L/s
l (2 yr)	Qactual	Qrelease	1		
(mm/hr)	(L/s)	(L/s)			
76.81	19.4	16.7	_		
52.03	13.2	13.2			
40.04	10.1	10.1			
32.86	8.3	8.3			
28.04	7.1	7.1			
24.56	6.2	6.2			
21.91	5.5	5.5			
19.83	5.0	5.0			
18.14	4.6	4.6			
16.75	4.2	4.2			
15.57	3.9	3.9			
14.56	3.7	3.7			
	0.13 0.70 I (2 yr) (mm/hr) 76.81 52.03 40.04 32.86 28.04 24.56 21.91 19.83 18.14 16.75 15.57	0.13 0.70  I (2 yr) Qactual (mm/hr) (L/s)  76.81 19.4  52.03 13.2  40.04 10.1  32.86 8.3  28.04 7.1  24.56 6.2  21.91 5.5  19.83 5.0  18.14 4.6  16.75 4.2  15.57 3.9	0.13         0.70         Allowable           I (2 yr) (mm/hr)         Qactual (L/s)         Qrelease (L/s)           76.81         19.4         16.7           52.03         13.2         13.2           40.04         10.1         10.1           32.86         8.3         8.3           28.04         7.1         7.1           24.56         6.2         6.2           21.91         5.5         5.5           19.83         5.0         5.0           18.14         4.6         4.6           16.75         4.2         4.2           15.57         3.9         3.9	0.13       0.70       Allowable Release Rate:         I (2 yr) (mm/hr)       Qactual (L/s)       Qrelease (L/s)         76.81       19.4       16.7         52.03       13.2       13.2         40.04       10.1       10.1         32.86       8.3       8.3         28.04       7.1       7.1         24.56       6.2       6.2         21.91       5.5       5.5         19.83       5.0       5.0         18.14       4.6       4.6         16.75       4.2       4.2         15.57       3.9       3.9	0.13 0.70  Allowable Release Rate:    Cyr   Qactual (L/s) (L/s) (L/s) (L/s)   76.81

Subdrainage Area: Area (ha):	L105A - UNC 0.11				Tributar	Street 3 y to Preston Street
C:	0.70		Allowable	Release Rate:	14.09	L/s
tc (min)	l (2 yr) (mm/hr)	Qactual (L/s)	Qrelease (L/s)			
10	76.81	16.4	14.1			
20	52.03	11.1	11.1			
30	40.04	8.6	8.6			
40	32.86	7.0	7.0			
50	28.04	6.0	6.0			
60	24.56	5.3	5.3			
70	21.91	4.7	4.7			
80	19.83	4.2	4.2			
90	18.14	3.9	3.9			
100	16.75	3.6	3.6			
110	15.57	3.3	3.3			
120	14.56	3.1	3.1			

Subc	drainage Area: Area (ha): C:	L106A - UNC 0.200 0.70		Allowable	Release Rate:	Tributary <b>25.62</b>	Street 4 to Preston Street <b>L/s</b>
	tc	l (2 yr)	Qactual	Qrelease			
	(min)	(mm/hr)	(L/s)	(L/s)			
	10	76.81	29.9	25.6			
	20	52.03	20.3	20.3			
	30	40.04	15.6	15.6			
	40	32.86	12.8	12.8			
	50	28.04	10.9	10.9			
	60	24.56	9.6	9.6			
	70	21.91	8.5	8.5			
	80	19.83	7.7	7.7			
	90	18.14	7.1	7.1			
	100	16.75	6.5	6.5			
	110	15.57	6.1	6.1			

## SUMMARY TO OUTLET

120

Block ID	Area ID	Roof Storage (m3)	Cistern Storage (m3)	Underground Storage (m3)	Controlled Release Rate (L/s)
Block 1	L106B	20.7	0.0	-	8.75
Block 2	L105B	18.6	0.0	-	58.53
Block 3	L104C	-	-	-	2.56
Block 4	L104B	17.1	0.0	-	30.87
Block 5	L103C	-	-	-	8.97
Block 6	L103B	23.5	0.0	-	79.43
Block 7	L108D	-	3.6	-	17.94
Block 8	L108B	-	-	-	-
Block 9	L109A	-	-	-	8.97
Block 10	L109B	-	-	-	-
Block 11	L109D	-	3.6	-	17.94
Block 12	L108C	-	-	3.8	29.47
Block 13	L109C	-	-	3.8	30.75
Street 1	L108A	-	-	-	14.09
Street 2	L103A	-	-	-	19.22
Street 2	L104A	-	-		16.65
Street 3	L105A	-	-		14.09
Street 4	L106A	-	-	-	25.62
		Total N	linor Systen	n Release Rate:	383.8
			Site Targe	et Release Rate:	411.2
					-27.4

14.56 5.7 5.7

## Project #160401614, 933 Gladstone Avenue - Gladstone Village OCH

Area (ha): C:	0.11 0.88			Tributary to Preston Street
tc (min)	l (100 yr) (mm/hr)	Qactual (L/s)	Qrelease (L/s)	
10	178.56	47.8	14.1	
20	119.95	32.1	14.1	
30	91.87	24.6	14.1	
40	75.15	20.1	14.1	
50	63.95	17.1	14.1	
60	55.89	15.0	14.1	
70	49.79	13.3	13.3	
80	44.99	12.0	12.0	
90	41.11	11.0	11.0	
100	37.90	10.1	10.1	
110	35.20	9.4	9.4	
120	32.89	8.8	8.8	
ninage Area:	L103A - UNC			Street 2
Area (ha):	0.15			Tributary to Preston Street

Area (ha): C:	0.15 0.88		
tc (min)	l (100 yr) (mm/hr)	Qactual (L/s)	Qrelease (L/s)
10	178.56	65.2	19.2
20	119.95	43.8	19.2
30	91.87	33.5	19.2
40	75.15	27.4	19.2
50	63.95	23.3	19.2
60	55.89	20.4	19.2
70	49.79	18.2	18.2
80	44.99	16.4	16.4
90	41.11	15.0	15.0
100	37.90	13.8	13.8
110	35.20	12.8	12.8
120	32.89	12.0	12.0

Subdrair	nage Area:	L104A - UNC		
	Area (ha):	0.13		
	C:	0.88		
	<b>J</b> .	0.00		
ſ	tc	l (100 yr)	Qactual	Qrelease
	(min)	(mm/hr)	(L/s)	(L/s)
•	10	178.56	56.5	16.7
	20	119.95	37.9	16.7
	30	91.87	29.1	16.7
	40	75.15	23.8	16.7
	50	63.95	20.2	16.7
	60	55.89	17.7	16.7
	70	49.79	15.7	15.7
	80	44.99	14.2	14.2
	90	41.11	13.0	13.0
	100	37.90	12.0	12.0
	110	35.20	11.1	11.1
	120	32.89	10.4	10.4

_		L105A - UNC		
Are	ea (ha):	0.11		
	C:	0.88		
	tc	l (100 yr)	Qactual	Qrelease
(	(min)	(mm/hr)	(L/s)	(L/s)
	10	178.56	47.8	14.1
	20	119.95	32.1	14.1
	30	91.87	24.6	14.1
	40	75.15	20.1	14.1
	50	63.95	17.1	14.1
	60	55.89	15.0	14.1
	70	49.79	13.3	13.3
	80	44.99	12.0	12.0
	90	41.11	11.0	11.0
	100	37.90	10.1	10.1
	110	35.20	9.4	9.4
	120	32.89	8.8	8.8

rainage Area: Area (ha): C:	L106A - UNC 0.200 0.88			Street 4 Tributary to Preston Stre
tc (min)	l (100 yr) (mm/hr)	Qactual (L/s)	Qrelease (L/s)	
10	178.56	86.9	25.6	
20	119.95	58.4	25.6	
30	91.87	44.7	25.6	
40	75.15	36.6	25.6	
50	63.95	31.1	25.6	
60	55.89	27.2	25.6	
70	49.79	24.2	24.2	
80	44.99	21.9	21.9	
90	41.11	20.0	20.0	
100	37.90	18.4	18.4	
110	35.20	17.1	17.1	
120	32.89	16.0	16.0	

## SUMMARY TO OUTLET

Block ID	Area ID	Roof Storage (m3)	Cistern Storage (m3)	Underground Storage (m3)	Controlled Release Rate (L/s)	Area (ha)	Underground/Cistern (m3/ha)
Block 1	L106B	69.5	0.0	-	14.50	0.21	0.0
Block 2	L105B	62.8	57.8	-	60.21	0.47	122.9
Block 3	L104C	-	-	-	2.56	0.02	-
Block 4	L104B	57.8	22.4	-	38.43	0.30	74.6
Block 5	L103C	-	-	-	8.97	0.07	-
Block 6	L103B	79.0	80.6	-	79.43	0.62	129.9
Block 7	L108D	-	34.5	-	17.94	0.14	246.4
Block 8	L108B	-	-	-	-	0.14	-
Block 9	L109A	-	-	-	8.97	0.07	-
Block 10	L109B	-	-	-	-	0.15	-
Block 11	L109D	-	34.5	-	17.94	0.14	246.4
Block 12	L108C	-	-	46.2	29.47	0.09	200.8
Block 13	L109C	-	-	47.9	30.75	0.09	199.5
Street 1	L108A	-	-	-	14.09	0.11	-
Street 2	L103A	-	-	-	19.22	0.15	-
Street 2	L104A	-	-	-	16.65	0.13	-
Street 3	L105A	-	-	-	14.09	0.11	-
Street 4	L106A	-	-	-	25.62	0.20	-
		Total	Minor Syste	m Release Rate:	398.8	L/s	
			Site Targ	411.2	L/s		

-12.4 L/s

# Project #160401614, 933 Gladstone Avenue - Gladstone Village OCH Roof Drain Design Sheet, Estimated Roof Area in Block 1 (L103D-Roof) Standard Watts Model R1100 Accuflow Roof Drain

	Rating	Curve						
Elevation	Discharge Rate	Outlet Discharge	Storage	Elevation	Area	Volume	(cu. m)	Water Depth
(m)	(cu.m/s)	(cu.m/s)	(cu. m)	(m)	(sq. m)	Increment	Accumulated	(m)
0.000	0.0000	0.0000	0	0.000	0	0	0	0.000
0.025	0.0003	0.0022	0	0.025	42	0	0	0.025
0.050	0.0006	0.0044	3	0.050	169	2	3	0.050
0.075	0.0009	0.0061	9	0.075	380	7	9	0.075
0.100	0.0011	0.0077	22	0.100	675	13	22	0.100
0.125	0.0013	0.0094	44	0.125	1054	21	44	0.125
0.150	0.0016	0.0110	76	0.150	1518	32	76	0.150

Drawdown Estimate							
Total	Total						
Volume	Time	Vol	Detention				
(cu.m)	(sec)	(cu.m)	Time (hr)				
0.0	0.0	0.0	0				
2.5	557.1	2.5	0.154753				
9.1	1099.7	6.7	0.460238				
22.1	1682.7	13.0	0.927655				
43.6	2284.6	21.4	1.56227				
75.6	2897.0	32.0	2.366984				

Total Building Area (sq.m) Assume Available Roof Area (sq.m) Roof Imperviousness Roof Drain Requirement (sq.m/Notch) Number of Roof Notches* Max. Allowable Depth of Roof Ponding (m)	80%	1898 1518.4 0.99 232 7 0.15	* As per Ontario Building Code section OBC 7.4.10.4.(2)(c).
Max. Allowable Storage (cu.m) Estimated 100 Year Drawdown Time (h)		76 2.2	

<sup>\*</sup> Note: Number of drains can be reduced if multiple-notch drain used.

Calculation Results	5yr	100yr	Available
Qresult (cu.m/s)	0.008	0.011	-
Depth (m)	0.097	0.145	0.150
Volume (cu.m)	20.7	69.5	75.9
Draintime (hrs)	0.9	2 21	

-		J			
Head (m)	L/s				
	Open	75%	50%	25%	Closed
0.025	0.3155	0.31545	0.31545	0.31545	0.31545
0.050	0.6309	0.6309	0.6309	0.6309	0.6309
0.075	0.9464	0.86749	0.78863	0.70976	0.6309
0.100	1.2618	1.10408	0.94635	0.78863	0.6309
0.125	1.5773	1.34067	1.10408	0.86749	0.6309
0.150	1.8927	1.57726	1.2618	0.94635	0.6309

# Project #160401614, 933 Gladstone Avenue - Gladstone Village OCH Roof Drain Design Sheet, Estimated Roof Area in Block 2 (L103C-Roof) Standard Watts Model R1100 Accuflow Roof Drain

	Rating Curve				Volume Estimation			
Elevation	Discharge Rate	Outlet Discharge	Storage	Elevation	Area	Volume	(cu. m)	Water Depth
(m)	(cu.m/s)	(cu.m/s)	(cu. m)	(m)	(sq. m)	Increment	Accumulated	(m)
0.000	0.0000	0.0000	0	0.000	0	0	0	0.000
0.025	0.0003	0.0022	0	0.025	39	0	0	0.025
0.050	0.0006	0.0044	3	0.050	157	2	3	0.050
0.075	0.0009	0.0061	9	0.075	352	6	9	0.075
0.100	0.0011	0.0077	21	0.100	626	12	21	0.100
0.125	0.0013	0.0094	41	0.125	978	20	41	0.125
0.150	0.0016	0.0110	70	0.150	1409	30	70	0.150

Drawdown Estimate							
Total	Total	II Estillat	<u> </u>				
		\	Datastias				
Volume	Time	Vol	Detention				
(cu.m)	(sec)	(cu.m)	Time (hr)				
0.0	0.0	0.0	0				
2.3	516.9	2.3	0.1435824				
8.5	1020.4	6.2	0.4270178				
20.5	1561.2	12.1	0.8606954				
40.4	2119.7	19.9	1.4495038				
70.1	2687.9	29.7	2.1961322				

## **Rooftop Storage Summary**

Total Building Area (sq.m) Assume Available Roof Area (sq.n Roof Imperviousness Roof Drain Requirement (sq.m/Notch) Number of Roof Notches*	80%	1761 1408.8 0.99 232 7	
Max. Allowable Depth of Roof Ponding (m)		0.15	* As per Ontario Building Code section OBC 7.4.10.4.(2)(c).
Max. Allowable Storage (cu.m)		70	
Estimated 100 Year Drawdown Time (h)		2.0	

Trom Watto Brain Catalogue							
Head (m) L/s							
(	Open	<b>75%</b> 50% 25%		25%	Closed		
0.025	0.3155	0.31545	0.31545	0.31545	0.315451		
0.050	0.6309	0.6309	0.6309	0.6309	0.630902		
0.075	0.9464	0.86749	0.78863	0.70976	0.630902		
0.100	1.2618	1.10408	0.94635	0.78863	0.630902		
0.125	1.5773	1.34067	1.10408	0.86749	0.630902		
0.150	1.8927	1.57726	1.2618	0.94635	0.630902		

<sup>\*</sup> Note: Number of drains can be reduced if multiple-notch drain used.

Calculation Results		5yr	100yr	Available
	Qresult (cu.m/s)	0.007	0.011	•
Depth (m)		0.095	0.144	0.150
V	/olume (cu.m)	18.6	62.8	70.4
	Oraintime (hrs)	0.8	2.0	

# Project #160401614, 933 Gladstone Avenue - Gladstone Village OCH Roof Drain Design Sheet, Estimated Roof Area in Block 4 (L104B-Roof) Standard Watts Model R1100 Accuflow Roof Drain

	Rating	g Curve			Volume Estimation				
Elevation	Discharge Rate	Outlet Discharge	Storage	Elevation	Area	Volume	e (cu. m)	Water Depth	
(m)	(cu.m/s)	(cu.m/s)	(cu. m)	(m)	(sq. m)	Increment	Accumulated	(m)	
0.000	0.0000	0.0000	0	0.000	0	0	0	0.000	
0.025	0.0003	0.0019	0	0.025	33	0	0	0.025	
0.050	0.0006	0.0038	2	0.050	134	2	2	0.050	
0.075	0.0008	0.0047	8	0.075	301	5	8	0.075	
0.100	0.0009	0.0057	18	0.100	535	10	18	0.100	
0.125	0.0011	0.0066	35	0.125	836	17	35	0.125	
0.150	0.0013	0.0076	60	0.150	1204	25	60	0.150	

	Drawdown Estimate								
Total	Total								
Volume	Time	Vol	Detention						
(cu.m)	(sec)	(cu.m)	Time (hr)						
0.0	0.0	0.0	0						
2.0	515.4	2.0	0.143161						
7.2	1119.1	5.3	0.454025						
17.6	1816.1	10.3	0.958498						
34.6	2566.4	17.0	1.671382						
59.9	3350.0	25.4	2.60193						

Rooftop Storage Summary			<del>_</del>
Total Building Area (sq.m)		1505	
Assume Available Roof Area (sq.m)	80%	1204	
Roof Imperviousness		0.99	
Roof Drain Requirement (sq.m/Notch)		232	
Number of Roof Notches*		6	
Max. Allowable Depth of Roof Ponding (m)		0.15	* As per Ontario Building Code section OBC 7.4.10.4.(2)(c).
Max. Allowable Storage (cu.m)		60	
Estimated 100 Year Drawdown Time (h)		2.5	

<sup>\*</sup> Note: Number of drains can be reduced if multiple-notch drain used.

Calculation Results	5yr	100yr	Available
Qresult (cu.m/s)	0.006	0.007	-
Depth (m)	0.098	0.148	0.150
Volume (cu.m)	17.1	57.8	60.2
Draintime (hrs)	0.9	2.5	

1 Tom Watts Drain Catalogue								
Head (m)	L/s							
	Open	75%	50%	25%	Closed			
0.025	0.3155	0.31545	0.31545	0.31545	0.31545			
0.050	0.6309	0.6309	0.6309	0.6309	0.6309			
0.075	0.9464	0.86749	0.78863	0.70976	0.6309			
0.100	1.2618	1.10408	0.94635	0.78863	0.6309			
0.125	1.5773	1.34067	1.10408	0.86749	0.6309			
0.150	1.8927	1.57726	1.2618	0.94635	0.6309			

# Project #160401614, 933 Gladstone Avenue - Gladstone Village OCH Roof Drain Design Sheet, Estimated Roof Area in Block 6 (L103B-Roof) Standard Watts Model R1100 Accuflow Roof Drain

	Rating Curve				Volume Estimation			
Elevation	Elevation Discharge Rate Outlet Discharge Storage		Elevation	Area	Volume (cu. m)		Water Depth	
(m)	(cu.m/s)	(cu.m/s)	(cu. m)	(m)	(sq. m)	Increment	Accumulated	(m)
0.000	0.0000	0.0000	0	0.000	0	0	0	0.000
0.025	0.0003	0.0025	0	0.025	48	0	0	0.025
0.050	0.0006	0.0050	3	0.050	192	3	3	0.050
0.075	0.0009	0.0069	11	0.075	432	8	11	0.075
0.100	0.0011	0.0088	26	0.100	768	15	26	0.100
0.125	0.0013	0.0107	50	0.125	1201	24	50	0.125
0.150	0.0016	0.0126	86	0.150	1729	36	86	0.150

Drawdown Estimate								
Total	Total							
Volume	Time	Vol	Detention					
(cu.m)	(sec)	(cu.m)	Time (hr)					
0.0	0.0	0.0	0					
2.8	555.0	2.8	0.1541717					
10.4	1095.6	7.6	0.4585107					
25.2	1676.4	14.8	0.9241723					
49.6	2276.0	24.4	1.5564057					
86.0	2886.1	36.4	2.3580985					

## **Rooftop Storage Summary**

Total Building Area (sq.m) Assume Available Roof Area (sq. Roof Imperviousness Roof Drain Requirement (sq.m/Notch) Number of Roof Notches* Max. Allowable Depth of Roof Ponding (m) Max. Allowable Storage (cu.m)	80%	2161 1728.8 0.99 232 8 0.15 86	* As per Ontario Building Code section OBC 7.4.10.4.(2)(c).
Estimated 100 Year Drawdown Time (h)		2.2	

<sup>\*</sup> Note: Number of drains can be reduced if multiple-notch drain used.

Calculation Results	5yr	100yr	Available
Qresult (cu.m/s)	0.009	0.012	-
Depth (m)	0.097	0.145	0.150
Volume (cu.m)	23.5	79.0	86.4
Draintime (hrs)	0.9	2.2	

Head (m) L/s								
	Open	<b>75</b> %	50%	25%	Closed			
0.025	0.3155	0.31545	0.31545	0.31545	0.315451			
0.050	0.6309	0.6309	0.6309	0.6309	0.630902			
0.075	0.9464	0.86749	0.78863	0.70976	0.630902			
0.100	1.2618	1.10408	0.94635	0.78863	0.630902			
0.125	1.5773	1.34067	1.10408	0.86749	0.630902			
0.150	1 8927	1 57726	1 2618	0 94635	0.630902			

## D.3 CORRESPONDENCE WITH THE CITY OF OTTAWA (SWM CRITERIA)



#### **Gladstone Village Meeting Minutes**

Date: February 16th, 2021 Time: 11:00am –12:00 pm

Attendees:

City: Shawn Wessel (IPM), Eric Tousignant (Water Resources Dept., Eng.),

Abdul Mottalib (Sr. Eng.), Edith Tam (Planner -City Realty),

Doug James (Central Branch Manager). Andrew McCreight (File Lead),

Amy Whelan (EIT)

Applicant Team: Robert MacNeil (OCHC), Christa Allevato, Peter Moroz (Stantec),

Karin Smadella (Stantec)

Location: Online @ MTeams

Agenda Items:

SWM Criteria Relocation of Combined Sewer and Domestic Water Mains Capacity Issues Park Land

#### Karin Smadella-

For Gladstone village - this is intended to be a public street running through the subdivision and connecting in with oak street along Plouffe (18m cross-section).

Across these lands there is quite a lot of significant infrastructure. The collector storm sewer has to be relocated either along the multi-use pathway (NCC ownership) or through the subdivision itself.

Design criteria- We understand that a 2-year predevelopment with a max C= 0.4 to discharge to the combined sewer is to be used, although there was no mention of the collector storm sewer. Our first question is can there be a connection to this storm sewer and if so, what is the allowable release rate?

#### Eric Tousignant-

This storm sewer collects from the highway as well and we must check if the MTO has ownership. MTO will typically have ownership even outside of their property and drainage rights. If there is a proposal to add more flow to the sewer, we need to ensure that there are no issues with capacity and this scenario is a better option then trying to connect to the combined sewer, if possible. We will also be able to assess impacts to the storm sewer. A storm model has been created for the whole system in this area.

#### Robert MacNeil-

This storm sewer is conflicting with the placement of our buildings and extends on the city lands to the north is also conflicting with the envisioned development there. Therefore, it will need to be shifted to the west to be below the MUP which is owned partially by the NCC (90%) and the City. Robin working with Steven Willis to acquire the NCC owned portion of the MUP this Calander year.

Another factor to consider is that the city is considering extending district energy down to this site. My understanding is that if that is to ever occur the best place to extend district energy to connect would be along below the MUP giving added reasoning to acquire the NCC lands so that they are not a party to these discussions.

Alternatively, the storm sewer can be within the public street in the subdivision.

#### Abdul Mottalib-

Additionally, because the storm sewer is taking flows from the highway (partial ownership by MTO) if we move it below and along the MUP that would take care of the issue of MTO drainage rights.

#### Karin Smadella-

Why don't we look at the property as a whole and come up with a 5-year predevelopment flow rate and determine the flows and see if the storm sewer has the capacity.

#### Eric Tousignant-

This storm sewer was likely designed with 2-year criteria due to its age, as well we must consider the extra flow from the highway. Also keep in mind that the MTO is likely discharging as much flow as possible to the storm sewer and for a highway is likely designed with a 10-year capture.

#### Karin Smadella-

Stantec to provide 2-year predevelopment flow for City to verify if it can be accommodated in the storm collector sewer.

The city has acquired the lands next to the rec-center and the park and is planning to redevelop. We would like to know what their plan is for storm water management and what their plan is with respect to the storm sewer that cuts across in order to coordinate efficiently. As well if it is possible to share a storm water management and storage.

#### Edith Tam-

So far there is no storm water management in place for the above noted lands right now. We are in the process of acquiring 1010 Somerset and approximately 1 hector of those lands are tentatively being allocated to the development of a soccer field. Currently Plouffe park is depressed and from what I understand is currently a storm water pond for 100-year flood. With this in mind, it is likely the proposed soccer field will also be depressed. As far as I know we are coordinating with Ottawa community housing because they have 933 Gladstone. We are planning on building a community center, there might be a French elementary school, and would like to coordinate effectively for this development.

#### Robert MacNeil-

The main trunk sewer will need to be shifted so that it doesn't fall below building footprints. The water and the combined sewers that run alongside one another run will have an opportunity to continue with some of the servicing still positioned there.

Edith's group has been focussing on acquiring the lands right now and therefore will be behind us by several years in terms of development. There scoping and design work will not catch up to us so the challenge for us is to continue working with their group and the City in making decisions that are going to be fortuitous for everyone.

Other than phase one, Plouffe park is going to be extended westerly and run all the way through the site likely with no buildings along its length. It would be a massive city park. There could be underground parking below as well as dry underground storage.

#### Eric Tousingnant-

The Pluoffe park SWM Pond is a 50-year design, so during a 100-year event the lower part of Preston just in front of Pluoffe will continue to flood. What we have is an improvement from what was there before. If you are keeping the park lands to the west of Plouffe there is a good opportunity to create more storage for Pluoffe park and upgrade to a 100-year design, removing the ponding that will happen on Preston street during a 100-year event. This potential expansion of storage could also be allocated to the city lands to the north as well as Gladstone's lands to south.

#### Karin Smadella-

Our other major question is if the existing major infrastructure that crosses through the site must stay in service? As part of the subdivision design, will connections have to be maintained to the existing public and private mains located within the City lands to the north?

Similarly, the combined collector sewer that runs through the development will need to be

Similarly, the combined collector sewer that runs through the development will need to be relocated. Are there known constraints that should be considered in the design and construction phasing?

#### Abdul Mottalib

Advised that City will consult with Asset Management to ask if connections will have to be maintained to the City watermains to the north.

#### Eric Tousingant-

In terms of moving the combined collector sewer, it can be moved as long as it has no hydraulic impact to the system and can continue to be a relief system for the Preston Trunk. If there is a realignment it must maintain the existing crossing location under Somerset Street.

#### Robert MacNeil-

Can you foresee any issues with moving the Nepean Storm under the MUP and potentially coupled with district energy running side by side? The MUP easement is about 50ft in width.

#### Shawn Wessel-

Moving the Nepean storm will require a certain offset from infrastructure (clearances) in order to be able to access the sewer for future maintenance/replacement. This will be something that will need to be looked into with more detail (plan & profile, cross sections, etc.) to determine if there is room, depending on what is required for development.

#### Karin Smadella-

For the sanitary sewage and potentially combined sewage for these lands should it be directed to the local or combined collector system.

#### Eric Tousingant-

It would be preferable to the local system if it has capacity. Typically, we do not connect to the collector systems. If the storm can be directed elsewhere and it is just the sanitary discharge to the local system there shouldn't be any issues with capacity.

#### Shawn Wessel-

Detailed Design -

It is important to note that for your submission we would require grading, site servicing, stormwater management plans and roof plans. The roof and grading plans should include all ponding for 5- and 100-year events. Roof Plans are to include drain and scupper locations as well as what table speaking to the prescribed drain types (manufacture and model #), weir openings and flows for all buildings with flat roofs on this all sites.

#### Karin Smadella

Noted that Gladstone Village application will be for a plan of subdivision. Rochester Heights may be a site plan application. For site plans with buildings of this nature (mid-high rise), detailed design of the buildings (including building mechanical) is normally not available when the site plan control application is being approved. Discussion about this request can be undertaken separately.

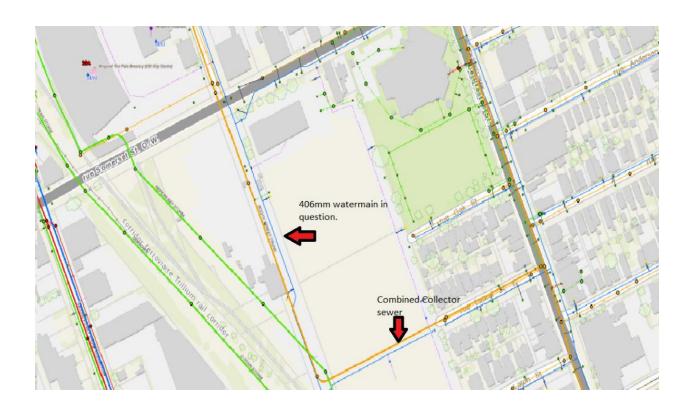
Actionable items:

- Determine if the collector storm sewer (that drains the highway) is owned by the MTO or the City.
- Check with parks to determine if it is possible to create more storage to upgrade the park from a 50-year design to a 100-year design and ultimately reduce the potential of flooding on Preston.
- Provide a plan & profile and section drawings for the proposed relocation of the Nepean Storm
  under the MUP coupled with district energy to determine if there is enough clearance for City
  approval. (KS I believe that only a section was discussed for high level feasibility Plan and
  profile drawings would accompany the detailed design submission based on the preferred
  sewer alignment)
- Determine if the 406mm water main that crosses through the development site can be abandoned once the new development is up and running or if it must remain. Please see image below. Note: There is a FH at rear of 332 Preston that is connected to the private water line of 933 Gladstone property. Need to check if abandoning this FH is an option or if there is a way to connect to WM on Balsam St. and if so, who pays for this?

- I've spoken with Robin Souchen about the watermains on the 1010 Somerset property and to both of us it makes the most sense to keep this 406mm watermain that runs adjacent to the Booth Street Trunk and continues on under City Centre Avenue.
- As Rob MacNeil has noted, the City is behind OCH by a few years in regards to master planning subject lands. All we know is the we have a number of items we may have to accommodate on the lands:
- Approx. 1 hectare park to be depressed
- Underground parking 800+ parking spots similar to Lansdowne
- Twin pad arena to be confirmed by Linda Tremblay
- An elementary school for 389 students
- Expansion of Plant Bath community centre space
- Gym
- 150-300 residential units
- Approximately 6 floors of office space
- Retail space

This may give you an idea of what capacity is required for the area.





From: Smadella, Karin
To: Paerez, Ana

**Subject:** FW: Gladstone Village - Storm Collector Contributions

**Date:** Wednesday, March 17, 2021 5:20:49 PM

Attachments: <u>image002.png</u>

#### **FYI**

#### Karin Smadella, P.Eng

Project Manager

Direct: 613 724-4371 Mobile: 613 698-8088

Karin.Smadella@stantec.com

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From: Tousignant, Eric < Eric. Tousignant@ottawa.ca>

Sent: Wednesday, March 17, 2021 3:54 PM

To: Smadella, Karin < Karin. Smadella@stantec.com>

Subject: RE: Gladstone Village - Storm Collector Contributions

The Nepean Bay SWM model assumed an imperviousness of 0.55, which is roughly a C of 0.6. Since this is only a 2 year system and there is a risk of this storm system backing up into the LRT corridor, let's try to match existing conditions, especially since the LRT team is currently using hydrographs from this system to come up with a flood proofing solution.

#### Eric

#### Eric Tousignant, P.Eng.

Senior Water Resources Engineer Infrastructure Services 613-580-2424 ext 25129

From: Smadella, Karin < <a href="mailto:Karin.Smadella@stantec.com">Karin.Smadella@stantec.com</a>>

Sent: March 17, 2021 3:49 PM

**To:** Tousignant, Eric < <a href="mailto:Eric.Tousignant@ottawa.ca">Eric.Tousignant@ottawa.ca</a>>

**Subject:** RE: Gladstone Village - Storm Collector Contributions

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Yes the storm trunk along the LRT – in your correspondence below you noted that the storm sewer has capacity but that discharge to the system should be controlled to the 2 year storm. My mtg will be done in the next 15 min and I can give you a call.

The Nepean Bay storm model assumes 4.7 ha of these lands draining to the storm sewer uncontrolled (No ICDs) (see blue areas in figure below). There is a total of 20 ha drainage to this trunk sewer system (starting at highway 417) with a peak flow of about 2 cms. In short, there is available capacity in the storm system for your flows.

Given the extremely tight nature of these systems and the potential for backup onto the future LRT system, I would recommend that we set the target release rates at 2 year. Also, since we did not account for any of these areas in the Preston combined system model, any area draining to the combined would also need to be controlled to 2 year.

#### Karin Smadella, P.Eng

Project Manager

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**From:** Tousignant, Eric < <a href="mailto:Eric.Tousignant@ottawa.ca">Eric.Tousignant@ottawa.ca</a>>

Sent: Wednesday, March 17, 2021 3:42 PM

**To:** Smadella, Karin < <a href="mailto:Karin.Smadella@stantec.com">Karin.Smadella@stantec.com</a>>

**Subject:** RE: Gladstone Village - Storm Collector Contributions

Unfortunately I am in meetings all day tomorrow. Is this the storm trunk next to the LRT corridor?

From: Smadella, Karin < <a href="mailto:Karin.Smadella@stantec.com">Karin.Smadella@stantec.com</a>>

**Sent:** March 17, 2021 3:41 PM

To: Tousignant, Eric < Eric. Tousignant@ottawa.ca>

Cc: Paerez, Ana < Ana. Paerez@stantec.com>

**Subject:** RE: Gladstone Village - Storm Collector Contributions

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Hi Eric – Sorry I'm in a meeting but otherwise would give you a call to avoid these emails back and forth. The C-value we are looking for is for the contribution to the existing storm trunk and not the combined sewer.

I can call you tomorrow to discuss if that is easier.

#### Karin

#### Karin Smadella, P.Eng

Project Manager

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**From:** Tousignant, Eric < <a href="mailto:Eric.Tousignant@ottawa.ca">Eric.Tousignant@ottawa.ca</a>>

Sent: Wednesday, March 17, 2021 3:37 PM

**To:** Smadella, Karin < <a href="mailto:Karin.Smadella@stantec.com">Karin.Smadella@stantec.com</a>>

Cc: Paerez, Ana < Ana. Paerez@stantec.com>

Subject: RE: Gladstone Village - Storm Collector Contributions

#### Hi Karin

Unfortunately, the entire Preston combined sewer Model assumed an existing imperviousness of roughly 0.45, which is equivalent to a C of roughly 0.5. You would have to stick with the 0.5.

As for the major system. As you noted, You will have to control development sites up to the 100 year event on-site, but internal roadways (if they are city streets) can drain to existing roadway. I would only ask that you check the impact of the runoff on the local street to make sure that it is not excessive.

#### Eric

### Eric Tousignant, P.Eng.

Senior Water Resources Engineer Infrastructure Services 613-580-2424 ext 25129

From: Smadella, Karin < <a href="mailto:Karin.Smadella@stantec.com">Karin.Smadella@stantec.com</a>>

Sent: March 12, 2021 2:18 PM

**To:** Tousignant, Eric < <a href="mailto:Eric.Tousignant@ottawa.ca">Eric.Tousignant@ottawa.ca</a>

Cc: Paerez, Ana < <a href="mailto:Ana.Paerez@stantec.com">Ana.Paerez@stantec.com</a>>

**Subject:** RE: Gladstone Village - Storm Collector Contributions

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#### Thanks Eric

I have summarized the sewer and swm criteria below. Can you please confirm the criteria and provide a response to the two questions highlighted?

#### Minor Storm System Design Criteria

To be controlled to 2 year flow, C = ?

Please confirm the runoff coefficient to be assumed for the allowable 2 year flow into the minor system. Given the predevelopment condition where the site was all hard surface with no inlet control, can we use 2 year flow at C=0.9?

#### Major System Design Criteria

Major system flow from Public Streets to be directed to Preston Street. Is there any known restriction from directing some of the major system flows down the local streets abutting the site (Oak, Laurel, Larch, Balsam)?

Private Blocks to provide on-site storage for stormwater in excess of the allowable minor system contributions up to the 100-year event.

#### Combined System Design Criteria

To be controlled to the 2 year flow, maximum C=0.4.

Thanks for your quick responses. Have a great weekend.

Karin

Karin Smadella, P.Eng

Project Manager

Direct: 613 724-4371 Mobile: 613 698-8088 Karin.Smadella@stantec.com

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**From:** Tousignant, Eric < <a href="mailto:Eric.Tousignant@ottawa.ca">Eric.Tousignant@ottawa.ca</a>>

Sent: Tuesday, March 09, 2021 2:47 PM

To: Smadella, Karin < <a href="mailto:Karin.Smadella@stantec.com">Karin.Smadella@stantec.com</a>>

Cc: Paerez, Ana < <u>Ana.Paerez@stantec.com</u>>

**Subject:** RE: Gladstone Village - Storm Collector Contributions

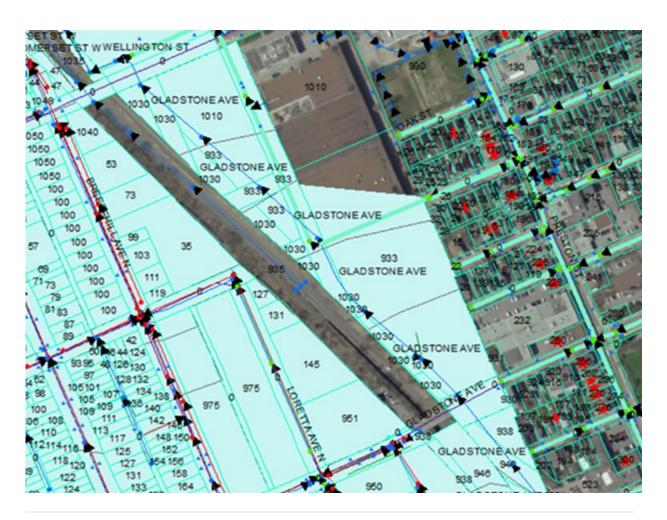
#### Hi Karin

Attached is the DDSWMM sketch for the Preston combined sewer model. As you can see, the lands in question do not drain to the combined system in our model and have been assumed draining to the storm sewer next to the rail corridor.

The Nepean Bay storm model assumes 4.7 ha of these lands draining to the storm sewer uncontrolled (No ICDs) (see blue areas in figure below). There is a total of 20 ha drainage to this trunk sewer system (starting at highway 417) with a peak flow of about 2 cms. In short, there is available capacity in the storm system for your flows.

Given the extremely tight nature of these systems and the potential for backup onto the future LRT system, I would recommend that we set the target release rates at 2 year. Also, since we did not account for any of these areas in the Preston combined system model, any area draining to the combined would also need to be controlled to 2 year.

Eric



From: Smadella, Karin < <a href="mailto:Karin.Smadella@stantec.com">Karin.Smadella@stantec.com</a>>

Sent: March 09, 2021 11:57 AM

**To:** Tousignant, Eric < <a href="mailto:Eric.Tousignant@ottawa.ca">Eric.Tousignant@ottawa.ca</a> <a href="mailto:Cc">Cc: Paerez, Ana < <a href="mailto:Ana.Paerez@stantec.com">Ana.Paerez@stantec.com</a> <a href="mailto:Stantec.com">Stantec.com</a> <a href="mailto:Stantec.com">Stantec.com</a

**Subject:** RE: Gladstone Village - Storm Collector Contributions

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Hi Eric – Yes, the questions below are related to the Gladstone Village site at 933 Gladstone Avenue. Both sites have Gladstone addresses so it is confusing.

We require clarity on what will be permitted for the storm/combined outlets prior to layout out the sewers for this subdivision development. Thanks for clarifying that the major system from the public roadway can be directed to Preston Street.

#### Karin

Karin Smadella, P.Eng

Project Manager

Direct: 613 724-4371

Mobile: 613 698-8088 Karin.Smadella@stantec.com

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**From:** Tousignant, Eric < <a href="mailto:Eric.Tousignant@ottawa.ca">Eric.Tousignant@ottawa.ca</a>>

Sent: Tuesday, March 09, 2021 11:12 AM

To: Smadella, Karin < <a href="mailto:Karin.Smadella@stantec.com">Karin.Smadella@stantec.com</a>>

**Subject:** RE: Gladstone Village - Storm Collector Contributions

#### Hi again Karin

Just to be on the same page, your email from March 3<sup>rd</sup> is not for the Gladstone/Rochester site. I think there is some confusion. I have asked my modeler to model the new combined sewer location through the site at Rochester/Gladstone, but I think you are looking for answers about the old Fed buildings site.

We just completed updating the Nepean Bay storm sewer model so we can add flow to the storm pipe, but that system is very tight, and it can impact the future light rail.

Unfortunately, we are very backlogged right now due to light rail and I will try to get on this site ASAP.

As for your question about the SWM facility. I don't anticipate any changes to it. Plouffe park is there to protect a low point on Preston and **not to accommodate future development**. You will need to provide on-site detention for any site plan in the development area. If there are city streets within the future development area, then they will just flow onto Preston and will form part of the overall major system flow strategy for Preston Street. Their impact on the Plouffe park SWM facility will be negligible given that the park captures all the excess major flow for the Preston drainage area north of Carling.

Eric

### Eric Tousignant, P.Eng.

Senior Water Resources Engineer Infrastructure Services
613-580-2424 ext 25129

From: Smadella, Karin < <a href="mailto:Karin.Smadella@stantec.com">Karin.Smadella@stantec.com</a>>

Sent: March 09, 2021 10:42 AM

**To:** Tousignant, Eric < <a href="mailto:Eric.Tousignant@ottawa.ca">Eric.Tousignant@ottawa.ca</a> <a href="mailto:Cc">Cc: Paerez, Ana < <a href="mailto:Ana.Paerez@stantec.com">Ana.Paerez@stantec.com</a> >

**Subject:** RE: Gladstone Village - Storm Collector Contributions

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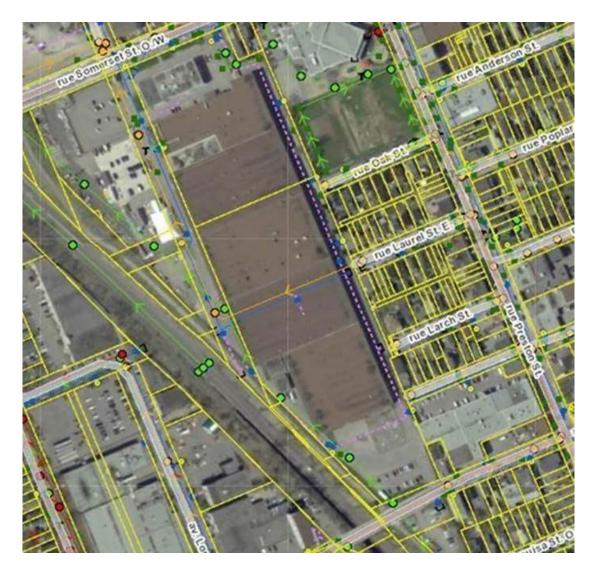
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Hi Eric,

Please see the attached figure which the infrastructure picked up in the survey. It appears that the inlets at the south end of the site would contribute to the storm system and those on the eastern limit the combined.

Below I have included the aerials from 1958 and 2014. During that period the site was covered in a large building and asphalt. I do not expect that there were stormwater controls installed at the time of construction.





Let us know if you require anything further.

#### Karin

#### Karin Smadella, P.Eng

Project Manager

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**From:** Tousignant, Eric < <a href="mailto:Eric.Tousignant@ottawa.ca">Eric.Tousignant@ottawa.ca</a>>

Sent: Tuesday, March 09, 2021 8:43 AM

To: Smadella, Karin < <a href="mailto:Karin.Smadella@stantec.com">Karin.Smadella@stantec.com</a>>

**Subject:** RE: Gladstone Village - Storm Collector Contributions

#### HI again Karin

A question that has come back to me from the modelers is if the existing site has CBs on it. This will help us determine the next increase in runoff. No problem if you don't have the answer. What we will do then, is figure out how much water runs off onto the street in the existing system and gets into street CBs. We will then subtract this flow from the future flow go get the net increase.

#### Eric

From: Smadella, Karin < <a href="mailto:Karin.Smadella@stantec.com">Karin.Smadella@stantec.com</a>

**Sent:** March 08, 2021 5:18 PM

**To:** Tousignant, Eric < <a href="mailto:Eric.Tousignant@ottawa.ca">Eric.Tousignant@ottawa.ca</a>>

Cc: Paerez, Ana <<u>Ana.Paerez@stantec.com</u>>; Robert MacNeil <<u>Robert\_MacNeil@och.ca</u>>

Subject: RE: Gladstone Village - Storm Collector Contributions

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Hi Eric – I realize that this request was only sent to you mid-last week but can you please confirm receipt and advise when you expect to be able to provide direction? As I am certain you are aware, this is a very important project for OCH and they want to move forward with the functional design as soon as possible.

#### Thanks,

#### Karin

#### Karin Smadella, P.Eng

Project Manager

Direct: 613 724-4371 Mobile: 613 698-8088

Karin.Smadella@stantec.com

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From: Smadella, Karin

Sent: Wednesday, March 03, 2021 11:01 AM

**To:** Tousignant, Eric < <a href="mailto:Eric.Tousignant@ottawa.ca">Eric.Tousignant@ottawa.ca</a>>

**Cc:** Wessel, Shawn <<u>shawn.wessel@ottawa.ca</u>>; Ana Paerez (<u>Ana.Paerez@stantec.com</u>)

<a href="mailto:</a>, Robert MacNeil <a href="mailto:Robert\_MacNeil@och.ca">Robert\_MacNeil@och.ca</a>, Moroz, Peter

<peter.moroz@stantec.com>; Mottalib, Abdul <<u>Abdul.Mottalib@ottawa.ca</u>>

Subject: Gladstone Village - Storm Collector Contributions

Hi Eric,

Further to our meeting on February 16<sup>th</sup>, I am providing storm flows based on a contributing area of 3.24ha from the Gladstone Village site. We understand that it is the City's preference that storm flow be separated from the combined system if possible. **Please advise whether or not the stormwater flows below can be accommodated in the storm collector sewer that currently runs along the western limit of the site.** Should discharge be permitted to the storm system, all sanitary flows will be directed to the local sewers on the adjacent roadways.

Flows are based on the following:

#### Scenario 1

- Full capture of the 2 year event from the proposed municipal ROW to avoid ponding in the street in the 2 year event. Major flows would be directed to a shared SWM facility on neighbouring City lands.
- Allowable release rate from the private blocks based on the 5 year event with a maximum C=0.4
  (equivalent to the allowable discharge to the combined system). Storage for the affordable
  housing units to be provided in the new/expanded City SWM facility alternatively storage to be
  provided on the individual development blocks.
- Based on these assumptions, the 100 year target flow rate for minor system discharge to the storm trunk would be 406.4 L/s.

#### Scenario 2

- Full capture of the 2 year event from the proposed municipal ROW to avoid any ponding in the street in the 2 year event. Major flows would be directed to a shared SWM facility on neighbouring City lands.
- Allowable release rate from the private blocks based on the 2 year event with a maximum C=0.4.
   Storage for the affordable housing units to be provided in the new/expanded City SWM facility alternatively storage to be provided on the individual development blocks.
- Based on these assumptions, the 100 year target flow rate for minor system discharge to the storm trunk would be 329.0 L/s.

If capacity in the storm collector sewer is not available, the flow from Scenario 1 would be directed to the combined system. Under this condition, please advise if the local combined sewers have capacity to receive a combined sewage flow of 406.4 L/s or if the flow should be directed to the combined collector sewer.

#### Timing:

Do you have an idea if the timing if the development of the City lands and the expansion of the SWM facility? Should the development of the Gladstone Village subdivision proceed in advance of the SWM works on the City lands, will the major system flow from the municipal ROW (and potentially flow from the private development blocks) be permitted to outlet to Plouffe Park or would an interim facility on the City development lands be required?

Thanks and please let me know if you have any questions.

#### Karin

#### Karin Smadella, P.Eng

Project Manager

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Karin.Smadella@stantec.com

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### GLADSTONE VILLAGE, 933 GLADSTONE AVENUE – FUNCTIONAL SERVICING REPORT

Appendix E Background Reports

## Appendix E BACKGROUND REPORTS





### **FINAL REPORT ON**

## Phase One Environmental Site Assessment 933 Gladstone Avenue Ottawa, Ontario

#### Submitted to:

Ms. Erin Tait, Specialist, Environmental Remediation City of Ottawa Real Estate Partnerships & Development Office 5th Floor, 110 Laurier Ave West Ottawa, ON K1P 1J1

#### Report Number: 1661627/1000

#### Distribution:

2 copies - City of Ottawa 1 e-copy - City of Ottawa

1 e-copy - Golder Associates Ltd. 1 copy - Golder Associates Ltd.







## **Executive Summary**

Golder Associates Ltd. (Golder) was retained by the City of Ottawa (the "Client") to conduct a Phase One Environmental Site Assessment (Phase One ESA) for the property located at 933 Gladstone Avenue, Ottawa, Ontario (hereinafter collectively referred to as the "Site" or "Phase One Property").

The Site includes five (5) parcels of land with a combined total area of approximately 3.3 hectares (8.1 acres). Parcels 1 and 3 (part of PIN 04107-0039 and all of PIN 04107-0032) are currently owned by the federal government while three (3) parcels (part of PINs 04107-0035, 04107-0033 and 04107-0031) are closed rights-of-way that are owned by the City. Golder understands that the City is considering acquiring the Site and if it does, intends to obtain a Record of Site Condition for the Site in the future. Based on the information provided by a legal title search, the legal description of the Site is: Lots 1 to 7, inclusive, West Champagne Avenue, Block B, Lots 1, 2 & 3 & Parts of Lot 4, 5 & A, East Loretta Avenue, Block B, Plan 73 and various lot and streets in Block C, Plan 73, City of Ottawa.

The Site was formerly part of a larger property occupying land stretching between Somerset Street West to Gladstone in a north-south direction which combined 1010 Somerset Street West and 933 Gladstone Avenue. It was primarily occupied by a single large warehouse structure known as the Central Ordnance Depot from the late 1940's until it was demolished in 2015.

The Executive Summary highlights key points from the report only; for complete information and findings, as well as the limitations, the reader should examine the complete report.

The Phase One ESA is being carried out in order to identify issues of potential environmental concern within the study area which have the potential to impact the soil and/or groundwater on the Site and to assist in scoping any Phase II ESA activities which may be required. The scope of work for the Phase One ESA was described in Golder's proposal dated July 20, 2016 (P1661627).

This Phase One ESA was completed in general accordance with the Ontario Regulation (O.Reg.) 153/04 (as amended) in order to comply with the City's current Official Plan requirements that all Phase One ESA reports that are submitted for Site Plan Approval be completed in accordance with the O.Reg.153/04 as amended. The Phase One ESA also meets the requirements of the Canadian Standards Association (CSA) Standard Z768-01, Phase One Environmental Site Assessment (reaffirmed 2012). It is understood that a Record of Site Condition (RSC) pursuant to Ontario Regulation 153/04 – Records of Site Condition – Part XV.1 of the Act, made under the Environmental Protection Act, will be filed for the Site if the City does acquire the Site.

Based on the information obtained during the Phase One ESA conducted at the Site the following areas of potential environmental concern related to potential impacts to soil and/or groundwater were identified:

i





APEC #	Area of Potential Environmental Concern	Location of Area of Potential Environmental Concern on Phase One Property	Potentially Contaminating Activity	Location of PCA (on-Site or off-Site)	Contaminants of Potential Concern	Media Potentially Impacted (Groundwater, soil and/or Sediment)
1	Current Dyed Diesel AST	Storage yard in the northwest corner of the Site	PCA 28: Gasoline and Associated Products in Fixed Tanks	On-Site	PHC and BTEX	Groundwater and Soil
2	Former on-Site rail tracks as well as rail line adjacent to the west	Former on-Site rail spurs running in several locations across the entire property during lumberyard use. Rail spurs running to east side of boiler room and along the west side of the depot building	PCA 46: Rail Yards, Tracks, and Spurs	On-Site	Metals, PAHs, PHC	Soil
3	Footprint of old buildings was built up with fill following 2015 demolition. Layer of fill was also identified across Site prior to demolition, which included waste products. Fill origin unknown	Entire Site	PCA 30: Importation of Fill Material of Unknown Quality	On-Site	Metals, PAHs, PHC, VOC	Soil
4	Former lumber yard on-Site	Entire Site	PCA 59: Bulk Storage of Treated and Preserved Wood Products	On-Site	Metals, PAHs, VOCs	Soil
5	Site used as Central Ordnance Depot for 50 years including storage of paints, oils, munitions and assorted military stores	Entire Site	PCA: Other – Oil Drum Storage PCA 20: Explosives and Ammunition Bulk Storage PCA 39: Paints Manufacturing, Processing, and Bulk Storage	On-Site	Metals, PAHs, VOCs	Groundwater and Soil





APEC #	Area of Potential Environmental Concern	Location of Area of Potential Environmental Concern on Phase One Property	Potentially Contaminating Activity	Location of PCA (on-Site or off-Site)	Contaminants of Potential Concern	Media Potentially Impacted (Groundwater, soil and/or Sediment)
6	Historical heating oil ASTs	West (2 tanks) and south (1 tank) of former boiler room	PCA 28: Gasoline and Associated Products in Fixed Tanks	On-Site	PAHs, PHC, BTEX, VOC	Groundwater and Soil
7	Former printer operation on-Site	Unknown, assume entire building footprint area	PCA 31: Ink Manufacturing, Processing, and Bulk Storage	On-Site	VOCs	Groundwater and Soil
8	Former 2500 gallon sump noted in building plans for the flammables storage room	On-Site (NW corner, north of former boiler room)	PCA: Other – Chemical Storage Room Sump	On-Site	PHC, BTEX, VOCs	Groundwater and Soil
9	Historical vehicle maintenance	Unknown, assume entire Site	PCA: Other – Vehicle Maintenance	On-Site	PHC, VOC	Groundwater and Soil
10	Transformers on- Site within former warehouse	Site within former warehouse footprint	PCA 55: Transformer Use	On-Site	PCBs, PHC	Groundwater and Soil
11	Waste generator codes for Petroleum distillates, waste oils and lubricants, light fuels, chemicals, and pharmaceuticals	Entire Phase One Study Area	PCA : Other – Waste Generator	On/Off-Site	PHC, VOC	Groundwater and Soil
12	Several 205 L drums of waste oil were stored in the boiler room and minor staining was observed	West side in former boiler room	PCA : Other – Petroleum Product Drum Storage	On-Site	PHC, BTEX	Groundwater and Soil
13	Numerous fires in the 1950's burned down portions of the depot which may have released contaminants	On-Site (North and south ends of former warehouse, as well as well as two fires in unknown locations)	PCA : Other - Fires	On-Site	PHC, Metals, PAH, VOCs	Groundwater and Soil





APEC #	Area of Potential Environmental Concern	Location of Area of Potential Environmental Concern on Phase One Property	Potentially Contaminating Activity	Location of PCA (on-Site or off-Site)	Contaminants of Potential Concern	Media Potentially Impacted (Groundwater, soil and/or Sediment)
14	Parking area contains empty bulk liquid totes of unknown sources, 5 buckets (25 L each) marked "Hydraulic Fluid – Must be disposed of" on wooden pallet in paved area, soil piles, asphalt pile, empty drums. Several drums of unknown contents noted in 2001 in maintenance yard immediately adjacent to north	On-Site (NW corner of Site in storage area)	PCA : Debris and Chemical Waste	On-Site / Off-Site	Metals, PHC PAH, VOCs	Groundwater and Soil
15	Venice Iron Works and V Steel Works Limited.	17 Larch Street, adjacent to Site on east side	PCA 34: Metal Fabrication	Off-Site	Metals, PHC, VOC	Groundwater and Soil

PHC - petroleum hydrocarbons fraction 1 to fraction 4

BTEX - benzene, toluene, ethylbenzene and xylenes

PCB - polychlorinated biphenyls

PAH - polycyclic aromatic hydrocarbons

VOC - Volatile Organic Compounds

Based on the above findings, a Phase Two Environmental Site Assessment (Phase Two ESA) is recommended to be completed in order to assess the soil and groundwater quality at the areas where areas of potential environmental concern were identified and to assist in the with the potential submittal of a Record of Site Condition (RSC).





## **Table of Contents**

EXE	ECUTIVE SUMMARY	i
1.0	INTRODUCTION	1
	1.1 Phase One Property Information	1
2.0	SCOPE OF INVESTIGATION	1
3.0	HISTORICAL RECORDS REVIEW	2
	3.1 General	2
	3.1.1 Phase One Study Area Determination	2
	3.1.2 First Developed Use Determination	2
	3.1.3 Review of Fire Insurance Maps and Reports	3
	3.1.4 Chain of Title	4
	3.1.5 Environmental and Historical Reports	5
	Interpretation of Reports	7
	Historical Analytical Data Review and Comparison to Current Standards	g
	3.1.6 Review of Street Directories	9
	3.1.6.1 On-Site Listings	g
	3.1.6.2 Surrounding Properties within 250 m of the Site Listings	
	3.2 Environmental Source Information	11
	3.2.1 Ministry of the Environment and Climate Change Correspondence	11
	3.2.2 City of Ottawa Correspondence	11
	3.2.3 City of Ottawa Document Review	13
	3.2.4 Review of the 2004 City of Ottawa Waste Disposal Sites Inventory	14
	3.2.5 Ministry of Natural Resources (MNRF)	14
	3.2.6 Technical Standards and Safety Authority Correspondence	15
	3.2.7 EcoLog ERIS Report	15
	3.2.7.1 On Site	15
	3.2.7.2 Surrounding Properties within 250 m of the Site	16
	3.3 Physical Settings Sources	17
	3.3.1 Aerial Photographs	17





	3.3.2	Topography, Hydrology, Geology	20
	3.3.3	Fill Materials	21
	3.3.4	Water Bodies and Area(s) of Natural Significance	22
	3.3.5	Water Wells	22
	3.4	Site Operating Records	22
4.0	INTER	VIEWS	23
5.0	SITE R	RECONNAISSANCE	23
	5.1	General Requirements	23
	5.2	Specific Observations at Phase One Property	23
	5.2.1	Enhanced Investigation Property	26
	5.3	Surrounding Land Use	27
	5.4	Written Description of Investigation	27
6.0	REVIE	W AND EVALUATION OF INFORMATION	28
	6.1	Current and Past Uses of the Site	28
	6.2	Potentially Contaminating Activity	29
	6.2.1	On-Site PCAs	29
	6.2.2	PCAs on Surrounding Properties within 250 m of the Site Listings	31
	6.3	Areas of Potential Environmental Concern	35
	6.4	Conceptual Site Model	39
	6.4.1	Uncertainty and Absence of Information	40
7.0	CONC	LUSIONS	41
8.0	REFER	RENCES	42
9.0	LIMITA	ATIONS AND USE OF REPORT	44





#### **TABLES**

Table 1: Site Ownership Information	1
Table 2: Summary of Fire Insurance Plan Review for the Years 1888-1956	3
Table 3: Chain of Title information for 933 Gladstone Avenue	4
Table 4: Summary of historical and environmental information review findings.	6
Table 5: Summary of PCAs identified from the Street Directory Search	10
Table 6: Summary of Historical Land Use Inventory Results of Note	12
Table 7: Summary of Air Photo Review Findings	18
Table 8: Topography, Hydrology and Geology Summary	20
Table 9: Summary of the Current and Past Uses of the Site	28
Table 10: Summary of PCAs within the Phase One Property	29
Table 11: Summary of PCAs within the Phase One Study Area but not on the Phase One Property	31
Table 12: Summary of all APECs affecting the Phase One Property	36

#### **FIGURES**

Figure 1: Key Plan

Figure 2: Site Plan

Figure 3: Topographic Map and Areas of Natural Significance

Figure 4: Areas of Potential Environmental Concern (APEC)

#### **APPENDICES**

#### **APPENDIX A**

Regulatory Requests and Correspondence

#### **APPENDIX B**

EcoLog ERIS Report, Title Search, and Street Directories

#### **APPENDIX C**

Aerial Photographs

#### **APPENDIX D**

Site Photographs





### 1.0 INTRODUCTION

### 1.1 Phase One Property Information

Golder Associates Ltd. (Golder) was retained by the City of Ottawa (the "Client") to conduct a Phase One Environmental Site Assessment (Phase One ESA) for the property located at 933 Gladstone Avenue, Ottawa, Ontario (hereinafter collectively referred to as the "Site" or "Phase One Property") as shown on Figures 1 and 2.

The Site includes five (5) parcels of land with a combined total area of approximately 3.3 hectares (8.1 acres). Parcels 1 and 3 (part of PIN 04107-0039 and all of PIN 04107-0032) are currently owned by the federal government while three (3) parcels (part of PINs 04107-0035, 04107-0033 and 04107-0031) are closed rights-of-way that are owned by the City. Golder understands that the City is considering acquiring the Site and if it does, intends to obtain a Record of Site Condition for the Site in the future. Based on the information provided by a legal title search, the legal description of the Site is: Lots 1 to 7, inclusive, West Champagne Avenue, Block B, Lots 1, 2 & 3 & Parts of Lot 4, 5 & A, East Loretta Avenue, Block B, Plan 73 and various lot and streets in Block C, Plan 73, City of Ottawa.

The Site was formerly part of a larger property occupying land stretching between Somerset Street to Gladstone in a north-south direction which combined 1010 Somerset Street West and 933 Gladstone Avenue. It was primarily occupied by a single large warehouse structure known as the Central Ordnance Depot from the late 1940's until it was demolished in 2015.

Contact information for the Site including the current owner is provided in Table 1 below.

**Address Current Site Owner(s) Contact Information** Ms. Erin Tait. Specialist. Environmental Remediation City of Ottawa (Parcels 2,4, and 5) 933 Gladstone City of Ottawa Avenue. Real Estate Partnerships & Development Office Canadian Federal Government Ottawa, Ontario Realty Services Branch (Parcels 1 and 3) 5th Floor, 110 Laurier Avenue West K1Y 3E5 Ottawa, Ontario K1P 1J1

**Table 1: Site Ownership Information** 

### 2.0 SCOPE OF INVESTIGATION

A Phase One ESA is a preliminary qualitative assessment of the environmental condition of a property, based on a review of current activities and historical information for the Site, as well as a review of relevant and readily available environmental information for the surrounding properties located within a 250 metre (m) radius of the boundary of the Site (collectively referred to as the "Phase One Study Area"). The boundary of the Phase One Study Area is presented in Figure 2.





According to Ontario Regulation ("O.Reg.") 153/04 *Records of Site Condition*, the objectives of a Phase One ESA are to:

- 1) Develop a preliminary determination of the likelihood that one or more contaminants have affected any land or water on, in or under the Site.
- 2) Determine the need for a Phase Two Environment Site Assessment (ESA).
- 3) Provide a basis for carrying out a Phase Two ESA.
- 4) Provide adequate preliminary information about environmental conditions in the land or water on, in or under the Site for the conduct of a risk assessment following completion of a Phase Two ESA if needed.
- 5) Identify and report on evidence of actual and/or potential contamination on the Site from current and historical activities at the Site or from adjacent properties.

It is understood that this Phase One ESA is being carried out to support the City of Ottawa's (the City) purchase of the Site parcels owned by the Federal Government (Parcels 1 & 3). This Phase One ESA was completed in general accordance with the Ontario Regulation (O.Reg.) 153/04 (as amended) in order to comply with the City's current Official Plan requirements that all Phase One ESA reports that are submitted for Site Plan Approval be completed in accordance with the O.Reg.153/04 as amended. The Phase One ESA also meets the requirements of the Canadian Standards Association (CSA) Standard Z768-01, *Phase One Environmental Site Assessment* (reaffirmed 2012). It is understood that a Record of Site Condition (RSC) pursuant to *Ontario Regulation 153/04 – Records of Site Condition – Part XV.1 of the Act*, made under the *Environmental Protection Act*, will be filed for the Site if the City does acquire the Site.

#### 3.0 HISTORICAL RECORDS REVIEW

#### 3.1 General

#### 3.1.1 Phase One Study Area Determination

For the purpose of this Phase One ESA, the Phase One Study Area is the area within a 250 m radius of the boundary of the Site. Based on Golder's review of the historical and current information compiled as part of this Phase One ESA for the area surrounding the Site and observations of neighbouring properties made during the Site visit, it was concluded that an assessment of information pertaining to properties within 250 m of the boundary of the Site was sufficient to achieve the objectives of the Phase One ESA.

#### 3.1.2 First Developed Use Determination

The date of first developed use of the Phase One Property was determined based on review of the chain of title information, aerial photographs, city directories, EcoLog ERIS Report, previous environmental reports, and information provided by the Site representative.

The Site was privately owned from 1809 to 1942. Based on available information it appears that the Site was undeveloped until approximately 1894 when it was used as the lumber yard (Sparks Estate South Yard) including several rail spurs. The Site appeared to be free of buildings until it was bought by the crown in 1942. By 1946 the land was developed with the Central Ordnance Depot, a large warehouse complex that covered the majority of the Site including the lands to the north extending to Somerset Street West. In 2015 the warehouse was demolished and the land has remained vacant to present.





### 3.1.3 Review of Fire Insurance Maps and Reports

Golder reviewed its archive of Fire Insurance Plans (FIPs) for the years 1888 (Revised 1901), 1902 (Revised 1912), 1925 (Revised 1948), and 1956 for the Site and surroundings properties in order to help develop an understanding of the history of the development of the Site and surrounding properties (within 250 m).

Table 2: Summary of Fire Insurance Plan Review for the Years 1888-1956

Year Site		Surrounding Property Direction				
		North	East	South	West	
1888 (rev. 1901)	Site used as a lumber yard with multiple rail spurs (Sparks Estate South Yard). Lumber piles in north and central portion of the site.	Lumber yard extends north to Somerset Street. Shows outline of "school site" bordering Somerset St. but building not present.	Export Lumber Co. piling ground listed as vacant in 1901. Small residential like buildings to east along Balsam and Pine Streets.	Lumber yard and rail spurs continue to south of current property boundaries. Small residential like buildings to southeast approaching Somerset St.	Railway shown running along western property boundary but does not extend further west.	
1902 (rev. 1912)	Site appears vacant.	Vacant land except for small building on south side of Somerset St. A woodworking factory is present on the north site of Somerset.	Small, residential like buildings along Oak, Laurel, Larch, Lachlin Ave., and Pine St. vacant land to NE.	Vacant land with furniture factory to southwest on west side of railway.	Railway shown along western property boundary beyond which are mixture of vacant land with no indication of industrial activities.	
1925 (rev. 1948)	Site now occupied by Central Ordnance Depot building. Two boilers and coal storage shown in SW corner of building. Two rail spurs run along west side of building and east side of boiler room.	Depot building extends north to Somerset St. Lumber pile shown to west of building adjacent to rail line.	Small, residential like buildings along Oak, Laurel, Balsam, and Larch Street, Plant bath and playground property to NE.  Gasoline stations and auto repair operations noted along the east side of Preston St.	"Corporation yard" with an office and sand dryer on south side of Gladstone with residential dwellings in the southeast. British American Oil Co. located south of Louisa St.	Railway shown along western property boundary beyond which are several commercial and industrial properties including a few underground storage tanks shown. British American Bank Note, Lyle Blackwell Cleaners & Dyers, Auto Repair and General Supply Co. (hydraulic and industrial power plant equipment) are activities of potential concern.	





Vasa	Sito	Surrounding Property Direction			
Year	Site	North	East	South	West
1956	Same as 1948	Same as 1948	Generally similar to 1948	Generally similar to 1948 except British American Oil Co. property listed as vacant.	Generally similar to 1948 however, several more commercial / industrial operations located on west side of rail line show presence of underground storage tanks.

The review of fire insurance plans for the Site and surrounding area indicates that the Site was used as a lumberyard in the late 1800s but was not occupied by a building until the Central Ordnance Depot was constructed in the 1940s. The surrounding lands on all sides began primarily as residential dwellings in the early 1900's, and have been developed with a variety of commercial and light industrial facilities since 1912, particularly on the west side of the rail line. The FIPs showed several historic activities on the Site and within the Phase One Study Area that qualify as Potentially Contaminating Activities.

#### 3.1.4 Chain of Title

Chain of title information for the Phase One Property was obtained from Wentzell Titles and is listed in Table 3 below. A copy of the chain of title is included in Appendix B.

Table 3: Chain of Title information for 933 Gladstone Avenue.

Owner's Name	Dates of Ownership
Crown	Prior to February 25, 1809
Robert Randall	February 25, 1809 to May 23, 1837
Peter Ayler Vallely	May 23, 1837 to August 18, 1837
William Price, Peter Mcbill, Nathaniel Gould & James Daries	August 18, 1837 to May 2, 1844
Nicholas Sparks	May 2, 1844 to December 16, 1875
Esther Slater	December 16, 1875 to Nov 10, 1894
John R. Booth	Nov 10, 1894 to May 27, 1921
J.R. Booth Ltd.	May 27, 1921 to August 17, 1942
His Majesty the King (Crown) (current owner)	August 17, 1942 to Present

The review of the chain of title shows that the Site was owned by private individual and corporations until 1942 when the Site was purchased by the Crown. As noted above, use of the Site as a lumber yard is believed to have started in approximately 1894 when the property was acquired by John R. Booth. The Phase One property is believed to have remained otherwise undeveloped until being acquired by the Crown who constructed the Central Ordnance Depot.





### 3.1.5 Environmental and Historical Reports

The following environmental and historical reports related to the Site and adjacent property north of the Site were provided by the City of Ottawa to Golder for review as part of this Phase One ESA. Reports are ordered below from oldest to most recent. Noteworthy findings are summarized in Table 4 and a more detailed interpretation of each document follows the table. Golder consulted these reports to develop an understanding of any issues previously identified for the Site and surrounding properties.

- 1) "1900 Ottawa-Hull Fire Map" Chas. E. Goad. April 1900. Plan Showing Extent of Ottawa-Hull Conflagration.
- 2) "1950's Depot Fire Articles" for the Site. Ottawa Journal. March 1950. *Army Probing Ordnance Depot Blaze.*June 1951. *MP Demands Fire Probe.* January 1952. *Fireman Hurt Battling Ordnance Depot Blaze.*October 1952. *Fire Destroys Plouffe Park Army Stores.* Prepared for the Ottawa Journal.
- 3) 1970/71 building plans for *General Alterations to No. 1 Supply Centre, Plouffe Park, Ottawa, Ontario.*Selected plans from City of Ottawa Building Code Services historic records.
- 4) 1989 building plans for *No. 1 Supply Centre Warehouse, Plouffe Park, 1010 Somerset St. W., Ottawa, Ontario Fire Protection Improvements.* Selected plans from City of Ottawa Building Code Services historic records.
- 5) "2001 Phase I ESA" for portion of the Site north of Laurel Street, and adjacent property north of the Site. Aqua Terre Solutions Inc. March 2001. *Phase I Environmental Site Assessment Plouffe Park (1010 Somerset St. W.) Ottawa, Ontario.* Prepared for Public Works and Government Service Canada.
- 6) "2005 Phase I & II ESA" for the Site and adjacent property north of the Site. Trow Associates Inc. January 2005. Phase I & II Environmental Site Assessment, Plouffe Park 1010 Somerset St. W., Ottawa, Ontario DRFP#08830. Prepared for Public Works & Government Services Canada.
- 7) "2008 Environmental Review" Levac Robichaud Leclerc Associates Ltd. October 2008. Environmental Review and Limited Investigation Plouffe Park, 1010 Somerset Street West, Ottawa, Ontario. Prepared for SNC-Lavalin Profac Inc.
- 8) "2013 Soil and Groundwater Investigation" for the Site and adjacent property north of the Site. DST Consulting Engineers Inc. September 2013. Subsurface Soil and Groundwater Investigation Sampling Plouffe Park 1010 Somerset Street West, Ottawa, Ontario. Prepared for Public Works and Government Services Canada.
- 9) "2015 Phase One ESA" for the Site: Pinchin Ltd. 2015. *Phase One Environmental Site Assessment:* 933 *Gladstone Avenue Ottawa, Ontario.* Prepared for Canada Lands Company CLC Limited.
- 10) "175 Loretta Ave N Monitoring" for 175 Loretta Ave N property south of Site: Amec Foster Wheeler. 2016. 2016 Groundwater Monitoring Program Private Fuel Outlet 175 Loretta Avenue North Ottawa, Ontario. Prepared for City of Ottawa.





Table 4: Summary of historical and environmental information review findings.

Report	On/Off Site	Factual Information
1900 Ottawa- Hull Fire Map	On Site	The Site is shown as a lumber yard within the area destroyed by the April 1900 fire.
1950's Depot Fire Articles	On and Off Site – Refers to warehouse that spanned both properties	The Site (i.e., Central Ordnance Depot) caught fire four times between 1950 and 1952. There was a particularly damaging blaze in June 1951 that destroyed a large section of the north end of the warehouse which occupied the adjacent land to the north of the Site. The article mentions charred lumber as well as oil and paint drums caught in the blaze. The 1952 fire is noted to have occurred in the southern portion of the building in block F, while the locations of the other two fires are unknown.
1970/71 Building Plans	On Site – southern portion of property	Building plans for modifications to southern portion of building to construct a flammable storage room next to boiler room. Plans show that a rail spur was present along the western side of the building that terminated at the boiler room. Flammable storage room plans show several floor drains, each connected to a 2,500 gallon underground sump.
1989 Building Plans	On Site – southern portion of property	Building plans for modifications to southern portion of building showing a battery charging room in the southeast corner as well as an exterior vehicle storage compound.
2001 Phase I ESA	On and Off Site – Refers to warehouse that spanned both properties listed as 1010 Somerset St. W.	<ol> <li>Six (6) APECs were identified including:</li> <li>Former Coal Storage Area and Diesel AST (boiler room area)</li> <li>Equipment and drum storage in yard (NW maintenance yard)</li> <li>Former underground storage tanks (USTs) (SE of Site)</li> <li>Historical land use on surrounding properties</li> <li>Bulk storage of explosive ordnance</li> <li>Designated substance issues including lead, mercury, and asbestos</li> </ol>
2005 Phase I & II ESA	On and Off Site – Refers to warehouse that spanned both properties listed as 1010 Somerset St. W.	Nine (9) PCAs were identified, which included all six (6) APECs reported in "2001 Phase I ESA" as well as  1. The former rail line to the west of the building  2. The general fill quality at the Site  3. The fires at the northern portion of the property in 1950's  Only two APECs, the fill and the coal storage yard, showed concentrations above applicable guidelines at the time when analysed during the Phase II investigation. The groundwater flow direction was inferred to be to the north-northeast.
2008 Environmental Review	On and Off Site – Refers to warehouse that spanned both properties listed as 1010 Somerset St. W.	This report noted that the general fill quality on the Site was an environmental concern, and any fill generated from redevelopment would need disposal. Asbestos materials were noted throughout the depot building, as well as lead based paints. Finally, mould was identified in the building.





Report	On/Off Site	Factual Information
2013 Soil and Groundwater Investigation	On and Off Site – Refers to warehouse that spanned both properties listed as 1010 Somerset St. W.	Based on groundwater and soil analysis, four areas of environmental concern (AEC) were identified on the northern portion of the former warehouse north of the Phase One Property (1010 Somerset St. W.). Additionally, based on inert fill quality assessment, three areas of impacts were identified; two in the northern portion of the Site, and one in the southwestern portion which showed PAHs and metals exceedances.
		Seventeen (17) PCAs were identified on Site as well as forty-two (42) PCAs in the Phase One study area outside the Phase One Property. Off Site PCAs which contributed to on-Site APECs included: the adjacent railway tracks, adjacent metal fabrication plant, and a hydro vault located north and adjacent to the Site. Groundwater flow was reportedly inferred to be northwest from topography maps.  Typical on-Site PCAs included:
2015 Phase One ESA	On Site – same property limits as this Phase One ESA	<ul> <li>Current diesel ASTs</li> <li>The former on-Site railway line</li> <li>Current and former fill</li> <li>Former on-Site lumber yard</li> <li>Storage and transportation of ammunition</li> <li>Several former on-Site ASTs</li> <li>Former on-Site printers</li> <li>Former on-Site retail fuel outlet (RFO)</li> <li>Historical on-Site vehicle maintenance</li> <li>Historical fires on the Site</li> <li>Former transformer in the warehouse</li> <li>Drums of unknown substance</li> <li>Waste generator codes for the Site.</li> <li>From these PCAs, twenty-one (21) APECs on the Site were</li> </ul>
		identified. A Phase II ESA was recommended prior to filing a Record of Site Condition.
175 Loretta Ave N Monitoring	Off Site – For Public Works Yard at 175 Loretta Ave. N.	Two fuel USTs were decommissioned in 2011 at the private fuel station located at the 175 Loretta Ave. N. Contaminated soils were excavated from accessible locations in the vicinity of the USTs during decommissioning. Groundwater monitoring programs completed twice a year since 2013 reportedly suggest that any residual PHC contamination from the Site is non-mobile and unlikely to affect surrounding sites.

### Interpretation of Reports

The multiple fires mentioned in the "1900 Ottawa-Hull Fire Map" and "1950's Depot Fire Articles" represent several potential contaminant sources from burned wood (PAHs), barrels of paint (metals and VOCs) and oil (PHCs), and asbestos materials given that they are still present in "2008 Environmental Review". The water used to extinguish the flames could also have acted as a transport medium to the subsurface for the contaminants. These fires would contribute to a PCA on-site as they would release and mobilize the contaminants in materials burned.





The 1970/71 Building Plans note a 2500 gallon sump was installed in the Flammables Storage Room. Chemicals from the storage room that collected in the sump may have entered the subsurface in the event that the integrity of the sump and/or connected piping was compromised so this sump is considered a PCA for the Site.

Of the APECs noted in the 2001 Phase I ESA, only four (4) qualify as PCAs for the Phase One Property. The former coal storage area and diesel AST fall within the central-west portion of the Site, the former UST falls within southeast corner of the Site, the bulk storage of explosive ordnance and flammable materials, and the historical land use on surrounding properties. The maintenance yard mentioned in the drum storage APEC is located north of the Phase One Property which is hydraulically cross-gradient of the Site, and the designated substance issues no longer exist as the building has been demolished.

The 2005 Phase I and II ESA include figures showing the locations of the APECs discovered. APECs 1, 3, 4, 5, 7, 8, 9 fall within the Phase One Property. Each of these APECs were already covered in the 2001 Phase I ESA with the exception of APEC #8 which was based on anecdotal information of a potential fuel station near Gladstone Avenue. A Phase II intrusive investigation was completed to assess the APECs on the Site, and only APECs 1 and 9, general fill quality and the coal storage area, had contaminant concentrations exceeding the Ontario background criteria (Table 1) but not federal criteria of the time. The former fuel station (APEC #8) was considered in the report to be false information, and was no longer considered to be an APEC. Boreholes were also advanced in the vicinity of the former UST (APEC #3), and no exceedances were detected so this issue is not considered an APEC. The available soil and groundwater quality data described in this report were reviewed and compared to currently applicable residential property use standards as described further below.

The 2008 Environmental review was meant to assess designated substances in the former depot building. Since the depot has been demolished, findings of this report do not affect the current report. The exception is the note that the general fill quality is of environmental concern to the Site. Three (3) areas of environmental impact were noted in this report, and of these only A3 fell within the current Phase One Property limits. A3, located beneath the former boiler room in the central-west portion of the current Phase One property, had exceedances for PAHs and metals found within the fill. The other impact sites and areas of concern all occur north of the Site and down gradient, and are therefore are not considered to cause areas of potential environmental concern (APECs) on the Site.

The 2013 Soil and Groundwater Investigation completed by DST identified four areas of environmental concern (AEC) on the property adjacent to the Phase One Property to the north (1010 Somerset St. W.). Three areas of impacted fill material were identified; two on the property to the north, and one location which is on the Phase One Property on the central-west side where the boiler room was formerly located. The available soil and groundwater quality data described in this report were reviewed and compared to currently applicable residential property use standards as described further below.

The 2015 Phase One ESA completed by Pinchin provides data regarding PCAs and APECs on the Phase One Property and in the Phase One Study Area. Their final list of PCAs and APECs were compared against Golder's to ensure no PCAs were missed in the Phase One ESA and confirming known PCAs. Pinchin's on-Site APEC referencing the 2001 Aqua Terre Phase I ESA report of bulk drum storage with unknown contents is not considered an on-Site APEC as the yard where these were located is north (i.e., cross-gradient) of the current Phase One Property. Additionally, the APEC included based on the spill of 8 L of hydraulic fluid on-Site is not considered to be an APEC, as the spill was a small quantity, went to sewer, and any contaminated soil is likely to have been





removed during the demolition of the depot. Two APECs were stated in reference to temporary fuel ASTs used for vehicles during the depot demolition, these APECs will not be considered due to the short time period the tanks were on-Site. The inferred groundwater flow seen in this Pinchin report (northwest) is approximately ninety degrees off of what the 2005 report by Trow stated (north-northeast). Given that Trow did intrusive testing and used a variety of actual groundwater elevation measurements to interpolate their flow, the north-northeast flow direction is considered appropriate as it correlates with topographic information discussed in Section 3.3.2.

The 2016 175 Loretta Ave N Monitoring Report completed by Amec Foster Wheeler provides a history of fuel UST decommissioning and remediation at the property. It indicates that any residual contamination is non-mobile and unlikely to affect surrounding properties. As such, the USTs noted at the 175 Loretta Ave N property and the previous property uses can be considered unlikely to contribute to an APEC on the Phase One Property.

### Historical Analytical Data Review and Comparison to Current Standards

The available soil and groundwater quality data described in historic reports prepared for the 933 Gladstone Ave property was reviewed and the data compared to currently applicable residential property use standards as described in MOECC Table 3 generic site condition standards in a non-potable groundwater condition for residential/parkland/institutional property use, coarse textured soil.

Historical data is primarily described in the 2005 Trow Phase II ESA and the 2013 DST Phase II ESA reports. It appears that investigations completed on the 933 Gladstone portion of the former warehouse were primarily located in the vicinity of the former boiler room in the southwest portion of the Phase One property. A review of available results shows that concentrations of PAHs and metals were detected in the fill at several locations in the vicinity of the former boiler room at concentrations above the Table 3 residential standards. The samples with elevated concentrations are from the fill material that was present to depths of approximately 1 to 1.8 metres. Similar results and concentrations above standards were noted in sample locations north of the Phase One property as well, suggesting that fill impacts were present across the site. No information is available documenting building demolition activities that were carried out in 2015 so it is not clear how much, if any, fill material may have been removed as part of the demolition activities.

Groundwater impacts were not noted during previous assessments, however, a limited number of monitoring wells were installed so they may not provide an adequate level of assessment of potential groundwater quality impacts at the site.

#### 3.1.6 Review of Street Directories

Golder ordered a street directory search from EcoLog Environmental Risk Information Services Ltd. (EcoLog ERIS) for the years 1885/86, 1890/91, 1895/96, 1900, 1905, 1910, 1916, 1921, 1926, 1931, 1936, 1941, 1946, 1951, 1956, 1962, 1966, 1971, 1976, 1981/82, 1987, 1992, 1996/97, 2001/02, 2006/07 and 2011 for the Site and surroundings properties (refer to copy of correspondence in Appendix B).

### 3.1.6.1 On-Site Listings

The Site was first listed with the address of 933 Gladstone Avenue in 2001-02 as St. Joseph Print Group and was unlisted again in 2006-07 which it has remained up to at least 2011. As noted above, the Phase One property was previously part of a larger property that was typically listed under the address 1010 Somerset Street West and/or 1 Oak Street. While there are no listing for 1 Oak Street, 1010 Somerset Street West is listed as Department of Sup & Servs Capital Region Sup Centre in the 1966 to 1992 directories.





### 3.1.6.2 Surrounding Properties within 250 m of the Site Listings

First listings in the area around the Site begin in 1890/91 as 'All Residential', with the exception of a lumber yard listed at Balsam Street (70-145). The listings remain residential until 1931 when commercial listings appear on Gladstone Avenue. In 1936 commercial and light industrial listings begin to appear on Preston Street, and in 1966 they also are seen on Loretta Avenue North. From 1966 onward, commercial and light industrial listings appear primarily on Gladstone Avenue, Preston Street, and Loretta Avenue North, with the remaining area continuing as predominantly residential.

A number of the light industrial listings noted in the street directory qualify as PCAs under Reg. 153/04. Table 2: Potentially Contaminating Activities. A summary of listings known to contribute to a PCA when within 250 m of a Site is seen in Table 5 below.

Table 5: Summary of PCAs identified from the Street Directory Search

Address	Address Listing (Year)		
	United Garage (1941-46)	PCA 28: Storage, Maintenance,	
225 Preston Street	Malmberg Auto Service (1951-71)	Fuelling and Repair of Vehicles	
223 Flesion Street	Carm's Auto Repair (1992)	PCA 10: Commercial Autobody Shop	
	S & S Truck Parts (1976-87)	Зпор	
	Mazzocato Service Station (1962)		
	Panuccio BP Service Station (1966-82)	PCA 28: Storage, Maintenance,	
241 Preston Street	Petro Canada Service Station (1987)	Fuelling and Repair of Vehicles	
241 1 resion direct	Preston Auto Centre (1992)	PCA 10: Commercial Autobody Shop	
	Jason Auto Centre (1996/97)	Shop	
	Preston Garage (2001/02-2011)		
280 Preston Street	Superior Cleaners (1951)	PCA 37: Operation of Dry Cleaning Equipment	
284 Preston Street	Top Value Gasmart (1981/82-87)	PCA 28: Storage, Maintenance, Fuelling and Repair of Vehicles	
910 Gladstone Avenue	Sal Auto & Trucks Service Centre (1981/82)	PCA 10: Commercial Autobody Shop	
	R & M Automotive Finishes (1981/82)		
	Khera Auto Repair (1987)		
916 Gladstone Avenue	Aberousal Body Repair (1992)	PCA 10: Commercial Autobody	
910 Glaustone Avenue	A V I Auto Centre (1996/97)	Shop	
	P B Auto Centre (2001/02)		
	Dragon Auto Service (2011)		
	Mario Garage (1992)	PCA 10: Commercial Autobody	
949 Gladstone Avenue	Vesuvio Iron Works (1996/97)	Shop PCA 34: Metal Fabrication	
	Orville's Auto Electric (1996/97-2011)	I OA OA. Miciai i abilication	





Address	Listing (Year)	Potentially Contaminating Activity	
952 Gladstone Avenue	Blackwell Ltd. Dry Cleaning (1951)	PCA 37: Operation of Dry Cleaning Equipment	
17 Lorob Stroot	Venice Iron Works (1992-2001/02)	PCA 34: Metal Fabrication	
17 Larch Street	V Steel Works (2001/02-2011)	FCA 34: Metal Fabrication	
	Canada Printing Ink (1971)	PCA 31: Ink Manufacturing	
155 Loretta Avenue North	Canadian Toners (1981/82)	PCA 54: Textile Manufacturing and Processing	
	Regional Textiles (1981/82)		
157 Loretta Avenue North	City Queensway Taxi (1971-1976)	PCA 28: Storage, Maintenance, Fuelling and Repair of Vehicles	
188 Louisa Street	Motorworks (2001/02)	PCA 10: Commercial Autobody Shop	

Golder Note: Several of the PCAs along Gladstone Street and Larch Street within approximately 100 m of the Site, are located up-to cross gradient, and therefore may be considered to have contributed to APECs on the Site.

#### 3.2 Environmental Source Information

### 3.2.1 Ministry of the Environment and Climate Change Correspondence

The Ontario Ministry of Environment and Climate Change (MOECC) was contacted (refer to copy of correspondence in Appendix A) to provide an Index Report with respect to active orders and approvals for the Site.

A formal response from the MOECC was received by Golder on August 5, 2016. The review of the MOECC response indicated that no Active Orders, Certificates of Approval or Environmental Compliance Approvals (the new name for Certificate of Approval) have been issued for the Site.

#### 3.2.2 City of Ottawa Correspondence

Golder forwarded a request to the City (refer to copy of correspondence in Appendix A) for the following information for the Site:

- Historic information related to landfill or dump sites on or in proximity to the property
- A review of the Historical Land Use Inventory (HLUI) for the Site and nearby properties

A formal response from the City was received by Golder on August 23, 2016. The review of the City's response indicated one hundred and seventy-four (174) entries in the historical land use inventory within the Phase One Study Area. A summary of the noteworthy results can be found in Table 6 below.





Table 6: Summary of Historical Land Use Inventory Results of Note

HLUI	Address	Name	Description
10902	1040 Somerset Street West	Paradise Auto Repair	North of Site. Auto Repair.
3972	1010 Somerset Street West	Dept. Of Supply And Services	Adjacent to North of Site. Commercial Printing.
1185	975 Gladstone	B A Banknote	West of Site. Commercial Printing.
6309	969 Somerset Street West	Genesove Press Limited	Adjacent, North of Site. Commercial Printing.
8526	952 Gladstone Avenue	Lyle Blackwell Limited	Southwest of Site. Dry cleaning. One gasoline UST.
8566	951 Gladstone Avenue	Love Printing Service Limited	West of Site. Commercial Printing.
9857	949 Gladstone	Orville's Electric Service	West of Site. Auto electrical work.
13758	Avenue	Vesuvio Iron Works	Metal works.
6674	940 Gladstone Avenue	Hodgins Bros. Limited	South of Site. Heating equipment manufacturing.
10140	916 Gladstone Avenue	P B Auto Centre	South of Site. Auto Repair.
11223	916 Gladstone Avenue	R + M Automotive Finishes	South of Site. Auto body finishing.
12189	910 Gladstone Avenue	Sal Auto And Truck Service Centre	South of Site. Auto Repair.
5264	903 Somerset Street West	Expert Cleaner And Dyer	North of Site. Dry Cleaning and Dyeing.
7767	896 Somerset Street West	Johnny Closs	North of Site. Auto Repair. Four underground storage tanks.
394	893 Somerset Street West	Acadian Printing	North of Site. Commercial Printing.
7430	890 Somerset Street West	Jim Frisby Holdings Limited	North of Site. Auto Repair.
14137	284 Preston Street	Top Value Gasmarts	Southeast of Site. Auto fuelling.
13395	280 Preston Street	Superior Cleaners	Southeast of Site. Dry Cleaning.
1189	0.44 Dreater Otreat	Panuccio Saro	Court and Cita Auto Donain and fuelling
11389	241 Preston Street	Preston Street Garage	Southeast of Site. Auto Repair and fuelling.
8286	225 Preston Street	Malmberg Auto Service Limited	East of Site. Auto Repair. Two USTs.
4876	215 Preston Street	Esso Home Comfort	East of Site. Petroleum products wholesale.
8487	203 Louisa Street	L'ora Di Ottawa	South of Site. Commercial Printing.
678	193 Preston Street	Aircon Fuels	East of Site. Auto fuelling.
5456	187 Preston Street	Farmer And Garrett	East of Site. Tannery.
3630		City Of Ottawa	Southwest of Site. Truck transport industry.





HLUI	Address	Name	Description
5879	175 Loretta Avenue North	General Supply Co. Of Canada Limited	Motor vehicles, wholesale. Paint shop. One gasoline UST.
162	164 Preston Street	Ana Transportation Inc.	East of Site. Truck transport industry.
11060	155 Loretta	Popular Printing	West of Site. Printers.
11978	Avenue North	Regional Textiles	Textile company.
11383	153 Preston Street	Preston & Lieff Glass	East of Site. Lumber Wholesale.
1559	145 Loretta Avenue North	Bell Telephone Co. Of Canada Limited	West of Site. One gasoline UST.
6287	131 Loretta Avenue North	Hall Fuel Limited	West of Site. One gasoline UST.
434	111 Breezehill	907462 Ontario Limited	West of Site. Auto repair.
6522	Avenue North	Grandtech Auto	Auto repair.
6533	75 Breezehill Avenue North	Grant Trading-Coal And Wood	Northwest of Site. Lumber and building materials.
3452	73 Breezehill Avenue North	Charcoal Supply Co.	Northwest of Site. Petroleum Products.
2056	55 Breezehill	Breezehill Auto Body	Northwest of Site. Auto body finishing.
7244	Avenue North	Japan Auto Svc Inc.	Vehicle wholesale.
1929	53 Breezehill Avenue North	Bruce Coal Co. (Yard)	Northwest of Site. Lumber and building materials.
13716	17 Larch Street	V Steel Works Limited	Adjacent East of Site. Metal working services and manufacturing.
14794		Venice Iron Works	Metal working services and manufacturing.
2043	0 Arlington Street	British American Oil Co. Limited	South of Site. Petroleum products, wholesale.

The HLUI contained approximately 40 sites in the Phase One Study Area with current or previous uses that qualify as PCAs. The inferred groundwater flow for the Site is to the north-northeast, and as such, PCAs to the north, south and east are less likely to contribute to an on-Site APEC. The Sites located to the west and south-southwest of the Site have the potential to create APECs on the Site given their positions up-gradient of the inferred groundwater flow.

### 3.2.3 City of Ottawa Document Review

Prior to the 2001 amalgamation, the City did not have a consolidated database of environmental concerns for City properties and typically referred all inquiries to the 1988 Mapping and Assessment of Former Industrial Sites, City of Ottawa, Intera Technologies Ltd. (hereafter known as the "1988 Intera Report"). This report describes an inventory and assessment study of former industrial sites that were active in the former (prior to the 2001 amalgamation) City of Ottawa from 1850 to 1984 that likely produced or handled hazardous wastes and materials. The sites were subsequently screened to identify higher priority sites which were subdivided into Group I, Group II and Group III sites.





- Group I Sites Sufficient evidence to indicate that wastes are present on-Site and that there is a high potential for environmental impact
- Group II Sites Sufficient evidence to indicate that wastes are likely remnant on-Site
- Group III Sites Unlikely that significant quantities of waste exist at the Site today and therefore the potential for environmental impact is minimal

No former industrial Site were identified on the Phase One Property, however, three (3) Group III Site were identified within the Phase One Study Area to the east, south, and west.

- 187 Preston Street (130 m east of the Phase One Property) is the Site of the former Farmer and Garrett Tanners
- West end of St. Anthony Street (formerly Arlington Street) (170 m southeast of Phase One Property) is the Site of the former British American Oil Co. Ltd.
- 975 Gladstone Avenue (200 m west of the Phase One Property) is the Site of the British American Bank Note
   Co. Ltd.

Given that these facilities are separated from the Site by a distance of 130 m or more as well as by several streets with underlying services, they are not generally considered to be PCAs that will result in an APEC on the Site. The American Bank Note property is located hydraulically up gradient but the likelihood of potential impact is lessened due to the presence of the 5 metre deep rail cut between this facility and the Phase One Property which should act as a barrier to shallow groundwater flow in the vicinity.

### 3.2.4 Review of the 2004 City of Ottawa Waste Disposal Sites Inventory

The review of the 2004 City of Ottawa Waste Disposal Sites Inventory as described in the report entitled "Old Landfill Management Strategy, Phase 1-Identification of Sites, City of Ottawa, Ontario", completed by Golder for the City of Ottawa, dated October 2004 indicated that the Site is not registered as an active or closed waste disposal site.

The Site was found to be located within 1 km of the closed LeBreton Flats, Nepean Bay, Young and Fairmont, and Bayswater and Wellington waste disposal Sites.

The LeBreton Flats is located approximately 850 m north of the Site. Nepean Bay is approximately 600 m northwest of the Site Young and Fairmont is approximately 750 m southwest of the Site, and Bayswater and Wellington is approximately 350 m west of the Site. These historic waste disposal sites are not considered an issue of environmental concern given their distances from the Site and/or locations either down gradient or cross-gradient of the inferred groundwater flow.

### 3.2.5 Ministry of Natural Resources (MNRF)

Ontario's Ministry of Natural Resources and Forestry (MNRF) was asked to search their records for the following:

- information about areas of natural significance in the vicinity of the Site
- any other environmental concerns related to the Site and surrounding area

A representative of the MNRF replied on November 16, 2016 and indicated there are no natural heritage features identified on or in close proximity to the Site.





### 3.2.6 Technical Standards and Safety Authority Correspondence

The Technical Standards and Safety Authority (TSSA) was contacted via e-mail (refer to copy of correspondence in Appendix B) to determine if any commercial fuel underground storage tanks (USTs) were registered on the Site or on the surrounding properties within 250 m of the Site. It should be noted that there is currently no requirement in Ontario to register private underground fuel oil storage tanks for heating purposes. The TSSA has maintained records since 1989.

A representative of the TSSA replied on September 8, 2016 and indicated that the TSSA records of two (2) active fuel USTs at 175 Loretta Avenue North. As described above in Section 3.1.5, these tanks have been decommissioned so are not considered an issue of potential environmental concern.

### 3.2.7 EcoLog ERIS Report

Golder contracted EcoLog Environmental Risk Information Services Ltd. (EcoLog ERIS) to conduct a search of environmental sources, including federal, provincial and private sector databases, for information on the Phase One Property and Study Area. The EcoLog ERIS report is provided in Appendix B.

The databases searches included the following databases:

Anderson's Waste Disposal Sites; Certificates of Approval; Environmental Registry; Coal Gasification Plants; Fuel Storage Tanks; National Defence & Canadian Forces Fuel Storage Tanks, Spills, and Waste Disposal Sites; National PCB Inventory; National Pollutant Release Inventory; Ontario Inventory of PCB Storage Sites; Ontario Regulation 347 Waste Receivers Summary and Waste Generator Summary; Record of Site Condition; Retail Fuel Storage Tanks; Private and Retail Fuel Storage Tanks; Ontario Spills; Anderson's Storage Tanks; Waste Disposal Sites - MOE CA Inventory; Waste Disposal Sites - MOE 1991 Historical Approval Inventory; Water Well Information Systems; Boreholes; Abandoned Aggregate Inventory; Aggregate Inventory; Abandoned Mine Information System; Automobile Wrecking and Supplies; Commercial Fuel Oil Tanks, Chemical Register; Compliance and Convictions; Certificates of Property Use; Drill Hole Database; Environmental Activity and Sector Registry; Environmental Compliance Approval; Environmental Effects Monitoring; ERIS Historical Searches; Environmental Issues Inventory; List of TSSA Expired Facilities; Federal Convictions; Contaminated Sites on Federal Land; Fisheries and Oceans Fuel Tanks; TSSA Historical Incidents; Indian & Northern Affairs Fuel Tanks; TSSA Incidents; Landfill Inventory Management Ontario; Canadian Mine Locations; Mineral Occurrences; National Analysis of Trends in Emergencies System; Non-Compliance Reports; National Environmental Emergencies System; Oil and Gas Wells; Ontario Oil and Gas Wells; Orders; Canadian Pulp and Paper; Parks Canada Fuel Storage Tanks; Pesticide Register; TSSA Pipeline Incidents; Permit to Take Water; Scott's Manufacturing Directory; Wastewater Discharger Registration Database; Transport Canada Fuel Storage Tanks; and TSSA Variances for Abandonment of Underground Storage Tanks.

#### 3.2.7.1 On Site

The Site has been a registered waste generator of: Petroleum distillates, waste oils and lubricants, light fuels, inorganic/organic laboratory chemicals, and pharmaceuticals. Additionally, there is a registered spill of 8 L of hydraulic fluid to the ground and storm sewer in 2002.





### 3.2.7.2 Surrounding Properties within 250 m of the Site

Noteworthy records reported for the Phase One ESA Study Area (excluding the Phase One Property) included the following:

- Automobile Wrecking and Supplies (AUWR) One (1) record of an automobile wrecking and supply facility at 55 Breezehill Avenue North, under the name A & T Autoparts.
- Borehole (BORE) Twenty-eight (28) records of boreholes are reported within 250 m of the Site. The boreholes uses were either unspecified or for geotechnical or geological investigation purposes. The boreholes were drilled between 1950 and 2010 and generally had depths of less than 3 metres and up to 10 metres below ground surface.
- Certificates of Approval (CA) A total of twenty-three (23) certificates of approval were issued within 250 m of the Site. The certificates were issued over the last twenty years and associated mainly with discharges of municipal water and sewage, and industrial air emissions associated with BA Banknote Inc.
- List of TSSA Expired Facilities (EXP) Nineteen (19) TSSA expired facilities were listed, but they appear to all be in relation to only three sites. Each was an expiration of liquid fuel tanks, piping, and other fuel infrastructure. The expirations were found at 971 Gladstone Avenue (Mr. Gas Limited), 241 Preston Street (Preston Auto Centre), and 284 Preston Street (Mac's Convenience Stores Inc.). All occurred between 1993 and 1995.
- Fuel Storage Tank (FST) and Fuel Storage Tank Historical (FSTH) Two (2) fuel storage tanks and two (2) historical fuel storage tanks were noted on the property of 175 Loretta Avenue, owned by the City of Ottawa. The historical tanks (FSTH) included two single walled 22,700 L USTs with sacrificial anode protection, used for gasoline and diesel fuel storage in 1991. The current fuel storage tanks (FST) appear to be replacements of the historical ones, also having a capacity of 22,700 L and holding gasoline and diesel.
- Ontario Regulation 347 Waste Generators Summary (GEN) The EcoLog ERIS report identified one hundred and thirty-five (135) waste generation Site listings within the Phase One Study Area. The waste classes identified are varied and are included in the EcoLog ERIS report in Appendix B.
- National Pollutant Release Inventory (NPRI) Twenty-five (25) entries to the pollutant release inventory were listed, but all requests were attached to one of two sites: 975 Gladstone Avenue (BA Banknote Inc.) and 175 Loretta Avenue North (City of Ottawa). 975 Gladstone Avenue was primarily noted for hexavalent chromium, as well as hydrotreated heavy naphtha, hydrotreated light distillate, solvent naphtha medium aliphatic, ethylene glycol butyl ether acetate, titanium, and hydrofluorocarbon from 2002-2010. 175 Loretta Avenue North was noted for toluene release from 1995-2009.
- Ontario Spills (SPL) The EcoLog ERIS Report listed sixteen (16) records of spills within 250 m of the Site. Some of the reported spills included releases of Freon or natural gas or spilling of small quantities (between 0.5 and 8 L) of gasoline to the roads. Due to the small quantities of the spills and that many of the spills were reportedly cleaned up, were reportedly to storm sewers and/or were not anticipated to have an impact, details regarding these spills and releases were not considered relevant.





- Private and Retail Fuel Storage Tanks (PRT) Four (4) private fuel storage tanks were registered in the private and retail database. These were gasoline and diesel storage tanks located at: a 7,919 L tank at 241 Preston Street (Preston Auto Centre, expiry (exp.) 1993), a 45,400 L tank at 971 Gladstone Avenue (Mr. Gas Limited, exp. 1994), a 45,000 L tank at 175 Loretta Avenue North (Regional Municipality of Ottawa, exp. unknown), and a 63,500 L tank at 284 Preston Street (C Corp (Ontario) Inc., exp. 1996).
- Scott's Manufacturing Directory (SCT) Thirty (30) manufacturing entries were found. Of particular note were 17 Larch Street (V Steel Works, Metal fabrication), 949 Gladstone Avenue (Vesuvio Iron Logic Custom, Metal manufacturing), 975 Gladstone Avenue (BA Banknote, Commercial printing), and 203 Louisa Street (L'Ora Di Ottawa, Newspaper printing).
- Water Well Information System (WWIS) Twenty-eight (28) records of boreholes are reported within 250 m of the Site. The boreholes uses were either unspecified or for geological investigation purposes. The wells were installed between 1950 and 2010 and generally had depths of less than 3 metres and up to 10 metres below ground surface.

Based on the review of the EcoLog ERIS report, the former presence of retail fuels outlets associated fuel storage tanks, industrial sites including tanneries, metal fabricators, and banknote manufacturers, commercial sites such as garages and dry cleaners, are located within the Phase One Study Area and are generally considered off-Site PCAs. Several diesel, natural gas, refrigerant, gasoline and oil spills were reported to have occurred within the Phase One Study Area; however, given that they were either not significant in size, were located greater than 100 m from the Site, were located hydraulically cross-gradient or downgradient with respect to the Site or entered the atmosphere or sewers, they are not considered to be issues of potential environmental concern. The Ecolog ERIS report identified many waste generating sites within the Phase One Study Area. The presence of waste generators alone is not considered an issue of concern on its own as there is no information as to the handling practices at the identified sites; however, it is an indication of the presence of chemical storage.

## 3.3 Physical Settings Sources

### 3.3.1 Aerial Photographs

Aerial photographs for the Site for the years 1928, 1958, 1965, 1976, 1991, 1999, 2005, and 2011, from the City of Ottawa geo-map (http://maps.ottawa.ca/geoOttawa/) and 2016 from Google Earth, were reviewed on-line. In addition, selected aerial photographs for the Site were obtained from the National Air Photo Library (NAPL) in Ottawa, Ontario by Golder personnel for the years 1932, 1938, 1952, 1969, 1979, 1986, and 1995 in order to help develop an understanding of the history of the development of the Site and surrounding properties (within 250 m). Copies of the aerial photographs obtained from the NAPL are presented in Appendix C.





**Table 7: Summary of Air Photo Review Findings** 

Vaar	8:40		Surrounding F	Property Direction	
Year	Site	North	East	South	West
1928	Vacant Land	Vacant lands followed by Somerset Street, a large lumberyard, and residential dwellings.	Residential dwellings and Preston Street.	Gladstone Avenue, followed by rail yards, tracks and spurs.	Rail tracks and commercial/industrial buildings followed by residential dwellings.
1932	As per 1928	As per 1928	As per 1928	As per 1928	As per 1928
1938	Small structures of uncertain use appear on west side of Site.	As per 1932	As per 1932	Rail yards south of the current 417 and east of Preston Street replaced by buildings. New small residential development on Loretta Street south of Gladstone Avenue.	As per 1932
1952	Warehouse built on Site. Northwest corner used as a storage yard.	Warehouse on Site extends onto property to the north. Parking and storage yards west of warehouse.	As per 1938	New residential dwellings built on block between Loretta and Breezehill south of Gladstone.	New large industrial building on west side of Loretta Street.
1958	Parking lot added south of warehouse. Two ASTs noted along west side of building near the boiler room.	Storage yards west of warehouse emptied. Vacant.	As per 1952	As per 1952	As per 1952
1965	ASTs noted in the 1958 photo along west side of building near the boiler room appear to have been removed. One AST may be present in a similar location a bit further to the west than the ASTs noted in the 1958 photo.	New warehouse built north of Somerset Street. West of warehouse now parking lot. New building north of warehouse before Somerset Street.	Residential dwellings on Rochester to southeast torn down. Lots vacant.	Highway 417 built over previous rail tracks.	Addition to southern edge of building directly adjacent (west) to Site.





V	Oit a	Surrounding Property Direction			
Year	Site	North	East	South	West
1969	As per 1965	New building on lot east of warehouse.	Residential dwellings to southeast at Preston Street and Gladstone Avenue demolished.	As per 1965	Railway to the west now in a cut and bridge constructed at Gladstone Avenue so that railway passes underneath. All but most western rail spur removed.
1976	As per 1969	As per 1969	New apartment building along Gladstone Avenue at Rochester Street.	Main building at 175 Loretta expanded.	As per 1969
1979	As per 1976	As per 1976	New large commercial buildings northeast of Gladstone Avenue and Preston Street intersection.	As per 1976	As per 1976
1986	As per 1979	As per 1979	As per 1979	As per 1979	As per 1979
1991	As per 1986	As per 1986	Residential dwellings replaced with large commercial east of Site on Gladstone Avenue.	As per 1986	As per 1986
1995	As per 1991	As per 1991	As per 1991	As per 1991	As per 1991
1999	As per 1995	As per 1995	As per 1995	As per 1995	As per 1995
2005	An AST can be seen south of the boiler room.	Major addition to building east of warehouse into the park. Two large stretched canvas buildings built in parking lot of the warehouse.	Small addition to building east of Site on Gladstone Avenue.	As per 1999	As per 1999
2011	As per 2005	As per 2005	As per 2005	As per 2005	As per 2005





Year	Site	Surrounding Property Direction			
		North	East	South	West
2016	Warehouse demolished and Site left vacant. Small gravel storage yard in northwest corner.	Warehouse demolished. Large rectangular canvas building removed. Parking lot and storage yard still present.	As per 2011	As per 2011	As per 2011

The review of aerial photographs of the Site and surrounding area indicates that the Site was developed with the Central Ordnance Depot sometime between 1938 and 1952. The surrounding lands on all sides began primarily as residential dwellings in the early 1900's, and have been developed with a variety of commercial and light industrial facilities since the 1950's.

The review of the aerial photographs indicated that an AST was present along the west side of the Site since at least 2005. The presence of an AST on the Site is an issue of potential environmental concern.

### 3.3.2 Topography, Hydrology, Geology

The following records were reviewed to identify topographic, geologic and hydrogeological conditions at the Site. Refer to Section 5.0 for additional information on Site features, as observed at the time of the Site visit.

Table 8: Topography, Hydrology and Geology Summary

Торіс	Conditions	Comment / Source
Topography of Site and Surrounding Area	The Site is a flat topped mound that is approximately one metre lower along the sides. The Site generally at grade with the surrounding area to the east, and slightly lower than the lands to the west. The exception is the rail tracks that run in a 5 metre deep manmade trench to the west of the Site.	Site and surrounding area observations. GeoOttawa topography map Figure 3 – Topographic Map and Areas of Natural Significance
Overburden Soils	Overlying fill materials consisting of sand a gravel underlain by a thin layer of till comprised of silty sand to 0.5 m, then 0.5 m of silty clay, and clay 0 - 4 m thick down to bedrock which is at a depth of 1 - 5 m.	DST. Subsurface Soil and
Type of Bedrock	Lindsay formation limestone.	Belanger J. R., Urban Geology of the National Capital Area, Geological Survey of Canada, Open file 5311, 2008.





Topic	Conditions	Comment / Source
Depth to Bedrock	1 to 5 m below the ground surface (mbgs)	Generalized Bedrock Geology, Ottawa, Ontario, Belanger J. R., Urban Geology of the National Capital Area, Geological Survey of Canada, Open file D3256, 2001. Trow Associates Inc. Phase I & II Environmental Site Assessment, Plouffe Park 1010 Somerset St. W., Ottawa, Ontario DRFP#08830. 2005.
Inferred Local Groundwater Flow	The inferred groundwater flow direction is toward the north-northeast.	GeoOttawa topography map. Site observations Trow Associates Inc. Phase I & II Environmental Site Assessment, Plouffe Park 1010 Somerset St. W., Ottawa, Ontario DRFP#08830. 2005.
Site Grade Relative to the Adjoining Properties  The Site is approximately 2 m lower than the lands to the west, with the exception of the railway track which is in a manmade 5 m deep depression on the western edge of the Site. The site is at grade with the lands to the north, south, and east.		Site observations
Depth to Groundwater	2.9 mbgs to 3.3 mbgs	DST. Subsurface Soil and Groundwater Investigation Sampling Plouffe Park – 1010 Somerset Street West, Ottawa, Ontario. 2013.

### 3.3.3 Fill Materials

Topic	Conditions	Comment / Source
Fill Materials	Fill of unknown source and unknown quality was likely brought onto the Site to level it after the demolition of the Central Ordnance Depot in 2015. Fill also identified as being present across the site prior to demolition and identified as an issue of environmental concern in previous environmental reports. No record that this fill material was removed during 2015 demolition activities.	Site observations. Trow Associates Inc. 2005 Phase I & II Environmental Site Assessment, Plouffe Park 1010 Somerset St. W., Ottawa, Ontario.





### 3.3.4 Water Bodies and Area(s) of Natural Significance

Topic	Conditions	Comment / Source
Nearest Open Water Body	Ottawa River, approximately 1 km to the northwest of the Site.	Figure 1 – Key Plan GeoOttawa topography map
Areas of Natural Significance	The area around the Phase One Study area is entirely urbanized and there are no areas of natural significance within it.	Site Observations Figure 3 – Topographic Map and Areas of Natural Significance

### 3.3.5 Water Wells

Topic	Conditions	Comment / Source
Water Wells on Site (location, stratigraphy of the overburden, from ground surface to bedrock, depth to bedrock, depth to water table, drilling date, use)	No active water wells were found on-Site during the site reconnaissance. Groundwater monitoring wells were previously installed during the 2005 and 2013 site assessments. In the northwest portion of the site, groundwater was encountered between 1.36 m and 1.96 m respectively, in a 0.2 – 1.0 m thick clayey silt layer which is underlain by clay that extends to the borehole's termination at 4.6 m. In the northeast portion of the site, groundwater was encountered at 2.9 mbgs and was within the clay layer which extended from 1.5 mbgs to bedrock at 4.2 mbgs.	The EcoLog ERIS database report, Site observations.  DST 2013. Subsurface Soil and Groundwater Investigation Sampling Plouffe Park – 1010 Somerset Street West, Ottawa, Ontario.  Trow Associates Inc. 2005 Phase I & II Environmental Site Assessment, Plouffe Park 1010 Somerset St. W., Ottawa, Ontario.
Water Wells on the Neighbouring Properties (location, stratigraphy of the overburden, from ground surface to bedrock, depth to bedrock, depth to water table, drilling rate, use)	Based on the EcoLog ERIS report, twenty-eight (28) wells are located in the Phase One Study Area (within 250 metres of the Site). It was indicated that the wells were completed within the overburden and were used mainly for monitoring and test holes. Details regarding the stratigraphy, depth to bedrock and water table in the 25 water wells is provided in the EcoLog ERIS report included in Appendix B.	The EcoLog ERIS database report.

## 3.4 Site Operating Records

At the time of the Site visit, the Phase One Property was vacant. No Site operating records were provided to Golder for review.





#### 4.0 INTERVIEWS

Mr. Peter Slobodian of Brookfield Global Integrated Solutions (hereinafter referred to as the "Site representative"), was interviewed at the Site on October 5, 2016. Pursuant to the requirements of O.Reg. 153/04, the Site representative was interviewed as the "current owner" with knowledge of current Site operations.

Relevant information obtained during the interview and Site visit is provided in Section 5.0.

#### 5.0 SITE RECONNAISSANCE

### 5.1 General Requirements

Ms. Sheila Barter (Environmental Consultant) of Golder visited the Site on October 5, 2016 at 9:00 am. The Site visit consisted of a walk-around the Site with the Site representative, along with a cursory inspection of surrounding properties from the Site and publicly accessible areas. The weather conditions were sunny and the temperature was approximately 16°C. The Site was undeveloped vacant land at the time of the Site visit except for the northwest corner which was being used for storage and parking as part of a larger area extending to the north on the adjacent property.

Photographs of relevant features noted during the Site visit are provided in Appendix D.

### 5.2 Specific Observations at Phase One Property

The specific observations made during the Site visit are presented in the following sections.

Topic	Observations	Source
Structures Number and Age of Buildings on the Site	No buildings or structures were present at the Site. Former warehouse was demolished in Spring 2015.	Site observations and Site Representative
General Descriptions of Each Building (including improvements	No buildings or structures were present at the Site.	Site observations
<b>Building Areas</b>	No buildings or structures were present at the Site.	Site observations
Number of Floors (include all levels, whether above or below ground)	No buildings or structures were present at the Site.	Site observations
Number, Age, and Depth of Levels Below Ground Level	No buildings or structures were present at the Site.	Site observations
Number and Details of all Aboveground Storage Tanks (ASTs)	One AST was observed on the Site in the storage area in the northwest corner. One 1340 L AST marked Petro Canada Dyed Diesel, Manufactured date: 2014. It was not clear if this tank was actually in use at the time of the Site visit.	Site observations and Site Representative





Topic	Observations	Source
Number and Details of all Underground Storage Tanks (USTs)	No USTs were observed or reported on the Phase One Property.	Site observations and Site Representative
Underground Utilities Potable and Non-Potable Water Sources	Potable water is provided to the Study Area by the City of Ottawa.	Site Observations and Site Representative
Utility Lines Present (i.e., Electrical, Natural Gas, other)	Site utility connections to former building were abandoned during demolition and Site grading drawings provided by the City. Electrical lines and poles are present along the east and west sides of the Site and on adjacent properties.	Site Representative KWX Architects. Plouffe Park Demolition, Utility Abandonment I & II. Prepared for Morrison Hershfield and Public Works and Government Services Canada
Sanitary/Process Wastewater Receptor	No sanitary or process wastewater is generated on- Site.	Site Representative, Site observations
Sanitary Sewer Connection	Sanitary sewer connection is reportedly available at the Site. Sanitary sewer manhole was observed on the west side of the Site, south of the parking area.	Site observations, Site representative
Septic Systems	None identified.	Site observations, Site representative
Storm Water Flow	Infiltration and storm sewers.	Site observations
Storm Sewer Connection	Storm sewers are present at the Site.	Site observations, Site representative
Interior of Structures Entry and Exit Points for Site Buildings	No buildings or structures were present at the Site.	Site observations, Site representative
Existing and Former Heating System(s) (include fuel type / source)	As no buildings or structures were present at the Site there were no existing heating systems observed or reported. No details about the former heating system were known by the Site representative.	Site observations, Site representative
Existing and Former Cooling System(s) (include fuel type / source)	As no buildings or structures were present at the Site there were no existing cooling systems observed or reported. No details about the former cooling system were known by the Site representative.	Site observations, Site representative
Drains, Pits, and Sumps (include current use, if any, and former use)	As no buildings or structures were present at the Site there were no drains, pits, or sumps observed or reported.	Site observations, Site representative





Topic	Observations	Source
Unidentified Substances	None identified.	Site observations
Floor Stains or Corrosion Located near a Potential Discharge Location	None identified.	Site observations
Miscellaneous Exterior Location of any Current and Former Wells	None identified.	Site observations, Site representative
Ground Cover (i.e., grass, gravel, soil, or pavement, etc.)	Newly established grass over majority of Site. Asphalt and gravel parking/storage area in northwest corner of Site. Approximate area of pavement ~3300 m <sup>2</sup> .	Site observations
Current or Former Railway Lines or Spurs	Current railway line adjacent to western boundary of Site. OC Transpo Trillium line commuter light rail, double track section in constructed trench.	Site observations.
Presence of Stained Soil, Vegetation, or Pavement	None observed.	Site observations
Presence of Stressed Vegetation	None observed.	Site observations
Areas Where Fill and/or Debris Materials Appear to Have Been Placed	The northwest corner of the Site is being used as a storage area. Debris noted in the area included old sheet metal, rolls of carpeting, old hydro poles, wood debris, foam rubber, metal buckets with scrap metal, rolls of snow fencing.  Majority of Site has been built up with fill. Site representative did not know the source of the fill. Former warehouses were demolished and footprint of old buildings was built up with fill and seeded with grass. A drainage ditch surrounds the filled area. Approximate size of filled area ~ 21,000 m <sup>2</sup> .	Site observations
Potentially Contaminating Activity	Parking/storage area contains empty bulk liquid totes of unknown sources, 5 buckets (25 L each) marked "Hydraulic Fluid – Must be disposed of" on wooden pallet in paved area, soil piles, asphalt pile, empty drums.	Site observations
Unidentified Substances	None identified.	Site observations





### **5.2.1** Enhanced Investigation Property

The Site is not considered to be an enhanced investigation property; however, the investigation was conducted in a manner consistent with the requirements for enhanced investigation properties as described in subsection 13(3) of O.Reg. 153/04. Relevant information is reported in the following table:

Topic	Observations	Source
Operations at the property, including processing or manufacturing	None observed or reported.	Site observations and interview
Hazardous materials used or stored at the Phase one property	None observed or reported.	Site observations and interview
Products manufactured at the Phase one property;	None observed or reported.	Site observations and interview
By-products and wastes at the Phase one property	None observed or reported.	Site observations and interview
Raw materials handling and storage locations at the Phase one property	Storage of materials in NW corner of Site.	Site observations and interview
Location and contents of drums, totes and bins at the Phase one property	There were empty buckets, drums and totes on the Site in the previously discussed areas where debris was present. Former contents of the buckets, drums and totes is unknown. One of the totes was marked "Water". No testing was performed to determine contents.	Site observations and interview
The location, installation date, source of incoming liquid and effluent discharge location for all oil-water separators	None observed or reported.	Site observations and interview
All vehicle and equipment maintenance areas, including the locations of maintenance, fluid storage, and waste storage areas	All vehicle and equipment maintenance areas, including the locations of maintenance, fluid storage, and waste  None observed or reported. Boat and backhoe were parked in the parking area. No maintenance is done on site according to Site representative.	





Topic	Observations	Source
Details of all spills including the dates, locations, materials involved, and volumes of material spilled	including the dates, locations, materials involved, and volumes of material	
Details of liquid discharge points such as water and French drains, including their locations	None observed or reported.	Site observations and interview
Details of all hydraulic lift equipment at the property, including elevators, in-ground hoists and loading docks	None observed or reported.	Site observations and interview

### 5.3 Surrounding Land Use

During the Site visit, a visual reconnaissance of the outdoor operations in the Phase One Study Area was carried out from the Site and publicly accessible areas.

The surrounding properties include residential and commercial land uses, as illustrated on Figure 2.

**North:** The area north is occupied by Public Works and Government Services Canada. The large temporary dome is a masonry shop used for the creation and repair of masonry for Federal Government buildings. The paved area north of the Site is currently being used by the Department of National Defense for storage of materials in trailers.

**East:** Residential and commercial properties (including Preston Hardware).

South: Gladstone Avenue, residential properties and City of Ottawa Loretta Works Yard.

**West:** Railway tracks in trench (OCTranspo Trillium Line commuter light rail) and paved multi-use path adjacent to fence on Site. Commercial properties west of the rail corridor.

### 5.4 Written Description of Investigation

At the time of the Site reconnaissance, conducted on October 5, 2016, the Site consisted of an 8.1 acre (3.3 hectare) parcel of undeveloped land. No buildings or structures were noted on the Phase One Property. The Site representative confirmed that the former buildings on the Site had been demolished in the Spring of 2015 and that fill had been imported to the Site in order to level and vegetate the area. The surrounding properties within the Phase One Study Area included residential and commercial land uses as well as a rail corridor and City of Ottawa owned properties.





There were findings from the Site and area reconnaissance that indicate a PCA on-Site, which was the result of the debris that was noted in the storage area in the NW corner of the Site. It is expected that this PCA represents an APEC on the Site.

#### 6.0 REVIEW AND EVALUATION OF INFORMATION

#### 6.1 Current and Past Uses of the Site

The following summarizes the current and past uses of the Phase One Property:

Table 9: Summary of the Current and Past Uses of the Site

Year(s)	Owner's Name	Description of Property Use		Other Observations from Aerial Photographs, Fire Insurance Plans, Etc.
Prior to February 25, 1809	Crown	Undeveloped	Agricultural or Other use	No Aerial photos prior to 1928. Fire
February 25, 1809 to May 23, 1837	Robert Randall	Undeveloped	Agricultural or Other use	Insurance plans show the Site as undeveloped (i.e., no
May 23, 1837 to August 18, 1837	Peter Ayler Vallely	Undeveloped	Agricultural or Other use	buildings) prior to 1948 but was
August 18, 1837 to May 2, 1844	William Price, Peter Mcbill, Nathaniel Gould & James Daries	Undeveloped	Agricultural or Other use	occupied by a lumber yard starting in 1894 until sometime prior to
May 2, 1844 to December 16, 1875	Nicholas Sparks	Undeveloped	Agricultural or Other use	1928 where it appeared vacant. The surrounding area
December 16, 1875 to Nov 10, 1894	Esther Slater	Undeveloped	Agricultural or Other use	is entirely residential until commercial and
Nov 10, 1894 to May 27, 1921	John R. Booth	Lumberyard with rail spurs but no buildings.	Commercial / industrial use	light industrial businesses begin to build up along Gladstone Avenue,
May 27, 1921 to August 17, 1942	J.R. Booth Ltd.	Lumberyard with rail spurs but no buildings.	Commercial / industrial use	Loretta Avenue North and Preston Street subsequent to 1930.
August 17, 1942 to March 2015	His Majesty the King (Crown) (current owner)	ng (Crown) Depot). Also Commer		Warehouse covers most of the Site. Parking lot is built in the south of the Site. A boiler room with ASTs outside can be seen along the western edge of the warehouse.
March 2015 to Present	His Majesty the King (Crown) (current owner)	Vacant land with small area used for storage.	Commercial / industrial use	The parking lot and northwest corners of the Site are still used for storage.





The Site was privately owned from 1809 to 1942. It is assumed that the Site was vacant and undeveloped prior to 1894. Subsequent to 1894 the Site was used as a lumberyard and vacant land until it was bought by the crown in 1942. By 1946 the land was developed with the Central Ordnance Depot, a warehouse complex that covered the majority of the Site including adjacent lands to the north. In 2015 the warehouse was demolished and the land has remained vacant since that time.

### 6.2 Potentially Contaminating Activity

Potentially contaminating activities, which if currently or historically carried out at a site, may contribute to an area of potential environmental concern (APEC). Based on the information obtained as part of this Phase One ESA, the following PCA was identified:

#### 6.2.1 On-Site PCAs

Table 10: Summary of PCAs within the Phase One Property

ID on Figure 4	Location	Potentially Contaminating Activities as per Table 2 of Reg.153/04 Sources		Rationale for the PCA to Contribute to an APEC on the Site
1	On-Site (NW corner)	PCA 28: Gasoline and Associated Products in Fixed Tanks (Current Dyed Diesel AST)	Site observations	
2	On-Site	PCA 46: Rail Yards, Tracks, and Spurs (Former on-Site rail spurs running in several locations across the entire property during lumberyard use. Rail spurs running to east side of boiler room and along the west side of the depot building)		
3	On-Site (Entire Site)	PCA 30: Importation of Fill Material of Unknown Quality (Footprint of old building was built up with fill following 2015 demolition. Layer of fill was also identified across Site prior to demolition, which included waste products. Fill origin unknown)	Site observations, Pinchin 2015 Phase One ESA Trow 2005 Phase I & II ESA	As per Reg. 153/04. All PCAs found on the Phase One Property
4	On-Site (Entire Site)	PCA 59: Bulk Storage of Treated and		are considered APECs.
5	On-Site (Entire Site)  PCA 20: Explosives and Ammunition Bulk Storage PCA 39: Paints Manufacturing, Processing, and Bulk Storage PCA: Other – Oil Drum Storage (Site used as Central Ordnance Depot for 50 years including reported storage of paint, oils, ammunition/ordnance and assorted military stores)		FIP, HLUI, Pinchin 2015 Phase One ESA	





ID on Figure 4	Location	Potentially Contaminating Activities as per Table 2 of Reg.153/04	Information Sources	Rationale for the PCA to Contribute to an APEC on the Site
6	On-Site (West and south of former boiler room)	PCA 28: Gasoline and Associated Products in Fixed Tanks (Historical heating oil ASTs)	1958 – 2014 Aerial photos, Pinchin 2015 Phase One ESA	
7	On-Site (Unknown, assume entire site)	PCA 31: Ink Manufacturing, Processing, and Bulk Storage (Former printer operation on-Site)	2001/02 Street Directory, Pinchin 2015 Phase One ESA	
8	On-Site (SW corner of former building, north of former boiler room)	PCA: Other – Flammable Chemical Storage Room Sump (2500 gallon sump was noted in building plans for the flammables storage room)	1970/71 Building Plans	
9	On-Site (Unknown, assume entire Site)	PCA: Other – Vehicle Maintenance (Reported historical vehicle maintenance)	Pinchin 2015 Phase One ESA	
10	On-Site (Site within former warehouse footprint)	PCA 55: Transformer Use (Transformers on-Site within former warehouse)	Pinchin 2015 Phase One ESA	As per Reg. 153/04. All PCAs found on the Phase One Property are
11	On-Site	PCA: Other – Waste Generator (Waste generator codes for Petroleum distillates, waste oils and lubricants, light fuels, chemicals, and pharmaceuticals)	EcoLog ERIS, Pinchin 2015 Phase One ESA	considered APECs.
12	On-Site (West side in former boiler room)	On-Site (West side in former boiler  On-Site (West side in former boiler  On-Site (West side in former boiler  On-Site (Storage  Storage  Several 205 L drums of waste oil were storage in the boiler room and minor staining		
13	On-Site (North and south ends of former warehouse, as well as two fires in unknown locations)	PCA: Other - Fires (Numerous fires in the 1950's burned down portions of the depot which may have released contaminants including oil and paint)	1900 Ottawa-Hull Fire Map, 1950's Depot Fire Articles, Trow 2005 Phase I & II ESA	





ID on Figure 4	Location	Location Potentially Contaminating Activities as per Table 2 of Reg.153/04		Rationale for the PCA to Contribute to an APEC on the Site
14	On-Site (NW corner)	PCA: Other – Storage of Debris and Chemical Waste (Parking/storage area contains empty bulk liquid totes of unknown sources, 5 buckets (25 L each) marked "Hydraulic Fluid – Must be disposed of" on wooden pallet in paved area, soil piles, asphalt pile, empty drums.	Site observations	

### 6.2.2 PCAs on Surrounding Properties within 250 m of the Site Listings

Table 11: Summary of PCAs within the Phase One Study Area but not on the Phase One Property.

ID on Figure 2	Location	Potentially Contaminating Activities as per Table 2 of Reg.153/04	Information Sources	Rationale for the PCA to Contribute to an APEC on the Site
		PCAs North of Sit	te	
15	1040 Somerset Street	PCA 10: Commercial Autobody Shop (Paradise Auto Repair)	HLUI	This PCA is not considered likely to contribute to an APEC on Site. This is due the PCA being down-gradient of the Site according to the local inferred groundwater flow.
16	1010 Somerset Street	PCA: Other – Drums of Unknown Contents (Several drums of unknown contents noted in 2001 in maintenance yard)	Aqua Terre 2001 Phase I ESA, Pinchin 2015 Phase One ESA	This PCA is considered likely to contribute to an APEC on Site. This is due to the PCA being directly adjacent to the north portion of the Site.
17	969 Somerset Street	PCA 31: Ink Manufacturing, Processing, and Bulk Storage (Genesove press Limited – Printers)	HLUI	
18	903 Somerset Street	PCA 37: Operation of Dry Cleaning Equipment (Expert Cleaner and Dyer) PCA 17: Dye Manufacturing, Processing, and Bulk Storage (Expert Cleaner and Dyer)	HLUI	These PCAs North of the Phase One Property are not considered likely to contribute to an APEC on Site. This is due these PCAs being down-gradient of the Site
19	896 Somerset Street	PCA 10: Commercial Autobody Shop (Johnny Closs – Auto repair) PCA 28: Gasoline and Associated Products Storage in Fixed Tanks (Johnny Closs – Auto repair)	HLUI	according to the local inferred groundwater flow.





ID on Figure 2	Reg. 155/04		Information Sources	Rationale for the PCA to Contribute to an APEC on the Site
20	893 Somerset Street	PCA 31: Ink Manufacturing, Processing, and Bulk Storage (Acadian Printing – Printers)	HLUI	
21	890 Somerset Street	PCA 10: Commercial Autobody Shop (Jim Frisby Holdings Limited – Auto repair)	HLUI	
22	55 Breezehill Avenue North	PCA 10: Commercial Autobody Shop (Breezehill Auto Body) (Japan Auto SVC Inc. – Auto repair) PCA 49: Salvage Yard including Automobile Wrecking (A & T Autoparts)	HLUI, EcoLog ERIS	
23	53 Breezehill Avenue North	PCA – Other: Bulk Storage of Coal (Bruce Coal Co.)	HLUI	
		PCAs East of Sit	е	
24	241 Preston Street	PCA 28: Gasoline and Associated Products Storage in Fixed Tanks (Preston Auto Centre, Mazzocato Service Station, Pannuccio BP Service Station, Petro Canada Service Station – one UST) PCA 10: Commercial Autobody Shop (Preston Auto Centre, Jason Auto Centre, Preston Garage)	EcoLog ERIS, Street Directory, HLUI	Those DCAs seek of the
25	225 Preston Street	PCA 28: Gasoline and Associated Products Storage in Fixed Tanks (Malmberg Auto Service – two USTs) PCA 10: Commercial Autobody Shop (United Garage, Malmberg Auto Service, Carm's Auto Repair)	EcoLog ERIS, Street Directory, HLUI	These PCAs east of the Phase One Property are not considered likely to contribute to an APEC on Site. This is due to their distance from the Site (>100 m) and their position cross-gradient of the Site according to the local
26	215 Preston Street	PCA 28: Gasoline and Associated Products Storage in Fixed Tanks (Esso Home Comfort)		inferred groundwater flow.
27	193 Preston Street	PCA 28: Gasoline and Associated Products Storage in Fixed Tanks (Aircon Fuels)	HLUI	
28	187 Preston Street	PCA 53: Tannery (Farmer and Garrett – Tannery)	HLUI, 1988 Intera Report	





ID on Figure 2	Location	Potentially Contaminating Activities as per Table 2 of Reg.153/04	Information Sources	Rationale for the PCA to Contribute to an APEC on the Site
29	164 Preston Street	PCA 10: Commercial Autobody Shop (Ana Transportation Inc. – Auto Repair)	HLUI	
30	153 Preston Street	PCA 59: Bulk Storage of Treated and Preserved Wood Products (Preston & Lieff Glass – Lumber Wholesale)	HLUI	
31	17 Larch Street	PCA 34: Metal Fabrication (Venice Iron Works, V Steel Works		This PCA has a high likelihood of contributing to an APEC on-Site due to its position directly adjacent to the Site, despite being crossgradient of the inferred groundwater flow.  This Site has been confirmed across multiple sources. The likely contaminants would be metals, PHC and VOCs.
		PCAs South of Si	te	
32	284 Preston Street	PCA 28: Gasoline and Associated Products Storage in Fixed Tanks (C Corp (Ontario) – one UST) (Top Value Gasmart, Mac's Convenience Stores Inc.)	EcoLog ERIS, Street Directory, HLUI	These PCAs southeast of the Phase One Property on Preston Street are not considered likely to contribute to an APEC on Site. This is
33	280 Preston Street	PCA 37: Operation of Dry Cleaning Equipment (Superior Cleaners – Dry cleaning)	Street Directory, HLUI	due to their distance from the Site (>100 m) and their position cross-gradient of the Site according to the local inferred groundwater flow.
34	916 Gladstone Avenue	PCA 10: Commercial Autobody Shop (R+M Automotive Finishes, Aberousal Body Repair) (Khera Auto Repair, A V I Auto Centre, P B Auto Centre, Dragon Auto Service)	Street Directory, HLUI	These PCAs all are slightly southeast of the Phase One Property, and because of this, are not considered likely
35	910 Gladstone Avenue	PCA 10: Commercial Autobody Shop (Sal Auto & Truck Service Centre.)	Street Directory, HLUI	to contribute to an APEC on Site. While these PCAs are within 100 m of the Site, their positions place them cross-
36	203 Louisa Street	PCA 31: Ink Manufacturing, Processing, and Bulk Storage (L'Ora Di Ottawa – Newspaper Printer)	EcoLog ERIS, HLUI	gradient of the Site rather than up-gradient, according to the local inferred groundwater flow.
37	188 Louisa Street	PCA 10: Commercial Autobody Shop (Motorworks – Auto Repair)	Street Directory	





ID on Figure 2	Location	Potentially Contaminating Activities as per Table 2 of Reg.153/04	Information Sources	Rationale for the PCA to Contribute to an APEC on the Site	
38	West end of St. Anthony Street	PCA 41: Petroleum-derived Gas Manufacturing, Processing, and Bulk Storage (British American Oil Co. Limited)	1988 Intera Report		
		PCAs West of Sit	е		
39	West of Site	PCA 46: Rail Yards, Tracks, and Spurs (Multiple rail lines historically running in north-south direction immediately west of Site)	Aerial photos, FIP, Site Visit, Pinchin 2015 Phase One ESA	This PCA is considered likely to contribute to an APEC on Site. This is due to the PCA being directly adjacent to the Site.	
40	975 Gladstone Avenue  PCA 31: Ink Manufacturing, Processing, and Bulk Storage (British American Bank Note Co. Limited, BA Banknote Inc.)		EcoLog ERIS, Street Directory, HLUI, 1988 Intera Report, FIPs (1948, 1956)	PCAs west of the Phase One Property are not considered likely to contribute to an APEC on Site. This is due to their positions cross-gradient of the Site rather than up- gradient, according to the	
41	971 Gladstone Avenue	PCA 28: Gasoline and Associated Products Storage in Fixed Tanks (Mr Gas Limited – one UST)	EcoLog ERIS	local inferred groundwater flow and their distance from the Site >100 m away.	
42	952 Gladstone Avenue	PCA 28: Gasoline and Associated Products Storage in Fixed Tanks (Lyle Blackwell Limited – one gasoline UST) PCA 37: Operation of Dry Cleaning Equipment (Lyle Blackwell Limited Cleaners & Dyers) PCA 17: Dye Manufacturing, Processing, and Bulk Storage (Lyle Blackwell Limited Cleaners & Dyers)	FIPs (1948), HLUI	These PCAs are up gradient of the Site, but are considered unlikely to	
43	951 Gladstone Avenue	PCA 31: Ink Manufacturing, Processing, and Bulk Storage (Love Printing Service Limited)	HLUI	contribute to an APEC due to their distance from the Site >100 m away.	
44	949 Gladstone Avenue	PCA 34: Metal Fabrication (Vesuvio Iron Works) PCA 10: Commercial Autobody Shop (Mario Garage, Orville's Auto Electric)	EcoLog ERIS, Street Directory, HLUI		
45	940 Gladstone Avenue	PCA 34: Metal Fabrication (Hodgins Bros. Limited – Heating equipment manufacturing)	HLUI		





ID on Figure 2	Location	Potentially Contaminating Activities as per Table 2 of Reg.153/04	Information Sources	Rationale for the PCA to Contribute to an APEC on the Site
46	175 Loretta Avenue North	PCA 28: Gasoline and Associated Products Storage in Fixed Tanks (General Supply Co. of Canada Limited – One gasoline UST, City of Ottawa – Two historic USTs) PCA 39: Paints Manufacturing, Processing, and Bulk Storage (General Supply Co. Of Canada Limited) PCA 57: Vehicles and Associated Parts Manufacturing (General Supply Co. Of Canada Limited, City of Ottawa)	EcoLog ERIS, Street Directory, HLUI, TSSA, 2016 175 Loretta Ave. N. Monitoring Report	This PCA is not considered likely to contribute to an APEC on the Site since available documents indicate that remediation activities had been carried out and that there is reportedly little to no mobilization of contaminants off the 175 Loretta Ave. N. property.
47	157 Loretta Avenue North	PCA 52: Storage, Maintenance, Fuelling and Repair of Vehicles (City Queensway Taxi – Auto fleet repair and storage)	Street Directory	
48	155 Loretta Avenue North	PCA 31: Ink Manufacturing, Processing, and Bulk Storage (Canada Printing Ink, Canadian Toners, Popular Printing) PCA 54: Textile Manufacturing and Processing (Regional Textiles)	Street Directory, HLUI,	These PCAs southwest of the Phase One Property are up gradient of the Site, but are
49	145 Loretta Avenue North	PCA 28: Gasoline and Associated Products Storage in Fixed Tanks (Bell Telephone Co. Of Canada Limited – One gasoline UST)	HLUI, FIP (1956)	considered unlikely to contribute to an APEC due to their distance from the Site >50 m away.
50	131 Loretta Avenue North	PCA 28: Gasoline and Associated Products Storage in Fixed Tanks (Hall Fuel Limited – One gasoline UST)	HLUI, FIP (1956)	
51	111 Breezehill Avenue North	PCA 10: Commercial Autobody Shop (907462 Ontario Limited, Grandtech Auto – Auto repair)	HLUI	

### 6.3 Areas of Potential Environmental Concern

The following table summarizes the findings of the Phase One ESA based on the available information. APEC locations are presented in Figure 4.





Table 12: Summary of all APECs affecting the Phase One Property

APEC #	Area of Potential Environmental Concern	Location of Area of Potential Environmental Concern on Phase One Property	Potentially Contaminating Activity	Location of PCA (on-Site or off-Site)	Contaminants of Potential Concern	Media Potentially Impacted (Groundwater, soil and/or Sediment)
1	Current Dyed Diesel AST.	Storage yard in the northwest corner of the Site	PCA 28: Gasoline and Associated Products in Fixed Tanks.	On-Site	PHC and BTEX	Groundwater and Soil
2	Former on-Site rail tracks as well as rail line adjacent to the west.	Former on-Site rail spurs running in several locations across the entire property during lumberyard use. Rail spurs running to east side of boiler room and along the west side of the depot building.	PCA 46: Rail Yards, Tracks, and Spurs.	On-Site	Metals, PAHs, PHC	Soil
3	Footprint of old buildings was built up with fill following 2015 demolition. Layer of fill was also identified across Site prior to demolition, which included waste products. Fill origin unknown.	Entire Site	PCA 30: Importation of Fill Material of Unknown Quality.	On-Site	Metals, PAHs, PHC, VOC	Soil
4	Former lumber yard on-Site.	Entire Site	PCA 59: Bulk Storage of Treated and Preserved Wood Products.	On-Site	Metals, PAHs, VOCs	Soil





APEC #	Area of Potential Environmental Concern	Location of Area of Potential Environmental Concern on Phase One Property	Potentially Contaminating Activity	Location of PCA (on-Site or off-Site)	Contaminants of Potential Concern	Media Potentially Impacted (Groundwater, soil and/or Sediment)
5	Site used as Central Ordnance Depot for 50 years including storage of paints, oils, munitions and assorted military stores.	Entire Site	PCA: Other – Oil Drum Storage PCA 20: Explosives and Ammunition Bulk Storage PCA 39: Paints Manufacturing, Processing, and Bulk Storage.	On-Site	Metals, PAHs, VOCs	Groundwater and Soil
6	Historical heating oil ASTs.	West (2 tanks) and south (1 tank) of former boiler room.	PCA 28: Gasoline and Associated Products in Fixed Tanks.	On-Site	PAHs, PHC, BTEX, VOC	Groundwater and Soil
7	Former printer operation on-Site.	Unknown, assume entire building footprint area.	PCA 31: Ink Manufacturing, Processing, and Bulk Storage.	On-Site	VOCs	Groundwater and Soil
8	Former 2500 gallon sump noted in building plans for the flammables storage room.	On-Site (NW corner, north of former boiler room).	PCA: Other – Chemical Storage Room Sump.	On-Site	PHC, BTEX, VOCs	Groundwater and Soil
9	Historical vehicle maintenance.	Unknown, assume entire Site.	PCA: Other – Vehicle Maintenance.	On-Site	PHC, VOC	Groundwater and Soil
10	Transformers on-Site within former warehouse.	Site within former warehouse footprint.	PCA 55: Transformer Use.	On-Site	PCBs, PHC	Groundwater and Soil





APEC #	Area of Potential Environmental Concern	Phase One Property		Location of PCA (on-Site or off-Site)	Contaminants of Potential Concern	Media Potentially Impacted (Groundwater, soil and/or Sediment)
11	Waste generator codes for Petroleum distillates, waste oils and lubricants, light fuels, chemicals, and pharmaceuticals.	Entire Phase One Study Area.	PCA: Other – Waste Generator.	On/Off- Site	PHC, VOC	Groundwater and Soil
12	Several 205 L drums of waste oil were stored in the boiler room and minor staining was observed.	West side in former boiler room.	PCA: Other – Petroleum Product Drum Storage.	On-Site	PHC, BTEX	Groundwater and Soil
13	Numerous fires in the 1950's burned down portions of the depot which may have released contaminants.	On-Site (North and south ends of former warehouse, as well as well as two fires in unknown locations).	PCA: Other – Fires.	On-Site	PHC, Metals, PAH, VOCs	Groundwater and Soil





APEC #	Area of Potential Environmental Concern	Location of Area of Potential Environmental Concern on Phase One Property	Potentially Contaminating Activity	Location of PCA (on-Site or off-Site)	Contaminants of Potentially Impacted (Groundwate soil and/or Sediment)	
14	Parking area contains empty bulk liquid totes of unknown sources, 5 buckets (25 L each) marked "Hydraulic Fluid – Must be disposed of" on wooden pallet in paved area, soil piles, asphalt pile, empty drums. Several drums of unknown contents noted in 2001 in maintenance yard immediately adjacent to north.	On-Site (NW corner of Site in storage area).	PCA: Debris and Chemical Waste.	On-Site / Off-Site	Metals, PHC PAH, VOCs	Groundwater and Soil
15	Venice Iron Works and V Steel Works Limited.	17 Larch Street, adjacent to Site on east side.	PCA 34: Metal Fabrication.	Off-Site	Metals, PHC, VOC	Groundwater and Soil

PHC - petroleum hydrocarbons fraction 1 to fraction 4

BTEX – benzene, toluene, ethylbenzene and xylenes

PCB - polychlorinated biphenyls

PAH - polycyclic aromatic hydrocarbons

VOC - Volatile Organic Compounds

### 6.4 Conceptual Site Model

The following key Site features (as required by O.Reg. 153/04) are presented in Figures 1 through 4:

- The former warehouse building footprint
- Existing buildings and structures
- Water bodies and areas of natural significance located in the Phase One Study Area
- Roads (including names) and railways within the Phase One Study Area
- Uses of properties adjacent to the Phase One Property
- Location of identified PCAs in the Phase One Study Area (including any storage tanks)





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

- At the time of the Site reconnaissance, conducted on October 5, 2016, the Site consisted of an 8.1 acre (3.3 hectare) parcel of undeveloped land. No buildings or structures were noted on the Phase One Property.
- An OC Transpo light rail line is in a trench along the west perimeter of the Site. No areas of natural significance were identified on or within the Phase One Study Area.
- No active water source is reportedly available at the Site. Potable water is provided to the Study Area by the City of Ottawa.
- At the time of the Phase One ESA, the Site was undeveloped land. Historically, the Site was part of a larger property that included the immediately adjacent lands to the north that was occupied by a large government owned warehouse structure referred to as the Central Ordnance Depot or Central Supply Depot. Prior to that the Site was used as a lumberyard. There are no indications that the Phase One Property was used for any of the following commercial uses: vehicle garage, bulk liquid dispensing facility, or dry cleaning facility.
- At the time of the Phase One ESA, the neighbouring properties within the Phase One Study Area included residential, commercial, and light industrial land uses. Many of the neighbouring properties in the Phase One Study Area were used for industrial purposes as well as the following commercial uses: vehicle garage, fuel dispensing facility, or dry cleaning facility.
- Fifty-one (51) PCAs were identified in the Phase One Study Area, fifteen (15) of which were on the Phase One Property, as shown on Figure 2. Based on site characteristics and the locations of the off-Site PCA, a total of 17 Areas of Potential Environmental Concern were identified for the Phase One Property as shown on Figure 4.
- Utility connections to the former building were abandoned during demolition, including water, sewer, electrical, natural gas, cable and telephone. Utility mains, including storm sewers observed during the site reconnaissance continue to be present.
- Soil at the Site consists primarily of till plain deposits of silt and clay; and limestone bedrock. The physiography of the soils is till plains. Borehole records for the Site and Study Area from previous environmental studies indicate the presence of wide-spread fill material and silty sand underlain by silty clay, clay, and grey limestone at a depth of approximately 1 5 m on Site.
- Local groundwater is anticipated to flow towards the north-northeast based on topography and previously completed subsurface investigations that evaluated groundwater flow direction based on water levels measured in groundwater monitoring wells. Regional groundwater is anticipated to flow in a northern direction towards the Ottawa River, which is approximately 1 km north of the Site.

### 6.4.1 Uncertainty and Absence of Information

There were no material deviations to the Phase One ESA requirements set out in O.Reg. 153/04 that would cause uncertainty or absence of information that would affect the validity of the Phase One Conceptual Site Model or the findings of this Phase One ESA.





#### 7.0 CONCLUSIONS

Based on the information obtained and reviewed as part of this Phase One ESA, a total of 15 areas of potential environmental concern were identified in association with the Site, grouped into the following general categories:

- Waste/Debris Areas of debris were noted during the Site visit in multiple locations. Potential contaminants
  of concern include metals, PAH, PHC and VOCs.
- Fill Fill materials of unknown origin and quality are present on the Site. Potential contaminants of concern include metals, PAH, PHC and VOCs.
- Gasoline and Associated Products Storage Current and historical ASTs associated with the Site. Potential contaminants of concern include PHC, PAH, and BTEX.
- Past Site Uses The Site has been used for commercial printing, ammunition, oil, paint, chemicals and flammable materials storage, vehicle maintenance and repair, a private fuel outlet, and lumberyard. Each of these Site uses is associated with a PCA, and the contaminants of potential concern include metals, PAH, PHC, BTEX, and VOCs.
- Waste Generator The Site has numerous waste generator tags associated with its previous use as a warehouse. Additionally, the Phase One Study Area is populated with industrial and commercial properties with dozens of different waste generator registrations. The contaminants of potential concern include metals, PAHs, PHC, BTEX, and VOCs.
- Fires The former lumberyard was destroyed by fire in 1900, and there were numerous fires at the warehouse on-Site in the early 1950s. It is likely that designated substances and chemicals stored in the former building may have contaminated the Site during the fire via the water used to extinguish the fire. Contaminants of potential concern include metal, PAH, PHC, BTEX, and VOCs.
- Transformer The former warehouse had transformers within the building. The contaminants of potential concern include PCB and PHC.
- Flammable Storage Room Sump A 2500 gallon sump was installed in the 1970s as a drainage area for the Flammable Storage room. Chemicals collected in the sump may have entered the subsurface in the event that the integrity of the sump and connected piping was compromised. Contaminants of concern are PHC, BTEX, and VOCs.
- Off-Site PCAs A metal fabrication facility located adjacent to the Site at 17 Larch Street was identified as likely to contribute to an APEC on Site given its close proximity. The contaminant of potential concern is metals, PHC and VOCs.

Based on the above, a Phase Two ESA is recommended and would be required to support the submission of an RSC for the Site.





### 8.0 REFERENCES

The following documents and/or data were cited in this report:

Source	Date
Generalized Bedrock Geology, Ottawa, Ontario, Belanger J. R., Urban Geology of the National Capital Area, Geological Survey of Canada, Open file D3256.	2001
Urban Geology of the National Capital Area, Geological Survey of Canada, Open file 5311.	2008
Aerial Photographs (Golder in-house library and GeoOttawa)	1928, 1932, 1938, 1952, 1958, 1965, 1969, 1976, 1979, 1986, 1991, 1995, 1999, 2005, and 2011
Fire Insurance Plans – Golder in-house library	1888 (Revised 1901), 1902 (Revised 1912), 1925 (Revised 1948), and 1956
City Directories, obtained by ERIS on behalf of Golder	1885/86, 1890/91, 1895/96, 1900, 1905, 1910, 1916, 1921, 1926, 1931, 1936, 1941, 1946, 1951, 1956, 1962, 1966, 1971, 1976, 1981/82, 1987, 1992, 1996/97, 2001/02, 2006/07 and 2011
ERIS Report	August 2016
Plan Showing Extent of Ottawa-Hull Conflagration. Chas. E. Goad.	April 1900
Army Probing Ordnance Depot Blaze. Ottawa Journal.	March 1950
MP Demands Fire Probe. Ottawa Journal.	June 1951
Fireman Hurt Battling Ordnance Depot Blaze. Ottawa Journal.	January 1952
Fire Destroys Plouffe Park Army Stores. Ottawa Journal.	October 1952
General Alterations to No. 1 Supply Centre, Plouffe Park, Ottawa, Ontario. Selected plans from City of Ottawa Building Code Services historic records.	1970/71
Building plans for No. 1 Supply Centre Warehouse, Plouffe Park, 1010 Somerset St. W. Ottawa, Ontario – Fire Protection Improvements. Selected plans from City of Ottawa Building Code Services historic records.	1989
Phase I Environmental Site Assessment Plouffe Park (1010 Somerset St. W.) Ottawa, Ontario. Aqua Terre Solutions Inc.	March 2001





Source	Date
Phase I & II Environmental Site Assessment, Plouffe Park 1010 Somerset St. W., Ottawa, Ontario DRFP#08830. Trow Associates Inc.	January 2005
Environmental Review and Limited Investigation Plouffe Park, 1010 Somerset Street West, Ottawa, Ontario. Levac Robichaud Leclerc Associates Ltd.	October 2008
Subsurface Soil and Groundwater Investigation Sampling Plouffe Park – 1010 Somerset Street West, Ottawa, Ontario. DST Consulting Engineers Inc.	September 2013
Phase One Environmental Site Assessment: 933 Gladstone Avenue Ottawa, Ontario-Draft. Pinchin Ltd.	March 26, 2015
2016 Groundwater Monitoring Program Private Fuel Outlet 175 Loretta Avenue North Ottawa, Ontario. Amec Foster Wheeler.	December 2016





#### 9.0 LIMITATIONS AND USE OF REPORT

This report (the "Report") was prepared for the exclusive use of The City of Ottawa ("the City") for the express purpose of providing advice with respect to the environmental condition of the Site. In evaluating the Site, Golder Associates Ltd. (Golder) has relied in good faith on information provided by others as noted in the Report. We have assumed that the information provided is factual and accurate. We accept no responsibility for any deficiency, misstatement or inaccuracy contained in this Report as a result of omissions, misinterpretations or fraudulent acts of persons interviewed or contacted, or incomplete or inaccurate historical information from the various agencies. Any use which a third party makes of this Report, or any reliance on or decisions to be made based on it, is the sole responsibility of such third party. If a third party requires reliance on this Report, prior written authorization from Golder is required. Golder disclaims any responsibility of consequential financial effects on transactions or property values, or requirements for follow-up actions and costs.

The scope and the period of Golder's assessment are described in this Report, and are subject to restrictions, assumptions and limitations. Except as noted herein, the work was conducted in accordance with the scope of work and terms and conditions of Golder's proposal. Golder did not perform a complete assessment of all possible conditions or circumstances that may exist at the Site referenced in the Report. Conditions may therefore exist which were not detected given the limited nature of the assessment Golder was retained to undertake with respect to the Site and additional environmental studies and actions may be required. In addition, it is recognized that the passage of time affects the information provided in the Report. Golder's opinions are based upon information that existed at the time of the writing of the Report. It is understood that the services provided for in the scope of work allowed Golder to form no more than an opinion of the actual conditions at the Site at the time the Site was visited, and cannot be used to assess the effect of any subsequent changes in any laws, regulations, the environmental quality of the Site or its surroundings. Asbestos and mould surveys were not performed. If a service is not expressly indicated, do not assume it has been provided.

The results of an assessment of this nature should in no way be construed as a warranty that the Site is free from any and all contamination from past or current practices.





## **Report Signature Page**

**GOLDER ASSOCIATES LTD.** 

Alex Wood, B.Eng.

**Environmental Consultant** 

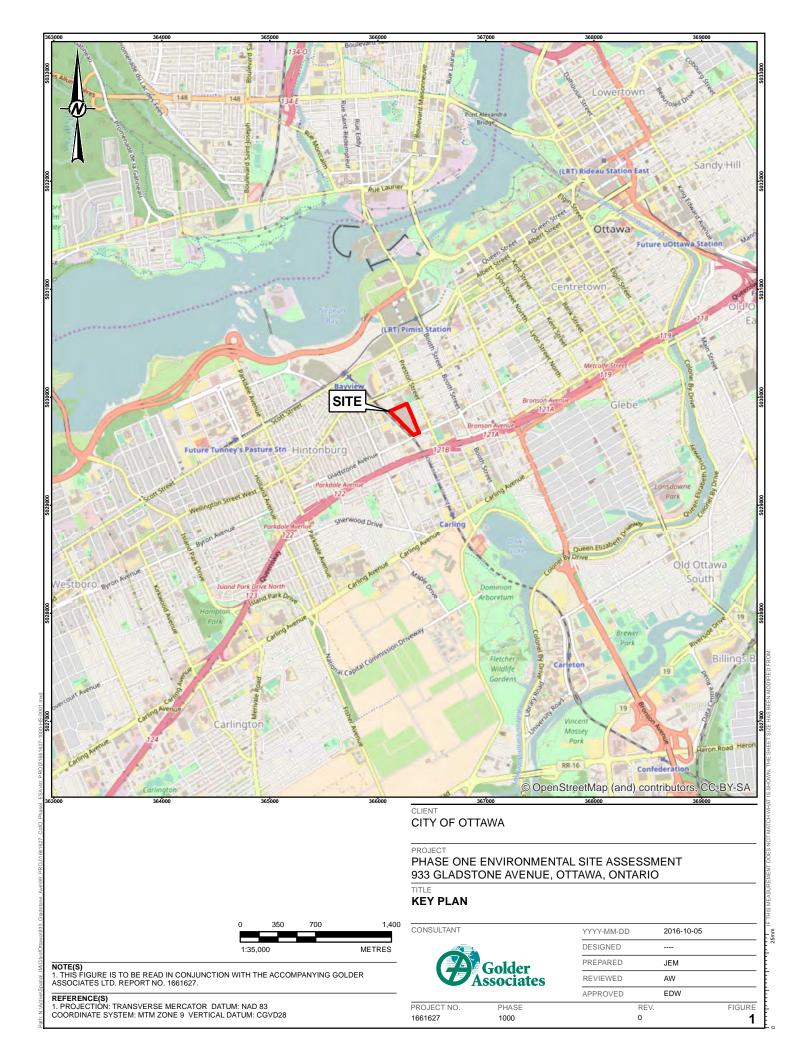
Eric Wilson, P.Eng., PMP Associate. Senior Project Manager

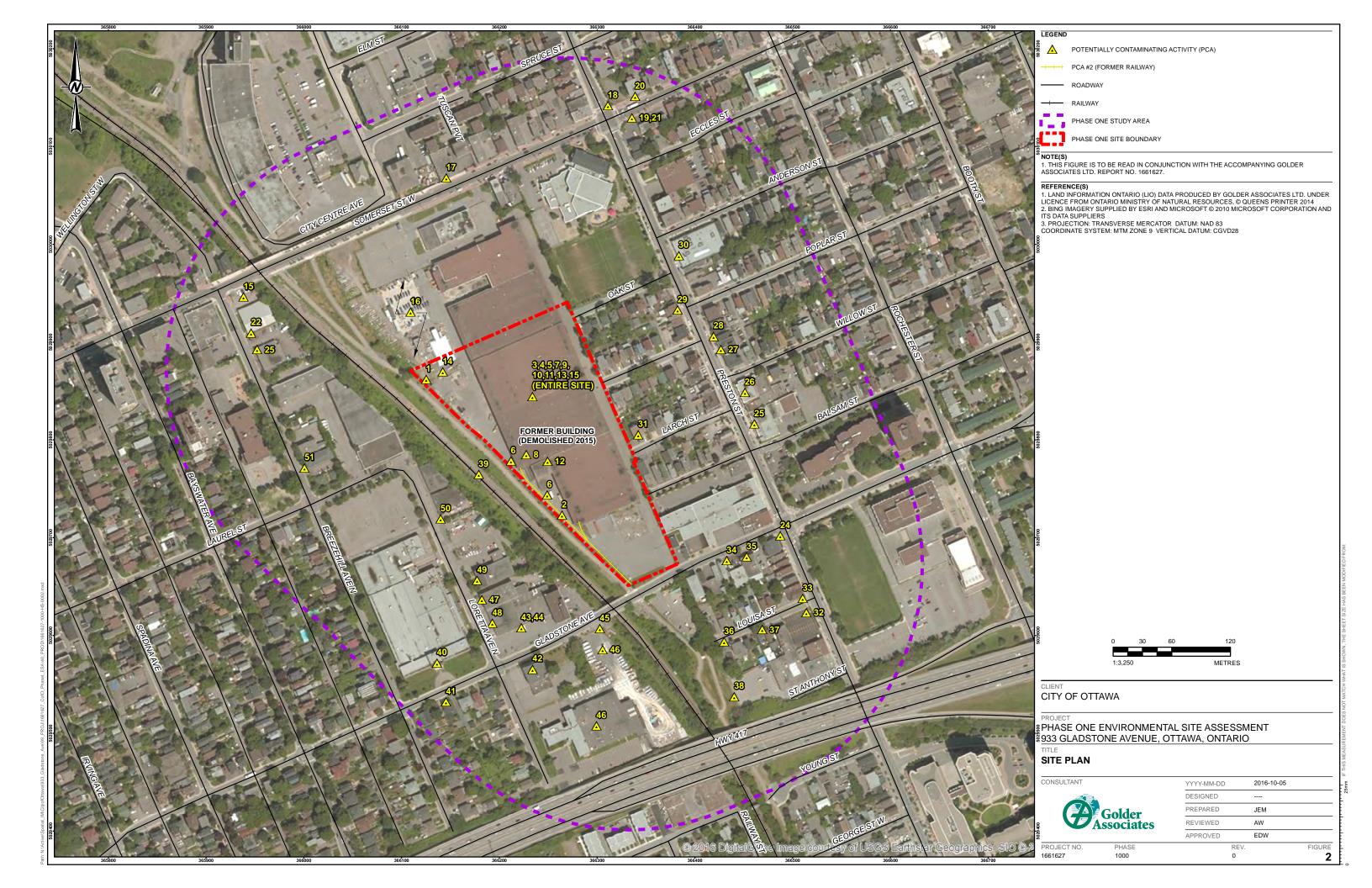
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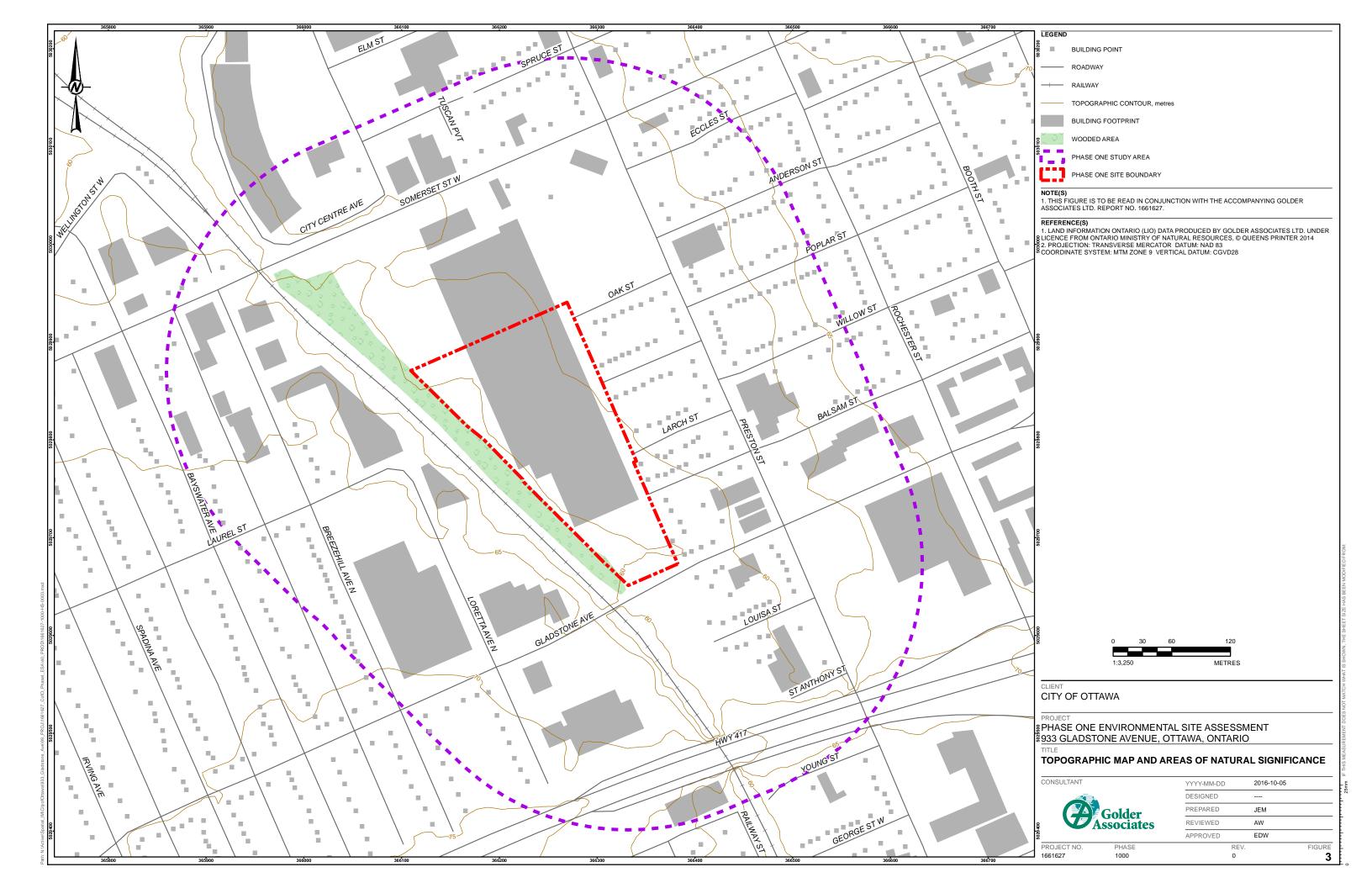
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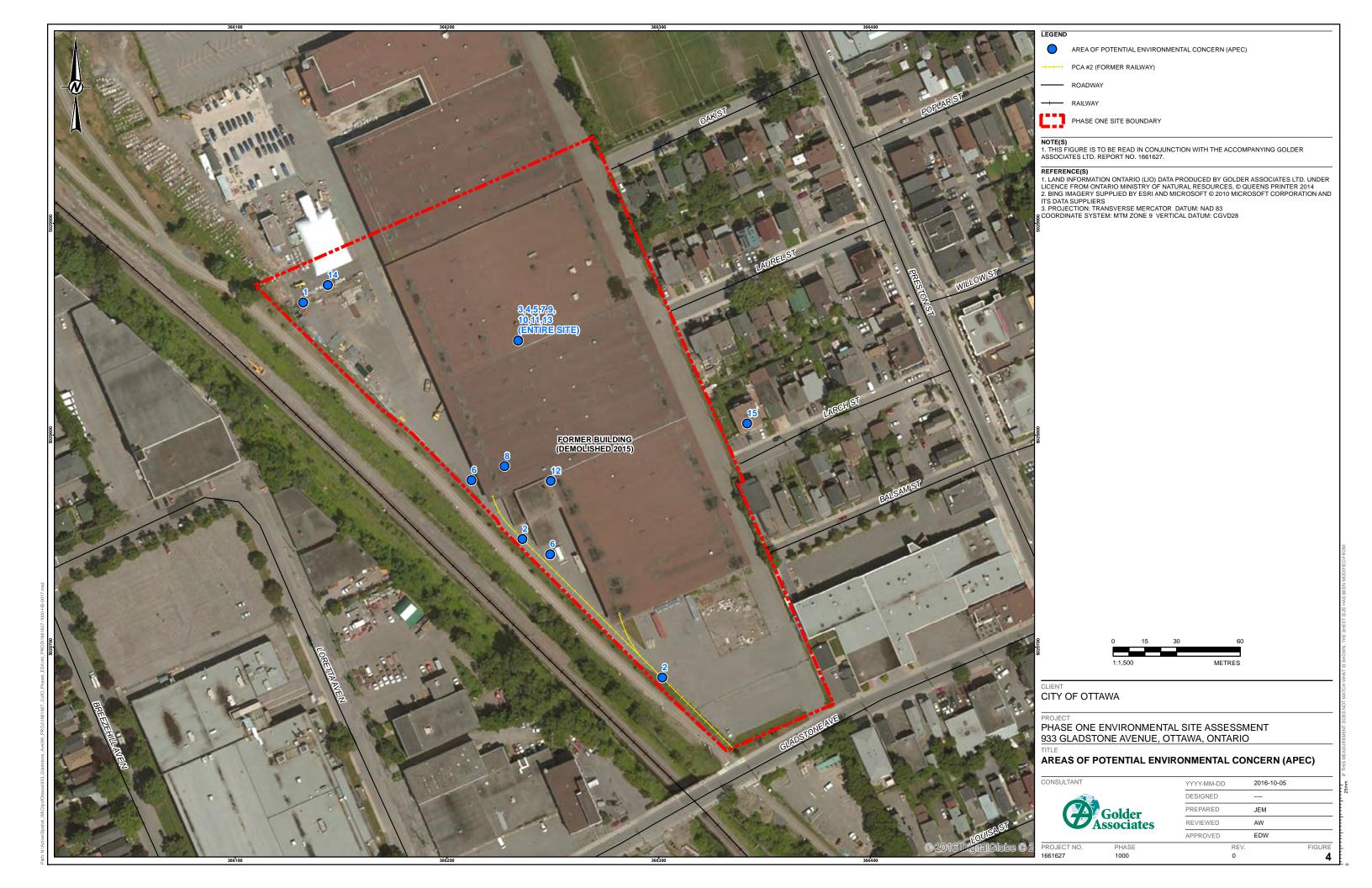
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## **APPENDIX A**

**Regulatory Requests and Correspondence** 



#### **Dumas, Melissa**

From: Barter, Sheila

**Sent:** Wednesday, September 07, 2016 5:06 PM **To:** 'publicinformationservices@tssa.org'

Subject: TSSA Search - 933 Gladstone Avenue, Ottawa, Ontario

Hello,

Could you please perform a TSSA database search for any underground storage tanks, registered fuel tanks, outstanding instructions, incident reports, fuel oil spills or contaminations records for the following properties:

- 933 Gladstone Avenue, Ottawa, ON
- 925 Gladstone Avenue, Ottawa, ON
- 1010 Somerset, Ottawa, ON
- 145 Loretta, Ottawa, ON
- 131 Loretta, Ottawa, ON
- 175 Loretta, Ottawa, ON
- 47 Breezehill, Ottawa, ON
- 55 Breezehill, Ottawa, ON
- 73 Breezehill, Ottawa, ON
- 75 Breezehill, Ottawa, ON

Please let me know if you have any questions.

Best regards, Sheila

Sheila Barter (B.Sc. Agr. (Hons)) | Environmental Consultant | Golder Associates Ltd.
1931 Robertson Road, Ottawa, Ontario, Canada, K2H 5B7
T: +1 (613) 592 9600 | D: +1 (613) 592-9600 x3305 | F: +1 (613) 592 9601 | C: +1 (613) 323-4275 | E: Sheila Barter@golder.com | www.golder.com

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From: Ruchi Chohan <rchohan@tssa.org> on behalf of Public Information Services

<publicinformationservices@tssa.org>

Sent: September-08-16 10:14 AM

**To:** Barter, Sheila

Subject: RE: TSSA Search - 933 Gladstone Avenue, Ottawa, Ontario

Hello Sheila.

Thank you for your inquiry.

I have searched the below noted address (addresses) and I have located the following record:

175 Loretta Avenue North, Ottawa has a record of 2 active underground fuel tanks

For a more detailed report including underground fuel storage tank details and copies of all inspection reports, please submit your request in writing to Public Information Services via e-mail (<a href="mailto:publicinformationservices@tssa.org">public Information Services via e-mail (<a href="publicinformationservices@tssa.org">public Informat

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

Kind Regards,

Ruchi



#### **Ruchi Chohan | Public Information Agent**

Facilities and Business Services
345 Carlingview Drive
Toronto, Ontario M9W 6N9
Tel: +1-416-734-3417 | Fax: +1-416-231-4903 | E-Mail: <a href="mailto:rchohan@tssa.org">rchohan@tssa.org</a>



From: Barter, Sheila [mailto:Sheila\_Barter@golder.com]

Sent: Wednesday, September 07, 2016 5:06 PM

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

Subject: TSSA Search - 933 Gladstone Avenue, Ottawa, Ontario

Hello,

Could you please perform a TSSA database search for any underground storage tanks, registered fuel tanks, outstanding instructions, incident reports, fuel oil spills or contaminations records for the following properties:

933 Gladstone Avenue, Ottawa, ON

- 925 Gladstone Avenue, Ottawa, ON
- 1010 Somerset, Ottawa, ON
- 145 Loretta, Ottawa, ON
- 131 Loretta, Ottawa, ON
- 175 Loretta, Ottawa, ON
- 47 Breezehill, Ottawa, ON
- 55 Breezehill, Ottawa, ON
- 73 Breezehill, Ottawa, ON
- 75 Breezehill, Ottawa, ON

Please let me know if you have any questions.

Best regards, Sheila

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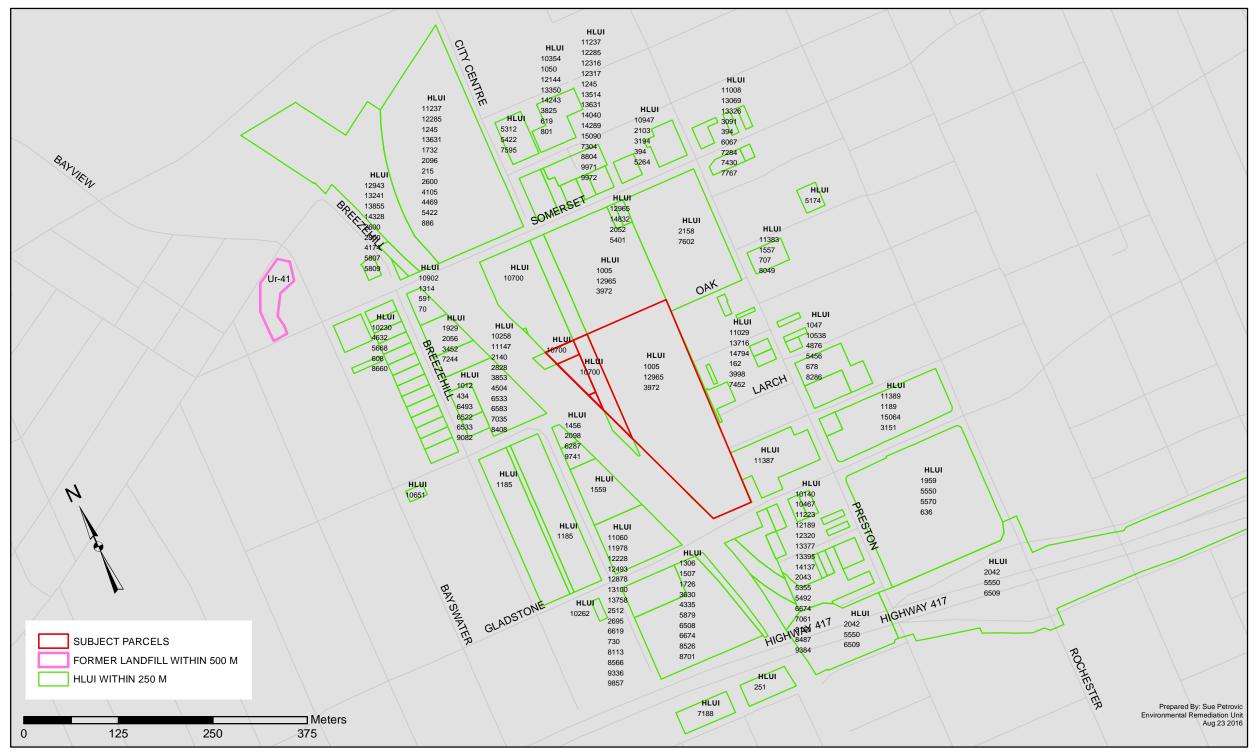
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HLUI	Name	Street Number	Street Name	Comments	Waste Generator #	Type of Facility	Storage Tanks	References	Pin Certainty	PIN
70	AL'S BODY SHOP	1040	SOMERSET			Motor Vehicle Repair Shops		M.1960, M.1970, M.1980; SC98	1	04107-0001
10902	PARADISE AUTO REPAIR	1040	SOMERSET			Motor Vehicles, Wholesale		2005 Select Phone	1	04107-0001
215	APPLIED GRAPHICS VISUAL PLANNING	880	WELLINGTON	#1		Photographic Equipment and Musical Instruments and Supplies, Wholesale		SC98; 2005 Select Phone	1	04098-0005
251	ARC CONCRETE SOLUTIONS INC.	51	YOUNG			Structural and Related Work		2005 Select Phone	1	04106-0149
3972	DEPT. OF SUPPLY AND SERVICES	1010	SOMERSET	R. C. O. C central ordnance depot		Commercial Printing Industries		M.1949, M.1957, M.1960, M.1970, M.1980; FIP1912-118-832, Vol2; FIP1922-119-832, Vol2; FIP1948-319-832; FIP1956-319-2-832	1	04107-0039
1185	B A BANKNOTE	975	GLADSTONE		ON0297401	Commercial Printing Industries		M.1900, M.1910, M.1920, M.1930, M.1940, M.1949, M.1950, M.1957, M.1958, M.1961, M.1964; S.1958, S.1961, S.1964, S.1965, S.1970/71; SC98; FIP1912-118-875A,Vol2; FIP1922-118-857A,Vol2; FIP1948-319-857; FIP1956-319-3-857A,Vol3; PID1994; 2000 PID	1	04107-0009
591	AERO MECHTRONICS LIMITED	1040	SOMERSET		ON0507400	Stamped, Pressed and Coated Metal Products Industries		PID1994	1	04107-0001
608	ACTECK AUTOMOTIVE	1050	SOMERSET			Motor Vehicles, Wholesale		2005 Select Phone	1	04099-0347
619	ACTION PLUMBING & HEATING	160	ELM	NO PIN FOR 160 - PIN IS FOR 164		Highway and Heavy Construction		2005 Select Phone	2	04107-0153
636	ADULT HIGH SCHOOL	300	ROCHESTER	ADULT HIGH SCHOOL	ON0375211	Elementary and Secondary Education		2000 PID	1	04105-0001
6309	GENESOVE PRESS LIMITED	969	SOMERSET			Combined Publishing and Printing Industries		M.1920, M.1949, M.1960, M.1963, M.1970, M.1980; FIP1901-119- 828,Vol2; FIP1912-119-828,Vol2; FIP1922-119-828,Vol2; FIP1948-116- 828; FIP1963-116-1-703	2	04107-0121
707	LARIVIERE CONSTRUCTION LIMITED	153	PRESTON			Exterior Close In Work		2005 Select Phone	1	04108-0030
730	BEN GENERAL CONSTRUCTION & SNOW PLOWING LIMITED	155	LORETTA			Non Residential Building and Development		2001 Employment Survey	1	04107-0012
801	AMERICAN CAN OF CANADA LIMITED	145	SPRUCE			Stamped, Pressed and Coated Metal Products Industries		M.1900- M.1971, S.1958, S.1961, S.1964, S.1965, FIP1901-113-826,Vol2; FIP1912-113-826,Vol2; FIP1922-113-826,Vol2; FIP1948-116-826; FIP1963-116-1-826.	1	04107-0153
886	TRAVERS 1910 LIMITED	880	WELLINGTON	UNIT 224	ON1746200	Commercial Printing Industries		M.1960, M.1970, M.1971, M.1980; S.1970/71; SC98; PID994; 2000 PID	1	04098-0005
1005	ALAN NONTELL - MAINTENANCE SUPPORT	1010	SOMERSET	PLOUFFE PARK	ON3451496	General Administrative Services		2003 PID	1	04107-0039
8526	LYLE BLACKWELL LIMITED	952	GLADSTONE	FIP1912, FIP1922 - vacant lot FIP1948 - no tank M. 1956, FIP1956 - lists Gray-Harvey Co. Ltd., wholesale hardware warehouses		Laundries and Cleaners	1 UST - gasoline	M.1900, M.1910, M.1920, M.1930, M.1940, M. 1948,M.1950, M.1956; FIP1901-121-839,vol2; FIP1912-121-839A,vol2; FIP1922-121- 839A,vol2; FIP1948-319-839A; FIP1956-319-4-839A	1	04106-0148
1047	ALEX I. GARLOCK LIMITED	156	WILLOW	Garage and Storage on site.		Non Residential Building and Development		M.1949, M.1963; FIP1901-122-724,vol2; FIP1912-122-724,vol2; FIP1922-122-724,vol2; FIP1948-118-724; FIP1956-118-724,vol1	2	04108-0197
1050	ALEXANDER BATTERY CORPORATION	145	SPRUCE	Unit A	ON1314600	Electrical and Electronic Machinery, Equipment and Supplies, Wholesale		2000 PID	1	04107-0153
8566	LOVE PRINTING SERVICE LIMITED	951	GLADSTONE	Love Printing Service Ltdout of business in 1994 GEN# = ON0607900		Combined Publishing and Printing Industries		M.1960, M.1970, M.1971, M.1980; S.1970/71; PID1994	1	04107-0012
4335	DAVID BERMAN TYPOGRAPHICS LIMITED	950	GLADSTONE	3RD FLOOR	ON0861503	Commercial Printing Industries		PID1994; SC98; 2000 PID	1	04106-0148

HLUI	Name	Street Number	Street Name	Comments	Waste Generator #	Type of Facility	Storage Tanks	References	Pin Certainty	PIN
1245	BAKER BROTHERS SASH AND DOOR FACTORY	989	SOMERSET			Sash, Door and Other Millwork Industries		M.1900, M.1910, M.1920, M.1930, M.1940, M.1950	2	04098-0009
1306	ARTISTIC HOME RENOVATIONS	950	GLADSTONE			Residential Building and Development		2001 Employment Survey	1	04106-0148
1314	A-SANDOR INC.	1040	SOMERSET			Machine Shop Industry		2005 Select Phone	1	04107-0001
1456	BEACON LITE LIMITED	131	LORETTA			Sign and Display Industry		2005 Select Phone	1	04107-0014
1507	AUTO TRADER	950	GLADSTONE			Combined Publishing and Printing Industries		2005 Select Phone	1	04106-0148
1557	BELL TELEPHONE	130	ANDERSON			Motor Vehicles, Wholesale		M.19100, M.1910, M.1920, M.1930, M.1940, M.1950, M.1970, M.1980, M.1990, M.1997	1	04108-0030
9857	ORVILLE'S ELECTRIC SERVICE	949	GLADSTONE			Electrical and Electronic Machinery, Equipment and Supplies, Wholesale		SC98; 2001 Employment Survey	1	04107-0012
1726	BONSALL COMMUNICATIONS	950	GLADSTONE			Motion Picture Laboratories and Video Production Facilities		2001 Employment Survey	1	04106-0148
1732	BLM TRADE PRINTERS LIMITED	880	WELLINGTON	BAY 226	ON2039600	Platemaking, Typesetting and Bindery Industry		SC98; 2000 PID	1	04098-0005
13758	VESUVIO IRON WORKS	949	GLADSTONE			Iron Foundries		SC98	2	04107-0012
1959	BUD'S ALIGNMENT AND BRAKE SERVICE	0	ROCHESTER	352 to 356		Motor Vehicle Repair Shops		M.1949, M.1956, M.1960, M.1970, M.1980; FIP1901-122-733B,vol2; FIP1912-122-733B,vol2; FIP1922-122-733B,vol2; FIP1948-118- 733B,vol1; FIP1956-118-733B,vol1.	2	04104-0298
6674	HODGINS BROS. LIMITED	940	GLADSTONE	Also listed as Hodgins Brothers Heating Equipment Manufactures. Listed at 1950 Scott in M. 1964		Fabricated Structural Metal Products Industries		M.1958, M.1960, M.1961, M.1964, M.1970, M.1980, S.1958, S.1961, S.1964, S.1965	1	04106-0145
10700	PUBLIC WORKS AND GOVERNMENT SERVICES CANADA	933	GLADSTONE	LIBRARY-PARLIAMENT HILL-EAST, WEST, CENTRE BLK	ON0144723	General Administrative Services		2000 PID	1	04107-0029
2052	BREADNER CO. LIMITED	1002	SOMERSET			Jewellery and Precious Metal Industries		M.1900, M.1910, M.1920, M.1930, M.1940, M.1949, M.1950, M.1956, M.1957; FIP1912-119-712, vol2; FIP1922-119-712, vol2; FIP1948-319-712; FIP1956-319-2-712	1	04107-0113
10140	P B AUTO CENTRE	916	GLADSTONE			Motor Vehicles, Wholesale		2005 Select Phone	1	04106-0080
2096	BROWNS CLEANERS & TAILORS LIMITED	6	CHAMPAGNE		ON0443200	Laundries and Cleaners		PID1994; SC98; 2000 PID	1	04098-0009
2098	BUCHANAN LIGHTING	129	LORETTA			Electrical and Electronic Machinery, Equipment and Supplies, Wholesale		2005 Select Phone	1	04107-0015
2103	BUDGET BUILDING MAINTENANCE	935	SOMERSET	no pin for 935 - pin is for 939		Service Industries Incidental to Air Transport		2005 Select Phone	2	04107-0118
2140	BREEZEHILL HEATING LIMITED	75	BREEZEHILL			Heating Equipment Industry		2005 Select Phone	1	04107-0004
2158	BROOKFIELD LEPAGE JOHNSON CONTROLS	1	OAK	PLOUFFE PARK	ON0554831	General Administrative Services		2003 PID	1	04107-0111
2512	C CHAMPAGNE CARTAGE &	155	LORETTA			Exterior Close In Work		2001 Employment Survey	1	04107-0012
2600	CANADIAN PACIFIC RAILWAY YARD	0	WELLINGTON	- south side of Wellington M. 1920 - lists as # 912 - 914 FIP1901 - coal bins - cattle pens Round house, coal pockets and sand dryer, coal shed and machine shop		Machine Shop Industry		M.1900, M.1910, M.1912, M.1920, M.1922, M.1930, M.1940, M.1948, M.1950, M.1956; FIP1901-112-813,vol2; FIP1912-111-810,vol2; FIP1912-111-810,vol2; FIP1948-320-813; FIP1948-317-810; FIP1956-317-810; FIP1956-320-813	2	04098-0003
2695	CINE METU	953	GLADSTONE			Motion Picture Laboratories and Video Production Facilities		2005 Select Phone	1	04107-0012
11223	R + M AUTOMOTIVE FINISHES	916	GLADSTONE			Motor Vehicle Repair Shops		M.1960, M.1970, M.1980.	1	04106-0080

HLUI	Name	Street Number	Street Name	Comments	Waste Generator #	Type of Facility	Storage Tanks	References	Pin Certainty	PIN
2828	CARQUEST OF OTTAWA CENTRE	35	LAUREL	UNIT A	ON2231902	Machine Shop Industry		2003 PID	1	04107-0004
3091	CAPOGRECO CLEANERS	884	SOMERSET			Laundries and Cleaners		M.1900, M.1910, M.1920, M.1930, M.1940, M.1950, M.1960, M.1970, M.1980	2	04108-0002
3151	CARROLL BROTHERS	262	ROCHESTER	Blacksmith at this location in 1910		Other Transportation Equipment Industries		M.1900, M.1910, M.1920, M.1930, M.1940, M.1950	1	04108-0201
3194	CITY OF OTTAWA - DESIGN AND CONSTRUCTION	130	PRESTON	NO PIN FOR 130 - PIN FOR 123	ON7422806	General Administrative Services		2003 PID	2	04107-0115
12189	SAL AUTO AND TRUCK SERVICE CENTRE	910	GLADSTONE			Motor Vehicle Repair Shops		M.1960, M.1970, M.1980	1	04106-0079
5264	EXPERT CLEANER AND DYER	903	SOMERSET	Smoke Shop in 1950		Laundries and Cleaners		M.1900, M.1910, M.1920, M.1930, M.1940, M.1950	1	04107-0115
3825	MANSFIELD AND RODNEY PRINTERS CO. LIMITED	164	ELM		ON1787400	Commercial Printing Industries		M.1900, M.1910, M.1920, M1921, M.1930, M.1940, M.1949, M.1950, M.1956, M.1963, M.1960, M.1970, M.1980; FIP1901-113-826,vol2; FIP1912-113-826,vol2, FIP1922-113-826,vol2, FIP1948-116-826; FIP1963-116-1-826; SC98; PID994. 2000 PID	1	04107-0153
3853	CROLLA CONSTRUCTION CORPORATION	35	LAUREL			Non Residential Building and Development		2001 Employment Survey	1	04107-0004
7767	JOHNNY CLOSS	896	SOMERSET			Motor Vehicle Repair Shops	FIP1948, FIP1956- Four (4) Underground storage tanks	M.1900, M.1910, M.1920, M.1930, M.1940, M.1949, M.1950, M.1956, M.1960, M.1963, M.1970, M.1980, FIP1901-120-713,Vol2; FIP1922-120-713,Vol2; FIP1948-117-713; FIP1956-117-713	2	04108-0001
3998	DELTA HARDWOOD FLOORING	28	LAUREL			Other Trade Work		2005 Select Phone	1	04107-0070
4105	JULES PATRY LIMITED	0	WELLINGTON			Other Chemical Products Industries		M.1900, M.1910, M.1920, M.1930, M.1940, M.1950; SC98	2	04098-0005
4174	D. KEMP EDWARDS	25	BAYSWATER	FIP1912 - George M. Mason, sash & door factory/planing mill M. 1920 - vacant building - mill factory, open lumber storage, piles - kiln, engine room, planing mill, lumber sheds, shavings room, sash & door factory, offices. listed In M.1900 at #8-16 Fourth Ave. which became Bayswater. In 1910 listed before #25 Fourth Ave. By 1920 listed at Bayswater.		Lumber and Building Materials, Wholesale		M.1900, M.1910, M.1920, M.1930, M.1940, M.1950, S.1958, S1961, S.1970-71, S.1964-65, M.1920, M.1948, M.1956, M.1958, M.1960, M.1964, M.1970, M.1980; FIP1901-112-816,vol2; FIP1912-112-816,vol2; FIP1948-320-816; FIP1956-320-816	2	04098-0019
394	ACADIAN PRINTING	893	SOMERSET			Commercial Printing Industries		M.1960, M.1970, M.1980	2	04107-0115
4437	DOMICILE DEVELOPMENTS	148	SPRUCE	NO PIN FOR 148 - PIN IS FOR 152	ON2357665	Residential Building and Development		2003 PID	2	15685-0000
4469	DISPLAY LAMINATING	880	WELLINGTON			Other Textile Products Industries		SC98; 2001 Employment Survey	1	04098-0005
4504	EMERITUS ENGRAVING	75	BREEZEHILL			Recreational Vehicle Dealers (where servicing is present)		2001 Employment Survey	1	04107-0004
4632	ESPRIT DE CORPS	1066	SOMERSET	#204		Combined Publishing and Printing Industries		2005 Select Phone	1	04099-0367
7430	JIM FRISBY HOLDINGS LIMITED	890	SOMERSET			Motor Vehicle Repair Shops		2005 Property Assessment	1	04108-0001
5174	ED BRUNET ASSOC INC.	65	ANDERSON			Residential Building and Development		2005 Select Phone	1	04108-0063
14137	TOP VALUE GASMARTS	284	PRESTON			Gasoline Service Stations		M.1960, M.1970, M.1980	1	04106-0098

HI UI	Name	Street Number	Street Name	Comments	Waste Generator #	Type of Facility	Storage Tanks	References	Pin Certainty	PIN
5312	F. W. ARGUE LIMITED	161	SPRUCE	M. 1956, M. 1963 Located at #236 Bank St as coal, coke and fuel oil company		Motor Vehicle Repair Shops	FIP1963- One (1) UST	M.1922, M.1949, M.1956, M.1963, M.1960, M.1970, M.1980; FIP1901- 113-826,Vol2; FIP1912-113-826,Vol2; FIP1922-113-826,Vol2; FIP1948- 116-826; FIP1953-116-1-826	1	04107-0154
5355	FLEISCHER PHOTOGRAPHY	928	GLADSTONE			Photographers		2005 Select Phone	1	04106-0083
5401	G K DENTAL LAB INC.	1002	SOMERSET			Medical and Other Health Laboratories		2001 Employment Survey	1	04107-0113
5422	F.W. ARGUE LIMITED	128	CHAMPAGNE	FIP1912 - vacant lot - lumber shed, coal sheds (1 sm. 1 XL), open lumber yard		Petroleum Products, Wholesale	2 UST - gasoline	M.1900, M.1910, M.1920, M.1930, M.1940, M.1948, M.1950.,M.1956, M.1960, M.1970, M.1980; FIP1901-112-825,vol2; FIP1912-112-825,vol2; FIP1948-320-825; FIP1956-320-825	2	04098-0005
13395	SUPERIOR CLEANERS	280	PRESTON			Laundries and Cleaners		M.1900, M.1910, M.1920, M.1930, M.1940, M.1950	2	04106-0098
5492	FEDERAL PAVING CO.	928	GLADSTONE			Highway and Heavy Construction		M.1960, M.1970, M.1980	1	04106-0083
5550	NESBITT ENGINERRING LIMITED	374	ROCHESTER			Machine Shop Industry		M.1948, M.1955; FIP1901-85-736,vol2; FIP1912-124-736,vol2; FIP1922-124-736,vol2; FIP1948-119-736; FIP1956-119-1-736,vol1; FIP1901-124-742,vol2; FIP1912-124-742,vol2; FIP1922-123-742,vol2; FIP1948-119-742.	2	04104-0067
5570	GALLA BAKERY	115	LOUISA	Bakery also at #117 Louisa St in 1950.		Bakery Products Industries		M.1900, M.1910, M.1920, M.1930, M.1940, M.1950, M.1958, M.1961, M.1964, S.1958, M.1961, S.1964/65	2	04105-0001
5668	FRANCO'S ENTERPRISES HEATING	49	BAYSWATER			Plumbing, Heating and Air Conditioning, Mechanical Work		2001 Employment Survey	1	04099-0333
5807	GEORGE M. MASON	0	BREEZEHILL	Breeze Hill Ave. did not exist in 1900; 42-46		Sawmill, Planing Mill and Shingle Mill Products Industries		M.1900, M.1910, M.1920, M.1930, M.1940, M.1950	2	04098-0107
5809	GEORGE M. MASON CO.	2	BREEZEHILL	FIP1901 - vacant lot FIP1912 - lumber yard, George M. Mason Co lumber piled in open, rear of building M. 1920 - lists @ 42 - 46		Sawmill, Planing Mill and Shingle Mill Products Industries		M.1920, M.1948, M.1956, M.1963; FIP1901-112-816,vol2; FIP1912-112-816,vol2; FIP1948-320-821; FIP1956-320-821	2	04098-0107
1189	PANUCCIO SARO	241	PRESTON			Gasoline Service Stations		M.1960, M.1970, M.1980; SC98, BEP-G; 2005 Property Assessment	1	04108-0200
6067	FRISBY TIRE CO.	890	SOMERSET			Motor Vehicle Parts and Accessories, Wholesale		M.1960, M.1970, M.1980; SC98	1	04108-0001
11389	PRESTON STREET GARAGE	241	PRESTON			Motor Vehicles, Wholesale		2005 Select Phone	1	04108-0200
8286	MALMBERG AUTO SERVICE LIMITED	225	PRESTON	Oiling and Greasing Building and a Repair Building on Property Storage tanks located parallel to Preston st. on west side.		Motor Vehicles, Wholesale	FIP1948, FIP1956 -Two (2) USTs	M.1949, M.1957, M.1960, M.1963, M.1970, M.1971, M.1980, S.1970/71; FIP 1901-122-724,Vol2; FIP1912-122-724,Vol2; FIP1922- 122-724,Vol2; FIP1948-118-724; FIP1956-118-724,Vol2	1	04108-0199
6493	J. SAINT GERMAIN AND SON	99	BREEZEHILL			Exterior Close In Work		M.1960, M.1970, M.1980	1	04107-0005
6508	JASON OLIVER & SONS LIMITED	950	GLADSTONE	Firm established in 1862 - also listed at 21 Oliver St. (closed)		Household Furniture Industries		M.1900, M.1910, M.1920, M.1930, M.1940, M.1950;Ottawa The Beautiful, 1907, Martin & Esdale, Ottawa	1	04106-0148
6509	JASON PLUNKETT	261	BELL	- also listed as residence 1920 - Plunkett listed, but no mention of cartage		Truck Transport Industries		M.1900, M.1910, M.1920, M.1930, M.1940, M.1950	2	04104-0288
4876	ESSO HOME COMFORT	215	PRESTON			Petroleum Products, Wholesale		M.1960, M.1970, M.1980	1	04108-0197
8487	L'ORA DI OTTAWA	203	LOUISA			Combined Publishing and Printing Industries		2005 Select Phone	1	04106-0092
6583	HEADLIGHT INC.	75	BREEZEHILL			Photographers		2001 Employment Survey	1	04107-0004
6619	HOCO BRANDS LIMITED	155	LORETTA			Sugar and Sugar Confectionery Industries		SC98	1	04107-0012
678	AIRCON FUELS	193	PRESTON			Gasoline Service Stations		M.1960, M.1970, M.1980	1	04108-0181
7035	IDS INTL DUPLICATION SVC	35	LAUREL			Other Manufactured Products Industries		2005 Select Phone	1	04107-0004

HLUI	Name	Street Number	Street Name	Comments	Waste Generator #	Type of Facility	Storage Tanks	References	Pin Certainty	PIN
7061	ITAL-CAN VIDEO SERVICES	270	PRESTON			Motion Picture Laboratories and Video Production Facilities		2005 Select Phone	1	04106-0085
7188	JACK CRONIER IRON WORKS	53	YOUNG	Production of steel railings, stairs, steel grills, and fire escapes. Welding work. Also known as Cronier J.A. Co. Ltd salvage lumber piled in open yard FIP1948 - vacant lot		Non Residential Building and Development		M.1920, M.1948, M.1956, M.1970, M.1971, S.1970/71; FIP1948-319- 839B; FIP1956-319-4-839B	1	04106-0150
9384	MOTORWORKS	188	LOUISA			Motor Vehicles, Wholesale		2005 Select Phone	1	04106-0095
7284	IMPERIAL OIL CO. LIMITED	886	SOMERSET			Gasoline Service Stations		M.1900, M.1910, M.1920, M.1930, M.1940, M.1950	1	04108-0002
7304	INTERNATIONAL PAINTS (CANADA) LIMITED	160	SPRUCE			Paint and Varnish Industry		M.1960, M.1970, M.1980	1	04107-0124
5456	FARMER AND GARRETT	187	PRESTON	Tanners using bark tanning process, bark pile located on the property.		Leather and Allied Products Industries		Intera-1988a	1	04108-0178
7452	JOE TEGANO ROOFING	184	PRESTON			Exterior Close In Work		M.1960, M.1970, M.1980.	2	04107-0081
7595	LUMBER YARD	161	SPRUCE	M. 1956, M. 1963 Located at #236 Bank St as coal, coke and fuel oil company		Lumber and Building Materials, Wholesale		M.1922, M.1949, M.1956, M.1963; FIP1901-113-826,Vol2; FIP1912-113-826,Vol2; FIP1922-113-826,Vol2; FIP1948-116-826; FIP1953-116-1-826	1	04107-0154
7602	LUNDY CONSTRUCTION	930	SOMERSET			Residential Building and Development		2005 Select Phone	1	04107-0111
3630	CITY OF OTTAWA	175	LORETTA		ON0303108	Truck Transport Industries		2003 PID	1	04106-0147
8049	LARIVIERE CONSTRUCTION (ONTARIO) LIMITED	157	PRESTON			Non Residential Building and Development		2001 Employment Survey	1	04108-0030
8113	LAWCOM MANUFACTURING LIMITED	155	LORETTA	Products include- Custom consoles, desks, test rigs etc. (aluminum), illuminated survey lights, special cases; Unit B		Electric Lighting Industries		S.1970/71, M.1970, M.1971	1	04107-0012
8160	KEITEL FURNITURE REPAIR LIMITED	184	LOUISA	g, 2p20 20000, 02	ON2295700	Leather and Allied Products Industries		SC98; 2003 PID	1	04106-0096
5879	GENERAL SUPPLY CO. OF CANADA LIMITED	175	LORETTA	FIP1901 - vacant lot FIP1948 - no tank - north side of building shows oil storage beside it - small building also noted, unclear if oil stored in this building or in area between the 2 buildings; - warehouses, tractor assembly, general repairs FIP1948 - paint shop Regional Government of Ottawa-Carleton GEN# = ON0303108		Motor Vehicles, Wholesale	1 UST - gasoline (1956)	M.1948, M.1956, M.1960, M.1970, M.1980; FIP1901-121-834A,vol2; FIP1912-121-834A,vol2; FIP1922-121-834A,vol2; FIP1948-319-839A; FIP1956-319-4-839A; PID1994	1	04106-0147
8408	LEBRUN BUILDING SERVICES	75	BREEZEHILL	UNIT G	ON1423690	Services to Buildings and Dwellings		2003 PID	1	04107-0004
162	ANA TRANSPORTATION INC.	164	PRESTON			Truck Transport Industries		2005 Select Phone	1	04107-0107
11060	POPULAR PRINTING	155	LORETTA	Unit B		Other Chemical Products Industries		M.1960, M.1970, M.1980	1	04107-0012
11978	REGIONAL TEXTILES	155	LORETTA			Other Textile Products Industries		M.1960, M.1970, M.1980	1	04107-0012
8660	NATIONAL BRAKE AND CLUTCH SERVICE LIMITED	1050	SOMERSET	Acklands Auto Paint, Auto Body Supply Ltd. GEN# = ON0021803		Motor Vehicle Repair Shops		M.1960, M.1970, M.1980; PID1994; SC98	1	04099-0347
8701	MUN-WORKS	175	LORETTA			General Administrative Services		2001 Employment Survey	1	04106-0147

HLUI	Name	Street Number	Street Name	Comments	Waste Generator #	Type of Facility	Storage Tanks	References	Pin Certainty	PIN
8804	MONTREAL-OTTAWA EXPRESS LIMITED	148	SPRUCE	Transportation shed on property		Public Passenger Transit Systems Industries	One Underground Storage Tank	M.1920, M.1949, M.1956, M.1963; FIP1901-119-828,Vol2; FIP1912-119-828,Vol2; FIP1922-119-828,Vol2; FIP1948-116-828; FIP1963-116-1-703	1	04107-0123
9082	MURRAY LEN SUPPLY INC.	103	BREEZEHILL			Other Machinery, Equipment and Supplies, Wholesale		2001 Employment Survey	1	04107-0005
9085	MUSCA-WINE PRESSING &	969	SOMERSET			Distillery Products Industry		2001 Employment Survey	1	04107-0122
9336	NORTHERN ART GLASS	955	GLADSTONE			Lumber and Building Materials, Wholesale		2005 Select Phone	1	04107-0012
11383	PRESTON & LIEFF GLASS	153	PRESTON			Lumber and Building Materials, Wholesale		2005 Select Phone	1	04108-0030
9741	NORTH AMERICAN CANDY CO. LIMITED	127	LORETTA			Sugar and Sugar Confectionery Industries		M.1948, M.1963, M.1970, M.1971, S.1970/71; FIP1901,vol2; FIP1912- 118-857,vol2; FIP1922-118-857A,vol2; FIP1948-319-857; FIP1956-319- 1-857,vol 3	1	04107-0015
1559	BELL TELEPHONE CO. OF CANADA LIMITED	145	LORETTA	FIP1912 - vacant lot FIP1948 - empty lot M. 1956, M. 1963 - no listing		Motor Vehicles, Wholesale	1 UST - gasoline	M.1948, M.1956, M.1963; FIP1901-Key,vol2; FIP1912-118-857,vol2; FIP1948-319-857; FIP1956-319-4-857	1	04107-0013
9971	OTTAWA STAIRWORKS	148	SPRUCE			Sash, Door and Other Millwork Industries		M.1920, M.1949, M.1956, M.1963; FIP1901-119-828,Vol2; FIP1912-119-828,Vol2; FIP1922-119-828,Vol2; FIP1948-116-828; FIP1963-116-1-703	1	04107-0123
9972	OTTAWA STAIRWORKS LIMITED	989	SOMERSET			Other Wood Industries		M.1900, M.1910, M.1920, M.1930, M.1940, M.1950; FIP1901-119- 828,vol2. FIP1912-119-828,vol2. FIP1922-119-828.	2	04098-0009
13350	THE ALEXANDER BATTERY CORP	145	SPRUCE			Other Electrical Products Industries		SC98	2	04107-0153
10230	OTTAWA-CARLETON DISTRICT SCHOOL BOARD -DEVONSHIRE SCHOOL	100	BREEZEHILL		ON0375224	Elementary and Secondary Education		2000 PID	1	04099-0351
10258	PAN FILMS	75	BREEZEHILL			Motion Picture Laboratories and Video Production Facilities		2001 Employment Survey	1	04107-0004
10262	PANTUSA TILE & MARBLE	964	GLADSTONE			Interior and Finishing Work		2001 Employment Survey	1	04106-0074
10354	PHILIPS ELECTRONICS LIMITED	145	SPRUCE			Appliance, Television, Radio and Stereo Stores		2001 Employment Survey	1	04107-0153
10467	OTTAWA BAKERY LIMITED	0	PRESTON	304 to 306		Bakery Products Industries		M.1970, M.1971, S.1970/71	1	04106-0097
10538	PHOTOLUX	197	PRESTON			Photographers		2005 Select Phone	1	04108-0182
10651	ORIGINAL MAPLE BAT COMPANY THE	93	BAYSWATER			Sporting Goods and Toy Industries		2001 Employment Survey	1	04099-0175
6287	HALL FUEL LIMITED	131	LORETTA			Motor Vehicles, Wholesale	1 UST - gasoline	M.1948, M.1950, M.1955, M.1963; FIP1901,vol2; FIP1912-118- 857,vol2; FIP1922-118-857A,I vol2; FIP1948-319-857; FIP1956-319-1- 857,vol 3	1	04107-0014
434	907462 ONTARIO LIMITED	111	BREEZEHILL			Motor Vehicle Repair Shops		2005 Property Assessment	1	04107-0007
10946	PARSON REFRIGERATION (1985) LIMITED	955	SOMERSET		ON2204200	Services to Buildings and Dwellings		2003 PID	1	04107-0120
10947	PART MARKET	903	SOMERSET			Waste Materials, Wholesale		2001 Employment Survey	1	04107-0115
11008	PC UPGRADE	879	SOMERSET			Electrical and Electronic Machinery, Equipment and Supplies, Wholesale		2001 Employment Survey	1	04110-0175
6522	GRANDTECH AUTO	111	BREEZEHILL			Motor Vehicles, Wholesale	-	2005 Select Phone	1	04107-0007
1012	ALASKA STEEL AND IRON WORKS	109	BREEZEHILL			Other Repair Services		M.1960, M.1970, M.1980	2	04107-0005

HLUI	Name	Street Number	Street Name	Comments	Waste Generator #	Type of Facility	Storage Tanks	References	Pin Certainty	PIN
6533	GRANT TRADING-COAL AND WOOD	75	BREEZEHILL			Lumber and Building Materials, Wholesale		M.1900, M.1910, M.1920, M.1930, M.1940, M.1950	2	04107-0004
11147	PROFESSIONAL FIRE PROTECTION	75	BREEZEHILL			Electrical and Electronic Machinery, Equipment and Supplies, Wholesale		2005 Select Phone	1	04107-0004
11237	R.L. CRAIN LIMITED	989	SOMERSET			Platemaking, Typesetting and Bindery Industry		M.1921, M.1964, M.1949; FIP1901-119-828,vol1; FIP1912-119-828,vol2; FIP1922-119-828,vol1; FIP1948-116-828,vol1; FIP1963-116-1-703,vol1. M.1900, M.1910, M.1920, M.1930, M.1940, M.1950	2	04098-0009
3452	CHARCOAL SUPPLY CO.	73	BREEZEHILL			Petroleum Products, Wholesale		M.1900, M.1910, M.1920, M.1930, M.1940, M.1950	1	04107-0003
11387	PRESTON HARDWARE	248	PRESTON	#234		Interior and Finishing Work		2005 Select Phone	1	04107-0041
2056	BREEZEHILL AUTO BODY	55	BREEZEHILL			Motor Vehicle Repair Shops		M.1960, M.1970, M.1980; SC98; 2005 Select Phone	1	04107-0002
7244	JAPAN AUTO SVC INC.	55	BREEZEHILL			Motor Vehicles, Wholesale		2005 Select Phone	1	04107-0002
12144	ROGERS HOME HEATING INC.	160	ELM	NO PIN FOR 160 - PIN IS FOR 164		Highway and Heavy Construction		2005 Select Phone	2	04107-0153
1929	BRUCE COAL CO. (YARD)	53	BREEZEHILL			Lumber and Building Materials, Wholesale		M.1900, M.1910, M.1920, M.1930, M.1940, M.1948, M.1950, M.1955, M.1960, M.1970, M.1980; FIP1901-118-820,vol2; FIP1912-118-820,vol2; FIP1922-118-820,vol2; FIP1948-319-820,vol3; FIP1956-319-820,vol3.	2	04107-0002
12228	SILKWEAR	951	GLADSTONE			Children's Clothing Industry		2001 Employment Survey	1	04107-0012
12285	ROBERT TAPE LIMITED	989	SOMERSET			Machine Shop Industry		M.1960, M.1970, M.1971, M.1980; S.1970/71; SC98; PID1994; 2005 Select Phone	1	04107-0124
12316	ROBT TAPE LIMITED	989	SOMERSET			Structural and Related Work		2001 Employment Survey	1	04107-0124
12317	ROBT TAPE LIMITED	989	SOMERSET		ON0194400	Machine Shop Industry		2000 PID	1	04107-0124
12320	ROB'WAY SALES & SERVICE LIMITED	276	PRESTON			Appliance, Television, Radio and Stereo Stores		2001 Employment Survey	1	04106-0087
12493	STANDARD BREAD DIVISION OF INTER CITY BAKING COMPANY LIMITED	155	LORETTA			Bakery Products Industries	1 UST - fuel oil (1948)	M.1900, M.1910, M.1920, M.1930, M.1940, M.1948, M.1950, M.1956, M.1958, M.1961, M.1964; S.1958, S.1961, S.1964, S.1965; FIP1901-Key,vol2; FIP1912-188-857,vol2; FIP1948-319-857; FIP1956-319-4-857	1	04107-0012
12878	SHOP	949	GLADSTONE			Interior and Finishing Work		2005 Select Phone	1	04107-0012
12943	SLACK'S GARAGE	0	BREEZEHILL	1 to 3		Motor Vehicle Repair Shops		M.1960, M.1970, M.1980.	1	04098-0140
13716	V STEEL WORKS LIMITED	17	LARCH			Natural Fibres Processing and Felt Products Industry		2001 Employment Survey	1	04107-0066
13069	SPRINT COMPUTER	883	SOMERSET			Electrical and Electronic Machinery, Equipment and Supplies, Wholesale		2001 Employment Survey	1	04110-0182
13100	SPORTIVE SPORTSWEAR	155	LORETTA			Men's and Boys' Clothing Industries		2001 Employment Survey	1	04107-0012
13241	TAKAKI AUTOMOTIVE CO.	47	BREEZEHILL			Motor Vehicles, Wholesale		M.1960, M.1970, M.1980; SC98; 2005 Select Phone	1	04098-0013
13326	SUPERSHOT PHOTOLAB	879	SOMERSET			Platemaking, Typesetting and Bindery Industry		SC98	1	04110-0175
14794	VENICE IRON WORKS	17	LARCH			Other Repair Services		SC98	1	04107-0066
13377	THE CORP. OF THE CITY OF OTTAWA DISTRICT F	938		FIP1901 - lists 2 residences @ 128 - 130 & the rest of the block was vacant lots FIP1912, FIP1922 - residences		Other Utility Industries n.e.c.		M.1920, M.1948, M.1956; FIP1901-121-729,vol2; FIP1912-121-729,vol2; FIP1922-121-729,vol2; FIP1948-319-835; FIP1956-319-4-835	1	04106-0144
11029	PEACOCK PROCLEAN	8	OAK			Laundries and Cleaners		2005 Select Phone	1	04107-0102
13514	T+E FOOD PRODUCTS	158	SPRUCE			Fruit and Vegetable Industries		M.1960, M.1970, M.1980	1	04107-0123

HLUI	Name	Street Number	Street Name	Comments	Waste Generator #	Type of Facility	Storage Tanks	References	Pin Certainty	PIN
13631	W. C. EDWARDS AND COMPANY LIMITED	991	SOMERSET	Shavings press, planing mills, machine shop, kiln, carpentry shop, open yards, offices. No # 991 Somerset W. listed in M.1964. CNR tracks/siding on east & west of property.		Sawmill, Planing Mill and Shingle Mill Products Industries		M.1900, M.1910, M.1920, M.1930, M.1940, M.1948, M.1950, M.1956, M.1958, M.1961, M.1964; S.1958, S.1961, S.1964, S.1965; FIP1901-112-825,vol2; FIP1912-112-825,vol2; FIP1948-320-825; FIP1956-320-825	1	04098-0009
2043	BRITISH AMERICAN OIL CO. LIMITED	0	ARLINGTON	The years of operation are not stated in the Intera reference, therefore they are unknown.		Petroleum Products, Wholesale		Intera-1988a	2	04106-0097
2800	CANADIAN OIL CO. LIMITED	0	BREEZEHILL	FIP1901 - vacant lot; 45 - 47		Petroleum Products, Wholesale	2UST-coal tar (1912,1922) 3UST-naptha (1912, 1922) 3UST-coal oil (1948) 2UST- naptha (1948) 1 - strge area, AST naptha, 10000 gal 3AST- gasoline(1948)- 1AST large (1948)- 1AST basement	M.1920, M.1948, M.1956; FIP1901-112-821,vol2; FIP1912-112-821,vol2; FIP1922-112821,vol2; FIP1948-320-821; FIP1956-320-821	2	04098-0013
13855	WHELAN MOTORS LIMITED	50	BREEZEHILL			Motor Vehicle Repair Shops		M.1960, M.1970, M.1980	2	04098-0107
14040	ULTRALUX	160	SPRUCE			Lumber and Building Materials, Wholesale		2005 Select Phone	1	04107-0124
2042	BRITISH AMERICAN OIL CO.	0	PRESTON			Other Storage and Warehousing Industries		M.1900, M.1910, M.1920, M.1930, M.1940, M.1950	2	04106-0301
14243	UNION ENGRAVING CO. LIMITED	145	SPRUCE		ON1584800	Commercial Printing Industries		M.1960, M.1970, M.1980; PID1994; 2000 PID	1	04107-0153
14289	UNIVERSAL CONFECTIONARY LIMITED	158	SPRUCE			Sugar and Sugar Confectionery Industries		S.1958, S.1961, S.1964-65, M.1958	1	04107-0123
14328	UNNAMED AUTO REPAIRS	2	BREEZEHILL	FIP1901 - vacant lot FIP1912 - lumber yard M. 1920 - George M. Mason, planing mill		Motor Vehicle Repair Shops		M.1920, M.1948, M.1956, M.1963; FIP1901-112-816,vol2; FIP1912-112- 816,vol2; FIP1948-320-821; FIP1956-320-821	2	04098-0107
14550	VALLEY CHEMICALS	0	SOMERSET	Chemical factory & production of paints, lacquers, asphalts, cleaning compounds, nailing and stapling machines and fasteners. 963-965		Paint and Varnish Industry		M.1900, M.1910, M.1920, M.1930, M.1940, M.1950, M.1958, M.1960, M.1961, M.1964,M.1970, M.1980, S.1970/71, S.1958, S.1961, S.1964, S.1965	1	04107-0120
12965	SPARK'S ESTATE SOUTH YARD - J.R. BOOTH	0	SOMERSET			Lumber and Building Materials, Wholesale		FIP1901-119-829,831,834A,8343-vol2; FIP-1901-121-834A,834B,835-vol2; FIP1912-121-834,835-vol2; FIP1922-121-834A,834B,835-vol2, M.1920	1	04107-0039
14832	WINE EXCHANGE THE	1000	SOMERSET			Distillery Products Industry		2001 Employment Survey	1	04107-0112
15064	Servicenter	253	PRESTON			Medicine Manufacture		M.1900, M.1910, M.1920, M.1930, M.1940, M.1950	2	04108-0201
15090	National Drug and Chemical Co. of Canada Ltd.	158	SPRUCE			Drug and Chemical Co.		M.1960, M.1970, M.1980	1	04107-0123
7075	Baywater Avenue and Wellington Street Former Landfill			Site ID - Ur-41; Operational Period unknown, but likely prior to 1928						

#### HLUI Occurs directly on the subject property(ies)

Privately Owned Former Landfill Site - City of Ottawa has no information regarding current environmental conditions
Possible Errors identified in HLUI, to be confirmed by City of Ottawa's Planning & Growth Management Branch

Underlined Text Text has been added, not included in HLUI

From: Barter, Sheila

Sent: September-07-16 4:01 PM

**To:** 'Kemptville.InfoRequest@Ontario.ca'

**Subject:** MNRF Request for Information - 933 Gladstone Avenue, Ottawa, ON

**Attachments:** 933 Gladstone Site Map.pdf; MNRF Request.pdf

Hi,

We are in the process of preparing a Phase I Environmental Site Assessment for the site located at 933 Gladstone Avenue, Ottawa, Ontario. Please find attached the information request form and a site plan for this location.

Please let me know if you have any questions.

Best regards, Sheila

Sheila Barter (B.Sc. Agr. (Hons)) | Environmental Consultant | Golder Associates Ltd.
1931 Robertson Road, Ottawa, Ontario, Canada, K2H 5B7
T: +1 (613) 592 9600 | D: +1 (613) 592-9600 x3305 | F: +1 (613) 592 9601 | C: +1 (613) 323-4275 | E: Sheila Barter@golder.com | www.golder.com

## Work Safe, Home Safe

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Please consider the environment before printing this email.



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## **Natural Areas and Features Information Request Form**

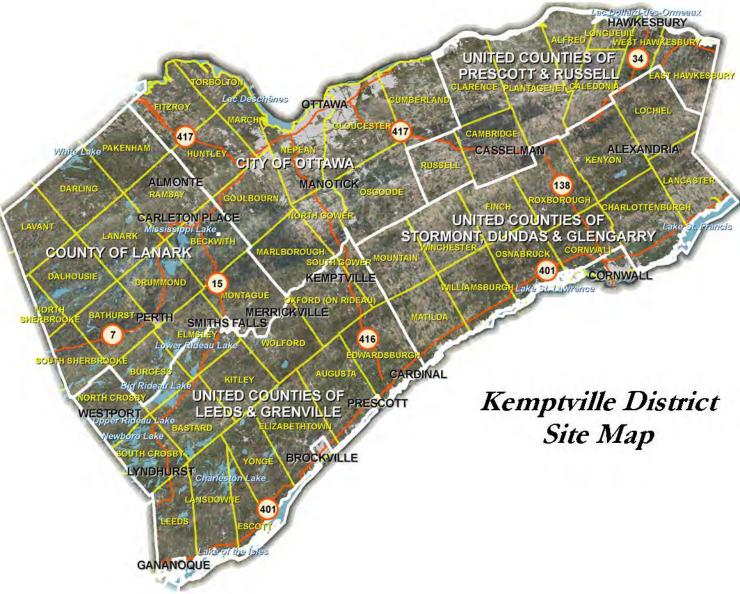
<b>Contact Information</b>			
Name:			
Address:			*All red fields are manditory
Phone Number:	Owner	Consultant	This includes X & Y Coordinates.
E-mail Address:			Please see for assistance
Site Information	Project Name:		
Township:	Lot:	Concessio	n:
X: Y:	: Address:		
	ore than 1 site, please provide all individua	l coordinates in an atta	ched spreadsheet
Type of Proposal	_		
Severance / Zoning	☐ Drains / Roads / Culverts		
☐ Hydroline clearing	☐ Small Scale Projects (less the state of the state	an 5 hectares)	
☐ RE Projects	☐ Large Scale Projects (5 hect	ares or greater)	
☐ Aggregate Project	Other:		
Attachments ***Please attach	a Site Map showing the area of interest		
☐ Picture ☐ Map(s)	☐ Engineered Drawings	Other:	
Request I would like to request the follo	owing information for the property ide	entified above:	
	uest please briefly outline the purpos lot severance, etc. or attach details):		ormation is required
Date of works proposed:			
other administration purposes. Wi protection rules under the Freedo safeguard personal information co Please Note: This request MUS Depending on the If the request doe	this form is collected in order to fulfill you. Ith regard to the personal information it co. Ith regard to the personal information it co. Ith of Information and Protection of Pro- Illected. Ith be made by the property owner or be nature of the request, it may take 6-8 Ith of the property information and conditions and conditions.	llects, the ministry is b ivacy Act and takes a by someone acting of weeks to respond to on, it may delay res	ound by privacy Il necessary steps to on their behalf. To your inquiry.

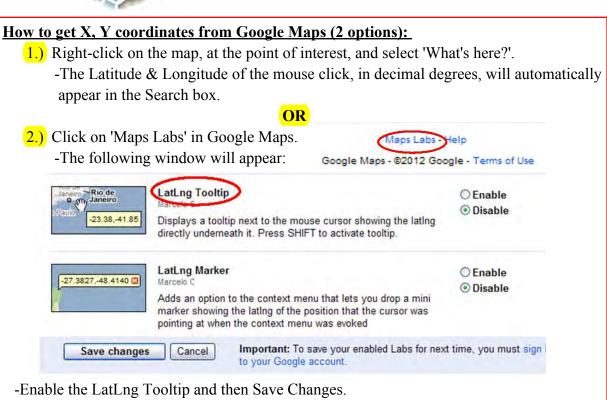
Please forward the completed form to:

OR Fax: 613-258-3920

Attention: Information Requests 10 Campus Drive, Postal Bag 2002 Kemptville, ON K0G 1J0

MNR File Number: \_\_\_\_\_\_ mage 1 of 2





-Now every time the **SHIFT** button is pressed in Google Maps, a Tool tip will appear

with the Latitude and Longitude of the mouse location in decimal degrees.

Kemptville District

10 Campus Drive Postal Box 2002 Kemptville ON K0G 1J0 Tel.: 613 258-8204 Fax: 613 258-3920

#### Ministère des Richesses naturelles et des Forêts

District de Kemptville

10, promenade Campus Case postale, 2002 Kemptville ON K0G 1J0 Tél.: 613 258-8204 Téléc.: 613 258-3920



Wed. Nov 16, 2016

Sheila Barter Golder Associates 1931 Robertson Rd. Ottawa, Ontario K2H 5B7 (613) 592-9600 ext 3305 Sheila\_Barter@golder.com

Attention: Sheila Narter

Subject: Information Request - Developments Project Name: Phase I ESA, 933 Gladstone Avenue Site Address: 933 Gladstone Ave, Ottawa, ON

Our File No. 2016 NEP-3800

## **Natural Heritage Values**

The Ministry of Natural Resources and Forestry (MNRF) Kemptville District has carried out a preliminary review of the above mentioned area in order to identify any potential natural resource and natural heritage values.

There are no known natural heritage features (e.g. Provincially Significant Wetlands, Areas of Natural and Scientific Interest, etc.) identified on or in close proximity to the site.

Municipal Official Plans contain information related to natural heritage features. Please see the local municipal Official Plan for more information, such as specific policies and direction pertaining to activities which may impact natural heritage features. For planning advice or Official Plan interpretation, please contact the local municipality. Many municipalities require environmental impact studies and other supporting studies be carried out as part of the development application process to allow the municipality to make planning decisions which are consistent with the Provincial Policy Statement (PPS, 2014).

The MNRF strongly encourages all proponents to contact partner agencies and appropriate municipalities early on in the planning process. This provides the proponent with early knowledge regarding agency requirements, authorizations and approval timelines; Ministry of the Environment and Climate Change (MOECC) and the local Conservation Authority may require approvals and permitting where natural values and natural hazards (e.g., floodplains) exist.

Kemptville District

10 Campus Drive Postal Box 2002 Kemptville ON K0G 1J0 Tel.: 613 258-8204 Fax: 613 258-3920 Ministère des Richesses naturelles et des Forêts

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As per the Natural Heritage Reference Manual (2010) the MNRF strongly recommends that an ecological site assessment be carried out to determine the presence of natural heritage features, and species at risk and their habitat on site. The MNRF can provide survey methodology for particular species at risk and their habitats.

The NHRM also recommends that cumulative effects of development projects on the integrity of natural heritage features and areas be given due consideration. This includes the evaluation of the past, present and possible future impacts of development in the surrounding area that may occur as a result of demand created by the presently proposed project.

## Wildland Fire

MNRF woodland data shows that the site contains woodlands. The lands should be assessed for the risk of wildland fire as per PPS 2014, Section 3.1.8 "Development shall generally be directed to areas outside of lands that are unsafe for development due to the presence of hazardous forest types for wildland fire. Development may however be permitted in lands with hazardous forest types for wildland fire where the risk is mitigated in accordance with wildland fire assessment and mitigation standards". Further discussion with the local municipality should be carried out to address how the risks associated with wildland fire will be covered for such a development proposal. Please see the Wildland Fire Risk Assessment and Mitigation Guidebook (2016) for more information.

## Significant Woodlands

Section 2.1.5 b) of the PPS states: Development and site alteration shall not be permitted in significant woodlands unless it has been demonstrated that there will be no negative impacts on the natural features or their ecological functions. The 2014 PPS directs that significant woodlands must be identified following criteria established by the Ontario Ministry of Natural Resources and Forestry, i.e. the Natural Heritage Reference Manual (NHRM), 2010. Where the local or County Official Plan has not yet updated significant woodland mapping to reflect the 2014 PPS, all wooded areas should be reviewed on a site specific basis for significance. The MNRF Kemptville District modelled locations of significant woodlands in 2011 based on NHRM criteria. The presence of significant woodland on site or within 120 metres should trigger an assessment of the impacts to the feature and its function from the proposed development.

## **Significant Wildlife Habitat**

Section 2.1.5 d) of the PPS states: Development and site alteration shall not be permitted in significant wildlife habitat unless it has been demonstrated that there will be no negative impacts on the natural features or their ecological functions. It is the responsibility of the approval authority to

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identify significant wildlife habitat or require its identification. The MNRF has several guiding documents which may be useful in identification of significant wildlife habitat and characterization of impacts and mitigation options:

- Significant Wildlife Habitat Technical Guide, 2000
- The Natural Heritage Reference Manual, 2010
- Significant Wildlife Habitat Mitigation Support Tool, 2014
- Significant Wildlife Habitat Criteria Schedule for Ecoregion 5E and 6E, 2015

The habitat of special concern species (as identified by the Species at Risk in Ontario list) and Natural Heritage Information Centre tracked species with a conservation status rank of S1, S2 and S3 may be significant wildlife habitat and should be assessed accordingly.

## Species at Risk

A review of the Natural Heritage Information Centre (NHIC) and internal records indicate that there is a potential for the following threatened (THR) and/or endangered (END) species on the site or in proximity to it:

- American Eel (END)
- Sensitive Species (END)
- Blanding's Turtle (THR)
- Butternut (END)
- Chimney Swift (THR)
- Eastern Meadowlark (THR)
- Eastern Small-footed Myotis (END)
- Lake Sturgeon (THR)
- Northern Long-eared Bat (END)
- Pale-bellied Frost Lichen (END)
- Tri-Colored Bat (END)
- Barn Swallow (THR)
- Little Brown Bat (END)

All endangered and threatened species receive individual protection under section 9 of the ESA and receive general habitat protection under Section 10 of the ESA, 2007. Thus any potential works should consider disturbance to the individuals as well as their habitat (e.g. nesting sites). General habitat protection applies to all threatened and endangered species. Note some species in Kemptville District receive regulated habitat protection. The habitat of these listed species is protected from damage and destruction and certain activities may require authorization(s) under

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the ESA. For more on how species at risk and their habitat is protected, please see: <a href="https://www.ontario.ca/page/how-species-risk-are-protected">https://www.ontario.ca/page/how-species-risk-are-protected</a>.

If the proposed activity is known to have an impact on any endangered or threatened species at risk (SAR), or their habitat, an authorization under the ESA may be required. It is recommended that MNRF Kemptville be contacted prior to any activities being carried out to discuss potential survey protocols to follow during the early planning stages of a project, as well as mitigation measures to avoid contravention of the ESA. Where there is potential for species at risk or their habitat on the property, an Information Gathering Form should be submitted to Kemptville MNRF at sar.kemptville@ontario.ca.

The Information Gathering Form may be found here:

http://www.forms.ssb.gov.on.ca/mbs/ssb/forms/ssbforms.nsf/FormDetail?OpenForm&ACT=RDR&T AB=PROFILE&ENV=WWE&NO=018-0180E

For more information on the ESA authorization process, please see: https://www.ontario.ca/page/how-get-endangered-species-act-permit-or-authorization

One or more special concern species has been documented to occur either on the site or nearby. Species listed as special concern are not protected under the ESA, 2007. However, please note that some of these species may be protected under the Fish and Wildlife Conservation Act and/or Migratory Birds Convention Act. Again, the habitat of special concern species may be significant wildlife habitat and should be assessed accordingly. Species of special concern for consideration:

- Milksnake (SC)
- Peregrine Falcon (SC)
- Snapping Turtle (SC)

If any of these or any other species at risk are discovered throughout the course of the work, and/or should any species at risk or their habitat be potentially impacted by on site activities, MNRF should be contacted and operations be modified to avoid any negative impacts to species at risk or their habitat until further direction is provided by MNRF.

Please note that information regarding species at risk is based largely on documented occurrences and does not necessarily include an interpretation of potential habitat within or in proximity to the site in question. Although this data represents the MNRF's best current available information, it is important to note that a lack of information for a site does not mean that additional features and values are not present. It is the responsibility of the proponent to ensure that species at risk are not killed, harmed, or harassed, and that their habitat is not damaged or destroyed through the activities carried out on the site.

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The MNRF continues to strongly encourage ecological site assessments to determine the potential for SAR habitat and occurrences. When a SAR or potential habitat for a SAR does occur on a site, it is recommended that the proponent contact the MNRF for technical advice and to discuss what activities can occur without contravention of the Act. For specific questions regarding the Endangered Species Act (2007) or SAR, please contact MNRF Kemptville District at <a href="mailto:sar.kemptville@ontario.ca">sar.kemptville@ontario.ca</a>.

The approvals processes for a number of activities that have the potential to impact SAR or their habitat have recently changed. For information regarding regulatory exemptions and associated online registration of certain activities, please refer to the following website: <a href="https://www.ontario.ca/page/how-get-endangered-species-act-permit-or-authorization">https://www.ontario.ca/page/how-get-endangered-species-act-permit-or-authorization</a>.

Please note: The advice in this letter may become invalid if:

- The Committee on the Status of Species at Risk in Ontario (COSSARO) re-assesses the status of the above-named species OR adds a species to the SARO List such that the section 9 and/or 10 protection provisions apply to those species; or
- Additional occurrences of species are discovered on or in proximity to the site.

This letter is valid until: Thu. Nov 16, 2017

The MNRF would like to request that we continue to be circulated on information with regards to this project. If you have any questions or require clarification please do not hesitate to contact me.

Sincerely,

Dom Ferland Management Biologist dominique.ferland@ontario.ca

Encl.\
-ESA Infosheet
-NHIC/LIO Infosheet

Ministry of the Environment and Climate Change Ottawa District Office 2430 Don Reid Drive, Suite 103 Ottawa Ontario K1H 1E1

613-521-3450 or 1-800-860-2195 Fax: 613-521-5437 Ministère de l'Environnement et de l'Action en matière de changement climatique Bureau du district d'Ottawa 2430, promenade Don Reid, Unité 103 Ottawa (Ontario) K1H 1E1 613-521-3450 ou 1-800-860-2195

Téléc.: 613-521-5437



OTT File No: 73

# INDEX REVIEW REPORT COMMERCIAL/INDUSTRIAL/AGRICULTURAL

Attention:

Sheila Barter

Your File:

Golder Associates

Date Received: August 5, 2016

Thank you for your inquiry requesting a search of records from the Ministry of the Environment and Climate Change (ministry). The ministry encourages you to use the available on-line resources to access publically-available information which may assist with your inquiry.

## PROPERTY OWNER AND LOCATION

Location:

Municipality:

Ottawa

Address:

933 Gladstone Ave

Lot

Concession

Township

## INDEX OF NAMES FOR ORDERS

We have searched the *Ottawa* District Index Record of Active Orders under the Environmental Protection Act (EPA), Ontario Water Resources Act (OWRA) and the Pesticides Act (PA) issued to: and the following information has been found:

**Please Note:** For information related to any ministry Orders issued to the property in question, **please request this information from the property owner.** If you would like further information regarding a specific Order issued, please contact the Ottawa District Office.

Date of Search: August 17, 2016

## RECORD OF SITE CONDITION

For information on **Records of Site Condition** filed on the Environmental Site Registry since October 1, 2004, please use the following links:

For records of site condition filed between October 1, 2004 and June 30, 2011 <a href="https://www.lrcsde.lrc.gov.on.ca/besrWebPublic/generalSearch">https://www.lrcsde.lrc.gov.on.ca/besrWebPublic/generalSearch</a>, and for records of site condition filed since July 1, 2011 <a href="https://www.ontario.ca/environment-and-energy/records-site-condition">https://www.ontario.ca/environment-and-energy/records-site-condition</a>



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# Endangered Species Act, 2007 & Species At Risk in Ontario

## Background

Endangered Species Act: <a href="http://www.e-laws.gov.on.ca/html/statutes/english/elaws\_statues-07e06\_e.htm">http://www.e-laws.gov.on.ca/html/statutes/english/elaws\_statues-07e06\_e.htm</a>
Species at Risk in Ontario List: <a href="https://www.mnr.gov.on.ca/en/Business/Species/2ColumnSubPage/246809.html">www.mnr.gov.on.ca/en/Business/Species/2ColumnSubPage/246809.html</a>

The Endangered Species Act (ESA) 2007 protects both species and habitat. Section 9 of the ESA "prohibits killing, harming, harassing, capturing, possessing, collecting, buying, selling, trading, leasing or transporting species that are listed as threatened, endangered or extirpated". Section 10 of the ESA, 2007 prohibits damaging or destroying habitat of endangered or threatened species. Protected habitat is either based on general definition in the Act or prescribed through a regulation. The ESA 2007 defines general habitat as an area on which the species depends, directly or indirectly, to carry on its life processes, including reproduction, rearing, hibernation, migration or feeding.

It is important to be aware that changes may occur in both species and habitat protection. The ESA applies to listed species on the Species at Risk in Ontario List (SARO). The Committee on the Status of Species in Ontario (COSSARO) meets regularly to evaluate species for listing and/or re-evaluate species already listed. As a result, species' designations may change that could in turn change the level of protection they receive under the ESA 2007. Also, habitat protection provisions for a species may change e.g. if a species-specific habitat regulation comes into effect. The regulation would establish the area that is protected as habitat for the species.

Information with respect to SAR can be found in the online database at the Natural Heritage Information Centre (NHIC) - <a href="http://nhic.mnr.gov.on.ca/nhic.cfm">http://nhic.mnr.gov.on.ca/nhic.cfm</a>. The NHIC compiles, maintains and distributes information on species at risk and updates its information on a regular basis. We encourage you to routinely check the NHIC database to obtain the most up to date SAR information for proposed work locations. However, while the NHIC database is the best available source of data, even when there are no known occurrences documented at a site, there is a possibility that SAR may occur at a proposed work location.

All data represents the MNR's best current available information, it is important to note that a lack of occurrence at a site does not mean that there are no Species at Risk (SAR) at the location. The MNR continues to encourage ecological site assessments determine the potential for other SAR occurrences. When a SAR does occur on a proposed site, it is recommended that the proponent contact the MNR for technical advice and to discuss what activities can occur without contravention of the Act. If an activity is proposed that will contravene the Act (such as Section 9 or 10), the proponent must contact the MNR to discuss the potential for application of certain permits (Section 17) or agreement (Regulation 242/08). For specific questions regarding the Endangered Species Act (2007) or species at risk, please contact a district Species at Risk Biologist sar.kemptville@ontario.ca.



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# Natural Heritage Information Centre

## Land Information Ontario

Natural Heritage Information Centre: <a href="http://nhic.mnr.gov.on.ca/">http://nhic.mnr.gov.on.ca/</a>

Biodiversity Explorer (mapping): https://www.biodiversityexplorer.mnr.gov.on.ca/nhicWEB/main.jsp

Land Information Ontario: http://www.mnr.gov.on.ca/en/Business/LIO/index.html

Ontario Geospatial Data Exchange: <a href="http://www.mnr.gov.on.ca/en/Business/LIO/2ColumnSubPage/STEL02">http://www.mnr.gov.on.ca/en/Business/LIO/2ColumnSubPage/STEL02</a> 167959.html

LIO Make-a-Map: <a href="http://www.mnr.gov.on.ca/en/Business/LIO/2ColumnSubPage/STDPROD">http://www.mnr.gov.on.ca/en/Business/LIO/2ColumnSubPage/STDPROD</a> 068999.html

Ontario Maps: <a href="http://www.mnr.gov.on.ca/en/Business/LIO/2ColumnSubPage/STDPROD">http://www.mnr.gov.on.ca/en/Business/LIO/2ColumnSubPage/STDPROD</a> 068512.html

The Natural Heritage Information Centre (NHIC) compiles, maintains and distributes information on natural species, plant communities and spaces of conservation concern in Ontario. This information is stored in a spatial database used for tracking this information. The Centre also has a library with conservation-related literature, reports, books, and maps, which are accessible for conservation applications, land use planning, and natural resource management. The NHIC website makes much of this information available through the internet.

**Natural Heritage Information Centre** 

300 Water Street, 2nd Floor, North Tower P.O. Box 7000, Peterborough, ON, K9J 8M5 Tel.:(705) 755-2159 Fax:(705) 755-2168

Land Information Ontario (LIO) manages key provincial datasets. LIO makes these and hundreds of other data sets available to registered users at no charge. LIO also coordinates public and private sector organizations to collect high resolution satellite imagery for Ontario providing significant cost savings for all partners. Technical bulletins, newsletters and more are available online. More details regarding Ontario imagery and data can be searched, ordered and accessed online.

LIO's Ontario Geospatial Data Exchange (OGDE) allows more than 400 public sector organizations to easily share and use digital geographic information under a single legal agreement. Membership is available to eligible public organizations at no costs.

Through the website, Maps & Map Tools are made available, including online mapping software: LIO Make-a-Map.

## **Land Information Ontario**

lio@ontario.ca LIO Support Team: (705) 755-1878

Or for specifics, see online at:

http://www.mnr.gov.on.ca/en/Business/LIO/2ColumnSubPage/STDPROD\_068510.html

Additional Information pertaining to NHIC, LIO and other Natural Heritage and Data and Information tools is available in the MNR Kemptville Information Request Guide (2012).

## INDEX REVIEW REPORT COMMERCIAL/INDUSTRIAL/AGRICULTURAL

## INDEX OF NAMES FOR APPROVALS ISSUED SINCE 1999

A search of the Index Record of names of all persons to whom approvals have been issued, maintained by the Director, Approvals Branch and the Regional Director, *Eastern Region*, and the District Manager, *Ottawa District*, under Section 19 EPA and Section 13 OWRA and the following information has been provided:

<u>Type</u> <u>Number</u> <u>Issued To</u> <u>Issue Date</u>

Section 9 EPA (Air)

Section 39 EPA (Waste Management)

Section 52 OWRA (Water)

Section 53 OWRA (Municipal/Privatel Industrial Sewage)

Other

The **ministry's Access Environment** is an on-line, map-based search tool designed to allow the public, quick and easy access to the ministry approvals and registration information from December 1999 onward. Access Environment currently displays Environmental Compliance Approvals (ECA), Renewable Energy Approvals (REA) and registrations on the Environmental Activity and Sector Registry (EASR). ECAs include all Certificates of Approval (CofAs) previously issued under the Environmental Protection Act (EPA) and approvals previously issued under s.53 of the Ontario Water Resources Act (OWRA). You can access this information from the ministry website or at the following

www.accessenvironment.ene.gov.on.ca/AEWeb/ae/GoSearch.action?search=basic&lang=en

Copies of **ECAs issued before January 1, 2000** can be obtained by submitting a <u>Request for a Copy</u> of an Environmental Compliance Approval

#### Please Note:

- The information provided above is based solely on the address(es) and name(s) of the present and past owners provided by you.
- The Index Record of Names to whom approvals have been issued, maintained by the Regional Director and District Manager, has been searched back to 1999.
- A search of our records does NOT indicate whether there are:
  - other uses for which an approval may have been required, nor
  - other uses on the property or in the vicinity that may affect the suitability of the property, for the use proposed to be made of it.

If a comprehensive knowledge of the property and the nearby lands and their environmental condition is required, you must examine them and other relevant records yourself, with the aid of a qualified person, if needed.

No Approvals have been issued.

Date of Search: August 17, 2016

## INDEX REVIEW REPORT COMMERCIAL/INDUSTRIAL/AGRICULTURAL

Additional site information related to the **location of landfill sites** in the province can be found at the following link:

http://www.ontario.ca/environment-and-energy/small-landfill-sites

http://www.ontario.ca/environment-and-energy/map-large-landfill-sites

The ministry's Hazardous Waste Information Network (HWIN) can also be accessed to search for information on generators, carriers, and receivers of subject waste in the province at the following link: <a href="https://www.hwin.ca">www.hwin.ca</a>

The ministry's Environmental Compliance Reports provide information about contaminant discharges to water and emissions to air that exceed limits found in legislation, environmental approvals, orders and/or policies/guidelines and can be accessed at the following link: <a href="http://www.ontario.ca/environment-and-energy/environmental-compliance-reports">http://www.ontario.ca/environment-and-energy/environmental-compliance-reports</a>

Information on **Environmental Penalties**, which are monetary penalties that can be imposed by the ministry for some industrial spills, can be assessed at the following link: <a href="https://www.ontario.ca/search/search-results?query=environmental%20penalties">https://www.ontario.ca/search/search-results?query=environmental%20penalties</a>

Additional ministry information can be accessed through the **Government of Ontario's Open Data Catalogue**: <a href="http://www.ontario.ca/government/open-data-ontario">http://www.ontario.ca/government/open-data-ontario</a>

The ministry also encourages you to consider best practices and standards of care used within the legal community and through your associations as a guide to obtaining information related to specific property for any legal purpose.

We trust this information will help meet your requirements quickly and effectively.

Please advise your colleagues that responses to requests for searches always take some time. As a result the Ministry of the Environment and Climate Change may not be able to meet deadlines imposed by other parties on real estate and other transactions.

Thank you for your inquiry.

Signature: Contact Name:

Johanne Veilleux

Title:

Administrative Assistant

Address:

Ministry of the Environment and Climate Change

2430 Don Reid Drive, Unit 103

Ottawa, ON K1H 1E1

Phone:

(613) 521-3450 Ext 221

Date: August 17, 2016

E&OE

Please Note: If you would like to receive an email with all the environmental links above, please contact me at <a href="mailto:johanne.veilleux@ontario.ca">johanne.veilleux@ontario.ca</a> and I will be pleased to send them to you.

# **APPENDIX B**

**EcoLog ERIS Report, Title Search, and Street Directories** 





# DATABASE REPORT

Project Property: 1661627 Phase I ESA

933 Gladstone Ave

Ottawa ON K1A0T4

**Project No:** 1661627

Report Type: Quote - Custom-Build Your Own Report

Order No: 20160822162

Requested by: Golder Associates Ltd.

Date Completed: September 23, 2016

Environmental Risk Information Services

A division of Glacier Media Inc.

P: 1.866.517.5204 E: info@erisinfo.com

www.erisinfo.com

## **Table of Contents**

Table of Contents	2
Executive Summary	
Executive Summary: Report Summary	
Executive Summary: Site Report Summary - Project Property	6
Executive Summary: Site Report Summary - Surrounding Properties	7
Executive Summary: Summary By Data Source	22
Map	42
Aerial	43
Detail Report	44
Unplottable Summary	176
Unplottable Report	
Appendix: Database Descriptions	211
Definitions	219

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Reliance on information in Report: This report DOES NOT replace a full Phase I Environmental Site Assessment but is solely intended to be used as a database review of environmental records.

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## **Executive Summary**

**Property Information:** 

Project Property: 1661627 Phase I ESA

933 Gladstone Ave Ottawa ON K1A0T4

**Project No:** 1661627

**Order Information:** 

Order No: 20160822162

Date Requested: August 22, 2016

Requested by: Golder Associates Ltd.

Report Type: Quote - Custom-Build Your Own Report

**Additional Products:** 

City Directory Search Subject Site plus 250m Radius

Land Title Search Title Search

## Executive Summary: Report Summary

Database	Name	Searched	Project Property	Boundary to 0.25km	Total
AAGR	Abandoned Aggregate Inventory	Y	0	0	0
AGR	Aggregate Inventory	Y	0	0	0
AMIS	Abandoned Mine Information System	Υ	0	0	0
ANDR	Anderson's Waste Disposal Sites	Υ	0	0	0
AUWR	Automobile Wrecking & Supplies	Υ	0	1	1
BORE	Borehole	Υ	1	28	29
CA	Certificates of Approval	Υ	0	23	23
CFOT	Commercial Fuel Oil Tanks	Υ	0	0	0
CHEM	Chemical Register	Υ	0	0	0
COAL	Inventory of Coal Gasification Plants and Coal Tar Sites	Υ	0	0	0
CONV	Compliance and Convictions	Υ	0	0	0
CPU	Certificates of Property Use	Υ	0	0	0
DRL	Drill Hole Database	Υ	0	0	0
EASR	Environmental Activity and Sector Registry	Υ	0	3	3
EBR	Environmental Registry	Υ	0	8	8
ECA	Environmental Compliance Approval	Υ	0	1	1
EEM	Environmental Effects Monitoring	Υ	0	0	0
EHS	ERIS Historical Searches	Y	0	23	23
EIIS	Environmental Issues Inventory System	Υ	0	0	0
EMHE	Emergency Management Historical Event	Υ	0	0	0
EXP	List of TSSA Expired Facilities	Υ	0	19	19
FCON	Federal Convictions	Y	0	0	0
FCS	Contaminated Sites on Federal Land	Y	0	0	0
FOFT	Fisheries & Oceans Fuel Tanks	Y	0	0	0
FST	Fuel Storage Tank	Y	0	2	2
FSTH	Fuel Storage Tank - Historic	Y	0	2	2
GEN	Ontario Regulation 347 Waste Generators Summary	Y	6	135	141
GHG	Greenhouse Gas Emissions from Large Facilities	Y	0	0	0
HINC	TSSA Historic Incidents	Y	0	5	5
IAFT	Indian & Northern Affairs Fuel Tanks	Y	0	0	0
INC	TSSA Incidents	Y	0	3	3
LIMO	Landfill Inventory Management Ontario	Y	0	0	0
MINE	Canadian Mine Locations	Y	0	0	0
MNR	Mineral Occurrences	Y	0	0	0
NATE	National Analysis of Trends in Emergencies System	Y	0	0	0
NCPL	(NATES) Non-Compliance Reports	Y	0	0	0

Database	Name	Searched	Project Property	Boundary to 0.25km	Total
NDFT	National Defense & Canadian Forces Fuel Tanks	Υ	0	0	0
NDSP	National Defense & Canadian Forces Spills	Υ	0	0	0
NDWD	National Defence & Canadian Forces Waste Disposal Sites	Υ	0	0	0
NEBW	National Energy Board Wells	Y	0	0	0
NEES	National Environmental Emergencies System (NEES)	Y	0	0	0
NPCB	National PCB Inventory	Υ	0	0	0
NPRI	National Pollutant Release Inventory	Υ	0	25	25
OGW	Oil and Gas Wells	Υ	0	0	0
OOGW	Ontario Oil and Gas Wells	Υ	0	0	0
ОРСВ	Inventory of PCB Storage Sites	Υ	0	0	0
ORD	Orders	Υ	0	0	0
PAP	Canadian Pulp and Paper	Υ	0	0	0
PCFT	Parks Canada Fuel Storage Tanks	Υ	0	0	0
PES	Pesticide Register	Υ	0	11	11
PINC	TSSA Pipeline Incidents	Υ	0	3	3
PRT	Private and Retail Fuel Storage Tanks	Υ	0	4	4
PTTW	Permit to Take Water	Υ	0	0	0
REC	Ontario Regulation 347 Waste Receivers Summary	Υ	0	0	0
RSC	Record of Site Condition	Υ	0	0	0
RST	Retail Fuel Storage Tanks	Υ	0	0	0
SCT	Scott's Manufacturing Directory	Υ	0	30	30
SPL	Ontario Spills	Υ	1	16	17
SRDS	Wastewater Discharger Registration Database	Υ	0	0	0
TANK	Anderson's Storage Tanks	Υ	0	0	0
TCFT	Transport Canada Fuel Storage Tanks	Υ	0	0	0
VAR	TSSA Variances for Abandonment of Underground Storage Tanks	Υ	0	0	0
WDS	Waste Disposal Sites - MOE CA Inventory	Υ	0	0	0
WDSH	Waste Disposal Sites - MOE 1991 Historical Approval Inventory	Υ	0	0	0
WWIS	Water Well Information System	Y	0	28	28
		Total:	8	370	378

## Executive Summary: Site Report Summary - Project Property

Map Key	DB	Company/Site Name	Address	Dir/Dist (m)	Elev diff (m)	Page Number
<u>8</u>	BORE		ON	-/0.0	0.80	<u>44</u>
<u>24</u>	GEN	DSS CAPITAL REGION SUPPLY CENTRE	933 GLADSTONE AVENUE OTTAWA ON K1A 0T4	WNW/36.9	1.09	<u>44</u>
24	GEN	GVT. OF CAN PUBLIC WORKS CANADA 18-375	CHP PLOUFFE PARK 933 GLADSTONE AVE. C/O PLACE DU PORTAGE PHASE IV LEVEL II ON K1A 0T4	WNW/36.9	1.09	<u>44</u>
<u>24</u>	GEN	PUBLIC WORKS AND GOVT SERVICES CANADA	CAPITAL REGION SUPPLY CENTRE (CRSC) 933 GLADSTONE AVENUE OTTAWA ON K1A 0T4	WNW/36.9	1.09	<u>45</u>
<u>24</u>	GEN	GVT. OF CAN PUBLIC WORKS CANADA	CHP PLOUFFE PARK 933 GLADSTONE AVE. C/O PLACE DU PORTAGE PHASE IV LEVEL II OTTAWA ON K1A 0T4	WNW/36.9	1.09	<u>45</u>
<u>24</u>	GEN	GVT. OF CAN PUBLIC WORKS CANADA 18-375	CHP PLOUFFE PARK 933 GLADSTONE AVE. C/O PLACE DU PORTAGE PHASE IV LEVEL II HULL	WNW/36.9	1.09	<u>45</u>
<u>24</u>	GEN	DSS CAPITAL REGION SUPPLY CENTRE 13-297	OTTAWA ON K1A 0T4 933 GLADSTONE AVENUE OTTAWA ON K1A 0T4	WNW/36.9	1.09	<u>46</u>
<u>24</u>	SPL	UNKNOWN	933 GLADSTONE OTTAWA CITY ON K1A 0T4	WNW/36.9	1.09	<u>46</u>

## Executive Summary: Site Report Summary - Surrounding Properties

Map Key	DB	Company/Site Name	Address	Dir/Dist (m)	Elev Diff (m)	Page Number
<u>1</u>	BORE		ON	SSW/14.9	1.30	<u>46</u>
<u>2</u>	SCT	V Steel Works Ltd.	17 Larch St Ottawa ON K1R 6W4	E/12.4	0.37	<u>47</u>
<u>3</u>	wwis		ON	SW/32.4	-4.30	<u>47</u>
<u>4</u>	BORE		ON	W/3.2	0.61	<u>47</u>
<u>5</u>	BORE		ON	NNE/4.5	-1.43	<u>48</u>
<u>6</u>	EHS		131 Loretta Avenue Ottawa ON	WSW/70.3	4.01	<u>48</u>
<u>7</u>	SCT	Beacon Lite Ltd.	131 Loretta Ave N Ottawa ON K1Y 2J7	SW/73.7	4.43	<u>49</u>
<u>9</u>	SCT	Buchanan Lighting Ltd.	129 Loretta Ave N Ottawa ON K1Y 2J7	WSW/68.8	4.19	<u>49</u>
<u>10</u>	BORE		ON	WSW/73.8	3.80	<u>49</u>
<u>11</u>	GEN	TerraPro Corporation	145 Loretta Ave. North Ottawa ON K1Y 2J7	SSW/86.1	5.29	<u>49</u>
<u>11</u>	GEN	TerraPro Corporation	145 Loretta Ave. North Ottawa ON	SSW/86.1	5.29	<u>50</u>
12	EHS		145 Loretta Avenue North Ottawa ON	SSW/89.6	5.11	<u>50</u>
<u>12</u>	GEN	TerraPro Corporation	145 Loretta Ave. North Ottawa ON	SSW/89.6	5.11	<u>50</u>
12	GEN	TerraPro Corporation	145 Loretta Ave. North Ottawa ON	SSW/89.6	5.11	<u>50</u>
<u>12</u>	GEN	TerraPro Corporation	145 Loretta Ave. North Ottawa ON K1Y 2J7	SSW/89.6	5.11	<u>51</u>
12	GEN	TerraPro Corporation	145 Loretta Ave. North Ottawa ON	SSW/89.6	5.11	<u>51</u>
12	PES	TERRA PRO CORPORATION	145 LORETTA AVE N OTTAWA ON K1Y 2J7	SSW/89.6	5.11	<u>51</u>
<u>12</u>	PES	TERRAPRO CORPORATION	145 LORETTA AVENUE NORTH OTTAWA ON K1Y 2J7	SSW/89.6	5.11	<u>51</u>
<u>13</u>	GEN	BROOKFIELD LEPAGE JOHNSON CONTROLS	1 OAK STREET OTTAWA ON	NNE/75.2	-2.55	<u>51</u>
<u>13</u>	GEN	Aim Waste Management Inc.	1 Oak Street Ottawa ON	NNE/75.2	-2.55	<u>51</u>
<u>13</u>	GEN	BROOKFIELD LEPAGE JOHNSON CONTROLS	OAK STREET COMPLEX 1 OAK STREET OTTAWA ON	NNE/75.2	-2.55	<u>52</u>
<u>13</u>	SPL	BROOKFIELD LEPAGE JOHNSON CONT	1 OAK STREET, OTTAWA PROPERTY MANAGEMENT CO. 120 PARKDALE AVE, SUITE 1401, OTTAWA OTTAWA CITY ON	NNE/75.2	-2.55	<u>52</u>

Map Key	DB	Company/Site Name	Address	Dir/Dist (m)	Elev Diff (m)	Page Number
<u>14</u>	WWIS		OTTAWA ON	SSW/116.3	5.56	<u>53</u>
<u>15</u>	BORE		ON	SW/122.4	6.05	<u>53</u>
<u>16</u>	BORE		ON	NW/47.4	0.55	<u>54</u>
<u>17</u>	WWIS		Ottawa ON	S/62.9	3.27	<u>54</u>
<u>18</u>	GEN	LOVE PRINTING SERVICE LTD.	951 GLADSTONE AVENUE OTTAWA ON K1Y 3E5	S/98.6	6.26	<u>54</u>
<u>18</u>	GEN	LOVE PRINTING (OUT OF BUS) 24-265	951 GLADSTONE AVENUE OTTAWA ON K1Y 3E5	S/98.6	6.26	<u>55</u>
<u>19</u>	CA	6176381 Canada Inc.	191-193 Preston St Ottawa ON	ENE/129.1	-2.26	<u>55</u>
<u>20</u>	BORE		ON	ENE/130.2	-1.68	<u>55</u>
<u>21</u>	EXP	MR GAS LIMITED **	971 GLADSTONE AV OTTAWA ON K1Y 3E5	SSW/110.7	6.53	<u>56</u>
<u>21</u>	EXP	MR GAS LIMITED **	971 GLADSTONE AV OTTAWA ON K1Y 3E5	SSW/110.7	6.53	<u>56</u>
<u>21</u>	EXP	MR GAS LIMITED **	971 GLADSTONE AV OTTAWA ON	SSW/110.7	6.53	<u>56</u>
<u>21</u>	EXP	MR GAS LIMITED **	971 GLADSTONE AV OTTAWA ON	SSW/110.7	6.53	<u>56</u>
<u>21</u>	EXP	MR GAS LIMITED **	971 GLADSTONE AV OTTAWA ON K1Y 3E5	SSW/110.7	6.53	<u>57</u>
<u>21</u>	EXP	MR GAS LIMITED **	971 GLADSTONE AV OTTAWA ON K1Y 3E5	SSW/110.7	6.53	<u>57</u>
<u>21</u>	EXP	MR GAS LIMITED **	971 GLADSTONE AV OTTAWA ON K1Y 3E5	SSW/110.7	6.53	<u>57</u>
<u>21</u>	SCT	Sportive Sportswear Manufacturers Inc.	155A Loretta Ave N Ottawa ON K1Y 2J7	SSW/110.7	6.53	<u>57</u>
<u>21</u>	SCT	SPORTIVE SPORTSWEAR MFG INC.	155A LORETTA AVE N OTTAWA ON K1Y 2J7	SSW/110.7	6.53	<u>57</u>
<u>22</u>	WWIS		Ottawa ON	S/58.9	3.97	<u>58</u>
<u>22</u>	WWIS		Ottawa ON	S/58.9	4.01	<u>58</u>
<u>23</u>	WWIS		OTTAWA ON	ESE/94.5	-1.68	<u>59</u>
<u>25</u>	WWIS		OTTAWA ON	SSE/43.3	3.85	<u>59</u>
<u>26</u>	WWIS		Ottawa ON	SSE/46.2	3.93	<u>60</u>
<u>27</u>	SCT	SPORTIVE SPORTSWEAR MFG INC.	155 A LORETTA AVE N OTTAWA ON K1Y 2J7	S/69.1	4.39	<u>60</u>
<u>28</u>	CA	R.M. OF OTTAWA-CARLETON	BALSAM AVE/PRESTON ST. OTTAWA ON	E/113.3	-1.91	<u>61</u>
<u>28</u>	INC		BALSAM ST. & PRESTON ST., OTTAWA ON	E/113.3	-1.91	<u>61</u>
<u>28</u>	SPL		Intersection of Balsam St and Preston St Ottawa ON	E/113.3	-1.91	<u>62</u>

Map Key	DB	Company/Site Name	Address	Dir/Dist (m)	Elev Diff (m)	Page Number
<u>29</u>	WWIS		Ottawa ON	S/82.1	5.73	<u>62</u>
<u>30</u>	SCT	INVITATIONS PLUS	193 PRESTON ST OTTAWA ON K1R 7P8	ENE/141.4	-2.28	<u>62</u>
<u>31</u>	WWIS		Ottawa ON	S/95.8	6.20	<u>63</u>
<u>32</u>	SCT	VESUVIO IRON LOGIC CUSTOM	949 GLADSTONE AVE OTTAWA ON K1Y 3E5	S/86.5	5.62	<u>63</u>
<u>32</u>	SCT	VESUVIO IRON WORKS	949 GLADSTONE AVE OTTAWA ON K1Y 3E5	S/86.5	5.62	<u>63</u>
<u>33</u>	WWIS		OTTAWA ON	S/67.6	4.25	<u>64</u>
<u>34</u>	BORE		ON	WNW/49.7	0.64	<u>64</u>
<u>35</u>	EHS		941-971 Gladstone Avenue Ottawa ON K1Y 3E5	S/97.3	5.74	<u>65</u>
<u>36</u>	CA		Lot 7, Bk 123, Reg. Plan 34, 930-934 Gladstone Ave	SE/29.5	0.27	<u>65</u>
<u>37</u>	EHS		Ottawa ON K1R 6Y4 173 Preston St Ottawa ON K1R7P6	NE/137.6	-2.13	<u>65</u>
<u>38</u>	GEN	Corporation City of Ottawa	930 Somerset Street West Ottawa ON	N/78.9	-2.23	<u>65</u>
38	PINC		930 Somerset St W,Ottawa ON	N/78.9	-2.23	<u>65</u>
<u>39</u>	WWIS		OTTAWA ON	S/73.3	4.42	<u>66</u>
<u>40</u>	BORE		ON	SW/157.8	4.92	<u>67</u>
<u>41</u>	CA	Preston Hardware (1980) Limited	234-248 Preston Street Ottawa ON K1R 7R4	ESE/103.6	-1.63	<u>67</u>
41	PES	PRESTON HARDWARE (1980) LIMITED	234-248 PRESTON ST OTTAWA ON K1R 7R4	ESE/103.6	-1.63	<u>68</u>
41	PES	PRESTON HARDWARE (1980) LIMITED	234-248 PRESTON ST OTTAWA ON K1R 7R4	ESE/103.6	-1.63	<u>68</u>
<u>41</u>	PES	PRESTON HARDWARE (1980) LIMITED	234-248 PRESTON STREET OTTAWA ON K1R 7R4	ESE/103.6	-1.63	<u>68</u>
42	GEN	MCKERLIE-MILLEN INC.	35A LAUREL STREET OTTAWA ON K1Y 4M4	W/92.4	3.77	<u>68</u>
<u>42</u>	GEN	CARQUEST CANADA LTD.	35A LAUREL STREET OTTAWA ON K1Y 4M4	W/92.4	3.77	<u>68</u>
<u>42</u>	GEN	CARQUEST CANADA LTD.	AUTO PAINT SUPPLY 35A LAUREL STREET	W/92.4	3.77	<u>69</u>
<u>42</u>	GEN	MCKERLIE MILLEN (SEE & USE ON2231907)	OTTAWA ON K1Y 4M4 35A LAUREL STREET OTTAWA ON K1Y 4M4	W/92.4	3.77	<u>69</u>
<u>42</u>	GEN	LEBRUN BUILDING SERVICES	75 G Breezehill North Ottawa ON K1Y 2H7	W/92.4	3.77	<u>69</u>
<u>42</u>	SCT	Breezehill Heating Ltd.	75 Breezehill Ave N Unit D Ottawa ON K1Y 2H6	W/92.4	3.77	<u>69</u>
<u>42</u>	SCT	merge design, print & promo	35B Laurel St Ottawa ON K1Y 4M4	W/92.4	3.77	<u>69</u>

Map Key	DB	Company/Site Name	Address	Dir/Dist (m)	Elev Diff (m)	Page Number
<u>42</u>	SCT	Paper Sign Man	35B Laurel St Ottawa ON K1Y 4M4	W/92.4	3.77	<u>70</u>
<u>42</u>	SCT	Signs in 23 hours.com	35B Laurel St Ottawa ON K1Y 4M4	W/92.4	3.77	<u>70</u>
42	SCT	Wake Cup Coffee Roasters	35 Laurel St Ottawa ON K1Y 4M4	W/92.4	3.77	<u>70</u>
<u>43</u>	WWIS		OTTAWA ON	S/73.8	4.37	<u>70</u>
44	EHS		153-157 Preston Street Ottawa ON K1R 7P6	NE/125.6	-2.61	<u>71</u>
<u>44</u>	EHS		153-157 Preston Road aka 130 Anderson St.	NE/125.6	-2.61	<u>71</u>
<u>45</u>	EHS		Ottawa ON K1R 7P6 Anderson Street && Preston Street Ottawa ON	NNE/115.2	-2.66	<u>71</u>
<u>46</u>	CA	City of Ottawa	930 Somerset St W Ottawa ON K1R 6R9	N/92.4	-1.85	<u>71</u>
<u>46</u>	GEN	PUBLIC WORKS CANADA	CHP PLOUFFE PARK C/O PLACE DU PORTAGE PHASE IV LEVEL II OTTAWA ON	N/92.4	-1.85	<u>72</u>
<u>46</u>	GEN	Corporation City of Ottawa	930 Somerset Street West Ottawa ON	N/92.4	-1.85	<u>72</u>
46	SPL		930 Somerset Street Ottawa ON	N/92.4	-1.85	<u>72</u>
<u>47</u>	EHS		916 Gladstone Avenue Ottawa ON K1R 6Y4	SE/59.1	-0.28	<u>73</u>
<u>47</u>	WWIS		lot 39 con 1 OTTAWA ON	SE/59.1	-0.28	<u>73</u>
<u>48</u>	GEN	Preston Medical Management Inc.	225 Preston Street Ottawa ON	E/153.2	-1.55	<u>73</u>
<u>49</u>	PES	PRESTON HARDWARE 1980 LIMITED	248 PRESTON ST OTTAWA ON K1R 7R4	ESE/103.4	-1.29	73
49	PES	PRESTON HARDWARE 1980 LIMITED	248 PRESTON ST OTTAWA ON K1R 7R4	ESE/103.4	-1.29	<u>74</u>
<u>50</u>	PRT	PRESTON AUTO CENTRE INC	241 PRESTON ST OTTAWA ON K1R 7R3	E/137.0	-1.44	<u>74</u>
<u>50</u>	SPL	City of Ottawa	South East corner of Preston and Balsam 241 PRESTON STREET, OTTAWA <unofficial> Ottawa ON K1R 7R3</unofficial>	E/137.0	-1.44	<u>74</u>
<u>51</u>	EHS		225 Preston St. Ottawa ON K1R 7R1	E/158.1	-1.53	<u>74</u>
<u>51</u>	GEN	LA PAUSE VELO LIMITEE	225 PRESTON STREET OTTAWA ON K1R 7R1	E/158.1	-1.53	<u>74</u>
<u>51</u>	GEN	LA PAUSE VELO LTEE/BIKE STOP, THE	225 PRESTON STREET, REAR UNIT OTTAWA ON K1R 7R1	E/158.1	-1.53	<u>75</u>
<u>51</u>	GEN	Preston Medical Management Inc.	225 Preston Street Ottawa ON K1R 7R1	E/158.1	-1.53	<u>75</u>
<u>51</u>	GEN	Preston Medical Management Inc.	225 Preston Street Ottawa ON K1R 7R1	E/158.1	-1.53	<u>75</u>
<u>51</u>	GEN	Preston Medical Management Inc.	225 Preston Street Ottawa ON K1R 7R1	E/158.1	-1.53	<u>75</u>
<u>51</u>	GEN	Preston Medical Management Inc.	225 Preston Street Ottawa ON K1R 7R1	E/158.1	-1.53	<u>76</u>

Map Key	DB	Company/Site Name	Address	Dir/Dist (m)	Elev Diff (m)	Page Number
<u>51</u>	GEN	Preston Medical Management Inc.	225 Preston Street Ottawa ON K1R 7R1	E/158.1	-1.54	<u>76</u>
<u>51</u>	GEN	Preston Medical Management Inc.	225 Preston Street Ottawa ON K1R 7R1	E/158.1	-1.54	<u>76</u>
<u>52</u>	EXP	PRESTON AUTO CENTRE INC	241 PRESTON ST OTTAWA ON K1R 7R3	E/138.5	-1.38	<u>76</u>
<u>53</u>	BORE		ON	SSW/170.4	8.07	<u>77</u>
<u>54</u>	EBR	Bridgehead (2000) Inc.	130 Anderson Street OTTAWA ON K1R 6T7	NE/148.6	-2.24	<u>77</u>
<u>55</u>	GEN	BA BANKNOTE	OTTAWA DIV., DIV OF QUEBECOR PUBLITECH INC.	SW/179.9	7.10	<u>77</u>
<u>55</u>	NPRI	BA BANKNOTE INC.	OTTAWA ON K1N 8V4 975 Gladstone Ave. Ottawa ON K1Y 4W5	SW/179.9	7.10	<u>78</u>
<u>55</u>	NPRI	BA BANKNOTE INC.	975 Gladstone Avenue Ottawa ON K1Y4W5	SW/179.9	7.10	<u>78</u>
<u>55</u>	NPRI	BA INTERNATIONAL	975 Gladstone Avenue Ottawa ON K1Y4W5	SW/179.9	7.10	<u>79</u>
<u>55</u>	NPRI	BA INTERNATIONAL	975 Gladstone Avenue Ottawa ON K1Y4W5	SW/179.9	7.10	<u>79</u>
<u>55</u>	NPRI	BA INTERNATIONAL INC.	975 Gladstone Avenue Ottawa ON K1Y4W5	SW/179.9	7.10	<u>79</u>
<u>55</u>	NPRI	BA INTERNATIONAL	975 Gladstone Avenue Ottawa ON K1Y4W5	SW/179.9	7.10	<u>79</u>
<u>55</u>	NPRI	BA INTERNATIONAL	975 Gladstone Avenue Ottawa ON K1Y4W5	SW/179.9	7.10	<u>80</u>
<u>55</u>	NPRI	BA INTERNATIONAL	975 Gladstone Avenue Ottawa ON K1Y4W5	SW/179.9	7.10	82
<u>55</u>	NPRI	BA INTERNATIONAL	975 Gladstone Avenue Ottawa ON K1Y4W5	SW/179.9	7.10	<u>82</u>
<u>55</u>	NPRI	BA INTERNATIONAL INC.	975 Gladstone Avenue Ottawa ON K1Y4W5	SW/179.9	7.10	<u>82</u>
<u>56</u>	PRT	MR GAS LIMITED ATTN LILIANNE LEVAC	971 GLADSTONE AV OTTAWA ON K1Y 3E5	SSW/149.7	7.72	<u>82</u>
<u>57</u>	CA	Grandtech Auto Inc.	111 Breezehill Avenue North Ottawa ON K1Y 2H6	W/138.2	4.09	<u>83</u>
<u>57</u>	EBR	Grandtech Auto Inc.	111 Breezehill Avenue North Ottawa ON K1Y 2H6	W/138.2	4.09	<u>83</u>
<u>58</u>	GEN	GREAT CANADIAN THEATRE COMPANY, THE	910 GLADSTONE AVENUE OTTAWA ON K1R 6Y3	SE/77.7	-0.33	<u>83</u>
<u>58</u>	GEN	Great Canadian Theatre Company	910 Gladstone Ottawa ON K1R 6Y4	SE/77.7	-0.33	<u>83</u>
<u>59</u>	CA		975 Gladstone Avenue Ottawa ON K1Y 4W5	SW/188.7	5.37	<u>84</u>
<u>59</u>	CA	BA International Inc.	975 Gladstone Avenue Ottawa ON K1Y 4W5	SW/188.7	5.37	<u>84</u>
<u>59</u>	CA	BA Banknote Inc.	975 Gladstone Avenue Ottawa ON K1Y 4W5	SW/188.7	5.37	<u>84</u>
<u>59</u>	CA	BA International Inc.	975 Gladstone Avenue Ottawa ON K1Y 4W5	SW/188.7	5.37	<u>84</u>
<u>59</u>	CA	B.A. BANKNOTE INC.	975 GLADSTONE AVE. OTTAWA CITY ON K1Y 4W5	SW/188.7	5.37	<u>85</u>

Map Key	DB	Company/Site Name	Address	Dir/Dist (m)	Elev Diff (m)	Page Number
<u>59</u>	CA	BA International Inc.	975 Gladstone Avenue Ottawa ON K1Y 4W5	SW/188.7	5.37	<u>85</u>
<u>59</u>	CA	BA Banknote Inc.	975 Gladstone Avenue Ottawa ON K1Y 4W5	SW/188.7	5.37	<u>85</u>
<u>59</u>	CA		975 Gladstone Avenue Ottawa ON K1Y 4W5	SW/188.7	5.37	<u>86</u>
<u>59</u>	EASR	CANADIAN BANK NOTE COMPANY, LIMITED	975 GLADSTONE AVE OTTAWA ON	SW/188.7	5.37	<u>86</u>
<u>59</u>	EASR	CANADIAN BANK NOTE COMPANY, LIMITED	975 GLADSTONE AVE OTTAWA ON	SW/188.7	5.37	<u>86</u>
<u>59</u>	EBR	BA Banknote Inc	975 Gladstone Avenue Ottawa ON K1Y 4W5	SW/188.7	5.37	<u>86</u>
<u>59</u>	EBR	Canadian Bank Note Company, Limited	975 Gladstone Avenue OTTAWA ON K1Y 4W5	SW/188.7	5.37	<u>87</u>
<u>59</u>	EBR	BA Banknote Inc.	975 Gladstone Avenue Ottawa ON K1Y 4W5	SW/188.7	5.37	<u>87</u>
<u>59</u>	EBR	BA Banknote Inc.	975 Gladstone Avenue Ottawa ON K1Y 4W5	SW/188.7	5.37	<u>87</u>
<u>59</u>	EBR	BA Banknote Inc.	975 Gladstone Avenue Ottawa ON K1Y 4W5	SW/188.7	5.37	<u>87</u>
<u>59</u>	EBR	BA Banknote Inc.	975 Gladstone Avenue Ottawa ON K1Y 4W5	SW/188.7	5.37	<u>88</u>
<u>59</u>	EHS		975 Gladstone Avenue n/a ON K1Y 4W5	SW/188.7	5.37	<u>88</u>
<u>59</u>	EHS		975 Gladstone Avenue Ottawa ON K1Y 4W5	SW/188.7	5.37	88
<u>59</u>	EHS		975 Gladstone Avenue Ottawa ON K1Y 4W5	SW/188.7	5.37	<u>88</u>
<u>59</u>	GEN	BA INTERNATIONAL INC.	975 GLADSTONE AVENUE OTTAWA ON K1Y 4W5	SW/188.7	5.37	<u>88</u>
<u>59</u>	GEN	BA INTERNATIONAL INC.	975 GLADSTONE AVENUE OTTAWA ON K1Y 4W5	SW/188.7	5.37	<u>89</u>
<u>59</u>	GEN	Pinchin Environmental	975 Gladstone Ottawa ON K1Y 4W5	SW/188.7	5.37	<u>91</u>
<u>59</u>	GEN	BA INTERNATIONAL INC.	975 GLADSTONE AVENUE OTTAWA ON	SW/188.7	5.37	<u>91</u>
<u>59</u>	GEN	BA BANKNOTE	OTTAWA DIV., DIV OF QUEBECOR PUBLITECH INC./975 GLADSTONE AVENUE	SW/188.7	5.37	92
<u>59</u>	GEN	BA INTERNATIONAL INC.	OTTAWA ON K1Y 4W5 975 GLADSTONE AVENUE OTTAWA ON K1Y 4W5	SW/188.7	5.37	<u>93</u>
<u>59</u>	GEN	BA BANKNOTE INC.	975 GLADSTONE AVENUE OTTAWA ON K1N 8V4	SW/188.7	5.37	<u>94</u>
<u>59</u>	GEN	BRITISH AMERICAN BANK NOTE INC.	975 GLADSTONE AVENUE C/O P.O. BOX 399, STATION A OTTAWA ON K1Y 4W5	SW/188.7	5.37	<u>95</u>
<u>59</u>	GEN	BA INTERNATIONAL INC.	975 GLADSTONE AVENUE OTTAWA ON K1Y 4W5	SW/188.7	5.37	<u>96</u>
<u>59</u>	GEN	BA BANKNOTE	975 GLADSTONE AVENUE OTTAWA ON K1N 8V4	SW/188.7	5.37	<u>97</u>
<u>59</u>	GEN	BA INTERNATIONAL INC.	975 GLADSTONE AVENUE OTTAWA ON K1N 8V4	SW/188.7	5.37	<u>98</u>

Map Key	DB	Company/Site Name	Address	Dir/Dist (m)	Elev Diff (m)	Page Number
<u>59</u>	GEN	BA BANKNOTE 05- 931	OTTAWA DIV., DIV OF QUEBECOR PUBLITECH INC./975 GLADSTONE AVENUE	SW/188.7	5.37	<u>99</u>
<u>59</u>	GEN	Canadian Bank Note Company, limited Gladstone	OTTAWA ON K1Y 4W5 975 Gladstone avenue Ottawa ON	SW/188.7	5.37	<u>100</u>
<u>59</u>	SCT	B.A. Banknote Inc.	975 Gladstone Ave Ottawa ON K1Y 4W5	SW/188.7	5.37	<u>101</u>
<u>59</u>	SCT	BA International Inc.	975 Gladstone Ave Ottawa ON K1Y 4W5	SW/188.7	5.37	<u>101</u>
<u>59</u>	SCT	BA International Inc.	975 Gladstone Ave Ottawa ON K1Y 4W5	SW/188.7	5.37	<u>102</u>
<u>59</u>	SCT	B A BANKNOTE	975 GLADSTONE AVE OTTAWA ON K1Y 4W5	SW/188.7	5.37	<u>10</u>
<u>59</u>	SCT	B.A. Banknote	975 Gladstone Ave Ottawa ON K1Y 4W5	SW/188.7	5.37	<u>102</u>
<u>59</u>	SPL	BA International Inc.	975 Gladstone Ave Ottawa ON K1Y 4W5	SW/188.7	5.37	<u>102</u>
<u>59</u>	SPL	Drain-All Ltd.	975 Gladstone Ave Ottawa ON K1Y 4W5	SW/188.7	5.37	<u>103</u>
<u>59</u>	SPL	BA International Inc.	975 Gladstone Ave Ottawa ON K1Y 4W5	SW/188.7	5.37	103
<u>59</u>	SPL	349977 Ontario Ltd.	975 Gladstone Ave Ottawa ON K1Y 4W5	SW/188.7	5.37	<u>103</u>
<u>60</u>	CA	City of Ottawa	130 Preston Street Ottawa ON	NNE/119.9	-2.03	<u>104</u>
<u>60</u>	GEN	City of Ottawa	130 Preston St Ottawa ON K1R 7P5	NNE/119.9	-2.03	<u>104</u>
<u>61</u>	SCT	L'ORA DI OTTAWA	203 LOUISA ST OTTAWA ON K1R 6Y9	SE/69.0	0.18	<u>10</u>
<u>61</u>	SCT	L'Ora di Ottawa (1987) Ltd.	203 Louisa St Ottawa ON K1R 6Y9	SE/69.0	0.18	<u>104</u>
<u>62</u>	CA	OTTAWA CITY	GLADSTONE AVE/PRESTON ST. CSO OTTAWA CITY ON	ESE/116.2	-1.51	<u>10</u>
<u>62</u>	CA	R.M. OF OTTAWA-CARLETON	GLADSTONE AVE/PRESTON ST. OTTAWA CITY ON	ESE/116.2	-1.51	<u>10</u>
<u>63</u>	SPL	OTTAWA HYDRO	99 BREEZE HILL AVENUE TRANSFORMER	W/129.3	3.92	<u>10</u>
<u>64</u>	CA	907462 ONTARIO LIMITED	OTTAWA CITY ON 111-113 BREEZEHILL AVE.N., SWM OTTAWA CITY ON K1Y 2H6	W/152.0	4.18	<u>10</u>
<u>65</u>	BORE		ON	S/142.4	8.85	106
<u>66</u>	GEN	DAVID BERMAN TYPOGRAPHICS LIMITED	950 GLADSTONE AVENUE 3RD FLOOR OTTAWA ON K1Y 3E6	S/127.6	7.68	<u>106</u>
<u>66</u>	GEN	DAVID BERMAN TYPOGRAPHICS LTD.	950 GLADSTONE AVE., 3RD FLOOR OTTAWA ON K1Y 3E6	S/127.6	7.68	106
<u>66</u>	SCT	TRADER MEDIA CORP.	950 GLADSTONE AVE OTTAWA ON K1Y 3E6	S/127.6	7.68	<u>10</u>
<u>66</u>	SCT	DAVID BERMAN TYPOGRAPHICS LTD.	950 GLADSTONE AVE OTTAWA ON K1Y 3E6	S/127.6	7.68	<u>10</u>
<u>67</u>	BORE		ON	SSE/82.6	2.65	<u>107</u>

Map Key	DB	Company/Site Name	Address	Dir/Dist (m)	Elev Diff (m)	Page Number
<u>68</u>	EHS		1010 Somerset St W Ottawa ON	NNW/136.7	-0.01	108
<u>68</u>	EHS		1010 Somerset Street West Ottawa ON	NNW/136.7	-0.01	108
<u>68</u>	GEN	Public Works and Government Services Canada	1010 Somerset Street Plouffe Park Shop Ottawa ON	NNW/136.7	-0.01	108
<u>68</u>	GEN	PUBLIC WORKS CANADA	MAINTENANCE SUPPORT SERVICES PLOUFFE PARK- 1010 SOMERSET STREET WEST OTTAWA ON	NNW/136.7	-0.01	109
<u>68</u>	GEN	public works government services canada	1010 SOMERSET STREET WEST OTTAWA ON	NNW/136.7	-0.01	<u>110</u>
<u>68</u>	GEN	SNC Lavalin O&M	1010 Somerset St. W Ottawa ON K1A 0K9	NNW/136.7	-0.01	<u>110</u>
<u>68</u>	GEN	GVT. OF CANPUBLIC WORKS CANADA	MAINTENANCE SUPPORT SERV. PLOUFFE PARK 1010 SOMERSET ST.W.C/O140 PROMENADE DU PORTAGE-OTTAWA ON K1A 0M3	NNW/136.7	-0.01	111
<u>68</u>	GEN	Public Works and Government Services Canada	1010 Somerset Street Plouffe Park Shop Ottawa ON	NNW/136.7	-0.01	111
<u>68</u>	GEN	Public Works and Government Services Canada	1010 Somerset Street Plouffe Park Shop Ottawa ON	NNW/136.7	-0.01	112
<u>68</u>	GEN	BROOKFIELD LEPAGE JOHNSON CONTROLS	1010 SOMERSET STREET PLOUFFE PARK OTTAWA ON	NNW/136.7	-0.01	113
<u>68</u>	GEN	public works government services canada environmental services directorate	1010 SOMERSET STREET WEST OTTAWA ON	NNW/136.7	-0.01	114
<u>68</u>	GEN	GVT. OF CANPUBLIC WORKS CANADA 18-285	MAINTENANCE SUPPORT SERVICES PLOUFFE PARK, 1010 SOMERSET STREET W. OTTAWA ON	NNW/136.7	-0.01	114
<u>68</u>	GEN	Public Works and Government Services Canada	1010 Somerset Street Plouffe Park Shop Ottawa ON	NNW/136.7	-0.01	<u>115</u>
<u>68</u>	GEN	Public Works and Government Services Canada	1010 Somerset Street Plouffe Park Shop Ottawa ON	NNW/136.7	-0.01	116
<u>68</u>	GEN	PUBLIC WORK & GOV`T SER CANADA	1010 SOMERSET st OTTAWA ON	NNW/136.7	-0.01	<u>117</u>
<u>68</u>	GEN	public works government services canada	1010 SOMERSET STREET WEST OTTAWA ON	NNW/136.7	-0.01	117
<u>68</u>	GEN	Public Works and Government Services Canada	1010 Somerset Street Plouffe Park Shop Ottawa ON	NNW/136.7	-0.01	118
<u>68</u>	PINC		1010 SOMERSET ST, OTTAWA ON	NNW/136.7	-0.01	119
<u>68</u>	SPL	SHELL CANADA PRODUCTS LTD.	DEPT OF PUBLIC WORKS 1010 SUMMERSET TANK TRUCK (CARGO) OTTAWA CITY ON	NNW/136.7	-0.01	<u>11</u>
<u>69</u>	BORE		ON	S/143.2	8.60	<u>120</u>
<u>70</u>	BORE		ON	S/153.3	8.20	<u>120</u>
<u>71</u>	EHS		73 Breezehill Avenue North Ottawa ON K1Y 2H6	WNW/118.1	4.11	<u>121</u>
<u>71</u>	SCT	A R C INDUSTRIES	73 BREEZEHILL AVE N OTTAWA ON K1Y 2H6	WNW/118.1	4.11	<u>121</u>
<u>71</u>	SCT	Arc Industries - Div. of OCAPDD	73 Breezehill Ave N Ottawa ON K1Y 2H6	WNW/118.1	4.11	<u>121</u>

Map Key	DB	Company/Site Name	Address	Dir/Dist (m)	Elev Diff (m)	Page Number
<u>71</u>	SCT	ARC Industries	73 Breezehill Ave N Ottawa ON K1Y 2H6	WNW/118.1	4.11	<u>12</u>
<u>72</u>	SPL	City of Ottawa	Breezehill Ave N between Laurel and Gladstone	SW/219.3	5.94	121
<u>73</u>	CA	City of Ottawa	Ottawa ON 135 Preston Street Ottawa ON K1R 7P4	NNE/177.6	-0.06	122
<u>74</u>	SCT	T & E FOOD PRODUCTS	158 SPRUCE ST OTTAWA ON K1R 6P2	NNW/173.8	-3.58	<u>122</u>
<u>75</u>	WWIS		OTTAWA ON	S/159.4	7.88	<u>122</u>
<u>76</u>	AUWR	A & T AUTO PARTS	55 BREEZEHILL AVE N OTTAWA ON K1Y 2H6	WNW/137.9	3.48	<u>123</u>
<u>77</u>	INC		179 LOUISA STREET, OTTAWA ON K1R 6Y9	SE/124.1	-0.61	123
<u>78</u>	GEN	Centretown Professional Corporation	955 Somerset st Ottawa ON	NNW/173.8	-2.41	<u>123</u>
<u>78</u>	GEN	PARSON REFRIGERATION (1985) LTD.	955 SOMERSET STREET WEST OTTAWA ON K1R 6R8	NNW/173.8	-2.41	124
<u>78</u>	GEN	Centretown Professional Corporation	955 Somerset st Ottawa ON K1R 6R8	NNW/173.8	-2.41	124
<u>78</u>	GEN	Centretown Professional Corporation	955 Somerset st Ottawa ON	NNW/173.8	-2.41	124
<u>78</u>	GEN	Centretown Professional Corporation	955 Somerset st Ottawa ON	NNW/173.8	-2.41	<u>124</u>
<u>78</u>	GEN	Centretown Professional Corporation	955 Somerset st Ottawa ON	NNW/173.8	-2.41	<u>125</u>
<u>78</u>	GEN	PARSON REFRIGERATION (1988) LTD.	955 SOMERSET STREET WEST OTTAWA ON K1R 6R8	NNW/173.8	-2.41	125
<u>78</u>	GEN	Centretown Professional Corporation	955 Somerset st Ottawa ON	NNW/173.8	-2.41	125
<u>79</u>	EHS		935/943 Somerset St. Ottawa ON	N/166.6	-2.44	125
80	SPL	OTTAWA HYDRO	947 SOMMERSET ST WEST TRANSFORMER	N/173.8	-2.43	<u>12</u>
<u>81</u>	SCT	J.M. HILL & SON LTD.	OTTAWA CITY ON 935 SOMERSET ST W OTTAWA ON K1R 6R8	N/169.6	-2.45	<u>12</u>
<u>82</u>	BORE		ON	NW/172.7	-2.62	<u>126</u>
<u>83</u>	ECA	City of Ottawa	175 Loretta Ave N Ottawa ON K1Y 4L8	S/149.0	6.92	<u>127</u>
<u>83</u>	FSTH	REGIONAL MUNICIPALITY OF OTTAWA CARLETON ATTN:	175 LORETTA AV N OTTAWA ON K1Y 4L8	S/149.0	6.92	127
<u>83</u>	FSTH	MARC LEVESQUE REGIONAL MUNICIPALITY OF OTTAWA CARLETON ATTN:	175 LORETTA AV N OTTAWA ON K1Y 4L8	S/149.0	6.92	127
<u>83</u>	GEN	MARC LEVESQUE OTTAWA-CARLTON, REGIONAL MUN OF	REGIONAL ROAD #13 AT MANOTICK 175 LORETTA AVE N	S/149.0	6.92	127
<u>83</u>	GEN	OTTAWA-CARLETON, REGIONAL MUN. OF	OTTAWA ON K1Y 4L8 SIGNALS AND COMMUNICATIONS 175 LORETTA AVENUE NORTH	S/149.0	6.92	128
<u>83</u>	GEN	Corporation City of Ottawa	OTTAWA ON K1Y 4L8 175 Loretta Ave N Ottawa ON K1Y 4L8	S/149.0	6.92	128

Map Key	DB	Company/Site Name	Address	Dir/Dist (m)	Elev Diff (m)	Page Number
<u>83</u>	GEN	OTTAWA-CARLTON, REGIONAL MUNICIPALITY OF	175 LORETTA AVENUE NORTH OTTAWA ON K1Y 4L8	S/149.0	6.92	128
<u>83</u>	GEN	City of Ottawa	175 LORETTA AVENUE NORTH OTTAWA ON K1Y 4L8	S/149.0	6.92	129
<u>83</u>	GEN	City of Ottawa	175 LORETTA AVENUE NORTH OTTAWA ON K1Y 4L8	S/149.0	6.92	<u>129</u>
<u>83</u>	GEN	City of Ottawa	175 LORETTA AVENUE NORTH OTTAWA ON K1Y 4L8	S/149.0	6.92	129
<u>83</u>	GEN	Corporation City of Ottawa	175 Loretta Ave N Ottawa ON K1Y 4L8	S/149.0	6.92	<u>130</u>
<u>83</u>	GEN	Corporation City of Ottawa	175 Loretta Ave N Ottawa ON K1Y 4L8	S/149.0	6.92	130
<u>83</u>	GEN	City of Ottawa	175 LORETTA AVENUE NORTH OTTAWA ON K1Y 4L8	S/149.0	6.92	<u>131</u>
<u>83</u>	GEN	OTTAWA-CARLTON, REGIONAL MUN OF	REGIONAL ROAD #28 (NAVAN ROAD) 175 LORETTA AVENUE NORTH	S/149.0	6.92	<u>131</u>
<u>83</u>	GEN	Corporation City of Ottawa	OTTAWA ON K1Y 4L8 175 Loretta Ave N Ottawa ON K1Y 4L8	S/149.0	6.92	<u>131</u>
<u>83</u>	GEN	OTTAWA-CARLTON, REGIONAL MUN. OF	SIGNALS AND COMMUNICATIONS 175 LORETTA AVENUE NORTH OTTAWA ON K1Y 4L8	S/149.0	6.92	132
<u>83</u>	GEN	Corporation City of Ottawa	175 Loretta Ave N Ottawa ON K1Y 4L8	S/149.0	6.91	<u>132</u>
<u>83</u>	GEN	Corporation City of Ottawa	175 Loretta Ave N Ottawa ON K1Y 4L8	S/149.0	6.91	132
<u>83</u>	GEN	City of Ottawa	175 LORETTA AVENUE NORTH OTTAWA ON K1Y 4L8	S/149.0	6.91	<u>133</u>
<u>83</u>	PRT	REGIONAL MUNICIPALITY OF OTTAWA CARLETON ATTN : DO	175 LORETTA AV N OTTAWA ON K1Y 4L8	S/149.0	6.92	<u>13</u>
<u>83</u>	SPL	KENT FUELS	175 LORETTA AVE. RMOC GARAGE TANK TRUCK (CARGO) OTTAWA CITY ON	S/149.0	6.91	<u>13</u>
<u>84</u>	HINC		150 BREEZEHILL AVENUE NORTH OTTAWA ON K1Y 2H8	SW/248.4	7.20	134
<u>85</u>	GEN	Central Tenant Services	865 Gladstone Ottawa ON	E/216.5	1.33	134
<u>86</u>	NPRI	CITY OF OTTAWA	175 LORETTA AVE. NORTH OTTAWA ON K1Y4L8	S/153.3	7.13	<u>134</u>
86	NPRI	REGIONAL MUNICIPALITY OF OTTAWA CARLETON	175 LORETTA AVE. NORTH OTTAWA ON K1Y 4L8	S/153.3	7.13	<u>135</u>
<u>86</u>	NPRI	CITY OF OTTAWA	175 LORETTA AVE. NORTH OTTAWA ON K1Y4L8	S/153.3	7.13	<u>135</u>
<u>86</u>	NPRI	City of Ottawa	175 LORETTA AVE. NORTH OTTAWA ON K1Y 4L8	S/153.3	7.13	<u>135</u>
<u>86</u>	NPRI	CITY OF OTTAWA	175 LORETTA AVE. NORTH OTTAWA ON K1Y 4L8	S/153.3	7.13	<u>135</u>
<u>86</u>	NPRI	TRAFFIC OPERATIONS BRANCH R.M.O.C	175 LORETTA AVE. NORTH OTTAWA ON K1Y 4L8	S/153.3	7.13	<u>136</u>
<u>86</u>	NPRI	REGIONAL MUNICIPALITY OF OTTAWA CARLETON	175 LORETTA AVE. NORTH OTTAWA ON K1Y 4L8	S/153.3	7.13	136
<u>86</u>	NPRI	REGIONAL MUNICIPALITY OF OTTAWA CARLETON	175 LORETTA AVE. NORTH OTTAWA ON K1Y 4L8	S/153.3	7.13	136

Map Key	DB	Company/Site Name	Address	Dir/Dist (m)	Elev Diff (m)	Page Number
<u>86</u>	NPRI	CITY OF OTTAWA	175 LORETTA AVE. NORTH OTTAWA ON K1Y4L8	S/153.3	7.13	136
<u>86</u>	NPRI	City of Ottawa	175 LORETTA AVE. NORTH OTTAWA ON K1Y 4L8	S/153.3	7.13	<u>137</u>
<u>86</u>	NPRI	REGIONAL MUNICIPALITY OF OTTAWA CARLETON	175 LORETTA AVE. NORTH OTTAWA ON K1Y 4L8	S/153.3	7.13	<u>137</u>
<u>86</u>	NPRI	CITY OF OTTAWA	175 LORETTA AVE. NORTH OTTAWA ON K1Y4L8	S/153.3	7.13	<u>137</u>
<u>86</u>	NPRI	CITY OF OTTAWA	175 LORETTA AVE. NORTH OTTAWA ON K1Y4L8	S/153.3	7.13	<u>137</u>
<u>86</u>	NPRI	CITY OF OTTAWA	175 LORETTA AVE. NORTH OTTAWA ON K1Y4L8	S/153.3	7.13	138
<u>86</u>	NPRI	CITY OF OTTAWA	175 LORETTA AVE. NORTH OTTAWA ON K1Y4L8	S/153.3	7.13	138
<u>87</u>	EASR	CITY OF OTTAWA	175 LORETTA OTTAWA ON	S/151.2	7.00	138
<u>87</u>	FST	REGIONAL MUNICIPALITY OF OTTAWA CARLETON ATTN:	175 LORETTA AVE N OTTAWA ON K1Y 4L8	S/151.2	7.00	138
<u>87</u>	FST	MARC LEVESQUE REGIONAL MUNICIPALITY OF OTTAWA CARLETON ATTN : MARC LEVESQUE	175 LORETTA AVE N OTTAWA ON K1Y 4L8	\$/151.2	7.00	<u>139</u>
<u>87</u>	GEN	Corporation City of Ottawa	175 Loretta Ave N Ottawa ON	S/151.2	7.00	139
<u>87</u>	GEN	City of Ottawa Public Works Department	175 Loretta Ave N. Ottawa ON	S/151.2	7.00	<u>139</u>
<u>87</u>	GEN	City of Ottawa	175 LORETTA AVENUE NORTH OTTAWA ON	S/151.2	7.00	<u>140</u>
<u>88</u>	GEN	ROBT TAPE LIMITED	989 SOMERSET ST. W. OTTAWA ON K1R 6R8	NNW/188.6	-3.08	<u>140</u>
88	GEN	ROBT TAPE LIMITED 33-483	989 SOMERSET ST. W. OTTAWA ON K1R 6R8	NNW/188.6	-3.08	140
88	GEN	ROBT. TAPE LTD.	989 Somerset St. West Ottawa ON K1R 6R8	NNW/188.6	-3.08	<u>140</u>
<u>88</u>	GEN	ROBT TAPE LIMITED	989 SOMERSET STREET WEST OTTAWA ON K1R 6R8	NNW/188.6	-3.08	141
88	SCT	ROBERT TAPE LIMITED	989 SOMERSET ST W OTTAWA ON K1R 6R8	NNW/188.6	-3.08	<u>14</u>
<u>89</u>	GEN	KEITEL FURNITURE REPAIR LTD	184 Louisa Street Ottawa ON K1R 6Z1	SE/129.7	-0.03	141
<u>89</u>	GEN	KEITEL FURNITURE REPAIR LTD	184 Louisa Street Ottawa ON K1R 6Z1	SE/129.7	-0.03	<u>141</u>
<u>89</u>	GEN	KEITEL FURNITURE REPAIR LTD	184 Louisa Street Ottawa ON K1R 6Z1	SE/129.7	-0.03	142
<u>89</u>	GEN	KEITEL FURNITURE REPAIR LTD	184 LOUISA STREET OTTAWA ON K1R 6Z1	SE/129.7	-0.03	<u>142</u>
<u>90</u>	HINC		901 SOMERSET ST. OTTAWA ON	N/178.8	-1.99	<u>142</u>
<u>91</u>	PINC		166 LORETTA AVENUE, OTTAWA ON	S/200.0	10.75	<u>142</u>
<u>92</u>	CA	R.M. OF OTTAWA-CARLETON	SOMERSET ST/PRESTON ST. OTTAWA CITY ON	N/186.6	-1.56	<u>14</u>

Map Key	DB	Company/Site Name	Address	Dir/Dist (m)	Elev Diff (m)	Page Number
<u>92</u>	CA	OTTAWA CITY	SOMERSET ST.W./PRESTON ST.,CSO OTTAWA CITY ON	N/186.6	-1.56	<u>14</u>
<u>93</u>	BORE		ON	NW/163.6	5.22	<u>144</u>
94	EXP	MAC'S CONVENIENCE STORES INC**	284 PRESTON ST OTTAWA ON K1R 7R6	SE/149.3	-0.72	<u>144</u>
94	EXP	MAC'S CONVENIENCE STORES INC**	284 PRESTON ST OTTAWA ON K1R 7R6	SE/149.3	-0.72	<u>144</u>
94	EXP	MAC'S CONVENIENCE STORES INC**	284 PRESTON ST OTTAWA ON K1R 7R6	SE/149.3	-0.72	<u>144</u>
<u>94</u>	EXP	MAC'S CONVENIENCE STORES INC**	284 PRESTON ST OTTAWA ON K1R 7R6	SE/149.3	-0.72	<u>145</u>
<u>94</u>	EXP	MAC'S CONVENIENCE STORES INC**	284 PRESTON ST OTTAWA ON	SE/149.3	-0.72	<u>145</u>
<u>94</u>	EXP	MAC'S CONVENIENCE STORES INC**	284 PRESTON ST OTTAWA ON K1R 7R6	SE/149.3	-0.72	<u>145</u>
<u>94</u>	EXP	MAC'S CONVENIENCE STORES INC**	284 PRESTON ST OTTAWA ON	SE/149.3	-0.72	<u>145</u>
<u>94</u>	EXP	MAC'S CONVENIENCE STORES INC**	284 PRESTON ST OTTAWA ON K1R 7R6	SE/149.3	-0.72	146
94	EXP	MAC'S CONVENIENCE STORES INC**	284 PRESTON ST OTTAWA ON K1R 7R6	SE/149.3	-0.72	146
<u>94</u>	EXP	MAC'S CONVENIENCE STORES INC**	284 PRESTON ST OTTAWA ON K1R 7R6	SE/149.3	-0.72	146
94	EXP	MAC'S CONVENIENCE STORES INC**	284 PRESTON ST OTTAWA ON K1R 7R6	SE/149.3	-0.72	146
<u>95</u>	EHS		1040 Somerset St. W Ottawa ON	WNW/168.1	3.44	<u>147</u>
<u>95</u>	GEN	AERO MECHTRONICS LIMITED 01-084	1040 SOMERSET STREET WEST OTTAWA ON K1Y 4L3	WNW/168.1	3.44	147
<u>95</u>	GEN	AERO MECHTRONICS LIMITED	1040 SOMERSET STREET WEST OTTAWA ON K1Y 4L3	WNW/168.1	3.44	<u>147</u>
<u>95</u>	GEN	AERO MECHTRONICS LIMITED	1040 SOMERSET STREET WEST OTTAWA ON K1Y 4L3	WNW/168.1	3.44	<u>147</u>
<u>95</u>	wwis		OTTAWA ON	WNW/168.1	3.44	147
<u>96</u>	wwis		ON	S/193.2	9.36	148
<u>97</u>	PRT	C CORP (ONTARIO) INC ATTN ACCOUNTS PAYABLE	284 PRESTON ST OTTAWA ON K1R7R6	SE/152.4	-0.71	<u>14</u>
<u>98</u>	HINC		122 PRESTON STREET OTTAWA ON K1R 7P2	N/196.6	-1.47	149
<u>99</u>	HINC		114 PRESTION STREET OTTAWA ON	N/202.3	-1.40	149
<u>100</u>	CA	The District in Lebreton Flats Inc.	148-158 Spruce Street Ottawa ON K1R 6P2	NNW/219.7	-4.39	<u>150</u>
<u>100</u>	GEN	Domicile Corporation	148-158 Spruce Street Ottawa ON K1R 6P2	NNW/219.7	-4.39	<u>150</u>
<u>101</u>	wwis		Ottawa ON	NW/211.9	-3.45	<u>150</u>
102	GEN	SLR Consulting (Canada) Ltd.	100 Breezehill Ave Ottawa ON K1Y 2H5	W/191.7	3.94	<u>150</u>

Map Key	DB	Company/Site Name	Address	Dir/Dist (m)	Elev Diff (m)	Page Number
102	GEN	Ottawa-Carleton District School Board	Devonshire Community PS 100 Breezehill Avenue	W/191.7	3.94	<u>151</u>
102	GEN	Ottawa-Carleton District School Board	Ottawa ON K1Y 2H5 Devonshire PS 100 Breezehill Avenue Ottawa ON	W/191.7	3.94	<u>151</u>
<u>102</u>	GEN	Ottawa-Carleton District School Board	100 Breezehille Ave. Ottawa ON	W/191.7	3.95	<u>151</u>
102	GEN	OTTAWA BOARD OF EDUCATION	100 BREEZEHILL AVENUE OTTAWA ON K1Y 2H5	W/191.7	3.95	<u>152</u>
<u>102</u>	GEN	Ottawa-Carleton District School Board	100 Breezehille Ave. Ottawa ON	W/191.7	3.94	<u>152</u>
102	GEN	Ottawa-Carleton District School Board	100 Breezehille Ave. Ottawa ON K1Y 2H5	W/191.7	3.94	<u>152</u>
<u>102</u>	GEN	Ottawa-Carleton District School Board Health & Safety	100 Breezehille Ave. Ottawa ON K1Y 2H5	W/191.7	3.94	<u>153</u>
102	GEN	Ottawa-Carleton District School Board	100 Breezehille Ave. Ottawa ON	W/191.7	3.95	<u>153</u>
<u>102</u>	GEN	SLR Consulting (Canada) Ltd.	100 Breezehill Ave Ottawa ON	W/191.7	3.94	<u>153</u>
102	GEN	Ottawa-Carleton District School Board	100 Breezehille Ave. Ottawa ON	W/191.7	3.95	<u>154</u>
<u>102</u>	GEN	SEACOR Environmental Inc.	100 Breezehill Ave Ottawa ON	W/191.7	3.94	<u>154</u>
102	GEN	Ottawa-Carleton District School Board	100 Breezehille Ave. Ottawa ON K1Y 2H5	W/191.7	3.94	<u>154</u>
<u>103</u>	HINC		106 PRESTON STREET OTTAWA ON K1R 7P2	N/211.2	-1.34	<u>155</u>
104	EHS		105 Preston Street Ottawa ON	N/212.7	-1.05	<u>155</u>
105	WWIS		Ottawa ON	NW/216.4	-4.86	<u>155</u>
106	WWIS		Ottawa ON	NW/218.3	-4.86	<u>156</u>
107	BORE		ON	SSE/180.1	4.16	<u>156</u>
108	WWIS		ON	NNW/227.3	-3.41	<u>157</u>
109	SPL	PRIVATE RESIDENCE	69 BAYSWATER AVE. FURNACE OIL TANK	W/226.7	4.84	<u>15</u>
<u>110</u>	wwis		OTTAWA CITY ON K1Y 2E7 OTTAWA ON	NW/227.2	-4.23	<u>157</u>
<u>111</u>	BORE		ON	SSE/182.9	2.68	<u>158</u>
<u>112</u>	wwis		OTTAWA ON	NW/230.5	-4.32	<u>158</u>
<u>113</u>	EHS		57 Bayswater Ave Ottawa ON K1Y 2E8	W/227.9	4.41	<u>159</u>
114	wwis		OTTAWA ON	NW/224.2	-3.74	<u>159</u>
<u>115</u>	EHS		57 Bayswater Ave Ottawa ON K1Y2E8	W/232.6	4.50	<u>159</u>

Map Key	DB	Company/Site Name	Address	Dir/Dist (m)	Elev Diff (m)	Page Number
116	BORE		ON	SSE/188.3	9.72	<u>160</u>
<u>117</u>	PES	DAVID SAUNDERS O/A PARAMOUNT PEST CONTROL	110 SPRUCE ST, APT 3 OTTAWA ON K1R 6P2	N/234.7	-1.18	<u>160</u>
<u>117</u>	PES	PARAMOUNT PEST CONTROL	110 SPRUCE ST; APT. #3 OTTAWA ON K1R 6P2	N/234.7	-1.18	<u>160</u>
<u>117</u>	PES	PARAMOUNT PEST CONTROL	110 SPRUCE ST APT#3 OTTAWA ON K1R 6P2	N/234.7	-1.18	<u>160</u>
117	PES	DAVID SAUNDERS O/A PARAMOUNT PEST CONTROL	110 SPRUCE ST, APT 3 OTTAWA ON K1R 6P2	N/234.7	-1.18	<u>161</u>
118	WWIS		OTTAWA ON	NW/228.2	-3.80	<u>161</u>
119	BORE		ON	SSE/197.6	0.70	<u>161</u>
<u>120</u>	EHS		Young Street & Loretta Avenue Ottawa ON	SSE/202.5	-0.38	<u>162</u>
<u>121</u>	EHS		883 Somerset St W Ottawa ON	NNE/246.2	1.42	<u>162</u>
122	BORE		ON	SSE/202.2	-1.01	<u>162</u>
123	wwis		Ottawa ON	N/242.5	-0.39	<u>163</u>
<u>124</u>	GEN	ACKLANDS LIMITED	1050 SOMERSET ST. WEST OTTAWA ON K1Y 3C5	WNW/221.8	2.17	<u>163</u>
124	GEN	ACKLANDS LIMITED 02-414	1050 SOMERSET ST. WEST OTTAWA ON K1Y 3C5	WNW/221.8	2.17	164
124	GEN	ACKLANDS LIMITED	1050 SOMERSET STREET WEST OTTAWA ON K1Y 3C5	WNW/221.8	2.17	<u>164</u>
125	CA	City of Ottawa	301 Preston St Ottawa ON K1R 0A6	ESE/237.8	5.66	<u>164</u>
125	EHS		300 Rochester Street Ottawa ON K1R 7N4	ESE/237.8	5.66	<u>164</u>
125	GEN	OTTAWA-CARLETON DISTRICT SCHOOL BOARD	ADULT HIGH SCHOOL 300 ROCHESTER STREET	ESE/237.8	5.66	<u>164</u>
125	GEN	OTTAWA-CARLETON DISTRICT SCHOOL BOARD	OTTAWA ON K1P 7N4 ADULT HIGH SCHOOL 300 ROCHESTER STREET	ESE/237.8	5.66	<u>165</u>
125	GEN	Ottawa-Carleton District School Board	OTTAWA ON K1R 7N4 Adult Continuing Education Centre 300 Rochester St.	ESE/237.8	5.66	<u>165</u>
<u>125</u>	GEN	OTTAWA BOARD OF EDUCATION 29-129	Ottawa ON K1R 7N4 HIGH SCHOOL OF COMMERCE,300 ROCHESTERST C/O 330 GILMOUR ST. OTTAWA ON K1R 7N4	ESE/237.8	5.66	<u>166</u>
<u>125</u>	GEN	OTTAWA-CARLETON DISTRICT SCHOOL BOARD	ADULT HIGH SCHOOL 300 ROCHESTER STREET	ESE/237.8	5.66	<u>166</u>
125	GEN	OTTAWA-CARLETON DISTRICT SCHOOL BOARD	OTTAWA ON K1R 7N4 ADULT HIGH SCHOOL 300 ROCHESTER STREET	ESE/237.8	5.66	<u>166</u>
125	GEN	OTTAWA-CARLETON DISTRICT SCHOOL BOARD Health and	OTTAWA ON K1R 7N4 ADULT HIGH SCHOOL 300 ROCHESTER STREET	ESE/237.8	5.66	<u>167</u>
125	GEN	Safety OTTAWA-CARLETON DISTRICT SCHOOL BOARD	OTTAWA ON K1R 7N4 ADULT HIGH SCHOOL 300 ROCHESTER STREET OTTAWA ON K1R 7N4	ESE/237.8	5.66	<u>167</u>

Map Key	DB	Company/Site Name	Address	Dir/Dist (m)	Elev Diff (m)	Page Number
125	GEN	OTTAWA BOARD OF EDUCATION	HIGH SCHOOL OF COMMERCE 300 ROCHESTER STREET OTTAWA ON K1R 7N4	ESE/237.8	5.66	<u>168</u>
125	GEN	OTTAWA BOARD OF EDUCATION	HIGH SCHOOL OF COMMERCE,300 ROCHESTERST C/O 330 GILMOUR ST. OTTAWA ON K1R 7N4	ESE/237.8	5.66	<u>168</u>
<u>126</u>	GEN	OTTAWA-CARLETON DISTRICT SCHOOL BOARD	ADULT HIGH SCHOOL 300 ROCHESTER STREET	ESE/234.4	5.62	<u>168</u>
127	INC		OTTAWA ON 49 Bayswater Avenue, Ottawa ON K1Y 2E7	W/238.4	3.78	<u>169</u>
<u>127</u>	SPL	Broadband Maintenance Inc. <unofficial></unofficial>	49 Bayswater Ave Ottawa ON K1Y 2E7	W/238.4	3.78	<u>170</u>
128	BORE		ON	SSE/219.8	5.57	<u>170</u>
129	BORE		ON	SSE/218.6	4.17	<u>171</u>
<u>130</u>	BORE		ON	SSE/225.6	6.20	<u>171</u>
<u>131</u>	WWIS		ON	SE/219.9	-0.86	<u>172</u>
131	wwis		OTTAWA ON	SE/219.9	-0.86	<u>172</u>
<u>132</u>	BORE		ON	SE/214.0	6.08	<u>173</u>
133	BORE		ON	SSE/221.8	2.36	<u>173</u>
<u>134</u>	SCT	Lixar IT Inc.	47A Young St Ottawa ON K1S 3H6	SSE/239.5	4.85	<u>174</u>
135	BORE		ON	SE/238.1	4.66	<u>174</u>
<u>136</u>	BORE		ON	SE/237.3	6.54	<u>175</u>

## Executive Summary: Summary By Data Source

#### **AUWR** - Automobile Wrecking & Supplies

A search of the AUWR database, dated 2001-Jul 2014 has found that there are 1 AUWR site(s) within approximately 0.25 kilometers of the project property.

<u>Site</u>	<u>Address</u>	Distance (m)	Map Key
A & T AUTO PARTS	55 BREEZEHILL AVE N OTTAWA ON K1Y 2H6	137.9	<u>76</u>

#### **BORE** - Borehole

A search of the BORE database, dated 1875-Jul 2014 has found that there are 29 BORE site(s) within approximately 0.25 kilometers of the project property.

Site	Address	Distance (m)	<u>Map Key</u>
	ON	14.9	1
	ON	3.2	<u>4</u>
	ON	4.5	<u>5</u>
	ON	0.0	<u>8</u>
	ON	73.8	<u>10</u>
	ON	122.4	<u>15</u>
	ON	47.4	<u>16</u>
	ON	130.2	<u>20</u>
	ON	49.7	<u>34</u>
	ON	157.8	<u>40</u>
	ON	170.4	<u>53</u>
	ON	142.4	<u>65</u>
	ON	82.6	<u>67</u>
		143.2	<u>69</u>
	ON		_

<u>Site</u>	<u>Address</u>	Distance (m)	Map Key
	ON	153.3	<u>70</u>
	ON	172.7	<u>82</u>
	ON	163.6	<u>93</u>
	ON	180.1	<u>107</u>
	ON	182.9	<u>111</u>
	ON	188.3	<u>116</u>
	ON	197.6	<u>119</u>
	ON	202.2	122
	ON	219.8	<u>128</u>
	ON	218.6	<u>129</u>
	ON	225.6	<u>130</u>
	ON	214.0	<u>132</u>
	ON	221.8	<u>133</u>
	ON	238.1	<u>135</u>
	ON	237.3	<u>136</u>

## **CA** - Certificates of Approval

A search of the CA database, dated 1985-Oct 30, 2011\* has found that there are 23 CA site(s) within approximately 0.25 kilometers of the project property.

Site	<u>Address</u>	Distance (m)	<u>Map Key</u>
6176381 Canada Inc.	191-193 Preston St Ottawa ON	129.1	<u>19</u>
R.M. OF OTTAWA-CARLETON	BALSAM AVE/PRESTON ST. OTTAWA ON	113.3	<u>28</u>
	Lot 7, Bk 123, Reg. Plan 34, 930-934 Gladstone Ave Ottawa ON K1R 6Y4	29.5	<u>36</u>
Preston Hardware (1980) Limited	234-248 Preston Street Ottawa ON K1R 7R4	103.6	<u>41</u>

<u>Site</u>	<u>Address</u>	Distance (m)	<u>Map Key</u>
City of Ottawa	930 Somerset St W Ottawa ON K1R 6R9	92.4	<u>46</u>
Grandtech Auto Inc.	111 Breezehill Avenue North Ottawa ON K1Y 2H6	138.2	<u>57</u>
	975 Gladstone Avenue Ottawa ON K1Y 4W5	188.7	<u>59</u>
BA International Inc.	975 Gladstone Avenue Ottawa ON K1Y 4W5	188.7	<u>59</u>
BA Banknote Inc.	975 Gladstone Avenue Ottawa ON K1Y 4W5	188.7	<u>59</u>
BA International Inc.	975 Gladstone Avenue Ottawa ON K1Y 4W5	188.7	<u>59</u>
B.A. BANKNOTE INC.	975 GLADSTONE AVE. OTTAWA CITY ON K1Y 4W5	188.7	<u>59</u>
BA International Inc.	975 Gladstone Avenue Ottawa ON K1Y 4W5	188.7	<u>59</u>
BA Banknote Inc.	975 Gladstone Avenue Ottawa ON K1Y 4W5	188.7	<u>59</u>
	975 Gladstone Avenue Ottawa ON K1Y 4W5	188.7	<u>59</u>
City of Ottawa	130 Preston Street Ottawa ON	119.9	<u>60</u>
OTTAWA CITY	GLADSTONE AVE/PRESTON ST. CSO OTTAWA CITY ON	116.2	<u>62</u>
R.M. OF OTTAWA-CARLETON	GLADSTONE AVE/PRESTON ST. OTTAWA CITY ON	116.2	<u>62</u>
907462 ONTARIO LIMITED	111-113 BREEZEHILL AVE.N., SWM OTTAWA CITY ON K1Y 2H6	152.0	<u>64</u>
City of Ottawa	135 Preston Street Ottawa ON K1R 7P4	177.6	<u>73</u>
R.M. OF OTTAWA-CARLETON	SOMERSET ST/PRESTON ST. OTTAWA CITY ON	186.6	<u>92</u>
OTTAWA CITY	SOMERSET ST.W./PRESTON ST.,CSO OTTAWA CITY ON	186.6	<u>92</u>
The District in Lebreton Flats Inc.	148-158 Spruce Street Ottawa ON K1R 6P2	219.7	<u>100</u>
City of Ottawa	301 Preston St Ottawa ON K1R 0A6	237.8	<u>125</u>

#### **EASR** - Environmental Activity and Sector Registry

A search of the EASR database, dated Feb 29, 2016 has found that there are 3 EASR site(s) within approximately 0.25 kilometers of the project property.

<u>Site</u>	<u>Address</u>	Distance (m)	Map Key
CANADIAN BANK NOTE COMPANY, LIMITED	975 GLADSTONE AVE OTTAWA ON	188.7	<u>59</u>
CANADIAN BANK NOTE COMPANY, LIMITED	975 GLADSTONE AVE OTTAWA ON	188.7	<u>59</u>
CITY OF OTTAWA	175 LORETTA OTTAWA ON	151.2	<u>87</u>

#### **EBR** - Environmental Registry

A search of the EBR database, dated 1994-Jan 2016 has found that there are 8 EBR site(s) within approximately 0.25 kilometers of the project property.

<u>Site</u>	<u>Address</u>	Distance (m)	<u>Map Key</u>
Bridgehead (2000) Inc.	130 Anderson Street OTTAWA ON K1R 6T7	148.6	<u>54</u>
Grandtech Auto Inc.	111 Breezehill Avenue North Ottawa ON K1Y 2H6	138.2	<u>57</u>
BA Banknote Inc.	975 Gladstone Avenue Ottawa ON K1Y 4W5	188.7	<u>59</u>
BA Banknote Inc.	975 Gladstone Avenue Ottawa ON K1Y 4W5	188.7	<u>59</u>
BA Banknote Inc.	975 Gladstone Avenue Ottawa ON K1Y 4W5	188.7	<u>59</u>
BA Banknote Inc.	975 Gladstone Avenue Ottawa ON K1Y 4W5	188.7	<u>59</u>
BA Banknote Inc	975 Gladstone Avenue Ottawa ON K1Y 4W5	188.7	<u>59</u>
Canadian Bank Note Company, Limited	975 Gladstone Avenue OTTAWA ON K1Y 4W5	188.7	<u>59</u>

#### **ECA** - Environmental Compliance Approval

A search of the ECA database, dated Feb 29, 2016 has found that there are 1 ECA site(s) within approximately 0.25 kilometers of the project property.

<u>Site</u>	<u>Address</u>	Distance (m)	Map Key
City of Ottawa	175 Loretta Ave N Ottawa ON K1Y 4L8	149.0	<u>83</u>

#### **EHS - ERIS Historical Searches**

A search of the EHS database, dated 1999-Aug 2014 has found that there are 23 EHS site(s) within approximately 0.25 kilometers of the project property.

Site	<u>Address</u>	Distance (m)	Map Key
	131 Loretta Avenue Ottawa ON	70.3	<u>6</u>
	145 Loretta Avenue North Ottawa ON	89.6	<u>12</u>
	941-971 Gladstone Avenue Ottawa ON K1Y 3E5	97.3	<u>35</u>
	173 Preston St Ottawa ON K1R7P6	137.6	<u>37</u>
	153-157 Preston Road aka 130 Anderson St. Ottawa ON K1R 7P6	125.6	<u>44</u>
	153-157 Preston Street Ottawa ON K1R 7P6	125.6	<u>44</u>
	Anderson Street && Preston Street Ottawa ON	115.2	<u>45</u>
	916 Gladstone Avenue Ottawa ON K1R 6Y4	59.1	<u>47</u>
	225 Preston St. Ottawa ON K1R 7R1	158.1	<u>51</u>
	975 Gladstone Avenue Ottawa ON K1Y 4W5	188.7	<u>59</u>
	975 Gladstone Avenue Ottawa ON K1Y 4W5	188.7	<u>59</u>
	975 Gladstone Avenue n/a ON K1Y 4W5	188.7	<u>59</u>
	1010 Somerset Street West Ottawa ON	136.7	<u>68</u>
	1010 Somerset St W Ottawa ON	136.7	<u>68</u>
	73 Breezehill Avenue North Ottawa ON K1Y 2H6	118.1	<u>71</u>
	935/943 Somerset St. Ottawa ON	166.6	<u>79</u>
	1040 Somerset St. W Ottawa ON	168.1	<u>95</u>
	105 Preston Street Ottawa ON	212.7	<u>104</u>
	57 Bayswater Ave Ottawa ON K1Y 2E8	227.9	<u>113</u>
	57 Bayswater Ave Ottawa ON K1Y2E8	232.6	<u>115</u>
	Young Street & Loretta Avenue Ottawa ON	202.5	<u>120</u>

883 Somerset St W Ottawa ON

300 Rochester Street

Ottawa ON K1R 7N4

246.2

237.8

**121** 

125

#### **EXP** - List of TSSA Expired Facilities

A search of the EXP database, dated Current to Nov 2015 has found that there are 19 EXP site(s) within approximately 0.25 kilometers of the project property.

Site MR GAS LIMITED **	Address 971 GLADSTONE AV	Distance (m)	Map Key
	OTTAWA ON K1Y 3E5		<del></del>
MR GAS LIMITED **	971 GLADSTONE AV OTTAWA ON K1Y 3E5	110.7	<u>21</u>
MR GAS LIMITED **	971 GLADSTONE AV OTTAWA ON	110.7	<u>21</u>
MR GAS LIMITED **	971 GLADSTONE AV OTTAWA ON	110.7	<u>21</u>
MR GAS LIMITED **	971 GLADSTONE AV OTTAWA ON K1Y 3E5	110.7	<u>21</u>
MR GAS LIMITED **	971 GLADSTONE AV OTTAWA ON K1Y 3E5	110.7	<u>21</u>
MR GAS LIMITED **	971 GLADSTONE AV OTTAWA ON K1Y 3E5	110.7	<u>21</u>
PRESTON AUTO CENTRE INC	241 PRESTON ST OTTAWA ON K1R 7R3	138.5	<u>52</u>
MAC'S CONVENIENCE STORES INC**	284 PRESTON ST OTTAWA ON K1R 7R6	149.3	<u>94</u>
MAC'S CONVENIENCE STORES INC**	284 PRESTON ST OTTAWA ON K1R 7R6	149.3	<u>94</u>
MAC'S CONVENIENCE STORES INC**	284 PRESTON ST OTTAWA ON K1R 7R6	149.3	<u>94</u>
MAC'S CONVENIENCE STORES INC**	284 PRESTON ST OTTAWA ON K1R 7R6	149.3	<u>94</u>
MAC'S CONVENIENCE STORES INC**	284 PRESTON ST OTTAWA ON K1R 7R6	149.3	<u>94</u>
MAC'S CONVENIENCE STORES INC**	284 PRESTON ST OTTAWA ON K1R 7R6	149.3	<u>94</u>
MAC'S CONVENIENCE STORES INC**	284 PRESTON ST OTTAWA ON K1R 7R6	149.3	<u>94</u>
MAC'S CONVENIENCE STORES INC**	284 PRESTON ST OTTAWA ON	149.3	<u>94</u>
MAC'S CONVENIENCE STORES INC**	284 PRESTON ST OTTAWA ON K1R 7R6	149.3	<u>94</u>
MAC'S CONVENIENCE STORES INC**	284 PRESTON ST OTTAWA ON	149.3	<u>94</u>
MAC'S CONVENIENCE STORES INC**	284 PRESTON ST OTTAWA ON K1R 7R6	149.3	<u>94</u>

### **FST** - Fuel Storage Tank

A search of the FST database, dated 2010-Nov 2015 has found that there are 2 FST site(s) within approximately 0.25 kilometers of the project property.

<u>Site</u>	<u>Address</u>	Distance (m)	<u>Map Key</u>
REGIONAL MUNICIPALITY OF OTTAWA CARLETON ATTN : MARC LEVESQUE	175 LORETTA AVE N OTTAWA ON K1Y 4L8	151.2	<u>87</u>
REGIONAL MUNICIPALITY OF OTTAWA CARLETON ATTN : MARC LEVESQUE	175 LORETTA AVE N OTTAWA ON K1Y 4L8	151.2	<u>87</u>

#### FSTH - Fuel Storage Tank - Historic

A search of the FSTH database, dated Pre-Jan 2010\* has found that there are 2 FSTH site(s) within approximately 0.25 kilometers of the project property.

<u>Site</u>	<u>Address</u>	Distance (m)	Map Key
REGIONAL MUNICIPALITY OF OTTAWA CARLETON ATTN : MARC LEVESQUE	175 LORETTA AV N OTTAWA ON K1Y 4L8	149.0	<u>83</u>
REGIONAL MUNICIPALITY OF OTTAWA CARLETON ATTN : MARC LEVESQUE	175 LORETTA AV N OTTAWA ON K1Y 4L8	149.0	<u>83</u>

#### **GEN** - Ontario Regulation 347 Waste Generators Summary

A search of the GEN database, dated 1986-May 2015 has found that there are 135 GEN site(s) within approximately 0.25 kilometers of the project property.

<u>Site</u>	<u>Address</u>	Distance (m)	<u>Map Key</u>
TerraPro Corporation	145 Loretta Ave. North Ottawa ON K1Y 2J7	86.1	<u>11</u>
TerraPro Corporation	145 Loretta Ave. North Ottawa ON	86.1	<u>11</u>
TerraPro Corporation	145 Loretta Ave. North Ottawa ON	89.6	<u>12</u>
TerraPro Corporation	145 Loretta Ave. North Ottawa ON	89.6	<u>12</u>
TerraPro Corporation	145 Loretta Ave. North Ottawa ON K1Y 2J7	89.6	<u>12</u>
TerraPro Corporation	145 Loretta Ave. North Ottawa ON	89.6	<u>12</u>
BROOKFIELD LEPAGE JOHNSON CONTROLS	1 OAK STREET OTTAWA ON	75.2	<u>13</u>
Aim Waste Management Inc.	1 Oak Street Ottawa ON	75.2	<u>13</u>
BROOKFIELD LEPAGE JOHNSON CONTROLS	OAK STREET COMPLEX 1 OAK STREET OTTAWA ON	75.2	<u>13</u>

Site	Address	Distance (m)	<u>Map Key</u>
LOVE PRINTING SERVICE LTD.	951 GLADSTONE AVENUE OTTAWA ON K1Y 3E5	98.6	<u>18</u>
LOVE PRINTING (OUT OF BUS) 24-265	951 GLADSTONE AVENUE OTTAWA ON K1Y 3E5	98.6	<u>18</u>
DSS CAPITAL REGION SUPPLY CENTRE	933 GLADSTONE AVENUE OTTAWA ON K1A 0T4	36.9	<u>24</u>
GVT. OF CAN PUBLIC WORKS CANADA 18-375	CHP PLOUFFE PARK 933 GLADSTONE AVE. C/O PLACE DU PORTAGE PHASE IV LEVEL II ON K1A 0T4	36.9	<u>24</u>
PUBLIC WORKS AND GOVT SERVICES CANADA	CAPITAL REGION SUPPLY CENTRE (CRSC) 933 GLADSTONE AVENUE OTTAWA ON K1A 0T4	36.9	<u>24</u>
GVT. OF CAN PUBLIC WORKS CANADA	CHP PLOUFFE PARK 933 GLADSTONE AVE. C/O PLACE DU PORTAGE PHASE IV LEVEL II	36.9	<u>24</u>
GVT. OF CAN PUBLIC WORKS CANADA 18-375	OTTAWA ON K1A 0T4 CHP PLOUFFE PARK 933 GLADSTONE AVE. C/O PLACE DU PORTAGE PHASE IV LEVEL II HULL	36.9	<u>24</u>
DSS CAPITAL REGION SUPPLY CENTRE 13-297	OTTAWA ON K1A 0T4 933 GLADSTONE AVENUE OTTAWA ON K1A 0T4	36.9	<u>24</u>
Corporation City of Ottawa	930 Somerset Street West Ottawa ON	78.9	<u>38</u>
MCKERLIE-MILLEN INC.	35A LAUREL STREET OTTAWA ON K1Y 4M4	92.4	<u>42</u>
CARQUEST CANADA LTD.	35A LAUREL STREET OTTAWA ON K1Y 4M4	92.4	<u>42</u>
CARQUEST CANADA LTD.	AUTO PAINT SUPPLY 35A LAUREL STREET OTTAWA ON K1Y 4M4	92.4	<u>42</u>
MCKERLIE MILLEN (SEE & USE ON2231907)	35A LAUREL STREET OTTAWA ON K1Y 4M4	92.4	<u>42</u>
LEBRUN BUILDING SERVICES	75 G Breezehill North Ottawa ON K1Y 2H7	92.4	<u>42</u>
PUBLIC WORKS CANADA	CHP PLOUFFE PARK C/O PLACE DU PORTAGE PHASE IV LEVEL II OTTAWA ON	92.4	<u>46</u>
Corporation City of Ottawa	930 Somerset Street West Ottawa ON	92.4	<u>46</u>
Preston Medical Management Inc.	225 Preston Street Ottawa ON	153.2	<u>48</u>
LA PAUSE VELO LIMITEE	225 PRESTON STREET OTTAWA ON K1R 7R1	158.1	<u>51</u>
LA PAUSE VELO LTEE/BIKE STOP, THE	225 PRESTON STREET, REAR UNIT OTTAWA ON K1R 7R1	158.1	<u>51</u>
Preston Medical Management Inc.	225 Preston Street Ottawa ON K1R 7R1	158.1	<u>51</u>
Preston Medical Management Inc.	225 Preston Street Ottawa ON K1R 7R1	158.1	<u>51</u>
Preston Medical Management Inc.	225 Preston Street Ottawa ON K1R 7R1	158.1	<u>51</u>

<u>Site</u>	<u>Address</u>	Distance (m)	<u>Map Key</u>
Preston Medical Management Inc.	225 Preston Street Ottawa ON K1R 7R1	158.1	<u>51</u>
Preston Medical Management Inc.	225 Preston Street Ottawa ON K1R 7R1	158.1	<u>51</u>
Preston Medical Management Inc.	225 Preston Street Ottawa ON K1R 7R1	158.1	<u>51</u>
BA BANKNOTE	OTTAWA DIV., DIV OF QUEBECOR PUBLITECH INC.	179.9	<u>55</u>
GREAT CANADIAN THEATRE COMPANY, THE	OTTAWA ON K1N 8V4 910 GLADSTONE AVENUE OTTAWA ON K1R 6Y3	77.7	<u>58</u>
Great Canadian Theatre Company	910 Gladstone Ottawa ON K1R 6Y4	77.7	<u>58</u>
BA INTERNATIONAL INC.	975 GLADSTONE AVENUE OTTAWA ON K1Y 4W5	188.7	<u>59</u>
BA INTERNATIONAL INC.	975 GLADSTONE AVENUE OTTAWA ON K1Y 4W5	188.7	<u>59</u>
Pinchin Environmental	975 Gladstone Ottawa ON K1Y 4W5	188.7	<u>59</u>
BA INTERNATIONAL INC.	975 GLADSTONE AVENUE OTTAWA ON	188.7	<u>59</u>
BA BANKNOTE	OTTAWA DIV., DIV OF QUEBECOR PUBLITECH INC./975 GLADSTONE AVENUE	188.7	<u>59</u>
BA INTERNATIONAL INC.	OTTAWA ON K1Y 4W5 975 GLADSTONE AVENUE OTTAWA ON K1Y 4W5	188.7	<u>59</u>
BA BANKNOTE INC.	975 GLADSTONE AVENUE OTTAWA ON K1N 8V4	188.7	<u>59</u>
BRITISH AMERICAN BANK NOTE INC.	975 GLADSTONE AVENUE C/O P.O. BOX 399, STATION A OTTAWA ON K1Y 4W5	188.7	<u>59</u>
BA INTERNATIONAL INC.	975 GLADSTONE AVENUE OTTAWA ON K1Y 4W5	188.7	<u>59</u>
BA BANKNOTE	975 GLADSTONE AVENUE OTTAWA ON K1N 8V4	188.7	<u>59</u>
BA INTERNATIONAL INC.	975 GLADSTONE AVENUE OTTAWA ON K1N 8V4	188.7	<u>59</u>
BA BANKNOTE 05-931	OTTAWA DIV., DIV OF QUEBECOR PUBLITECH INC./975 GLADSTONE AVENUE	188.7	<u>59</u>
Canadian Bank Note Company, limited Gladstone	OTTAWA ON K1Y 4W5 975 Gladstone avenue Ottawa ON	188.7	<u>59</u>
City of Ottawa	130 Preston St Ottawa ON K1R 7P5	119.9	<u>60</u>
DAVID BERMAN TYPOGRAPHICS LIMITED	950 GLADSTONE AVENUE 3RD FLOOR OTTAWA ON K1Y 3E6	127.6	<u>66</u>
DAVID BERMAN TYPOGRAPHICS LTD.	950 GLADSTONE AVE., 3RD FLOOR OTTAWA ON K1Y 3E6	127.6	<u>66</u>

Site	<u>Address</u>	Distance (m)	<u>Map Key</u>
Public Works and Government Services Canada	1010 Somerset Street Plouffe Park Shop Ottawa ON	136.7	<u>68</u>
PUBLIC WORK & GOV`T SER CANADA	1010 SOMERSET st OTTAWA ON	136.7	<u>68</u>
public works government services canada	1010 SOMERSET STREET WEST OTTAWA ON	136.7	<u>68</u>
Public Works and Government Services Canada	1010 Somerset Street Plouffe Park Shop Ottawa ON	136.7	<u>68</u>
Public Works and Government Services Canada	1010 Somerset Street Plouffe Park Shop Ottawa ON	136.7	<u>68</u>
PUBLIC WORKS CANADA	MAINTENANCE SUPPORT SERVICES PLOUFFE PARK- 1010 SOMERSET STREET WEST OTTAWA ON	136.7	<u>68</u>
public works government services canada	1010 SOMERSET STREET WEST OTTAWA ON	136.7	<u>68</u>
SNC Lavalin O&M	1010 Somerset St. W Ottawa ON K1A 0K9	136.7	<u>68</u>
GVT. OF CANPUBLIC WORKS CANADA	MAINTENANCE SUPPORT SERV. PLOUFFE PARK 1010 SOMERSET ST.W.C/O140 PROMENADE DU PORTAGE-OTTAWA ON K1A 0M3	136.7	<u>68</u>
Public Works and Government Services Canada	1010 Somerset Street Plouffe Park Shop Ottawa ON	136.7	<u>68</u>
Public Works and Government Services Canada	1010 Somerset Street Plouffe Park Shop Ottawa ON	136.7	<u>68</u>
BROOKFIELD LEPAGE JOHNSON CONTROLS	1010 SOMERSET STREET PLOUFFE PARK OTTAWA ON	136.7	<u>68</u>
public works government services canada environmental services directorate	1010 SOMERSET STREET WEST OTTAWA ON	136.7	<u>68</u>
GVT. OF CANPUBLIC WORKS CANADA 18-285	MAINTENANCE SUPPORT SERVICES PLOUFFE PARK, 1010 SOMERSET STREET W. OTTAWA ON	136.7	<u>68</u>
Public Works and Government Services Canada	1010 Somerset Street Plouffe Park Shop Ottawa ON	136.7	<u>68</u>
Centretown Professional Corporation	955 Somerset st Ottawa ON	173.8	<u>78</u>
PARSON REFRIGERATION (1985) LTD.	955 SOMERSET STREET WEST OTTAWA ON K1R 6R8	173.8	<u>78</u>
Centretown Professional Corporation	955 Somerset st Ottawa ON K1R 6R8	173.8	<u>78</u>
Centretown Professional Corporation	955 Somerset st Ottawa ON	173.8	<u>78</u>
Centretown Professional Corporation	955 Somerset st Ottawa ON	173.8	<u>78</u>
Centretown Professional Corporation	955 Somerset st Ottawa ON	173.8	<u>78</u>
PARSON REFRIGERATION (1988) LTD.	955 SOMERSET STREET WEST OTTAWA ON K1R 6R8	173.8	<u>78</u>

<u>Site</u>	<u>Address</u>	Distance (m)	Map Key
Centretown Professional Corporation	955 Somerset st Ottawa ON	173.8	<u>78</u>
OTTAWA-CARLTON, REGIONAL MUN OF	REGIONAL ROAD #13 AT MANOTICK 175 LORETTA AVE N	149.0	<u>83</u>
OTTAWA-CARLETON, REGIONAL MUN. OF	OTTAWA ON K1Y 4L8 SIGNALS AND COMMUNICATIONS 175 LORETTA AVENUE NORTH	149.0	<u>83</u>
Corporation City of Ottawa	OTTAWA ON K1Y 4L8 175 Loretta Ave N Ottawa ON K1Y 4L8	149.0	<u>83</u>
OTTAWA-CARLTON, REGIONAL MUNICIPALITY OF	175 LORETTA AVENUE NORTH OTTAWA ON K1Y 4L8	149.0	<u>83</u>
City of Ottawa	175 LORETTA AVENUE NORTH OTTAWA ON K1Y 4L8	149.0	<u>83</u>
City of Ottawa	175 LORETTA AVENUE NORTH OTTAWA ON K1Y 4L8	149.0	<u>83</u>
City of Ottawa	175 LORETTA AVENUE NORTH OTTAWA ON K1Y 4L8	149.0	<u>83</u>
Corporation City of Ottawa	175 Loretta Ave N Ottawa ON K1Y 4L8	149.0	<u>83</u>
Corporation City of Ottawa	175 Loretta Ave N Ottawa ON K1Y 4L8	149.0	<u>83</u>
City of Ottawa	175 LORETTA AVENUE NORTH OTTAWA ON K1Y 4L8	149.0	<u>83</u>
OTTAWA-CARLTON, REGIONAL MUN OF	REGIONAL ROAD #28 (NAVAN ROAD) 175 LORETTA AVENUE NORTH OTTAWA ON K1Y 4L8	149.0	<u>83</u>
Corporation City of Ottawa	175 Loretta Ave N Ottawa ON K1Y 4L8	149.0	<u>83</u>
OTTAWA-CARLTON, REGIONAL MUN. OF	SIGNALS AND COMMUNICATIONS 175 LORETTA AVENUE NORTH OTTAWA ON K1Y 4L8	149.0	<u>83</u>
Corporation City of Ottawa	175 Loretta Ave N Ottawa ON K1Y 4L8	149.0	<u>83</u>
Corporation City of Ottawa	175 Loretta Ave N Ottawa ON K1Y 4L8	149.0	<u>83</u>
City of Ottawa	175 LORETTA AVENUE NORTH OTTAWA ON K1Y 4L8	149.0	<u>83</u>
Central Tenant Services	865 Gladstone Ottawa ON	216.5	<u>85</u>
Corporation City of Ottawa	175 Loretta Ave N Ottawa ON	151.2	<u>87</u>
City of Ottawa Public Works Department	175 Loretta Ave N. Ottawa ON	151.2	<u>87</u>
City of Ottawa	175 LORETTA AVENUE NORTH OTTAWA ON	151.2	<u>87</u>
ROBT TAPE LIMITED	989 SOMERSET ST. W. OTTAWA ON K1R 6R8	188.6	<u>88</u>
ROBT TAPE LIMITED 33-483	989 SOMERSET ST. W. OTTAWA ON K1R 6R8	188.6	88

Site ROBT. TAPE LTD.	Address 989 Somerset St. West Ottawa ON K1R 6R8	<u>Distance (m)</u> 188.6	<u>Map Key</u> <u>88</u>
ROBT TAPE LIMITED	989 SOMERSET STREET WEST OTTAWA ON K1R 6R8	188.6	<u>88</u>
KEITEL FURNITURE REPAIR LTD	184 Louisa Street Ottawa ON K1R 6Z1	129.7	<u>89</u>
KEITEL FURNITURE REPAIR LTD	184 Louisa Street Ottawa ON K1R 6Z1	129.7	<u>89</u>
KEITEL FURNITURE REPAIR LTD	184 Louisa Street Ottawa ON K1R 6Z1	129.7	<u>89</u>
KEITEL FURNITURE REPAIR LTD	184 LOUISA STREET OTTAWA ON K1R 6Z1	129.7	<u>89</u>
AERO MECHTRONICS LIMITED 01-084	1040 SOMERSET STREET WEST OTTAWA ON K1Y 4L3	168.1	<u>95</u>
AERO MECHTRONICS LIMITED	1040 SOMERSET STREET WEST OTTAWA ON K1Y 4L3	168.1	<u>95</u>
AERO MECHTRONICS LIMITED	1040 SOMERSET STREET WEST OTTAWA ON K1Y 4L3	168.1	<u>95</u>
Domicile Corporation	148-158 Spruce Street Ottawa ON K1R 6P2	219.7	<u>100</u>
SLR Consulting (Canada) Ltd.	100 Breezehill Ave Ottawa ON K1Y 2H5	191.7	<u>102</u>
Ottawa-Carleton District School Board	Devonshire Community PS 100 Breezehill Avenue	191.7	<u>102</u>
Ottawa-Carleton District School Board	Ottawa ON K1Y 2H5 Devonshire PS 100 Breezehill Avenue Ottawa ON	191.7	<u>102</u>
Ottawa-Carleton District School Board	100 Breezehille Ave. Ottawa ON	191.7	<u>102</u>
OTTAWA BOARD OF EDUCATION	100 BREEZEHILL AVENUE OTTAWA ON K1Y 2H5	191.7	<u>102</u>
Ottawa-Carleton District School Board	100 Breezehille Ave. Ottawa ON	191.7	<u>102</u>
Ottawa-Carleton District School Board	100 Breezehille Ave. Ottawa ON K1Y 2H5	191.7	<u>102</u>
Ottawa-Carleton District School Board Health & Safety	100 Breezehille Ave. Ottawa ON K1Y 2H5	191.7	<u>102</u>
Ottawa-Carleton District School Board	100 Breezehille Ave. Ottawa ON	191.7	<u>102</u>
SLR Consulting (Canada) Ltd.	100 Breezehill Ave Ottawa ON	191.7	<u>102</u>
Ottawa-Carleton District School Board	100 Breezehille Ave. Ottawa ON	191.7	<u>102</u>
SEACOR Environmental Inc.	100 Breezehill Ave Ottawa ON	191.7	<u>102</u>
Ottawa-Carleton District School Board	100 Breezehille Ave. Ottawa ON K1Y 2H5	191.7	<u>102</u>

<u>Site</u>		Address	Distance (m)	<u>Map Key</u>
ACKLANDS LIMITED		1050 SOMERSET ST. WEST OTTAWA ON K1Y 3C5	221.8	124
ACKLANDS LIMITED	02-414	1050 SOMERSET ST. WEST OTTAWA ON K1Y 3C5	221.8	124
ACKLANDS LIMITED		1050 SOMERSET STREET WEST OTTAWA ON K1Y 3C5	221.8	124
OTTAWA-CARLETON DISTRIC SCHOOL BOARD	T	ADULT HIGH SCHOOL 300 ROCHESTER STREET OTTAWA ON K1R 7N4	237.8	125
OTTAWA-CARLETON DISTRIC SCHOOL BOARD	T	ADULT HIGH SCHOOL 300 ROCHESTER STREET OTTAWA ON K1R 7N4	237.8	125
OTTAWA-CARLETON DISTRIC SCHOOL BOARD Health and S		ADULT HIGH SCHOOL 300 ROCHESTER STREET	237.8	<u>125</u>
OTTAWA-CARLETON DISTRIC SCHOOL BOARD	т	OTTAWA ON K1R 7N4 ADULT HIGH SCHOOL 300 ROCHESTER STREET	237.8	<u>125</u>
OTTAWA BOARD OF EDUCAT	ION	OTTAWA ON K1R 7N4 HIGH SCHOOL OF COMMERCE 300 ROCHESTER STREET	237.8	125
OTTAWA BOARD OF EDUCAT	ION	OTTAWA ON K1R 7N4 HIGH SCHOOL OF COMMERCE,300 ROCHESTERST C/O 330 GILMOUR ST.	237.8	<u>125</u>
OTTAWA-CARLETON DISTRIC SCHOOL BOARD	т	OTTAWA ON K1R 7N4 ADULT HIGH SCHOOL 300 ROCHESTER STREET	237.8	<u>125</u>
OTTAWA-CARLETON DISTRIC SCHOOL BOARD	т	OTTAWA ON K1P 7N4 ADULT HIGH SCHOOL 300 ROCHESTER STREET	237.8	125
Ottawa-Carleton District School	Board	OTTAWA ON K1R 7N4 Adult Continuing Education Centre 300 Rochester St.	237.8	<u>125</u>
OTTAWA BOARD OF EDUCAT 29-129	TION	Ottawa ON K1R 7N4 HIGH SCHOOL OF COMMERCE,300 ROCHESTERST C/O 330 GILMOUR ST.	237.8	<u>125</u>
OTTAWA-CARLETON DISTRIC SCHOOL BOARD	т	OTTAWA ON K1R 7N4 ADULT HIGH SCHOOL 300 ROCHESTER STREET OTTAWA ON	234.4	<u>126</u>

#### **HINC** - TSSA Historic Incidents

A search of the HINC database, dated 2006-June 2009\* has found that there are 5 HINC site(s) within approximately 0.25 kilometers of the project property.

<u>Site</u>	<u>Address</u>	Distance (m)	Map Key
	150 BREEZEHILL AVENUE NORTH OTTAWA ON K1Y 2H8	248.4	<u>84</u>
	901 SOMERSET ST. OTTAWA ON	178.8	<u>90</u>
	122 PRESTON STREET OTTAWA ON K1R 7P2	196.6	<u>98</u>
	114 PRESTION STREET OTTAWA ON	202.3	<u>99</u>
	106 PRESTON STREET OTTAWA ON K1R 7P2	211.2	<u>103</u>

#### **INC** - TSSA Incidents

A search of the INC database, dated June 2009 - Nov 2015 has found that there are 3 INC site(s) within approximately 0.25 kilometers of the project property.

<u>Site</u>	<u>Address</u>	Distance (m)	<u>Map Key</u>
	BALSAM ST. & PRESTON ST., OTTAWA ON	113.3	<u>28</u>
	179 LOUISA STREET, OTTAWA ON K1R 6Y9	124.1	<u>77</u>
	49 Bayswater Avenue, Ottawa ON K1Y 2E7	238.4	<u>127</u>

#### NPRI - National Pollutant Release Inventory

A search of the NPRI database, dated Dec 31, 2014 has found that there are 25 NPRI site(s) within approximately 0.25 kilometers of the project property.

<u>Site</u>	<u>Address</u>	Distance (m)	<u>Map Key</u>
BA BANKNOTE INC.	975 Gladstone Ave. Ottawa ON K1Y 4W5	179.9	<u>55</u>
BA INTERNATIONAL	975 Gladstone Avenue Ottawa ON K1Y4W5	179.9	<u>55</u>
BA INTERNATIONAL	975 Gladstone Avenue Ottawa ON K1Y4W5	179.9	<u>55</u>
BA INTERNATIONAL INC.	975 Gladstone Avenue Ottawa ON K1Y4W5	179.9	<u>55</u>
BA INTERNATIONAL	975 Gladstone Avenue Ottawa ON K1Y4W5	179.9	<u>55</u>
BA INTERNATIONAL	975 Gladstone Avenue Ottawa ON K1Y4W5	179.9	<u>55</u>
BA INTERNATIONAL	975 Gladstone Avenue Ottawa ON K1Y4W5	179.9	<u>55</u>
BA INTERNATIONAL	975 Gladstone Avenue Ottawa ON K1Y4W5	179.9	<u>55</u>
BA INTERNATIONAL INC.	975 Gladstone Avenue Ottawa ON K1Y4W5	179.9	<u>55</u>
BA BANKNOTE INC.	975 Gladstone Avenue Ottawa ON K1Y4W5	179.9	<u>55</u>
CITY OF OTTAWA	175 LORETTA AVE. NORTH OTTAWA ON K1Y4L8	153.3	<u>86</u>
CITY OF OTTAWA	175 LORETTA AVE. NORTH OTTAWA ON K1Y4L8	153.3	<u>86</u>
REGIONAL MUNICIPALITY OF OTTAWA CARLETON	175 LORETTA AVE. NORTH OTTAWA ON K1Y 4L8	153.3	<u>86</u>
CITY OF OTTAWA	175 LORETTA AVE. NORTH OTTAWA ON K1Y4L8	153.3	<u>86</u>

<u>Address</u>	Distance (m)	Map Key
175 LORETTA AVE. NORTH OTTAWA ON K1Y 4L8	153.3	<u>86</u>
175 LORETTA AVE. NORTH OTTAWA ON K1Y 4L8	153.3	<u>86</u>
175 LORETTA AVE. NORTH OTTAWA ON K1Y 4L8	153.3	<u>86</u>
175 LORETTA AVE. NORTH OTTAWA ON K1Y 4L8	153.3	<u>86</u>
175 LORETTA AVE. NORTH OTTAWA ON K1Y 4L8	153.3	<u>86</u>
175 LORETTA AVE. NORTH OTTAWA ON K1Y4L8	153.3	<u>86</u>
175 LORETTA AVE. NORTH OTTAWA ON K1Y 4L8	153.3	<u>86</u>
175 LORETTA AVE. NORTH OTTAWA ON K1Y 4L8	153.3	<u>86</u>
175 LORETTA AVE. NORTH OTTAWA ON K1Y4L8	153.3	<u>86</u>
175 LORETTA AVE. NORTH OTTAWA ON K1Y4L8	153.3	<u>86</u>
175 LORETTA AVE. NORTH OTTAWA ON K1Y4L8	153.3	<u>86</u>
	175 LORETTA AVE. NORTH OTTAWA ON K1Y 4L8  175 LORETTA AVE. NORTH OTTAWA ON K1Y4L8  175 LORETTA AVE. NORTH OTTAWA ON K1Y4L8	175 LORETTA AVE. NORTH OTTAWA ON K1Y 4L8  175 LORETTA AVE. NORTH 153.3

#### PES - Pesticide Register

A search of the PES database, dated 1988-Jun 2013 has found that there are 11 PES site(s) within approximately 0.25 kilometers of the project property.

Site	<u>Address</u>		Distance (m)	Map Key
TERRA PRO CORPORATION	145 LORETTA AVE OTTAWA	N ON K1Y 2J7	89.6	<u>12</u>
TERRAPRO CORPORATION	145 LORETTA AVE OTTAWA	NUE NORTH ON K1Y 2J7	89.6	<u>12</u>
PRESTON HARDWARE (1980) LIMITED	234-248 PRESTON OTTAWA	ST ON K1R 7R4	103.6	<u>41</u>
PRESTON HARDWARE (1980) LIMITED	234-248 PRESTON OTTAWA	ST ON K1R 7R4	103.6	<u>41</u>
PRESTON HARDWARE (1980) LIMITED	234-248 PRESTON OTTAWA ON K1R 7	_	103.6	<u>41</u>
PRESTON HARDWARE 1980 LIMITED	248 PRESTON ST OTTAWA	ON K1R 7R4	103.4	<u>49</u>
PRESTON HARDWARE 1980 LIMITED	248 PRESTON ST OTTAWA ON K1R	7R4	103.4	<u>49</u>
PARAMOUNT PEST CONTROL	110 SPRUCE ST AI OTTAWA	PT#3 ON K1R 6P2	234.7	<u>117</u>

Site	<u>Address</u>	Distance (m)	Map Key
PARAMOUNT PEST CONTROL	110 SPRUCE ST; APT. #3 OTTAWA ON K1R 6P2	234.7	<u>117</u>
DAVID SAUNDERS O/A PARAMOUNT PEST CONTROL	110 SPRUCE ST, APT 3 OTTAWA ON K1R 6P2	234.7	<u>117</u>
DAVID SAUNDERS O/A PARAMOUNT PEST CONTROL	110 SPRUCE ST, APT 3 OTTAWA ON K1R 6P2	234.7	<u>117</u>

#### **PINC** - TSSA Pipeline Incidents

A search of the PINC database, dated Nov 30, 2015 has found that there are 3 PINC site(s) within approximately 0.25 kilometers of the project property.

Site	<u>Address</u>	Distance (m)	<u>Map Key</u>
	930 Somerset St W,Ottawa ON	78.9	<u>38</u>
	1010 SOMERSET ST, OTTAWA ON	136.7	<u>68</u>
	166 LORETTA AVENUE, OTTAWA ON	200.0	<u>91</u>

#### PRT - Private and Retail Fuel Storage Tanks

A search of the PRT database, dated 1989-1996\* has found that there are 4 PRT site(s) within approximately 0.25 kilometers of the project property.

<u>Site</u>	<u>Address</u>	Distance (m)	<u>Map Key</u>
PRESTON AUTO CENTRE INC	241 PRESTON ST OTTAWA ON K1R 7R3	137.0	<u>50</u>
MR GAS LIMITED ATTN LILIANNE LEVAC	971 GLADSTONE AV OTTAWA ON K1Y 3E5	149.7	<u>56</u>
REGIONAL MUNICIPALITY OF OTTAWA CARLETON ATTN : DO	175 LORETTA AV N OTTAWA ON K1Y 4L8	149.0	<u>83</u>
C CORP (ONTARIO) INC ATTN ACCOUNTS PAYABLE	284 PRESTON ST OTTAWA ON K1R7R6	152.4	<u>97</u>

#### **SCT** - Scott's Manufacturing Directory

A search of the SCT database, dated 1992-Mar 2011\* has found that there are 30 SCT site(s) within approximately 0.25 kilometers of the project property.

<u>Site</u>	<u>Address</u>	Distance (m)	<u>Map Key</u>
V Steel Works Ltd.	17 Larch St Ottawa ON K1R 6W4	12.4	<u>2</u>
Beacon Lite Ltd.	131 Loretta Ave N Ottawa ON K1Y 2J7	73.7	<u>7</u>

<u>Site</u>	<u>Address</u>	Distance (m)	<u>Map Key</u>
Buchanan Lighting Ltd.	129 Loretta Ave N Ottawa ON K1Y 2J7	68.8	<u>9</u>
Sportive Sportswear Manufacturers Inc.	155A Loretta Ave N Ottawa ON K1Y 2J7	110.7	<u>21</u>
SPORTIVE SPORTSWEAR MFG INC.	155A LORETTA AVE N OTTAWA ON K1Y 2J7	110.7	<u>21</u>
SPORTIVE SPORTSWEAR MFG INC.	155 A LORETTA AVE N OTTAWA ON K1Y 2J7	69.1	<u>27</u>
INVITATIONS PLUS	193 PRESTON ST OTTAWA ON K1R 7P8	141.4	<u>30</u>
VESUVIO IRON LOGIC CUSTOM	949 GLADSTONE AVE OTTAWA ON K1Y 3E5	86.5	<u>32</u>
VESUVIO IRON WORKS	949 GLADSTONE AVE OTTAWA ON K1Y 3E5	86.5	<u>32</u>
Breezehill Heating Ltd.	75 Breezehill Ave N Unit D Ottawa ON K1Y 2H6	92.4	<u>42</u>
merge design, print & promo	35B Laurel St Ottawa ON K1Y 4M4	92.4	<u>42</u>
Paper Sign Man	35B Laurel St Ottawa ON K1Y 4M4	92.4	<u>42</u>
Signs in 23 hours.com	35B Laurel St Ottawa ON K1Y 4M4	92.4	<u>42</u>
Wake Cup Coffee Roasters	35 Laurel St Ottawa ON K1Y 4M4	92.4	<u>42</u>
B.A. Banknote	975 Gladstone Ave Ottawa ON K1Y 4W5	188.7	<u>59</u>
B A BANKNOTE	975 GLADSTONE AVE OTTAWA ON K1Y 4W5	188.7	<u>59</u>
BA International Inc.	975 Gladstone Ave Ottawa ON K1Y 4W5	188.7	<u>59</u>
BA International Inc.	975 Gladstone Ave Ottawa ON K1Y 4W5	188.7	<u>59</u>
B.A. Banknote Inc.	975 Gladstone Ave Ottawa ON K1Y 4W5	188.7	<u>59</u>
L'Ora di Ottawa (1987) Ltd.	203 Louisa St Ottawa ON K1R 6Y9	69.0	<u>61</u>
L'ORA DI OTTAWA	203 LOUISA ST OTTAWA ON K1R 6Y9	69.0	<u>61</u>
DAVID BERMAN TYPOGRAPHICS LTD.	950 GLADSTONE AVE OTTAWA ON K1Y 3E6	127.6	<u>66</u>
TRADER MEDIA CORP.	950 GLADSTONE AVE OTTAWA ON K1Y 3E6	127.6	<u>66</u>
ARC Industries	73 Breezehill Ave N Ottawa ON K1Y 2H6	118.1	<u>71</u>
Arc Industries - Div. of OCAPDD	73 Breezehill Ave N Ottawa ON K1Y 2H6	118.1	<u>71</u>

Site	<u>Address</u>	Distance (m)	Map Key
A R C INDUSTRIES	73 BREEZEHILL AVE N OTTAWA ON K1Y 2H6	118.1	<u>71</u>
T & E FOOD PRODUCTS	158 SPRUCE ST OTTAWA ON K1R 6P2	173.8	<u>74</u>
J.M. HILL & SON LTD.	935 SOMERSET ST W OTTAWA ON K1R 6R8	169.6	<u>81</u>
ROBERT TAPE LIMITED	989 SOMERSET ST W OTTAWA ON K1R 6R8	188.6	<u>88</u>
Lixar IT Inc.	47A Young St Ottawa ON K1S 3H6	239.5	<u>134</u>

## SPL - Ontario Spills

A search of the SPL database, dated 1988-Jun 2015 has found that there are 16 SPL site(s) within approximately 0.25 kilometers of the project property.

<u>Site</u>	<u>Address</u>	Distance (m)	Map Key
BROOKFIELD LEPAGE JOHNSON CONT	1 OAK STREET, OTTAWA PROPERTY MANAGEMENT CO. 120 PARKDALE AVE, SUITE 1401, OTTAWA OTTAWA CITY ON	75.2	<u>13</u>
UNKNOWN	933 GLADSTONE OTTAWA CITY ON K1A 0T4	36.9	<u>24</u>
	Intersection of Balsam St and Preston St Ottawa ON	113.3	<u>28</u>
	930 Somerset Street Ottawa ON	92.4	<u>46</u>
City of Ottawa	South East corner of Preston and Balsam 241 PRESTON STREET, OTTAWA <unofficial> Ottawa ON K1R 7R3</unofficial>	137.0	<u>50</u>
349977 Ontario Ltd.	975 Gladstone Ave Ottawa ON K1Y 4W5	188.7	<u>59</u>
BA International Inc.	975 Gladstone Ave Ottawa ON K1Y 4W5	188.7	<u>59</u>
Drain-All Ltd.	975 Gladstone Ave Ottawa ON K1Y 4W5	188.7	<u>59</u>
BA International Inc.	975 Gladstone Ave Ottawa ON K1Y 4W5	188.7	<u>59</u>
OTTAWA HYDRO	99 BREEZE HILL AVENUE TRANSFORMER OTTAWA CITY ON	129.3	<u>63</u>
SHELL CANADA PRODUCTS LTD.	DEPT OF PUBLIC WORKS 1010 SUMMERSET TANK TRUCK (CARGO) OTTAWA CITY ON	136.7	<u>68</u>
City of Ottawa	Breezehill Ave N between Laurel and Gladstone Ottawa ON	219.3	<u>72</u>
OTTAWA HYDRO	947 SOMMERSET ST WEST TRANSFORMER OTTAWA CITY ON	173.8	<u>80</u>
KENT FUELS	175 LORETTA AVE. RMOC GARAGE TANK TRUCK (CARGO) OTTAWA CITY ON	149.0	<u>83</u>

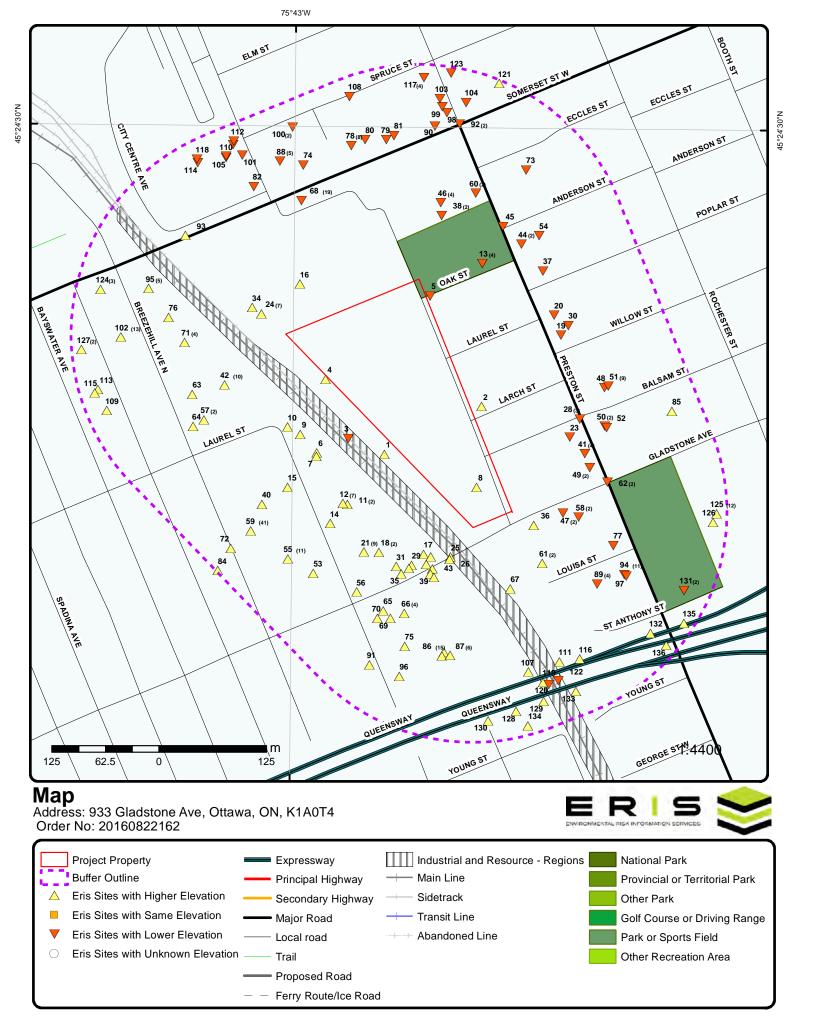
<u>Site</u>	<u>Address</u>	Distance (m)	<u>Map Key</u>
PRIVATE RESIDENCE	69 BAYSWATER AVE. FURNACE OIL TANK OTTAWA CITY ON K1Y 2E7	226.7	<u>109</u>
Broadband Maintenance Inc. <unofficial></unofficial>	49 Bayswater Ave Ottawa ON K1Y 2E7	238.4	<u>127</u>

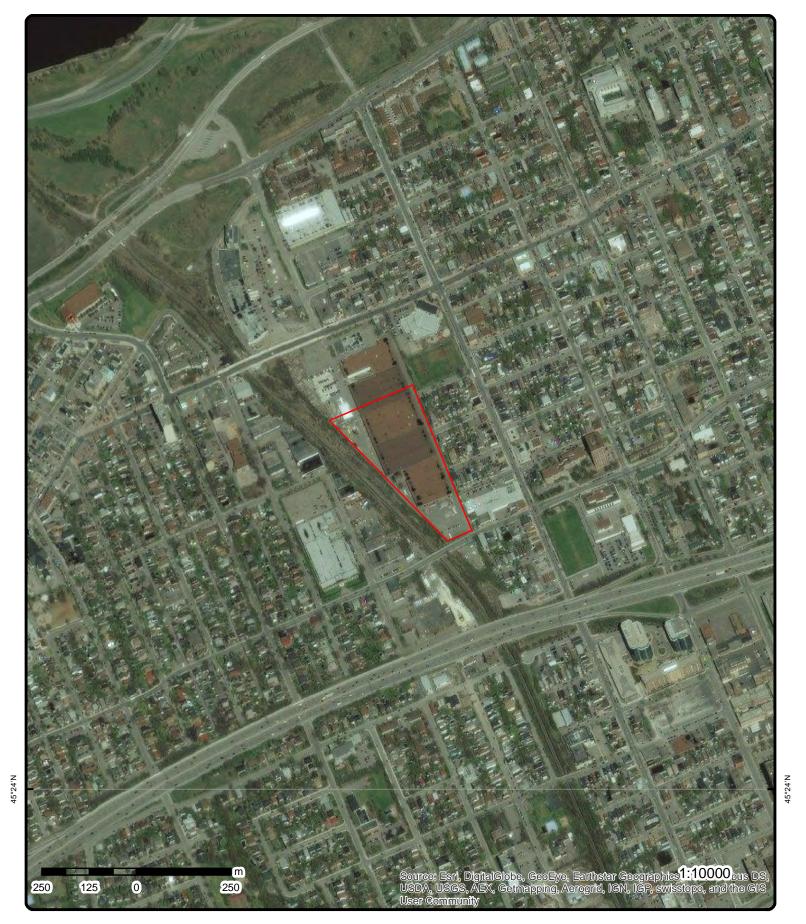
## **WWIS** - Water Well Information System

A search of the WWIS database, dated 1955-Mar 2014 has found that there are 28 WWIS site(s) within approximately 0.25 kilometers of the project property.

Site	<u>Address</u>	Distance (m)	Map Key
	ON	32.4	<u>3</u>
	OTTAWA ON	116.3	<u>14</u>
	Ottawa ON	62.9	<u>17</u>
	Ottawa ON	58.9	<u>22</u>
	Ottawa ON	58.9	<u>22</u>
	OTTAWA ON	94.5	<u>23</u>
	OTTAWA ON	43.3	<u>25</u>
	Ottawa ON	46.2	<u>26</u>
	Ottawa ON	82.1	<u>29</u>
	Ottawa ON	95.8	<u>31</u>
	OTTAWA ON	67.6	<u>33</u>
	OTTAWA ON	73.3	<u>39</u>
	OTTAWA ON	73.8	<u>43</u>
	lot 39 con 1 OTTAWA ON	59.1	<u>47</u>
	OTTAWA ON	159.4	<u>75</u>
	OTTAWA ON	168.1	<u>95</u>
	ON	193.2	<u>96</u>

<u>Site</u>	<u>Address</u>	Distance (m)	<u>Map Key</u>
	Ottawa ON	211.9	<u>101</u>
	Ottawa ON	216.4	<u>105</u>
	Ottawa ON	218.3	<u>106</u>
	ON	227.3	<u>108</u>
	OTTAWA ON	227.2	<u>110</u>
	OTTAWA ON	230.5	<u>112</u>
	OTTAWA ON	224.2	<u>114</u>
	OTTAWA ON	228.2	<u>118</u>
	Ottawa ON	242.5	<u>123</u>
	OTTAWA ON	219.9	<u>131</u>
	ON	219.9	<u>131</u>





**Aerial** 

Address: 933 Gladstone Ave, Ottawa, ON, K1A0T4



# **Detail Report**

Мар Кеу	Numbe Record		Direction/ Distance (m)	Elevation (m)	Site	DB
<u>8</u>	1 of 1		-/0.0	61.5	ON	BORE
Borehole ID:		613131			Туре:	Borehole
Use:					Status:	
Drill Method:					UTM Zone:	18
Easting:		444131			Northing:	5028142
Location Accu					Orig. Ground Elev m:	61
Elev. Reliabilit		000			DEM Ground Elev m:	60.6
Total Depth m	) <i>:</i>	-999			Primary Name:	
Township:					Concession:	
Lot:					Municipality:	
Completion Da Primary Water					Static Water Level: Sec. Water Use:	2.8
Details						
Stratum ID:		218393835			Top Depth(m):	0.0
Bottom Dep	th(m):	0.6			Stratum Desc:	GRAVEL.
+ Ctuatum (D.		04000000			Ton Donati ()	0.6
Stratum ID:		218393836			Top Depth(m):	0.6
Bottom Dep	th(m):	1.5			Stratum Desc:	SAND,GRAVEL. BROWN.
Stratum ID:		218393837			Top Depth(m):	1.5
Bottom Dep	th(m):	2.7			Stratum Desc:	SAND,SILT,GRAVEL. GREY.
+						
Stratum ID: Bottom Dep	th(m):	218393838 3.0			Top Depth(m): Stratum Desc:	2.7 BOULDERS. COMPACT.
+		0.4.000.000				
Stratum ID:		218393839			Top Depth(m):	3.0
Bottom Dep	th(m):				Stratum Desc:	BEDROCK. BEDROCK. BLACK. 0050
						081 000100670000500900050049COMPACT, WATER STABLE AT 190
24	1 of 7		WNW/36.9	61.8	DSS CAPITAL REGION 933 GLADSTONE AVE	NUE
					OTTAWA ON K1A 0T4	
Generator #:		0	N0989500			
Approval Yrs:		_	8,89,90			
SIC Code:			159			
SIC Description	on:		THER GEN. ADM	ЛIN.		
Details		_	40			
Waste Code Waste Desci			13 ETROLEUM DIS	TILLATES		
+						
Waste Code Waste Desci			52 /ASTE OILS & LI	JBRICANTS		
24	2 of 7		WNW/36.9	61.8	GVT. OF CAN PUBLIC	C WORKS CANADA 18-375
_					CHP PLOUFFE PARK 9	GEN

Number of Direction/ Elevation Site DΒ Map Key Records Distance (m) (m) ON K1A 0T4 Generator #: ON0144774 Approval Yrs: 95,96,97 SIC Code: 8159 SIC Description: OTHER GEN. ADMIN. --- Details ---Waste Code: LIGHT FUELS Waste Description: Waste Code: 252 Waste Description: WASTE OILS & LUBRICANTS 3 of 7 WNW/36.9 **PUBLIC WORKS AND GOVT SERVICES** 24 61.8 **GEN CANADA CAPITAL REGION SUPPLY CENTRE (CRSC) 933 GLADSTONE AVENUE** OTTAWA ON K1A 0T4 ON0989500 Generator #: Approval Yrs: 92,93,95,96,97,98,99,00,01 SIC Code: 8159 OTHER GEN. ADMIN. SIC Description: --- Details ---Waste Code: 148 **INORGANIC LABORATORY CHEMICALS** Waste Description: Waste Code: PETROLEUM DISTILLATES Waste Description: Waste Code: Waste Description: WASTE OILS & LUBRICANTS Waste Code: **PHARMACEUTICALS** Waste Description: Waste Code: Waste Description: ORGANIC LABORATORY CHEMICALS 4 of 7 WNW/36.9 61.8 GVT. OF CAN.- PUBLIC WORKS CANADA 24 GEN CHP PLOUFFE PARK 933 GLADSTONE AVE. C/O PLACE DU PORTAGE PHASE IV LEVEL II OTTAWA ON K1A 0T4 Generator #: ON0144774 90 Approval Yrs: SIC Code: SIC Description: OTHER GEN. ADMIN. --- Details ---Waste Code: 221 LIGHT FUELS Waste Description: Waste Code: Waste Description: WASTE OILS & LUBRICANTS

> GVT. OF CAN.- PUBLIC WORKS CANADA 18-375 CHP PLOUFFE PARK 933 GLADSTONE AVE.

**GEN** 

Order No: 20160822162

C/O PLACE DU PORTAGE PHASE IV LEVEL II HULL

OTTAWA ON K1A 0T4

WNW/36.9

61.8

24

5 of 7

Number of Direction/ Elevation Site DΒ Map Key

ON0144774 Generator #: 92,93,94 Approval Yrs: SIC Code: 8159

Records

SIC Description: OTHER GEN. ADMIN.

--- Details ---

Waste Code: 221

LIGHT FUELS Waste Description:

252 Waste Code:

Waste Description: WASTE OILS & LUBRICANTS

Distance (m)

(m)

DSS CAPITAL REGION SUPPLY CENTRE 13-297 24 6 of 7 WNW/36.9 61.8

933 GLADSTONE AVENUE OTTAWA ON K1A 0T4

**GEN** 

ON0989500 Generator #: Approval Yrs: 94

SIC Code: 8159 SIC Description: OTHER GEN. ADMIN.

--- Details ---

Waste Code: 213

Waste Description: PETROLEUM DISTILLATES

Waste Code: 252

Waste Description: WASTE OILS & LUBRICANTS

7 of 7 WNW/36.9 UNKNOWN 24 61.8 SPL 933 GLADSTONE

OTTAWA CITY ON K1A 0T4

Borehole

CON 1 ON OTTAWA RIVER

Order No: 20160822162

Ref NO: 231625

Contaminant Code: Contaminant Name: Contaminant Quantity:

Incident Cause: PIPE/HOSE LEAK Incident Dt: 7/11/2002

Incident Reason: **EQUIPMENT FAILURE** 

Incident Summary: TOW TRUCK:8L HYDRAULIC OIL TO GRD AND STORM SEW-ER, CLEANING

MOE Reported Dt: 7/11/2002 **Environmental Impact: POSSIBLE** 

Nature of Impact: Water course or lake Receiving Medium: LAND, WATER

**NEPEAN** 

SAC Action Class: Sector Source Type:

20107 Site Municipality:

1 of 1 SSW/14.9 62.0 1 **BORE** ON

Concession:

Borehole ID: 847977

Type: Geotechnical/Geological Investigation Status: Decommissioned Use:

Drill Method: Diamond Drill UTM Zone: 18 Easting: 444023 Northing: 5028180

Location Accuracy: Orig. Ground Elev m: 59.9 Elev. Reliability Note: DEM Ground Elev m: 57.3 Total Depth m: Primary Name: 3.2

LOT 38 Municipality: Lot:

Completion Date: 05-DEC-1962 Static Water Level: -999.9

Primary Water Use: Sec. Water Use:

Township:

Number of Direction/ Elevation Site DΒ Map Key Records Distance (m) (m) --- Details ---0.0 Stratum ID: 6559452 Top Depth(m): Stratum Desc: **GREY-BROWN CLAYEY SILT AND** Bottom Depth(m): 1.8 **GRAVEL FILL** Stratum ID: 6559453 Top Depth(m): 1.8 Bottom Depth(m): 3.2 Stratum Desc: GREY, CLAYEY SILT, FINE SAND, **GRAVEL (GLACIAL TILL)** 61.1 V Steel Works Ltd. 2 1 of 1 E/12.4 SCT 17 Larch St Ottawa ON K1R 6W4 Established: 7/1/1975 Plant Size (ft2): Employment: --- Details ---Description: All Other Industrial Machinery Manufacturing SIC/NAICS Code: 333299 Description: Other Plate Work and Fabricated Structural Product Manufacturing SIC/NAICS Code: Other Ornamental and Architectural Metal Product Manufacturing Description: SIC/NAICS Code: 332329 1 of 1 SW/32.4 56.4 3 **WWIS** ON Well ID: 7205660 Lot: Concession: Concession Name: OTTAWA-CARLETON NEPEAN TOWNSHIP County: Municipality: Northing Nad83: Easting Nad83: 443981 5028199 18 Utm Reliability: margin of error: 30 m - 100 m Primary Water Use: Construction Date: Sec. Water Use: Well Depth: Static Water Level: Pump Rate: Clear/Cloudy: Flow Rate: Specific Capacity: Final Well Status: Construction Method: Flowing (y/n): Elevation (m): Elevation Reliability: Depth to Bedrock: Overburden/Bedrock: Water Type: Casing Material: 1 of 1 W/3.2 61.3 4 **BORE** ON Borehole ID: 847983 Borehole Type: Use: Geotechnical/Geological Investigation Status: Decommissioned Drill Method: Diamond Drill UTM Zone: 18 443955 Northing: 5028268 Easting: Location Accuracy: Orig. Ground Elev m: 61.3 Elev. Reliability Note: DEM Ground Elev m: Total Depth m: 8.5 Primary Name:

Township: NEPEAN Concession: CON 1 ON OTTAWA RIVER
Lot: LOT 38 Municipality:

Order No: 20160822162

Completion Date: 12-NOV-1962 Static Water Level: -999.9

Primary Water Use: Sec. Water Use:

Map Key	Numbe Record		Direction/ Distance (m)	Elevation (m)	Site		DE
Details	•						
Stratum ID	):	6559473			Top Depth(m):	0.0	
Bottom De	epth(m):	0.2			Stratum Desc:	ASPHALT	
+							
Stratum ID	):	6559474			Top Depth(m):	0.2	
Bottom De	epth(m):	0.8			Stratum Desc:	FILL (SILTY SAND)	
+							
Stratum ID	):	6559475			Top Depth(m):	0.8	
Bottom De	epth(m):	2.3			Stratum Desc:	GREY CLAY, SOME GRAVEL	
+							
Stratum ID	):	6559476			Top Depth(m):	2.3	
Bottom De	epth(m):	6.9			Stratum Desc:	SOFT, GREY CLAY	
+							
Stratum ID	) <i>:</i>	6559477			Top Depth(m):	6.9	
Bottom De	epth(m):	8.5			Stratum Desc:	SHALE BEDROCK	
	4 -54		NNE/4 E	50.2			
<u>5</u>	1 of 1		NNE/4.5	59.3	ON		BORE
Borehole ID:	:	808695			Туре:	Borehole	
Use:			cal/Geological Inv	estigation	Status:	40	
Drill Method Easting:	:	Boring 444076.25	;		UTM Zone: Northing:	18 5028364.76	
Location Ac	curacy:				Orig. Ground Elev m:	57.9	
Elev. Reliabi		7.4			DEM Ground Elev m:	58.8 BH 3	
Total Depth Township:	m:	7.4			Primary Name: Concession:	вп 3	
Lot:					Municipality:		
Completion Primary Wat		05-FEB-19	965		Static Water Level: Sec. Water Use:	3.5	
Details							
Stratum ID	):	218597394	4		Top Depth(m):	0.0	
Bottom De	epth(m):	1.2			Stratum Desc:	Brown Hard Silty Clay	
+							
Stratum ID	) <i>:</i>	21859739	5		Top Depth(m):	1.2	
Bottom De	epth(m):	4.7			Stratum Desc:	Grey Dense Silt - Sand	
+ Stratum ID	)-	218597396	ŝ		Top Depth(m):	4.7	
Bottom De		5.9			Stratum Desc:	Grey Dense Till sand silt With: Gr	
	pui(III).	0.0			Suatum Desc.	Grey Berise Till Sand Silt With. Gr	
+ Stratum ID	) <u>-</u>	218597397	7		Top Depth(m):	5.9	
Bottom De	=	7.4	•		Stratum Desc:	Dark Grey Limestone	
<u>6</u>	1 of 1		WSW/70.3	64.7	131 Loretta Avenue Ottawa ON		EHS
Addit. Info O Order No.: Report Date: Report Type	:	:	Fire Insur. Maps a 20130205035 14-FEB-13 Standard Select F		tle Searches; Topographic Ma	aps; City Directory; Aerial Photos	

Standard Select Report

Report Type: Search Radius (km):

Мар Кеу	Number Record		Direction/ Distance (m)	Elevation (m)	Site		DB
7	1 of 1		SW/73.7	65.1	Beacon Lite Ltd. 131 Loretta Ave N Ottawa ON K1Y 2J7		SCT
Established: Plant Size (ft Employment			01-JUL-64 10000				
Details Description SIC/NAICS			Industrial Machinery 417230	, Equipment and	Supplies Wholesaler-Distribut	ors	
+ Description SIC/NAICS			Sign Manufacturing 339950				
+ Description SIC/NAICS			Other Commercial a 532490	nd Industrial Mac	hinery and Equipment Rental	and Leasing	
9	1 of 1		WSW/68.8	64.9	Buchanan Lighting Ltd. 129 Loretta Ave N Ottawa ON K1Y 2J7		SCT
Established: Plant Size (ft Employment			01-DEC-71 6000				
Details Description SIC/NAICS			Electrical Wiring and 416110	d Construction Su	pplies Wholesaler-Distributors	,	
+ Descriptior SIC/NAICS			Professional Machir 417930	nery, Equipment a	nd Supplies Wholesaler-Distri	butors	
+ Description SIC/NAICS			Electrical Wiring and 416110	d Construction Su	pplies Wholesaler-Distributors	:	
<u>10</u>	1 of 1		WSW/73.8	64.5	ON		BORE
Borehole ID: Use: Drill Method:		613137			Type: Status: UTM Zone:	Borehole	
Easting: Location Acc	curacy:	443911			Northing: Orig. Ground Elev m:	18 5028212 0	
Elev. Reliabil Total Depth I Township:	•	-999			DEM Ground Elev m: Primary Name: Concession:	62.9	
Lot: Completion L Primary Wate					Municipality: Static Water Level: Sec. Water Use:	-58	
11	1 of 2		SSW/86.1	66.0	TerraPro Corporation 145 Loretta Ave. North Ottawa ON K1Y 2J7		GEN
Generator #: Approval Yrs SIC Code: SIC Descript			ON4523321 2012 561730 Landscaping Service	es			
Details Waste Cod Waste Desc			252 WASTE OILS & LUI	BRICANTS			

Map Key	Number of Records	Direction/ Distance (m)	Elevation (m)	Site	DB
+ Waste Coo Waste Des		213 PETROLEUM DIS	TILLATES		
<u>11</u>	2 of 2	SSW/86.1	66.0	TerraPro Corporation 145 Loretta Ave. North Ottawa ON	GEN
Generator #: Approval Yrs SIC Code: SIC Descript	s:	ON4523321 2013 561730 LANDSCAPING SI	ERVICES		
Details Waste Coo Waste Des +	le:	213 PETROLEUM DIS	TILLATES		
Waste Coo Waste Des		252 WASTE OILS & LU	JBRICANTS		
12	1 of 7	SSW/89.6	65.8	145 Loretta Avenue North Ottawa ON	EHS
Addit. Info C Order No.: Report Date: Report Type Search Radi	:	20120329007 4/4/2012 9:34:30 A Custom Report 0.25	мM		
12	2 of 7	SSW/89.6	65.8	TerraPro Corporation 145 Loretta Ave. North Ottawa ON	GEN
Generator #: Approval Yr: SIC Code: SIC Descript	s:	ON4523321 2009 561730 Landscaping Servi	ces		
Details Waste Coo Waste Des +	le:	213 PETROLEUM DIS	TILLATES		
Waste Coo Waste Des		252 WASTE OILS & LU	JBRICANTS		
12	3 of 7	SSW/89.6	65.8	TerraPro Corporation 145 Loretta Ave. North Ottawa ON	GEN
Generator #: Approval Yr: SIC Code: SIC Descript	s:	ON4523321 2011 561730 Landscaping Servi	ces		
Details Waste Coo Waste Des	le:	252 WASTE OILS & LU	JBRICANTS		
+ Waste Coo Waste Des		213 PETROLEUM DIS	TILLATES		

DB	Site	Elevation (m)	Direction/ Distance (m)	Number of Records	Map Key
GEN	TerraPro Corporation 145 Loretta Ave. North Ottawa ON K1Y 2J7	65.8	SSW/89.6	4 of 7	12
		08	ON4523321 03,04,05,06,07,0	:	Generator #: Approval Yrs
		es	561730 Landscaping Servic	on:	SIC Code: SIC Description
		ILLATES	213 PETROLEUM DIST		Details Waste Code Waste Desc
		BRICANTS	252 WASTE OILS & LU		Waste Code Waste Desc
GEN	TerraPro Corporation 145 Loretta Ave. North Ottawa ON	65.8	SSW/89.6	5 of 7	12
			ON4523321		Generator #:
			2010 561730	1	Approval Yrs. SIC Code:
		es	Landscaping Servic	on:	SIC Description
		ILLATES	213 PETROLEUM DIST		Details Waste Code Waste Desc +
		BRICANTS	252 WASTE OILS & LU		Waste Code Waste Desc
PES	TERRA PRO CORPORATION 145 LORETTA AVE N OTTAWA ON K1Y 2J7	65.8	SSW/89.6	6 of 7	<u>12</u>
			Operator	:	Licence No.: Licence Type
PES	TERRAPRO CORPORATION 145 LORETTA AVENUE NORTH OTTAWA ON K1Y 2J7	65.8	SSW/89.6	7 of 7	<u>12</u>
			Operator	:	Licence No.: Licence Type
GEN	BROOKFIELD LEPAGE JOHNSON CONTROLS 1 OAK STREET OTTAWA ON	58.1	NNE/75.2	1 of 4	<u>13</u>
			ON0554831 03,04		Generator #: Approval Yrs. SIC Code: SIC Description
GEN	Aim Waste Management Inc. 1 Oak Street Ottawa ON	58.1	NNE/75.2	2 of 4	<u>13</u>
			ON3892828		Generator #:

Number of Direction/ Elevation Site DΒ Map Key Records Distance (m) (m) As of May 2015 Approval Yrs: SIC Code: SIC Description: --- Details ---Waste Code: 221 Light fuels Waste Description: Waste Code: 243 Waste Description: **PCB** 3 of 4 NNE/75.2 58.1 **BROOKFIELD LEPAGE JOHNSON CONTROLS** 13 **GEN** OAK STREET COMPLEX 1 OAK STREET OTTAWA ON Generator #: ON0554831 99,00,01 Approval Yrs: SIC Code: 7512 SIC Description: NON-RES. BLDG. OPER. --- Details ---Waste Code: PETROLEUM DISTILLATES Waste Description: Waste Code: 251 Waste Description: **OIL SKIMMINGS & SLUDGES** Waste Code: 252 Waste Description: WASTE OILS & LUBRICANTS Waste Code: Waste Description: ALKALINE WASTES - OTHER METALS Waste Code: PAINT/PIGMENT/COATING RESIDUES Waste Description: Waste Code: OTHER SPECIFIED INORGANICS Waste Description: Waste Code: ALIPHATIC SOLVENTS Waste Description: 13 4 of 4 NNE/75.2 58.1 **BROOKFIELD LEPAGE JOHNSON CONT** SPL 1 OAK STREET, OTTAWA PROPERTY MANAGEMENT CO. 120 PARKDALE AVE, SUITE 1401, OTTAWA **OTTAWA CITY ON** Ref NO: 205845 Contaminant Code: Contaminant Name: Contaminant Quantity: Incident Cause: PIPE/HOSE LEAK Incident Dt: 7/10/2001 **EQUIPMENT FAILURE** Incident Reason: Incident Summary: **BROOKFIELD:** MOE Reported Dt: 7/13/2001 **Environmental Impact:** Possible Nature of Impact: Air Pollution Receiving Medium: Air SAC Action Class: Sector Source Type:

Order No: 20160822162

20107

Site Municipality:

Map Key Numbe Record			Elevation (m)	Site	DB
<u>14</u>	1 of 1	SSW/116.3	66.3	OTTAWA ON	wwis
Well ID: Concession: County: Easting Nad. Zone: Primary Wate Sec. Water U Pump Rate: Flow Rate: Specific Cap Construction Elevation (m Depth to Bec Water Type:	83: er Use: Jse: pacity: n Method: i):	1535405 OTTAWA-CARLETON 443960 18 Air Precussion 66.02		Lot: Concession Name: Municipality: Northing Nad83: Utm Reliability: Construction Date: Well Depth: Static Water Level: Clear/Cloudy: Final Well Status: Flowing (y/n): Elevation Reliability: Overburden/Bedrock: Casing Material:	OTTAWA CITY 5028100  18-AUG-04  Observation Wells  No formation data Not stated
<u>15</u>	1 of 1	SW/122.4	66.7	ON	BORE
Borehole ID: Use: Drill Method Easting: Location Acc Elev. Reliabi Total Depth Township:	: curacy: ility Note:	613129 443911 -999		Type: Status: UTM Zone: Northing: Orig. Ground Elev m: DEM Ground Elev m: Primary Name: Concession:	Borehole 18 5028142 65.5 65.3
Lot: Completion Primary Wat				Municipality: Static Water Level: Sec. Water Use:	7.4
Details					
Stratum ID	) <del>:</del>	218393823		Top Depth(m):	0.0
Bottom De	pth(m):	0.6		Stratum Desc:	SILT.
+					
Stratum ID		218393824		Top Depth(m):	0.6
Bottom De	pth(m):	1.5		Stratum Desc:	GRAVEL.
+		04000005		<b>-</b>	
Stratum ID		218393825		Top Depth(m):	1.5
Bottom De	pth(m):	4.7		Stratum Desc:	GRAVEL. COMPACT.
+		0.40000000		44.1	4-
Stratum ID		218393826		Top Depth(m):	4.7
Bottom De	pth(m):	4.9		Stratum Desc:	SAND.
+		040000007		Ton Donath (se)	4.0
Stratum ID		218393827		Top Depth(m):	4.9
Bottom De	:p:n(m):	5.0		Stratum Desc:	GRAVEL. HARD.
+ Ctrotum ID	1-	240202020		Ton Donth ()	5.0
Stratum ID Bottom De		218393828		Top Depth(m): Stratum Desc:	5.0 BEDROCK. BEDROCK. 013 00005 021 00050 081 000100670000500900050049COMPACT, W

Мар Кеу	Numbe Record		Elevation (m)	Site	DB
<u>16</u>	1 of 1	NW/47.4	61.2	ON	BORE
Borehole ID: Use: Drill Method: Easting: Location Acc Elev. Reliabil Total Depth n Township: Lot: Completion L Primary Wate	curacy: lity Note: n: Oate:	847976 Geotechnical/Geological Inv Diamond Drill 443925  7 NEPEAN LOT 38 04-DEC-1962	vestigation	Type: Status: UTM Zone: Northing: Orig. Ground Elev m: DEM Ground Elev m: Primary Name: Concession: Municipality: Static Water Level: Sec. Water Use:	Borehole Decommissioned 18 5028379 60.3 61 CON 1 ON OTTAWA RIVER -999.9
Details					
Stratum ID:	;	6559447		Top Depth(m):	0.0
Bottom Dep	oth(m):	0.1		Stratum Desc:	ASPHALT
+ Stratum ID:	•	6559448		Top Depth(m):	0.1
Bottom Dep	oth(m):	1.1		Stratum Desc:	FILL (GRAVEL AND SAND)
+ Stratum ID:	-	6559449		Top Depth(m):	1.1
Bottom Dep		4.9		Stratum Desc:	BROWN, STIFF, CLAYEY SILT CHANGING TO STIFF TO SOFT GREY, SILTY CLAY
+ Stratum ID:	•	6559450		Top Depth(m):	4.9
Bottom Dep		5.9		Stratum Desc:	2in. GRAVEL LAYER
+					
Stratum ID:		6559451		Top Depth(m):	5.9
Bottom Dep	oth(m):	7.0		Stratum Desc:	DENSE, SILTY, FINE SAND, GRAVEL (GLACIAL TILL)
<u>17</u>	1 of 1	S/62.9	64.0	Ottawa ON	wwis
Well ID: Concession: County: Easting Nad8 Zone: Primary Wate: Sec. Water U. Pump Rate: Flow Rate: Specific Capa Construction Elevation (m) Depth to Bed Water Type: Details Thickness: Material Co	a3: er Use: se: acity: Method: irock:	7188016  OTTAWA-CARLETON 444069 18  Monitoring and Test Hole  Other Method		Lot: Concession Name: Municipality: Northing Nad83: Utm Reliability: Construction Date: Well Depth: Static Water Level: Clear/Cloudy: Final Well Status: Flowing (y/n): Elevation Reliability: Overburden/Bedrock: Casing Material:  Original Depth: Material:	NEPEAN TOWNSHIP 5028064 margin of error : 30 m - 100 m 13-AUG-12 4.1 m  Test Hole  Not stated  4.1 m
18	1 of 2	S/98.6	67.0	LOVE PRINTING SERVI 951 GLADSTONE AVE OTTAWA ON K1Y 3E5	GEN

Мар Кеу	Number Records		Direction/ Distance (m)	Elevation (m)	Site		DB
Generator #: Approval Yrs SIC Code: SIC Descripti	):		ON0607900 86,87,88,89,90 0007 LETTER ACKNOW	LEDG.			
Details Waste Code Waste Desc			264 PHOTOPROCESS	ING WASTES			
<u>18</u>	2 of 2		S/98.6	67.0	LOVE PRINTING (OUT 951 GLADSTONE AVE OTTAWA ON K1Y 3E5		GEN
Generator #: Approval Yrs SIC Code: SIC Descripti	): :		ON0607900 92,93,94,95,96,97,9 2841 NEWSPAPER, ETC				
<u>19</u>	1 of 1		ENE/129.1	58.4	6176381 Canada Inc. 191-193 Preston St Ottawa ON		CA
Certificate #: Application Y Issue Date: Approval Typ Status: Application T Client Name: Client Addres Client City: Client Postal Project Desci Contaminant Emission Col	Year:  Oe:  Type:  SS:  Code:  ription:		3042-82DHGD 2010 2/11/2010 Municipal and Priva Approved	ate Sewage Works			
<u>20</u>	1 of 1		ENE/130.2	59.0	ON		BORE
Borehole ID: Use: Drill Method: Easting: Location Acc Elev. Reliabil Total Depth n Township: Lot: Completion L Primary Wate	curacy: lity Note: n: Date:	613150 444221 -999			Type: Status: UTM Zone: Northing: Orig. Ground Elev m: DEM Ground Elev m: Primary Name: Concession: Municipality: Static Water Level: Sec. Water Use:	Borehole 18 5028342 61 57.9	
Details							
Stratum ID:		2183939	12		Top Depth(m):	0.0	
Bottom Dep	oth(m):	1.2			Stratum Desc:	SAND.	
+ Stratum ID:	-	2183939	13		Top Donth/ml:	1.2	
Stratum ID: Bottom Dep		2.103939	10		Top Depth(m): Stratum Desc:	SAND.	
+					Julium Dood.	- · · · - ·	

Map Key	Number of Records	f Direction/ Distance (m)	Elevation (m)	Site	DB
Stratum ID:	: 2	218393914		Top Depth(m):	2.1
Bottom De	pth(m):			Stratum Desc:	BEDROCK. RM. TILL. FIRM. BEDROCK. 0025016CK,VERY HARD. BEDROCK. BLACK. LT.
21	1 of 9	SSW/110.7	67.2	MR GAS LIMITED ** 971 GLADSTONE AV OTTAWA ON K1Y 3E5	EXP
Instance ID: TSSA Progra Maximum Ha		51047			
Facility Type Expired Date	):	FS Liquid Fuel Tank 6/17/1993			
Instance Nur Instance Typ	nber:	10902896 FS Liquid Fuel Tank			
Status: Description:		EXPIRED FS Gasoline Station	- Full Serve		
<u>21</u>	2 of 9	SSW/110.7	67.2	MR GAS LIMITED ** 971 GLADSTONE AV OTTAWA ON K1Y 3E5	EXP
Instance ID:	4	51233			
TSSA Progra Maximum Ha					
Facility Type		FS Liquid Fuel Tank			
Expired Date		6/17/1993			
Instance Nur Instance Typ		10902914 FS Liquid Fuel Tank			
Status:		EXPIRED			
Description:		FS Gasoline Station	- Full Serve		
<u>21</u>	3 of 9	SSW/110.7	67.2	MR GAS LIMITED ** 971 GLADSTONE AV OTTAWA ON	EXP
Instance ID: TSSA Progra Maximum Ha Facility Type	azard Rank: :	51537			
Expired Date Instance Nur.		10902920			
Instance Typ		FS Piping			
Status:		EXPIRED ES Dining			
Description:		FS Piping			
<u>21</u>	4 of 9	SSW/110.7	67.2	MR GAS LIMITED ** 971 GLADSTONE AV OTTAWA ON	EXP
Instance ID: TSSA Progra Maximum Ha Facility Type Expired Date	azard Rank: :	51114			
Instance Nur	nber:	10902905			
Instance Typ Status:	e:	FS Piping EXPIRED			
Description:		FS Piping			

Мар Кеу	Number of Records	Direction/ Distance (m)	Elevation (m)	Site	DB
<u>21</u>	5 of 9	SSW/110.7	67.2	MR GAS LIMITED ** 971 GLADSTONE AV OTTAWA ON K1Y 3E5	EXP
Instance ID: TSSA Progra Maximum Ha Facility Type Expired Date Instance Num Instance Typ Status: Description:	am Area: azard Rank: e: e: mber: oe:	6/17/1993 9453941 FS Facility EXPIRED			
<u>21</u>	6 of 9	SSW/110.7	67.2	MR GAS LIMITED ** 971 GLADSTONE AV OTTAWA ON K1Y 3E5	EXP
Instance ID: TSSA Progra Maximum Ha Facility Type Expired Date Instance Nu Instance Typ Status: Description:	am Area: azard Rank: e: e: mber: oe:	6/17/1993 10902896 FS Liquid Fuel Tank EXPIRED			
21	7 of 9	SSW/110.7	67.2	MR GAS LIMITED ** 971 GLADSTONE AV OTTAWA ON K1Y 3E5	EXP
Instance ID: TSSA Progra Maximum Ha Facility Type Expired Date Instance Nu Instance Typ Status: Description:	am Area: azard Rank: e: e: mber: oe:	6/17/1993 10902914 FS Liquid Fuel Tank EXPIRED			
21	8 of 9	SSW/110.7	67.2	Sportive Sportswear Manufacturers Inc. 155A Loretta Ave N Ottawa ON K1Y 2J7	SCT
Established Plant Size (f Employmen	t²):	1984 3200 20			
<u>21</u>	9 of 9	SSW/110.7	67.2	SPORTIVE SPORTSWEAR MFG INC. 155A LORETTA AVE N OTTAWA ON K1Y 2J7	SCT
Established. Plant Size (f Employmen	(t²):	1984 3200 14			

Number of Direction/ Elevation Site DΒ Map Key Records Distance (m) (m)

--- Details ---

All Other Cut and Sew Clothing Manufacturing Description:

SIC/NAICS Code: 315299

Description: MEN'S AND BOYS' CLOTHING, NOT ELSEWHERE CLASSIFIED

SIC/NAICS Code:

WOMEN'S, MISSES', AND JUNIORS' OUTERWEAR, NOT ELSEWHERE CLASSIFIED Description:

SIC/NAICS Code:

Cut and Sew Clothing Contracting Description:

315210 SIC/NAICS Code:

Description: Men's and Boys' Cut and Sew Shirt Manufacturing

SIC/NAICS Code:

Description: Men's and Boys' Cut and Sew Trouser, Slack and Jean Manufacturing

SIC/NAICS Code:

Other Men's and Boys' Cut and Sew Clothing Manufacturing Description:

SIC/NAICS Code: 315229

Description: Women's and Girls' Cut and Sew Blouse and Shirt Manufacturing

SIC/NAICS Code: 315232

Description: Other Women's and Girls' Cut and Sew Clothing Manufacturing

SIC/NAICS Code: 315239

22 1 of 2 S/58.9 64.7 **WWIS** Ottawa ON

Concession Name:

Construction Date:

Static Water Level:

Final Well Status:

Casing Material:

Elevation Reliability:

Overburden/Bedrock:

Municipality:

Well Depth:

Clear/Cloudy:

Flowing (y/n):

Northing Nad83:

Utm Reliability:

7174651 Well ID: Lot:

Concession:

OTTAWA-CARLETON County:

Easting Nad83: 444077 Zone:

Monitoring and Test Hole Primary Water Use:

Sec. Water Use: Pump Rate: Flow Rate:

Specific Capacity:

Construction Method: Other Method

Elevation (m): Depth to Bedrock:

Water Type:

--- Details ---

2.74 m Thickness:

**BROWN** Material Colour:

Thickness: 1.83 m

Material Colour: **BROWN** 

Thickness: .92 m

Material Colour: **GREY** 

2.74 m Original Depth:

FILL, HARD, DRY Material:

Original Depth: 4.57 m

Material: CLAY, FILL, HARD

Original Depth: 5.49 m

Material: CLAY, FINE SAND, WATER-BEARING

**OTTAWA CITY** 

margin of error: 30 m - 100 m

Monitoring and Test Hole

5028061

5.49 m

17-NOV-11

Not stated

22 2 of 2 S/58.9 64.7

Ottawa ON

Well ID: 7174650 Lot: **WWIS** 

Map Key	Number Records		Direction/ Distance (m)	Elevation (m)	Site		DE
Concession: County: Easting Nad8:	o.	OTTAWA-0	CARLETON		Concession Name: Municipality: Northing Nad83:	OTTAWA CITY 5028061	
Zone: Primary Wate	r Use:	18	and Test Hole		Utm Reliability: Construction Date:	margin of error : 30 m - 100 m 17-NOV-11	
Sec. Water Us Pump Rate: Flow Rate: Specific Capa Construction Elevation (m): Depth to Bedr	city: Method:	Other Meth	nod		Well Depth: Static Water Level: Clear/Cloudy: Final Well Status: Flowing (y/n): Elevation Reliability: Overburden/Bedrock:	5.18 m  Monitoring and Test Hole	
Water Type:	oon.				Casing Material:	Not stated	
Details							
Thickness:		3.1 m			Original Depth:	3.1 m	
Material Col	our:	BROWN			Material:	GRAVEL, SAND, HARD	
Thickness:		1.17 m			Original Depth:	4.27 m	
Material Col	our:	BROWN			Material:	SAND, SILT, CLAY	
+ Thickness:		.91 m			Original Depth:	5.18 m	
Material Col	our:	GREY			Material:	CLAY, SILT, SOFT	
22	1 of 1		ESE/94.5	59.0			
<u>23</u>	1 01 1		E3E/94.5	59.0	OTTAWA ON		WWIS
Vell ID:		1535493			Lot:		
Concession: County:		OTTAWA-0	CARLETON		Concession Name: Municipality:	OTTAWA CITY	
asting Nad8	3:	444239			Northing Nad83:	5028200	
Zone: Primary Wate	r Heo:	18			Utm Reliability: Construction Date:	03-MAY-05	
Sec. Water Us Pump Rate:					Well Depth: Static Water Level:	4.65 m	
Flow Rate:	altre.				Clear/Cloudy:	Test Hole	
Specific Capa Construction		Boring			Final Well Status: Flowing (y/n):	rest note	
Elevation (m): Depth to Bedr		59.35			Elevation Reliability: Overburden/Bedrock:	Overburden	
Water Type:	OCK.				Casing Material:	Not stated	
Details							
Thickness:		1.4 m			Original Depth:	1.4 m	
Material Col	our:	BROWN			Material:	SAND, GRAVEL, FILL	
+ Thickness:		.3 m			Original Depth:	1.7 m	
Material Col	our:	BROWN			Material:	SAND, FILL, CLAY	
+	our.	DICOVIA			material.	S. M.D., I ILL, OLM	
		0.05			Original Depth:	4.65 m	
Thickness:		2.95 m			Original Depth.	4.00 111	

25 1 of 1 SSE/43.3 64.5 WWIS

Order No: 20160822162

**Well ID:** 7183732

Concession: Concession Name:

County: OTTAWA-CARLETON Municipality: NEPEAN TOWNSHIP

Number of Direction/ Elevation Site DΒ Map Key Records Distance (m) (m) 444100 Northing Nad83: Easting Nad83: 5028061 Utm Reliability: margin of error: 30 m - 100 m Zone: 11-JUN-12 Primary Water Use: Monitoring and Test Hole Construction Date: Sec. Water Use: Well Depth: 4.88 m Pump Rate: Static Water Level: Flow Rate: Clear/Cloudy: Specific Capacity: Final Well Status: **Construction Method:** Other Method Flowing (y/n): Elevation Reliability: Elevation (m): Depth to Bedrock: Overburden/Bedrock: Water Type: Casing Material: Not stated --- Details ---Thickness: Original Depth: 1.83 m 1.83 m Material Colour: **BROWN** Material: FILL, GRAVEL, PACKED Thickness: 1.27 m Original Depth: 3.1 m Material Colour: **BROWN** Material: FILL, GRAVEL, PACKED Thickness: Original Depth: 1.78 m 4.88 m **GREY** Material Colour: Material: CLAY, SAND, SOFT SSE/46.2 64.6 **26** 1 of 1 **WWIS** Ottawa ON 7183729 Well ID: Lot: Concession: Concession Name: County: **OTTAWA-CARLETON** Municipality: NEPEAN TOWNSHIP Northing Nad83: Easting Nad83: 444099 5028058 Utm Reliability: margin of error: 30 m - 100 m Zone: 18 Primary Water Use: Monitoring and Test Hole Construction Date: 11-JUN-12 Sec. Water Use: Well Depth: 4.27 m Pump Rate: Static Water Level: Flow Rate: Clear/Cloudy: Specific Capacity: Final Well Status: Test Hole **Construction Method:** Other Method Flowing (y/n): Elevation Reliability: Elevation (m): Depth to Bedrock: Overburden/Bedrock: Not stated Water Type: Casing Material: --- Details ---Thickness: 1.5 m Original Depth: 1.5 m **BROWN** Material Colour: Material: FILL, GRAVEL, PACKED

Thickness: 1.24 m Original Depth: 2.74 m

Material Colour: GREY Material: CLAY, SILTY, GRAVEL

Thickness: 1.53 m Original Depth: 4.27 m

Material Colour: GREY Material: CLAY, SAND, SOFT

SCT

Order No: 20160822162

27 1 of 1 S/69.1 65.1 SPORTIVE SPORTSWEAR MFG INC. 155 A LORETTA AVE N

OTTAWA ON K1Y 2J7

Established: 1984
Plant Size (ft²): 3200
Employment: 14

DB Map Key Number of Direction/ Elevation Site Records Distance (m) (m) --- Details ---Description: MEN'S & BOYS' CLOTHING, N.E.C. SIC/NAICS Code: 2329 Description: WOMEN'S, MISSES', & JUNIORS' OUTERWEAR, N.E.C. SIC/NAICS Code: 28 1 of 3 E/113.3 58.8 R.M. OF OTTAWA-CARLETON CA BALSAM AVE/PRESTON ST. OTTAWA ON Certificate #: 7-0346-98-Application Year: 98 Issue Date: 5/14/1998 Approval Type: Municipal water Status: Approved Application Type: Client Name: Client Address: Client City: Client Postal Code: Project Description: Contaminants: **Emission Control:** 28 2 of 3 E/113.3 58.8 BALSAM ST. & PRESTON ST., OTTAWA INC ON Incident ID: 2369346 Incident Number: 218290 SR Type: FS-Incident Status Code: Causal Analysis Complete BALSAM ST. & PRESTON ST., OTTAWA - PIPELINE HIT Summary: Drainage System: Sub Surface Contam.: Aff. Prop. Use Water: Contam. Migrated: Contact Natural Env.: Near Body of Water: Approx. Quant. Rel.: Equipment Model: Serial No: Residential App. Type: Commercial App. Type: Industrial App. Type: Institutional App. Type: Venting Type: Vent Connector Mater.: Vent Chimney Mater.: Notes: Pipeline Type: Main Distribution Pipeline Pipeline Involved: **Plastic** Pipe Material: **Depth Ground Cover:** 42 Regulator Location: Regulator Type: Operation Pressure: 58 Pipeline Notes: Liquid Prop Make: Liquid Prop Model: Liquid Prop Serial No:

Order No: 20160822162

Equipment Type: Cylinder Capacity:

Number of Direction/ Elevation Site DΒ Map Key

Cylinder Capac. Units: Cylinder Material Type: Tank Capacity: Tank Material Type: Tank Storage Type: Tank Location Type: Pump Flow Rate Capac.: **Liquid Prop Notes:** 

> 3 of 3 E/113.3 58.8 Intersection of Balsam St and Preston St 28 SPL Ottawa ON

Ref NO: 2814-7WZHFK

Contaminant Code:

Records

Contaminant Name: NATURAL GAS (METHANE) Contaminant Quantity: 0 other - see incident description Incident Cause: Discharge or Emission to Air Incident Dt:

Damage By Moving Equipment - Containers damaged by moving Incident Reason:

Distance (m)

(m)

Incident Summary: TSSA: Gas main damange, Ottawa

MOE Reported Dt: 10/20/2009 **Environmental Impact:** Not Anticipated

Nature of Impact: Receiving Medium: SAC Action Class:

Air Spills - Gases and Vapours

Sector Source Type: Pipeline

Site Municipality:

1 of 1 S/82.1 66.4 29 **WWIS** Ottawa ON

Municipality:

Well Depth:

Clear/Cloudy:

Flowing (y/n): Elevation Reliability:

Northing Nad83:

Construction Date:

Static Water Level:

Final Well Status:

Overburden/Bedrock: Casing Material:

OTTAWA ON K1R 7P8

Utm Reliability:

Well ID: 7174652 Lot: Concession Name:

Concession: OTTAWA-CARLETON County:

Easting Nad83: 444055

Zone:

Primary Water Use: Monitoring and Test Hole

Sec. Water Use: Pump Rate: Flow Rate: Specific Capacity:

Construction Method: Other Method

Elevation (m): Depth to Bedrock:

Water Type:

--- Details ---

Thickness: 2.44 m **BROWN** 

Material Colour:

Thickness: 2.13 m

Material Colour: **GREY**  Original Depth: 2.44 m

GRAVEL, SAND, FILL Material:

**OTTAWA CITY** 

margin of error: 30 m - 100 m

Monitoring and Test Hole

Order No: 20160822162

5028051

4.57 m

17-NOV-11

Not stated

Original Depth: 4.57 m

Material: SILT, SAND, CLAY

1 of 1 ENE/141.4 58.4 **INVITATIONS PLUS 30** SCT 193 PRESTON ST

1994 Established: Plant Size (ft2): 0 Employment:

Map Key	Numbe Record		Direction/ Distance (m)	Elevation (m)	Site		DB
Details Description SIC/NAICS +	Code:		Quick Printing 323114				
Description SIC/NAICS			Digital Printing 323115				
Description SIC/NAICS			Other Printing 323119				
<u>31</u>	1 of 1		S/95.8	66.9	Ottawa ON		wwis
Well ID: Concession: County: Easting Nada Zone: Primary Wate Sec. Water U Pump Rate: Flow Rate: Specific Cap Construction Elevation (m) Depth to Bed Water Type:	83: er Use: Ise: nacity: n Method: ):	444037 18	A-CARLETON  ng and Test Hole		Lot: Concession Name: Municipality: Northing Nad83: Utm Reliability: Construction Date: Well Depth: Static Water Level: Clear/Cloudy: Final Well Status: Flowing (y/n): Elevation Reliability: Overburden/Bedrock: Casing Material:	OTTAWA CITY 5028050 margin of error : 30 m - 100 m 17-NOV-11 4.88 m  Monitoring and Test Hole	
Details					·		
Thickness:	:	3.66 m			Original Depth:	3.66 m	
Material Co	olour:	BROWN			Material:	FILL, HARD	
Thickness: Material Co		.61 m BROWN			Original Depth: Material:	4.27 m SAND, SILT, SOFT	
Thickness:	:	.61 m			Original Depth:	4.88 m	
Material Co	olour:	GREY			Material:	SILT, FINE SAND, SOFT	
<u>32</u>	1 of 2		S/86.5	66.3	VESUVIO IRON LOGIC O 949 GLADSTONE AVE OTTAWA ON K1Y 3E5	CUSTOM	SCT
Established: Plant Size (ft Employment	t²):		1972 1500 3				
Details Description SIC/NAICS	n:		Other Ornamental a	and Architectural Met	al Products Manufacturing		
32	2 of 2		S/86.5	66.3	VESUVIO IRON WORKS 949 GLADSTONE AVE OTTAWA ON K1Y 3E5		SCT
Established: Plant Size (ft Employment	t²):		1972 1500 3				
Details Description			ARCHITECTURAL	AND ORNAMENTAI	L METAL WORK		

Map Key Number of Direction/ Elevation Site DB Records Distance (m) (m)

SIC/NAICS Code: 3446

33 1 of 1 S/67.6 64.9

OTTAWA ON

**Well ID:** 7183728 **Lot:** 

 Concession:
 Concession Name:

 County:
 OTTAWA-CARLETON

 Municipality:
 NEPEAN TOWNSHIP

**Easting Nad83:** 444079 **Northing Nad83:** 5028047

**Zone:** 18 **Vtm Reliability:** margin of error : 30 m - 100 m

Primary Water Use: Monitoring and Test Hole Construction Date: 11-JUN-12

Sec. Water Use:Well Depth:4.57 mPump Rate:Static Water Level:

Flow Rate: Clear/Cloudy:

Specific Capacity:Final Well Status:Test HoleConstruction Method:Other MethodFlowing (y/n):

Elevation (m): Elevation Reliability:
Depth to Bedrock: Overburden/Bedrock:

Water Type: Casing Material: Not stated

--- Details ---

Thickness: 1.83 m Original Depth: 1.83 m

Material Colour: BROWN Material: FILL, GRAVEL, PACKED

+

Thickness: .91 m Original Depth: 2.74 m

Material Colour: GREY Material: CLAY, SAND, SOFT

+

Thickness: 1.83 m Original Depth: 4.57 m

Material Colour: GREY Material: CLAY, SAND, SOFT

34 1 of 1 WNW/49.7 61.3 BORE

Borehole ID:847982Type:BoreholeUse:Geotechnical/Geological InvestigationStatus:Decommissioned

 Drill Method:
 Diamond Drill
 UTM Zone:
 18

 Easting:
 443869
 Northing:
 5028351

 Location Accuracy:
 Orig. Ground Elev m:
 60.7

Location Accuracy:

Orig. Ground Elev m: 60.7

Elev. Reliability Note:

DEM Ground Elev m: 59

Total Depth m: 10.4

Primary Name:

Township: NEPEAN Concession: CON 1 ON OTTAWA RIVER
Lot: LOT 38 Municipality:

Completion Date: 13-NOV-1962 Static Water Level: -999.9

Primary Water Use: Sec. Water Use:

--- Details ---

 Stratum ID:
 6559468
 Top Depth(m):
 0.0

Bottom Depth(m): 0.3 Stratum Desc: TOPSOIL

 Stratum ID:
 6559469
 Top Depth(m):
 0.3

Bottom Depth(m): 3.2 Stratum Desc: FIRM, BROWNISH-GREY, SILTY,

SANDY CLAY

**Stratum ID:** 6559470 **Top Depth(m):** 3.2

Bottom Depth(m): 5.9 Stratum Desc: SOFT, GREY CLAY, TRACE OF SILT

Order No: 20160822162

**Stratum ID:** 6559471 **Top Depth(m):** 5.9

Map Key	Numbe Record		Direction/ Distance (m)	Elevation (m)	Site		DB
Bottom Dep	oth(m):	9.1			Stratum Desc:	CLAYEY, SILTY SAND AND (TILL)	GRAVEL
+ Ctratum ID:		6550472			Ton Donth(m)	9.1	
Stratum ID:		6559472 10.4			Top Depth(m): Stratum Desc:	BEDROCK	
Bottom Dep	otn(m):	10.4			Stratum Desc:	BEDROCK	
<u>35</u>	1 of 1		S/97.3	66.4	941-971 Gladstone A Ottawa ON K1Y 3E5		EHS
Addit. Info Or Order No.: Report Date: Report Type: Search Radiu			Fire Insur. Maps a 20090320020 3/31/2009 Standard Report 0.25	and/or Site Plans; Tit	tle Searches; City Director	у	
<u>36</u>	1 of 1		SE/29.5	61.0	Lot 7, Bk 123, Reg. F Ave Ottawa ON K1R 6Y4	Plan 34, 930-934 Gladstone	CA
Certificate #: Application Y Issue Date: Approval Typ Status: Application T Client Name: Client Addres Client City: Client Postal Project Desci	Year:  De:  Type:  SS:  Code: ription:		parking lot pondin	f Approval reporation treet, Suite 200		ing of manhole and catchbasin sto ladstone Avenue, approximately 10	
<u>37</u>	1 of 1		NE/137.6	58.6	173 Preston St Ottawa ON K1R7P6		EHS
Addit. Info Or Order No.: Report Date: Report Type: Search Radiu			Fire Insur. Maps a 20131219015 02-JAN-14 RSC Report (Urba .3				
38	1 of 2		N/78.9	58.5	Corporation City of 930 Somerset Street Ottawa ON		GEN
Generator #: Approval Yrs SIC Code: SIC Descripti			ON7608159 2013 913150				
Details Waste Code Waste Desc			252 WASTE OILS & L	LUBRICANTS			
38	2 of 2		N/78.9	58.5	930 Somerset St W,0	Ottawa	PINC

Number of Direction/ Elevation Site DΒ Map Key

ON

Records Distance (m) (m)

Incident ID:

Tank Status: RC Established

Attribute Category: FS-Perform P-line Inc Invest

Task Number: 3447385

FS-Pipeline Incident Type:

Incident Number: 644900

Status Code: Pipeline Damage Reason Est

Summary: 930 Somerset St W,Ottawa - 11/4" Pipeline Hit

Spills Action Centre:

Reported By: Stiles, Jeff

Affiliation:

E-mail Method Details: Fuel Category: Natural Gas

Fuel Occurrence Type: Date of Occurrence:

Occurrence Start Date: 7/7/2011

Health Impact: Occurrence Desc: **Environment Impact:** 

Property Damage: Yes

Service Interupt: Fuel Type:

Yes Enforce Policy:

Operation Type:

Damage Reason: Excavation practices not sufficient

Public Relation: Pipeline System: Pipeline Type: Depth: Pipe Material:

Regualtor Location: PSIG:

Notes:

Regulator Type:

39 1 of 1

S/73.3 65.1

Lot:

OTTAWA ON

Northing Nad83:

Utm Reliability:

Well Depth:

Clear/Cloudy:

Flowing (y/n): Elevation Reliability:

Construction Date:

Static Water Level:

Final Well Status:

5028041

5.18 m

11-JUN-12

Test Hole

margin of error: 30 m - 100 m

Well ID: 7183730 Concession: Concession Name:

**OTTAWA-CARLETON** Municipality: **NEPEAN TOWNSHIP** County:

Easting Nad83: 444077

18 Zone:

Primary Water Use: Monitoring and Test Hole

Sec. Water Use: Pump Rate:

Flow Rate: Specific Capacity:

**Construction Method:** Other Method

Elevation (m):

Depth to Bedrock: Overburden/Bedrock: Not stated Water Type: Casing Material:

--- Details ---

.91 m .91 m Thickness: Original Depth:

Material Colour: **BROWN** Material: SAND, GRAVEL, PACKED

Thickness: 1.22 m Original Depth: 2.13 m Material Colour: **BROWN** Material: TILL, , HARD **WWIS** 

Map Key	Number Records		Direction/ Distance (m)	Elevation (m)	Site	DB
+						
Thickness:		3.05 m			Original Depth:	5.18 m
Material Cole	our:	GREY			Material:	CLAY, SAND, SOFT
<u>40</u>	1 of 1		SW/157.8	65.6	ON	BORE
Borehole ID: Use:		613126			Type: Status:	Borehole
Drill Method:					UTM Zone:	18
Easting:		443881			Northing:	5028122
Location Accu Elev. Reliabilit	•				Orig. Ground Elev m: DEM Ground Elev m:	66.9 66.1
Total Depth m		-999			Primary Name:	00.1
Township:					Concession:	
Lot: Completion Da	nto:				Municipality: Static Water Level:	8.7
Primary Water					Sec. Water Use:	0.7
Details						
Stratum ID:		218393811			Top Depth(m):	0.0
Bottom Dept	th(m):	0.7			Stratum Desc:	SILT.
+	()-	···				<u></u>
Stratum ID:		218393812			Top Depth(m):	0.7
Bottom Dept	th(m):	1.0			Stratum Desc:	GRAVEL.
+	()-					
Stratum ID:		218393813			Top Depth(m):	1.0
Bottom Dept	th(m):	2.4			Stratum Desc:	CLAY. FIRM.
+	, ,					
Stratum ID:		218393814			Top Depth(m):	2.4
Bottom Dept	th(m):	2.7			Stratum Desc:	GRAVEL.
+	. ,					
Stratum ID:		218393815			Top Depth(m):	2.7
Bottom Dept	th(m):	3.0			Stratum Desc:	CLAY.
+						
Stratum ID:		218393816			Top Depth(m):	3.0
Bottom Dept	th(m):	3.6			Stratum Desc:	GRAVEL. HARD.
+						
Stratum ID:		218393817			Top Depth(m):	3.6
Bottom Dept	th(m):	8.1			Stratum Desc:	GRAVEL.
+						
Stratum ID:		218393818			Top Depth(m):	8.1
Bottom Dept	th(m):				Stratum Desc:	BEDROCK. 013 00005 021 00050
						081 000100670000500900050049COMPACT, WATER STABLE AT
<u>41</u>	1 of 4		ESE/103.6	59.1	Preston Hardware (1980) 234-248 Preston Street Ottawa ON K1R 7R4	) Limited CA

Approval Type: Municipal and Private Sewage Works

Map Key	Number of Records	Direction/ Distance (m)	Elevation (m)	Site	DB
Status: Application in Client Name: Client Addre Client City: Client Postal Project Desc Contaminant Emission Co	: ss: l Code: cription: ts:	Approved			
<u>41</u>	2 of 4	ESE/103.6	59.1	PRESTON HARDWARE (1980) LIMITED 234-248 PRESTON ST OTTAWA ON K1R 7R4	PES
Licence No.: Licence Type		Vendor			
<u>41</u>	3 of 4	ESE/103.6	59.1	PRESTON HARDWARE (1980) LIMITED 234-248 PRESTON ST OTTAWA ON K1R 7R4	PES
Licence No.: Licence Type		Limited Vendor			
<u>41</u>	4 of 4	ESE/103.6	59.1	PRESTON HARDWARE (1980) LIMITED 234-248 PRESTON STREET OTTAWA ON K1R 7R4	PES
Licence No.: Licence Type		23-01-10903-0 Limited Vendor			
42	1 of 10	W/92.4	64.5	MCKERLIE-MILLEN INC. 35A LAUREL STREET OTTAWA ON K1Y 4M4	GEN
Generator #: Approval Yrs SIC Code: SIC Descript	s:	ON0212446 96,97 3259 OTHER VEHICLE	ACCES.		
Details Waste Cod Waste Des	le:	145 PAINT/PIGMENT/0	COATING RESIDUES	3	
<u>42</u>	2 of 10	W/92.4	64.5	CARQUEST CANADA LTD. 35A LAUREL STREET OTTAWA ON K1Y 4M4	GEN
Generator #: Approval Yrs SIC Code: SIC Descript	s:	ON2231902 97,98,02,03,04 3259 OTHER VEHICLE	ACCES.		
Details Waste Cod Waste Des		145 PAINT/PIGMENT/0	COATING RESIDUES	s	

Map Key	Number of Records	Direction/ Distance (m)	Elevation (m)	Site	DB
42	3 of 10	W/92.4	64.5	CARQUEST CANADA LTD. AUTO PAINT SUPPLY 35A LAUREL STREET OTTAWA ON K1Y 4M4	GEN
Generator #:		ON2231902			
Approval Yrs	):	99,00,01 3259			
SIC Descript	ion:	OTHER VEHICLE	ACCES.		
Details Waste Cod Waste Des		145 PAINT/PIGMENT/0	COATING RESIDUES		
42	4 of 10	W/92.4	64.5	MCKERLIE MILLEN (SEE & USE ON2231907) 35A LAUREL STREET OTTAWA ON K1Y 4M4	GEN
Generator #:		ON0212446			
Approval Yrs	):	98			
SIC Code: SIC Descript	ion:	3259 OTHER VEHICLE	ACCES.		
Details					
Waste Cod		145			
Waste Des	cription:	PAINT/PIGMENT/0	COATING RESIDUES		
<u>42</u>	5 of 10	W/92.4	64.5	LEBRUN BUILDING SERVICES 75 G Breezehill North Ottawa ON K1Y 2H7	GEN
Generator #: Approval Yrs SIC Code: SIC Descript		ON1423690 02,03,04,05,06			
Details Waste Cod Waste Des		212 ALIPHATIC SOLVI	ENTS		
<u>42</u>	6 of 10	W/92.4	64.5	Breezehill Heating Ltd. 75 Breezehill Ave N Unit D Ottawa ON K1Y 2H6	SCT
Established: Plant Size (ft Employment		01-JUL-82			
Details Description SIC/NAICS +		Other Ornamental	and Architectural Met	al Product Manufacturing	
Description SIC/NAICS		All Other Miscellan 332999	eous Fabricated Meta	ll Product Manufacturing	
<u>42</u>	7 of 10	W/92.4	64.5	merge design, print & promo 35B Laurel St Ottawa ON K1Y 4M4	SCT
Established:		01-SEP-04			
Plant Size (ft Employment		1000			
Details Description	1:	Advertising Agenci	es		

Map Key	Numbe Record		Direction/ Distance (m)	Elevation (m)	Site		DB
SIC/NAICS	Code:	541	810				
+ Description SIC/NAICS		All 0 418	Other Wholesaler 990	-Distributors			
+ Description SIC/NAICS		Gra 541	phic Design Serv 430	vices			
+ Description SIC/NAICS		Bus 561	iness Service Ce 430	entres			
42	8 of 10	<b>W</b> /	92.4	64.5	Paper Sign Man 35B Laurel St Ottawa ON K1Y 4M4		SCT
Established: Plant Size (ft Employment	<sup>2</sup> ):	01 <i>-F</i>	AUG-96				
Details Description SIC/NAICS +	n:	Sigr 339	n Manufacturing 950				
Description SIC/NAICS		Sigr 339	n Manufacturing 950				
42	9 of 10	W/	92.4	64.5	Signs in 23 hours.com 35B Laurel St Ottawa ON K1Y 4M4		SCT
Established: Plant Size (ft Employment	<sup>2</sup> ):	01 <i>-A</i>	AUG-87				
Details Description SIC/NAICS	n:	Sigr 339	n Manufacturing 950				
+ Description SIC/NAICS		Coa 332		Heat Treating and A	Allied Activities		
Description SIC/NAICS		Sigr 339	n Manufacturing 950				
<u>42</u>	10 of 10	W/	92.4	64.5	Wake Cup Coffee Roas 35 Laurel St Ottawa ON K1Y 4M4	eters	SCT
Established: Plant Size (ft Employment	·2):	01-4	NUG-08				
Details Description SIC/NAICS	n:	Coff 311	ee and Tea Man 920	ufacturing			
43	1 of 1	S/7	73.8	65.1	OTTAWA ON		wwis
Well ID:		7183731			Lot:		
Concession: County: Easting Nada		OTTAWA-CAF 444081	RLETON		Concession Name: Municipality: Northing Nad83:	NEPEAN TOWNSHIP 5028037	

Мар Кеу	Number Record		Elevation (m)	Site		DB
Zone: Primary Wate Sec. Water U Pump Rate: Flow Rate: Specific Cap Construction Elevation (m, Depth to Beo Water Type:	lse: acity: n Method: ):	18 Monitoring and Test Hole Other Method		Utm Reliability: Construction Date: Well Depth: Static Water Level: Clear/Cloudy: Final Well Status: Flowing (y/n): Elevation Reliability: Overburden/Bedrock: Casing Material:	margin of error : 30 m - 100 m 11-JUN-12 5.18 m Test Hole	
Details				ŭ		
Thickness:	,	1.22 m		Original Depth:	1.22 m	
Material Co		BROWN		Material:	SAND, GRAVEL, PACKED	
+		4.00		0111011	0.44	
Thickness:		1.22 m		Original Depth:	2.44 m	
Material Co +	oiour:	GREY		Material:	CLAY, SAND, SOFT	
Thickness:		2.74 m		Original Depth:	5.18 m	
Material Co	olour:	GREY		Material:	CLAY, SAND, SOFT	
44	1 of 2	NE/125.6	58.1	153-157 Preston Street Ottawa ON K1R 7P6		EHS
Addit. Info O Order No.: Report Date: Report Type: Search Radiu	:	20031201013 12/10/03 Complete Report 0.25				
<u>44</u>	2 of 2	NE/125.6	58.1	153-157 Preston Road a Ottawa ON K1R 7P6	aka 130 Anderson St.	EHS
Addit. Info O Order No.: Report Date: Report Type: Search Radiu		20030326002 4/3/03 Complete Report 0.25				
<u>45</u>	1 of 1	NNE/115.2	58.0	Anderson Street && Pro Ottawa ON	eston Street	EHS
Addit. Info O Order No.: Report Date: Report Type: Search Radiu	;	20030603006 6/5/03 Custom Report 0.25				
<u>46</u>	1 of 4	N/92.4	58.8	City of Ottawa 930 Somerset St W Ottawa ON K1R 6R9		CA
Certificate #: Application \\ Issue Date: Approval Typ Status:	Year:	5421-7EMPZ6 2008 5/15/2008 Municipal and Priv Approved	rate Sewage Works			

Number of Direction/ Elevation Site DΒ Map Key Records Distance (m) (m)

Application Type: Client Name: Client Address: Client City: Client Postal Code: Project Description: Contaminants:

**Emission Control:** 

46 2 of 4 N/92.4 58.8 **PUBLIC WORKS CANADA** 

CHP PLOUFFE PARK C/O PLACE DU PORTAGE

**GEN** 

Order No: 20160822162

PHASE IV LEVEL II OTTAWA ON

Generator #: ON0144774

Approval Yrs: 98 SIC Code: 8159

SIC Description: OTHER GEN. ADMIN.

--- Details ---

Waste Code:

LIGHT FUELS Waste Description:

Waste Code: 252

Waste Description: WASTE OILS & LUBRICANTS

Corporation City of Ottawa 46 3 of 4 N/92.4 58.8 **GEN** 

930 Somerset Street West

Ottawa ON

ON7608159 Generator #: Approval Yrs: As of May 2015

SIC Code: SIC Description:

--- Details ---

Waste Code: 252

Waste crankcase oils and lubricants Waste Description:

Waste Code:

Waste Description: Wastes from the use of pigments, coatings and paints

Waste Code: 212

Aliphatic solvents and residues Waste Description:

4 of 4 N/92.4 58.8 930 Somerset Street 46 SPL Ottawa ON

Ref NO: 5417-9PFQYU Contaminant Code:

Contaminant Name: **CHLORINE GAS** 

Contaminant Quantity: 0 other - see incident description

Incident Cause: Operator/Human error

2014/09/30 Incident Dt:

Incident Reason: Operator/Human Error

Incident Summary: chlorine gas being vented to atm due to chemicals mixing

2014/09/30 MOE Reported Dt: Environmental Impact: Confirmed Nature of Impact: Air Pollution

Receiving Medium:

SAC Action Class: Air Spills - Gases and Vapours

Sector Source Type: Structure Site Municipality: Ottawa

Map Key Number of Direction/ Elevation Site DΒ Records Distance (m) (m) SE/59.1 60.4 47 1 of 2 916 Gladstone Avenue **EHS** Ottawa ON K1R 6Y4 Addit. Info Ordered: Fire Insur. Maps and/or Site Plans 20060214012 Order No.: Report Date: 2/23/2006 Report Type: **Custom Report** Search Radius (km): 0.25 SE/59.1 60.4 47 2 of 2 lot 39 con 1 **WWIS** OTTAWA ON Well ID: 1536292 Lot: 039 Concession Name: Concession: 01 County: **OTTAWA-CARLETON** Municipality: **OTTAWA CITY** Northing Nad83: Easting Nad83: Zone: Utm Reliability: unknown UTM Primary Water Use: Construction Date: 08-MAR-06 Sec. Water Use: Well Depth: 3.66 m Pump Rate: Static Water Level: Flow Rate: Clear/Cloudy: Specific Capacity: Final Well Status: **Construction Method:** Other Method Flowing (y/n): Elevation Reliability: Elevation (m): Overburden/Bedrock: Overburden Depth to Bedrock: Water Type: Casing Material: Not stated --- Details ---Thickness: .3 m Original Depth: .3 m Material Colour: **BLACK** Material: TOPSOIL, FILL Thickness: Original Depth: 1.53 m 1.83 m Material Colour: **BROWN** Material: SAND, SILT, LOOSE Thickness: 1.83 m Original Depth: 3.66 m Material Colour: **GREY** Material: SILT, SAND Preston Medical Management Inc. 48 1 of 1 E/153.2 59.1 **GEN** 225 Preston Street Ottawa ON Generator #: ON4912346 Approval Yrs: 2013 SIC Code: 621110 SIC Description: OFFICES OF PHYSICIANS --- Details ---

Waste Code: 261

Waste Description: **PHARMACEUTICALS** 

Waste Code:

Waste Description: PATHOLOGICAL WASTES

49 1 of 2 ESE/103.4 59.4

PRESTON HARDWARE 1980 LIMITED 248 PRESTON ST

**OTTAWA ON K1R 7R4** 

Order No: 20160822162

**PES** 

Map Key	Number of Records	Direction/ Distance (m)	Elevation (m)	Site	DB
Licence No Licence Typ		Vendor			
<u>49</u>	2 of 2	ESE/103.4	59.4	PRESTON HARDWARE 1980 LIMITED 248 PRESTON ST OTTAWA ON K1R 7R4	PES
Licence No.: Licence Typ		23-01-12318-0 Limited Vendor			
<u>50</u>	1 of 2	E/137.0	59.3	PRESTON AUTO CENTRE INC 241 PRESTON ST OTTAWA ON K1R 7R3	PRT
Location ID: Type: Expiry Date: Capacity (L) Licence #:	•	11042 retail 1993-12-31 7919 0056555001			
<u>50</u>	2 of 2	E/137.0	59.3	City of Ottawa South East corner of Preston and Balsam 241 PRESTON STREET, OTTAWA <unofficial> Ottawa ON K1R 7R3</unofficial>	SPL
Ref NO:		1823-6S4LH6			
Contaminan Contaminan		99 Hydrocarbon and le	and contaminated	water	
Contaminan	t Quantity:	Not specified	cau contaminateu	water	
Incident Cau Incident Dt:	ise:	Unknown 7/27/2006			
Incident Rea					
Incident Sur MOE Report		SE corner of Balsai 7/27/2006	m & Preston: oil &	lead contaminated water	
Environmen	tal Impact:	Possible			
Nature of Im Receiving M		Groundwater Pollut Land & Water	tion		
SAC Action	Class:				
Sector Sour Site Municip		Other Ottawa			
<u>51</u>	1 of 9	E/158.1	59.2	225 Preston St. Ottawa ON K1R 7R1	EHS
Addit. Info C Order No.: Report Date Report Type Search Radi	: :	Fire Insur. Maps an 20041122017 11/30/04 Complete Report 0.25	nd/or Site Plans		
<u>51</u>	2 of 9	E/158.1	59.2	LA PAUSE VELO LIMITEE 225 PRESTON STREET OTTAWA ON K1R 7R1	GEN
Generator #.	:	ON0990703			
Approval Yr. SIC Code:	s:	99,00,01 6542			
SIC Code.	tion:	BICYCLE SHOPS			
_					

Мар Кеу	Number of Records	Direction/ Distance (m)	Elevation (m)	Site	DB
Details Waste Cod Waste Des	le:	213 PETROLEUM DIS	TILLATES		
<u>51</u>	3 of 9	E/158.1	59.2	LA PAUSE VELO LTEE/BIKE STOP, THE 225 PRESTON STREET, REAR UNIT OTTAWA ON K1R 7R1	GEN
Generator #: Approval Yrs SIC Code: SIC Descript	s:	ON0990703 97,98 6542 BICYCLE SHOPS			
Details Waste Cod Waste Des	le:	213 PETROLEUM DIS	TILLATES		
<u>51</u>	4 of 9	E/158.1	59.2	Preston Medical Management Inc. 225 Preston Street Ottawa ON K1R 7R1	GEN
Generator #: Approval Yrs SIC Code: SIC Descript	s:	ON4912346 2009 621110 Offices of Physicia	ns		
Details Waste Cod Waste Des	le:	261 PHARMACEUTIC	ALS		
+ Waste Cod Waste Des		312 PATHOLOGICAL	WASTES		
<u>51</u>	5 of 9	E/158.1	59.2	Preston Medical Management Inc. 225 Preston Street Ottawa ON K1R 7R1	GEN
Generator #: Approval Yrs SIC Code: SIC Descript	s:	ON4912346 06,07,08 621110 Offices of Physicia	ns		
Details Waste Cod Waste Des +	le:	312 PATHOLOGICAL	WASTES		
Waste Cod Waste Des		261 PHARMACEUTIC	ALS		
<u>51</u>	6 of 9	E/158.1	59.2	Preston Medical Management Inc. 225 Preston Street Ottawa ON K1R 7R1	GEN
Generator #: Approval Yrs SIC Code: SIC Descript	s:	ON4912346 2010 621110 Offices of Physicia	ns		
Details Waste Cod Waste Des +	le:	261 PHARMACEUTIC	ALS		

Мар Кеу	Number of Records	Direction/ Distance (m)	Elevation (m)	Site	DB
Waste Coo Waste Des		312 PATHOLOGICAL V	VASTES		
<u>51</u>	7 of 9	E/158.1	59.2	Preston Medical Management Inc. 225 Preston Street Ottawa ON K1R 7R1	GEN
Generator # Approval Yr SIC Code: SIC Descrip	rs:	ON4912346 2011 621110 Offices of Physician	ns		
Details Waste Cod Waste Des	de:	261 PHARMACEUTICA	ıLS		
Waste Cod Waste Des		312 PATHOLOGICAL V	VASTES		
<u>51</u>	8 of 9	E/158.1	59.2	Preston Medical Management Inc. 225 Preston Street Ottawa ON K1R 7R1	GEN
Generator # Approval Yr SIC Code: SIC Descrip	rs:	ON4912346 As of May 2015			
Details Waste Cod Waste Des	de:	312 Pathological wastes	S		
Waste Cod Waste Des		261 Pharmaceuticals			
<u>51</u>	9 of 9	E/158.1	59.2	Preston Medical Management Inc. 225 Preston Street Ottawa ON K1R 7R1	GEN
Generator # Approval Yr SIC Code: SIC Descrip	s:	ON4912346 2012 621110 Offices of Physician	ns		
Details Waste Cod Waste Des	de:	312 PATHOLOGICAL V	VASTES		
+ Waste Cod Waste Des		261 PHARMACEUTICA	LS		
<u>52</u>	1 of 1	E/138.5	59.3	PRESTON AUTO CENTRE INC 241 PRESTON ST OTTAWA ON K1R 7R3	EXP
Instance ID: TSSA Progr. Maximum H. Facility Type Expired Date Instance Nu Instance Typ Status:	am Area: azard Rank: e: e: mber:	2/4/1993 9838975 FS Facility EXPIRED			

Map Key Number of Direction/ Elevation Site DB
Records Distance (m) (m)

Description:

53 1 of 1 SSW/170.4 68.8 ON BORE

Borehole ID: 613116 Type: Borehole

Use: Status:

Drill Method:UTM Zone:18Easting:443941Northing:5028042Location Accuracy:Orig. Ground Elev m:61.5

Elev. Reliability Note: DEM Ground Elev m: 68.1

Total Depth m: -999 Primary Name:

Township: Concession:
Lot: Municipality:
Completion Peter

Completion Date: Static Water Level: -999.9

Primary Water Use: Sec. Water Use:

--- Details --Stratum ID: 218393781

 Stratum ID:
 218393781
 Top Depth(m):
 3.8

 Bottom Depth(m):
 4.3
 Stratum Desc:
 CLAY.

**Stratum ID:** 218393782 **Top Depth(m):** 4.3

Bottom Depth(m): Stratum Desc: BEDROCK. FEET.SAND. GRAVEL.

COMPACT. GRAVEL. COMPACT. FIBROUS. SAND. GREY,COMPACT.

**Stratum ID:** 218393779 **Top Depth(m):** 0.0

Bottom Depth(m): 3.4 Stratum Desc: CLAY. HARD.

+

 Stratum ID:
 218393780
 Top Depth(m):
 3.4

 Bottom Depth(m):
 3.8
 Stratum Desc:
 PEBBLES.

54 1 of 1 NE/148.6 58.5 Bridgehead (2000) Inc.

 Year:
 2014

 EBR Registry No.:
 012-1133

 Ministry Ref. No.:
 0800 0EDOHI

Ministry Ref. No.: 9800-9FDQHL
Type: Instrument Proposal

Instrument Type: (EPA Part II.1) - Environmental Compliance Approval (project type: air)

Proposal Date: February 21, 2014

Location: 130 Anderson Street Ottawa K1R 6T7 CITY OF OTTAWA
Proponent Address: 130 Anderson Street, Ottawa Ontario, Canada K1R 6T7

55 1 of 11 SW/179.9 67.8 BA BANKNOTE

OTTAWA DIV., DIV OF QUEBECOR PUBLITECH

Order No: 20160822162

INC. OTTAWA ON K1N 8V4

130 Anderson Street OTTAWA ON K1R 6T7

Generator #: ON0297401 Approval Yrs: 88

SIC Code: 2819

SIC Description: OTHER COMM. PRINTING

--- Details ---

Waste Code: 112

Waste Description: ACID WASTE - HEAVY METALS

Map Key Number of Direction/ Elevation Site DΒ Records Distance (m) (m) Waste Code: ALKALINE WASTES - OTHER METALS Waste Description: Waste Code: PAINT/PIGMENT/COATING RESIDUES Waste Description: Waste Code: Waste Description: OTHER SPECIFIED INORGANICS Waste Code: Waste Description: AROMATIC SOLVENTS Waste Code: 241 Waste Description: HALOGENATED SOLVENTS Waste Code: Waste Description: WASTE OILS & LUBRICANTS Waste Code: **GRAPHIC ART WASTES** Waste Description: **55** 2 of 11 SW/179.9 67.8 BA BANKNOTE INC. **NPRI** 975 Gladstone Ave. Ottawa ON K1Y 4W5 Longitude: -75.7167 NPRI #: 0000007358 Year: 2002 Latitude: 45.4038 --- Details --kg 11 Units: Air: Water: Substances Released: Hexavalent chromium (and its compounds) Land: Units: tonnes Air: 10.1 Water: Volatile Organic Compounds (VOCs) Substances Released: Land: 3 of 11 SW/179.9 67.8 BA BANKNOTE INC. **55 NPRI** 975 Gladstone Avenue Ottawa ON K1Y4W5 Longitude: -75.7167 NPRI #: 0000007358 Year: 2003 Latitude: 45.4038 --- Details ---Units: kg Air: Water: Substances Released: Hexavalent chromium (and its compounds) Land: Units: tonnes Air: 11.1 Water: Substances Released: Volatile Organic Compounds (VOCs) Land:

Мар Кеу	Number of Records	Direction/ Distance (m)	Elevation (m)	Site	DB
<u>55</u>	4 of 11	SW/179.9	67.8	BA INTERNATIONAL 975 Gladstone Avenue Ottawa ON K1Y4W5	NPRI
Longitude: NPRI #: Year: Latitude:		-75.7167 0000007358 2008 45.4038			
Details Units: Air:		kg .012			
Water: Substances Land:	Released:	Hexavalent chromit	um (and its compo	unds)	
<u>55</u>	5 of 11	SW/179.9	67.8	BA INTERNATIONAL 975 Gladstone Avenue Ottawa ON K1Y4W5	NPRI
Longitude: NPRI #:		-75.7167 0000007358			
Year: Latitude:		2006 45.4038			
Details					
Units: Air:		tonnes .836			
Water: Substances Land:	Released:	MSG#1 - Hydrotrea	ated heavy naphtha	а	
+ Units: Air:		tonnes 2.9			
Water: Substances	: Released:	MSG#1 - Solvent n	aphtha medium ali	iphatic	
Land: +					
Units: Air:		kg .016			
Water: Substances Land:	Released:	Hexavalent chromit	um (and its compo	unds)	
<u>55</u>	6 of 11	SW/179.9	67.8	BA INTERNATIONAL INC. 975 Gladstone Avenue Ottawa ON K1Y4W5	 NPRI
Longitude: NPRI #: Year: Latitude:		-75.7167 0000007358 2011 45.4038			
<u>55</u>	7 of 11	SW/179.9	67.8	BA INTERNATIONAL 975 Gladstone Avenue Ottawa ON K1Y4W5	NPRI
Longitude: NPRI #: Year: Latitude:		-75.7167 0000007358 2005 45.4038			

DB Map Key Number of Direction/ Elevation Site Records Distance (m) (m) --- Details ---Units: tonnes Air: .593 Water: Substances Released: GE - Ethylene glycol butyl ether acetate (EGBEA) Land: Units: tonnes Air: .908 Water: MSG#1 - Hydrotreated heavy naphtha Substances Released: Land: Units: tonnes 4.706 Air: Water: Substances Released: MSG#1 - Solvent naphtha medium aliphatic Land: Units: kg .017 Air: Water: Hexavalent chromium (and its compounds) Substances Released: Land: **55** 8 of 11 SW/179.9 67.8 **BA INTERNATIONAL NPRI** 975 Gladstone Avenue Ottawa ON K1Y4W5 Longitude: -75.7167 NPRI #: 0000007358 Year: 2004 45.4038 Latitude: --- Details ---Units: tonnes Air: Water: Substances Released: Nitrous oxide Land: Units: tonnes Air: Water: Substances Released: Nitrogen oxides (expressed as NO2) Land: Units: tonnes Air: .164 Water: Substances Released: GE - Ethylene glycol butyl ether acetate (EGBEA) Land: Units: tonnes Air: Water: Carbon dioxide Substances Released: Land:

Order No: 20160822162

Carbon black

tonnes

Units:

Land:

Substances Released:

Air: Water:

DB Map Key Number of Direction/ Elevation Site Records Distance (m) (m) Units: tonnes Air: .317 Water: Substances Released: GE - Ethylene glycol propyl ether (EGPE) Land: Units: tonnes Air: Water: Substances Released: Carbon monoxide Land: Units: tonnes Air: 8.947 Water: Substances Released: MSG#2 - Hydrotreated light distillate Land: Units: tonnes .213 Air: Water: Substances Released: Light aromatic solvent naphtha Land: Units: tonnes Air: Water: Substances Released: Titanium (and its compounds) Land: Units: tonnes Air: Water: Substances Released: Sulphur dioxide Land: Units: tonnes Air: Water: Substances Released: Methane Land: Units: tonnes Air: Water: Substances Released: HFC-134a Hydrofluorocarbon Land: Units: kg .026 Air: Water: Substances Released: Hexavalent chromium (and its compounds) Land: tonnes

Units: tonne:

Water:

Substances Released:

PM - Total Particulate Matter

Land:

Units: tonnes Air:

Water:

Substances Released:

PM10 - Particulate Matter <= 10 Microns

Land:

Мар Кеу	Number of Records	Direction/ Distance (m)	Elevation (m)	Site	DB
+ Units: Air: Water:		tonnes			
Substances Land:	Released:	PM2.5 - Particulate	Matter <= 2.5 Mic	erons	
Units: Air: Water:		tonnes 13.851			
Substances Land:	Released:	Volatile Organic Co	ompounds (VOCs)		
<u>55</u>	9 of 11	SW/179.9	67.8	BA INTERNATIONAL 975 Gladstone Avenue Ottawa ON K1Y4W5	NPRI
Longitude: NPRI #: Year: Latitude:		-75.7167 0000007358 2007 45.4038			
Details Units: Air:		kg .018			
Water: Substances Land:	Released:	Hexavalent chromi	um (and its compo	unds)	
<u>55</u>	10 of 11	SW/179.9	67.8	BA INTERNATIONAL 975 Gladstone Avenue Ottawa ON K1Y4W5	NPRI
Longitude: NPRI #: Year:		-75.7167 0000007358 2009			
Latitude:		45.4038			
Details Units: Air: Water:		kg .003			
Substances Land:	Released:	Hexavalent chromi	um (and its compo	unds)	
<u>55</u>	11 of 11	SW/179.9	67.8	BA INTERNATIONAL INC. 975 Gladstone Avenue Ottawa ON K1Y4W5	NPRI
Longitude: NPRI #: Year: Latitude:		-75.7167 0000007358 2010 45.4038			
Details Units: Air:		kg .0003			
Water: Substances Land:	Released:	Hexavalent chromit	um (and its compo	ounds)	
<u>56</u>	1 of 1	SSW/149.7	68.4	MR GAS LIMITED ATTN LILIANNE LEVAC 971 GLADSTONE AV	PRT

Мар Кеу	Number of Records	Direction/ Distance (m)	Elevation (m)	Site	DB
				OTTAWA ON K1Y 3E5	
Location ID: Type: Expiry Date: Capacity (L): Licence #:		10944 retail 1994-06-30 45400 0010002008			
<u>57</u>	1 of 2	W/138.2	64.8	Grandtech Auto Inc. 111 Breezehill Avenue North Ottawa ON K1Y 2H6	CA
Certificate #: Application Y Issue Date: Approval Typ Status: Application T Client Name: Client Addres Client City: Client Postal Project Descr Contaminants Emission Cor	e: ype: ss: Code: iption: s:	6533-5TGM3J 2003 11/21/2003 Air Approved			
<u>57</u>	2 of 2	W/138.2	64.8	Grandtech Auto Inc. 111 Breezehill Avenue North Ottawa ON K1Y 2H6	EBR
Year: EBR Registry Ministry Ref. I Type: Instrument Ty Proposal Date Location: Proponent Ac	No.: /pe: e:	5/2/03 111 Breezehill Ave	arge into the natura	I environment other than water (i.e. Air) - EPA s. 9 4 Ottawa Ontario K1Y 2H6 wa Ontario K1Y 2H6	
<u>58</u>	1 of 2	SE/77.7	60.4	GREAT CANADIAN THEATRE COMPANY, THE 910 GLADSTONE AVENUE OTTAWA ON K1R 6Y3	GEN
Generator #: Approval Yrs: SIC Code: SIC Description		ON2272500 97,98,99,00,01 9631 ENTER. PROD. CO	O./ART.		
Details Waste Code Waste Desc +	· <del>-</del>	145 PAINT/PIGMENT/0	COATING RESIDU	ES	
Waste Code Waste Desc		331 WASTE COMPRE	SSED GASES		
<u>58</u>	2 of 2	SE/77.7	60.4	Great Canadian Theatre Company 910 Gladstone Ottawa ON K1R 6Y4	GEN
Generator #:		ON8458399			

Approval Yrs: SiC Code:	L	Site	Elevation (m)	Direction/ Distance (m)	Number of Records	Мар Кеу
SIC Description:  Other Performing Arts Companies  SW/188.7 66.1 975 Gladstone Avenue Ottawa ON K1Y 4W5  Certificate \$\frac{1}{2}\$ 1,801  Industrial air Status: Revoked and/or Replaced Application Type: Client Name: Client Address: Client Clift: Contaminants: Emission Control:  SW/188.7 66.1 BA International Inc. 975 Gladstone Avenue Ottawa ON K1Y 4W5  Syright Switch Swi					•	
Certificate #: Application Year: Issue Date: Client Address: Client Cortificate #: Application Year: Issue Date: Industrial air Revoked and/or Replaced Application Type: Client Postal Code: Contaminants: Certificate #: Application Year: Issue Date: Application Type: Client Postal Code: Contaminants: Certificate #: Application Year: Issue Date: Application Year: Client Application Year: Application Year: Client Application Year: Application Year: Application Year: Application Year: Client Application Year: Client Application Year: Application Year: Application Year: Application Year: Client Application Year			ta Componias			
Certificate #:   6703-4SSRE3   O1			is Companies	Other Performing Ar	on:	SIC Descripti
Application Year:   18/01	CA		66.1	SW/188.7	1 of 41	<u>59</u>
Issue Date: Application Type: Status: Certificate #: Application Type: Client Address: Client Address: Contaminants: Emission Control:  1/8/01  SW/188.7 66.1  SW/188.7 66.1  Subsection Status: Application Type: Client Address: Client Address: Client Address: Certificate #: Application Type: Client Postal Code: Contaminants: Emission Control:  1/8/01  SW/188.7 66.1  SW/188.7 66.1  BA International Inc. 975 Gladstone Avenue Ottawa ON K1Y 4W5  Certificate #: Application Year: Lissue Date: Approval Type: Status: Application Type: Client Address: Client Address: Client Address: Client Client Contaminants: Emission Control:  SW/188.7 66.1  BA Banknote Inc. 975 Gladstone Avenue Ottawa ON K1Y 4W5  Certificate #: Application Type: Client Postal Code: Project Description: Contaminants: Emission Control:  SW/188.7 66.1  BA Banknote Inc. 975 Gladstone Avenue Ottawa ON K1Y 4W5  Certificate #: Application Type: Client Name: Client Address: Client Client Client Client Contaminants: Emission Control:  192  3 of 41  SW/188.7 66.1  BA Banknote Inc. 975 Gladstone Avenue Ottawa ON K1Y 4W5  Certificate #: Application Year: 10/29/2003 Approval Type: Air Revoked and/or Replaced  Application Type: Client Name: Client Address: Client A				6703-4SSRE3		Certificate #:
Approval Type: Industrial air Revoked and/or Replaced Application Type: Amended CofA Client Name: BA Banknote Inc. Client Address: Glent Address: Glent Address: Glent Address: Glent Address: Glent Client C				-	ear:	
Status: Revoked and/or Replaced Application Type: Amended CofA Application Type: Ottawa Client Mame: BA Banknote Inc. Client City: Ottawa Client Postal Code: K1Y 4W5 Client Postal Code: K1Y 4W5 Contaminants: Emission Control:    1491-63LLHD					_	
Application Type: Client Name: Client Address: Client Address: Client Postal Code: Project Description: Certificate #: Application Type: Client Name: Client City: Client Postal Code: Project Description: Contaminants: Emission Control:  SW/188.7 66.1 BA International Inc. 975 Gladstone Avenue Ottawa ON K1Y 4W5  Certificate #: Application Vear: Issue Date: Application Type: Client Address: Client Address: Client Address: Client City: Client Postal Code: Project Description: Contaminants: Emission Control:  SW/188.7 66.1 BA International Inc. 975 Gladstone Avenue Ottawa ON K1Y 4W5  BA Banknote Inc. 975 Gladstone Avenue Ottawa ON K1Y 4W5  Status: Revoked and/or Replaced  BA Banknote Inc. 975 Gladstone Avenue Ottawa ON K1Y 4W5  Certificate #: 3844-5SQTGU Application Vear: 2003 Insulation Type: Client City: Client Postal Code: Project Description: Contaminants: Revoked and/or Replaced  BA Banknote Inc. 975 Gladstone Avenue Ottawa ON K1Y 4W5  Certificate #: 3844-5SQTGU Application Vear: 2003 Insulation Type: Client Ame: Client Address: Client Clty: Client Postal Code: Project Description: Contaminants:			alaced		e:	
Client Marne: Client Address: Client City: Client Postal Code: Project Description: Contaminants: Emission Control:  59 2 of 41  SW/188.7 66.1  BA International Inc. 975 Gladstone Avenue Ottawa ON KIY 4WS  Certificate #: 1491-63LLHD Application Year: 2004 Approval Type: Air Status: Client Address: Client City: Client Postal Code: Project Description: Contaminants: Emission Control:  BA International Inc. 975 Gladstone Avenue Ottawa ON KIY 4WS  BA International Inc. 975 Gladstone Avenue Ottawa ON KIY 4WS  BA International Inc. 975 Gladstone Avenue Ottawa ON KIY 4WS  Certificate #: Application Type: Client Marne: Client Address: Client City: Client Postal Code: Project Description: Contaminants: Emission Control:  BA Banknote Inc. 975 Gladstone Avenue Ottawa ON KIY 4WS  Certificate #: 3844-5SQTGU Application Year: 10/29/2003 Approval Type: Air Revoked and/or Replaced  Application Type: Client Address: Client City: Client Address: Client City: Client Address: Client Dostal Code: Project Description: Contaminants:			naceu		vpe:	
Client Postal Code: Project Description: Contaminants: Emission Control:  SW/188.7 66.1 BA International Inc. 975 Gladstone Avenue Ottawa ON K1Y 4W5  Certificate #: 1491-63LLHD Application Year: 2004 Issue Date: 11/9/2004 Approval Type: Air Revoked and/or Replaced Client Name: Client Address: Client City: Contaminants: Emission Control:  SW/188.7 66.1 BA International Inc. 975 Gladstone Avenue Ottawa ON K1Y 4W5  Certificate #: Air Revoked and/or Replaced  Status: Revoked and/or Replaced  Saluts: Revoked and/or Replaced  SW/188.7 66.1 BA Banknote Inc. 975 Gladstone Avenue Ottawa ON K1Y 4W5  Certificate #: 3844-SSQTGU Application Year: 2003 Issue Date: 10/29/2003 Approval Type: Air Revoked and/or Replaced  Application Type: Cient Mane: Client Address: Revoked and/or Replaced  Cient Application Type: Air Revoked and/or Replaced  Application Type: Air Revoked and/or Replaced  Cient Address: Client City: Client Postal Code: Revoked and/or Replaced  Application Type: Client Mane: Client Name: Client Postal Code: Revoked and/or Replaced  Client Address: Client City: Client Postal Code: Revoked and/or Replaced  Client Postal Code: Project Description: Contaminants: Revoked and/or Replaced			,,,,,			
Client Postal Code: Project Description: Contaminants: Emission Control:  SW/188.7 66.1 BA International Inc. 975 Gladstone Avenue Ottawa ON K1Y 4W5  Certificate #: 1491-63LLHD Application Year: 2004 Issue Date: 11/9/2004 Approval Type: Air Client Address: Client Address: Client Postal Code: Project Description: Contaminants: Emission Control:  SW/188.7 66.1 BA International Inc. 975 Gladstone Avenue Ottawa ON K1Y 4W5  Certificate #: Air Revoked and/or Replaced Application Type: Client Address: Client Address: Client Contaminants: Emission Control:  SW/188.7 66.1 BA Banknote Inc. 975 Gladstone Avenue Ottawa ON K1Y 4W5  Certificate #: 3844-5SQTGU Application Year: Issue Date: 10/29/2003 Approval Type: Air Ssue Date: 10/29/2003 Approval Type: Air Client Address: Client City: Client Postal Code: Project Description: Contaminants: Client Address: Client City: Client Postal Code: Project Description: Contaminants:			iue	975 Gladstone Aver	s:	Client Addres
Project Description: Contaminants: Emission Control:    SW/188.7   66.1   BA International Inc. 975 Gladstone Avenue Ottawa ON K1Y 4W5    Certificate #:						
Contaminants: Emission Control:    59    2 of 41		printing proce used in printring commercial paper	upor Simultank 21			
### SW/188.7   66.1   BA International Inc. 975 Gladstone Avenue Ottawa ON K1Y 4W5    Certificate #:		initing press used in printing commercial paper.	uper Simultank-212	installation of one S		
Gertificate #: 1491-63LLHD Application Year: 2004 Issue Date: 11/9/2004 Approval Type: Air Client Name: Client Address: Client Postal Contaminants: Emission Control:  SW/188.7 66.1 BA Banknote Inc. 975 Gladstone Avenue Ottawa ON K1Y 4W5  BA Banknote Inc. 975 Gladstone Avenue Ottawa ON K1Y 4W5  Certificate #: 3844-5SQTGU Application Year: 2003 Issue Date: 10/29/2003 Approval Type: Air Status: Revoked and/or Replaced Application Type: Client Address: Client Postal Code: Project Description: Contaminants:						
Application Year: Issue Date: 11/9/2004 Approval Type: Status: Revoked and/or Replaced Application Type: Client Name: Client Address: Client Postal Code: Project Description: Cortaminants: Emission Control:  SW/188.7 66.1 BA Banknote Inc. 975 Gladstone Avenue Ottawa ON K1Y 4W5  Certificate #: 3844-5SQTGU Application Year: 10/29/2003 Approval Type: Status: Approval Type: Status: Revoked and/or Replaced Application Type: Client Address: Client Address: Client Address: Client City: Client Postal Code: Project Description: Contaminants:	CA	975 Gladstone Avenue	66.1	SW/188.7	2 of 41	<u>59</u>
Application Year:   2004   11/9/2004   Approval Type:   Air   Revoked and/or Replaced   Application Type:   Client Name:   Client Address:   Client Address:   Client Address:   Client Postal Code:   Project Description:   Contaminants:   Emission Control:   SW/188.7   66.1   BA Banknote Inc.   975 Gladstone Avenue   Ottawa ON K1Y 4W5				1491-63LLHD		Certificate #
Issue Date: 11/9/2004 Approval Type: Air Status: Revoked and/or Replaced  Application Type: Client Name: Client Address: Client City: Client Postal Code: Project Description: Contaminants: Emission Control:  59 3 of 41 SW/188.7 66.1 BA Banknote Inc. 975 Gladstone Avenue Ottawa ON K1Y 4W5  Certificate #: 3844-5SQTGU Application Year: 2003 Issue Date: 10/29/2003 Approval Type: Air Status: Revoked and/or Replaced  Application Type: Client Name: Client Address: Client Address: Client Address: Client Address: Client Address: Client Postal Code: Project Description: Contaminants:					ear:	
Status: Revoked and/or Replaced  Application Type: Client Address: Client City: Client City: Client Postal Code: Project Description: Contaminants: Emission Control:  59 3 of 41 SW/188.7 66.1 BA Banknote Inc. 975 Gladstone Avenue Ottawa ON K1Y 4W5  Certificate #: 3844-5SQTGU Application Year: 2003 Issue Date: 10/29/2003 Approval Type: Air Status: Revoked and/or Replaced Application Type: Client Address: Client Address: Client Address: Client City: Client Postal Code: Project Description: Contaminants:						
Application Type: Client Name: Client Address: Client City: Client Postal Code: Project Description: Contaminants: Emission Control:  59 3 of 41 SW/188.7 66.1 BA Banknote Inc. 975 Gladstone Avenue Ottawa ON K1Y 4W5  Certificate #: 3844-5SQTGU Application Year: 2003 Issue Date: 10/29/2003 Approval Type: Air Status: Revoked and/or Replaced Application Type: Client Name: Client Name: Client Address: Client City: Client Code: Project Description: Contaminants:			.11		e:	
Client Name: Client City: Client Postal Code: Project Description: Contaminants: Emission Control:  59 3 of 41 SW/188.7 66.1 BA Banknote Inc. 975 Gladstone Avenue Ottawa ON K1Y 4W5  Certificate #: 3844-5SQTGU Application Year: 2003 Issue Date: 10/29/2003 Approval Type: Air Status: Revoked and/or Replaced Application Type: Client Name: Client Name: Client Address: Client City: Client City: Client Postal Code: Project Description: Contaminants:			olaced	Revoked and/or Rep	vno:	
Client Address: Client City: Client Postal Code: Project Description: Contaminants: Emission Control:  59 3 of 41 SW/188.7 66.1 BA Banknote Inc. 975 Gladstone Avenue Ottawa ON K1Y 4W5  Certificate #: 3844-5SQTGU Application Year: 2003 Issue Date: 10/29/2003 Approval Type: Air Status: Revoked and/or Replaced Application Type: Client Name: Client Name: Client Address: Client City: Client Postal Code: Project Description: Contaminants:					ype.	
Client Postal Code: Project Description: Contaminants: Emission Control:  59 3 of 41 SW/188.7 66.1 BA Banknote Inc. 975 Gladstone Avenue Ottawa ON K1Y 4W5  Certificate #: 3844-5SQTGU Application Year: 2003 Issue Date: 10/29/2003 Approval Type: Air Status: Revoked and/or Replaced Application Type: Client Name: Client Address: Client Address: Client Postal Code: Project Description: Contaminants:					s:	
Project Description: Contaminants: Emission Control:  59  3 of 41  SW/188.7  66.1  BA Banknote Inc. 975 Gladstone Avenue Ottawa ON K1Y 4W5  Certificate #: 3844-5SQTGU Application Year: 2003 Issue Date: 10/29/2003 Approval Type: Air Status: Revoked and/or Replaced Application Type: Client Name: Client Address: Client Address: Client Postal Code: Project Description: Contaminants:						
Contaminants: Emission Control:  59  3 of 41  SW/188.7  66.1  BA Banknote Inc. 975 Gladstone Avenue Ottawa ON K1Y 4W5  Certificate #:  3844-5SQTGU Application Year:  2003 Issue Date:  10/29/2003 Approval Type:  Air Status:  Revoked and/or Replaced Application Type: Client Name: Client Address: Client Address: Client Postal Code: Project Description: Contaminants:						
Emission Control:  59 3 of 41 SW/188.7 66.1 BA Banknote Inc. 975 Gladstone Avenue Ottawa ON K1Y 4W5  Certificate #: 3844-5SQTGU Application Year: 2003 Issue Date: 10/29/2003 Approval Type: Air Status: Revoked and/or Replaced Application Type: Client Name: Client Address: Client Address: Client Postal Code: Project Description: Contaminants:					•	•
Certificate #: 3844-5SQTGU Application Year: 2003 Issue Date: 10/29/2003 Approval Type: Air Status: Revoked and/or Replaced Application Type: Client Name: Client Address: Client Address: Client Postal Code: Project Description: Contaminants:						
Certificate #: 3844-5SQTGU Application Year: 2003 Issue Date: 10/29/2003 Approval Type: Air Status: Revoked and/or Replaced Application Type: Client Name: Client Address: Client Address: Client Postal Code: Project Description: Contaminants:		BA Banknote Inc	66.1	SW/188 7	3 of 41	59
Application Year: 2003 Issue Date: 10/29/2003 Approval Type: Air Status: Revoked and/or Replaced Application Type: Client Name: Client Address: Client City: Client Postal Code: Project Description: Contaminants:	CA	975 Gladstone Avenue	00.7	OW 100.1	00141	<u> </u>
Issue Date: 10/29/2003  Approval Type: Air  Status: Revoked and/or Replaced  Application Type: Client Name: Client Address: Client City: Client Postal Code: Project Description: Contaminants:				3844-5SQTGU		Certificate #:
Approval Type: Air Status: Revoked and/or Replaced  Application Type: Client Name: Client Address: Client City: Client Postal Code: Project Description: Contaminants:					ear:	
Status: Revoked and/or Replaced  Application Type: Client Name: Client Address: Client City: Client Postal Code: Project Description: Contaminants:						
Application Type: Client Name: Client Address: Client City: Client Postal Code: Project Description: Contaminants:			Nacad		e:	
Client Name:  Client Address:  Client City:  Client Postal Code:  Project Description:  Contaminants:			naceu	nevoked allu/ol Rep	vne.	
Client Address: Client City: Client Postal Code: Project Description: Contaminants:					, pc.	
Client Postal Code: Project Description: Contaminants:					s:	
Project Description: Contaminants:						
Contaminants:						
59 4 of 41 SW/188.7 66.1 BA International Inc. 975 Gladstone Avenue	CA		66.1	SW/188.7	4 of 41	<u>59</u>

Мар Кеу	Number of Records	Direction/ Distance (m)	Elevation (m)	Site	DB
				Ottawa ON K1Y 4W5	
Certificate #: Application N Issue Date: Approval Tyl Status: Application N Client Name: Client Addre Client City: Client Postal Project Desc Contaminant Emission Co	Year:  pe: Type: : ss: I Code: cription:	1491-63LLHD 2006 3/23/2006 Air Revoked and/or Re	eplaced		
<u>59</u>	5 of 41	SW/188.7	66.1	B.A. BANKNOTE INC. 975 GLADSTONE AVE. OTTAWA CITY ON K1Y 4W5	CA
Certificate #: Application \( \) Issue Date: Approval Typ Status: Application \( \) Client Name: Client Addre Client City:	Year: pe: Type: : :ss:	8-4158-92- 92 12/23/1992 Industrial air Approved			
Client Postal Project Desc Contaminant Emission Co	cription: ts:	INST. MIST ELMIN	l., (2) GEN. EXH. \$	SYSTEMS	
<u>59</u>	6 of 41	SW/188.7	66.1	BA International Inc. 975 Gladstone Avenue Ottawa ON K1Y 4W5	CA
Certificate #: Application   Issue Date: Approval Typ Status: Application   Client Name: Client Addre Client City: Client Postal Project Desc Contaminant Emission Co	Year: pe: Type: : ess: I Code: cription:	5712-6XRLU3 2007 3/19/2007 Air Approved			
<u>59</u>	7 of 41	SW/188.7	66.1	BA Banknote Inc. 975 Gladstone Avenue Ottawa ON K1Y 4W5	CA
Certificate #: Application \ Issue Date: Approval Typ	Year:	7660-5Z4PFX 2004 6/4/2004 Air			

Мар Кеу	Number of Records	Direction/ Distance (m)	Elevation (m)	Site	DB
Status: Application To Client Name: Client Addre. Client City: Client Postal Project Desc Contaminant Emission Co	ss: Code: ription:	Revoked and/or Rep	blaced		
<u>59</u>	8 of 41	SW/188.7	66.1	975 Gladstone Avenue Ottawa ON K1Y 4W5	CA
Certificate #: Application \( \) Issue Date: Approval Typ Status: Application \( \) Client Name: Client Addre. Client City: Client Postal Project Desc  Contaminant Emission Co	Year: pe: Type: ss: Code: ription:	silk screen press. Th	approval for an ar	mendment to the existing Certificate of Approval for the installation equipment will include construction of three stacks that will ventila nt vapours to the atmosphere.	
<u>59</u>	9 of 41	SW/188.7	66.1	CANADIAN BANK NOTE COMPANY, LIMITED 975 GLADSTONE AVE OTTAWA ON	EASR
Longitude: Latitude: Record Type PDF URL: CofA Numbe Date: Status: Project Type	r:	R-003-9388039268 19-NOV-13 Registered Heating System			
<u>59</u>	10 of 41	SW/188.7	66.1	CANADIAN BANK NOTE COMPANY, LIMITED 975 GLADSTONE AVE OTTAWA ON	EASR
Longitude: Latitude: Record Type PDF URL: CofA Numbe Date: Status: Project Type	r:	R-002-3388172978 19-NOV-13 Registered Standby Power Syst	em		
<u>59</u>	11 of 41	SW/188.7	66.1	BA Banknote Inc 975 Gladstone Avenue Ottawa ON K1Y 4W5	EBR

Number of Elevation Site DΒ Map Key Direction/ Records Distance (m) (m) Year: 2001 EBR Registry No.: IA01E0439 Ministry Ref. No.: Instrument Type: Instrument Type: EPA s. 9 - Approval for discharge into the natural environment other than water (i.e. Air) 3/30/01 Proposal Date: Location: 975 Gladstone Avenue, Ottawa, Ontario Ottawa BA Banknote Inc.975 Gladstone Avenue, Ottawa, Ontario, K1Y 4W5 Proponent Address: 12 of 41 SW/188.7 66.1 Canadian Bank Note Company, Limited **59 EBR** 975 Gladstone Avenue **OTTAWA ON K1Y 4W5** 2014 Year: EBR Registry No.: 012-1359 Ministry Ref. No.: 7194-9H3LA9 Instrument Proposal Type: Instrument Type: (EPA Part II.1) - Environmental Compliance Approval (project type: air) Proposal Date: March 19, 2014 975 Gladstone Avenue Ottawa K1Y 4W5 CITY OF OTTAWA Location: 975 Gladstone avenue, Ottawa Ontario, Canada K1Y 4W5 Proponent Address: **59** 13 of 41 SW/188.7 66.1 BA Banknote Inc. **EBR** 975 Gladstone Avenue Ottawa ON K1Y 4W5 Year: 2004 IA04E0471 EBR Registry No.: Ministry Ref. No.: 6786-5XFJPS Type: Instrument Decision Instrument Type: Approval for discharge into the natural environment other than water (i.e. Air) - EPA s. 9 Proposal Date: 975 Gladstone Avenue Ottawa Ontario Location: Proponent Address: 975 Gladstone Avenue Ottawa Ontario K1Y 4W5 14 of 41 66.1 **59** SW/188.7 BA Banknote Inc. **EBR** 975 Gladstone Avenue Ottawa ON K1Y 4W5 2000 Year: EBR Registry No.: IA00E0164 Ministry Ref. No.: Type: Instrument Instrument Type: EPA s. 9 - Approval for discharge into the natural environment other than water (i.e. Air) Proposal Date: 975 Gladstone Avenue, Ottawa, Ontario Ottawa Location: Proponent Address: BA Banknote Inc.975 Gladstone Avenue, Ottawa, Ontario, K1Y 4W5 **59** 15 of 41 SW/188.7 66.1 BA Banknote Inc. **EBR** 975 Gladstone Avenue Ottawa ON K1Y 4W5 Year: 2006 IA06E1098 EBR Registry No.: Ministry Ref. No.: 4981-6SKPCP Instrument Decision Type: Instrument Type: Approval for discharge into the natural environment other than water (i.e. Air) - EPA s. 9 Proposal Date: 975 Gladstone Avenue Ottawa Ontario Location:

Мар Кеу	Number of Records	Direction/ Distance (m)	Elevation (m)	Site	DB
Proponent A	Address:	975 Gladstone Ave	nue Ottawa Ontari	io K1Y 4W5	
<u>59</u>	16 of 41	SW/188.7	66.1	BA Banknote Inc. 975 Gladstone Avenue Ottawa ON K1Y 4W5	EBR
Year: EBR Registr Ministry Ref Type: Instrument T Proposal Da	. No.: Гуре:	2004 IA04E0048 9227-5V5REP Instrument Decisior Approval for discha		al environment other than water (i.e. Air) - EPA s. 9	
Location: Proponent A		975 Gladstone Ave 975 Gladstone Ave			
<u>59</u>	17 of 41	SW/188.7	66.1	975 Gladstone Avenue n/a ON K1Y 4W5	EHS
Addit. Info C Order No.: Report Date Report Type Search Radi	: :	20080226024w 2/26/2008 Online Mapless 0.25			
<u>59</u>	18 of 41	SW/188.7	66.1	975 Gladstone Avenue Ottawa ON K1Y 4W5	EHS
Addit. Info C Order No.: Report Date. Report Type Search Radi	:	20050520015 5/31/2005 0.25			
<u>59</u>	19 of 41	SW/188.7	66.1	975 Gladstone Avenue Ottawa ON K1Y 4W5	EHS
Addit. Info C Order No.: Report Date Report Type Search Radi	: :	Fire Insur. Maps Ar 20071128024 11/30/2007 CAN - Complete Re 0.25			
<u>59</u>	20 of 41	SW/188.7	66.1	BA INTERNATIONAL INC. 975 GLADSTONE AVENUE OTTAWA ON K1Y 4W5	GEN
Generator #. Approval Yr. SIC Code: SIC Descript	s:	ON0297401 2011 323119 Other Printing			
Details Waste Cod Waste Des	le:	221 LIGHT FUELS			
Waste Coo Waste Des +		231 LATEX WASTES			

Number of Direction/ Site DΒ Map Key Elevation Records Distance (m) 251 Waste Code: Waste Description: **OIL SKIMMINGS & SLUDGES** Waste Code: Waste Description: ALIPHATIC SOLVENTS Waste Code: Waste Description: **ORGANIC ACIDS** Waste Code: Waste Description: ACID WASTE - HEAVY METALS Waste Code: 265 Waste Description: **GRAPHIC ART WASTES** Waste Code: Waste Description: ALKALINE WASTES - OTHER METALS Waste Code: Waste Description: WASTE COMPRESSED GASES Waste Code: Waste Description: HALOGENATED SOLVENTS Waste Code: 233 OTHER POLYMERIC WASTES Waste Description: Waste Code: PHOTOPROCESSING WASTES Waste Description: Waste Code: Waste Description: WASTE OILS & LUBRICANTS Waste Code: 312 Waste Description: PATHOLOGICAL WASTES Waste Code: Waste Description: ORGANIC LABORATORY CHEMICALS Waste Code: Waste Description: OTHER SPECIFIED INORGANICS Waste Code: Waste Description: **NEUTRALIZED WASTES - OTHER METALS** Waste Code: Waste Description: ALKALINE WASTES - HEAVY METALS Waste Code: Waste Description: **EMULSIFIED OILS** 145 Waste Code:

Waste Description: PAINT/PIGMENT/COATING RESIDUES

Waste Code:

Waste Description: AROMATIC SOLVENTS

Waste Code:

Waste Description: INORGANIC LABORATORY CHEMICALS

Waste Code: 262

**DETERGENTS/SOAPS** Waste Description:

59

21 of 41

SW/188.7

66.1

BA INTERNATIONAL INC. 975 GLADSTONE AVENUE

**GEN** 

Map Key Number of Direction/ Elevation Site DB

OTTAWA ON K1Y 4W5

Records Distance (m) (m)

 Generator #:
 ON0297401

 Approval Yrs:
 2009

 SIC Code:
 323119

--- Details ---

SIC Description:

Waste Code: 112

Waste Description: ACID WASTE - HEAVY METALS

+

Waste Code: 121

Waste Description: ALKALINE WASTES - HEAVY METALS

Other Printing

+

Waste Code: 122

Waste Description: ALKALINE WASTES - OTHER METALS

Waste Code: 132

Waste Description: NEUTRALIZED WASTES - OTHER METALS

+

Waste Code: 145

Waste Description: PAINT/PIGMENT/COATING RESIDUES

+

Waste Code: 146

Waste Description: OTHER SPECIFIED INORGANICS

т

Waste Code: 148

Waste Description: INORGANIC LABORATORY CHEMICALS

+

Waste Code: 211

Waste Description: AROMATIC SOLVENTS

+

Waste Code: 212

Waste Description: ALIPHATIC SOLVENTS

+

Waste Code: 221

Waste Description: LIGHT FUELS

+

Waste Code: 231

Waste Description: LATEX WASTES

+

Waste Code: 233

Waste Description: OTHER POLYMERIC WASTES

+

Waste Code: 241

Waste Description: HALOGENATED SOLVENTS

+

Waste Code: 251

Waste Description: OIL SKIMMINGS & SLUDGES

Waste Code: 252

Waste Description: WASTE OILS & LUBRICANTS

+

Waste Code: 253

Waste Description: EMULSIFIED OILS

+

Waste Code: 262

Waste Description: DETERGENTS/SOAPS

+

Waste Code: 263

Waste Description: ORGANIC LABORATORY CHEMICALS

+

Waste Code: 264

Waste Description: PHOTOPROCESSING WASTES

+

Мар Кеу	Number of Records	Direction/ Distance (m)	Elevation (m)	Site	DB
Waste Cod Waste Des		265 GRAPHIC ART WA	STES		
Waste Cod Waste Des		267 ORGANIC ACIDS			
Waste Cod Waste Des		312 PATHOLOGICAL W	/ASTES		
Waste Cod Waste Des		331 WASTE COMPRES	SED GASES		
<u>59</u>	22 of 41	SW/188.7		Pinchin Environmental 975 Gladstone Ottawa ON K1Y 4W5	GEN
Generator #: Approval Yrs SIC Code: SIC Descript	::	ON5063272 05 323119 Other Printing			
Details Waste Cod Waste Desc		222 HEAVY FUELS			
<u>59</u>	23 of 41	SW/188.7		BA INTERNATIONAL INC. 975 GLADSTONE AVENUE OTTAWA ON	GEN
Generator #:		ON0297401			
Approval Yrs SIC Code: SIC Descript		2013 323119 OTHER PRINTING			
Details Waste Cod Waste Desc		251 OIL SKIMMINGS &	SLUDGES		
+ Waste Cod Waste Desc +		264 PHOTOPROCESSI	NG WASTES		
Waste Cod Waste Des		112 ACID WASTE - HE	AVY METALS		
Waste Cod Waste Des		221 LIGHT FUELS			
Waste Cod Waste Des		212 ALIPHATIC SOLVE	NTS		
Waste Cod Waste Des		262 DETERGENTS/SO/	APS		
Waste Cod Waste Des		241 HALOGENATED SO	OLVENTS		
Waste Cod Waste Des		331 WASTE COMPRES	SED GASES		
Waste Cod Waste Des		148 INORGANIC LABO	RATORY CHEMICALS	3	
Waste Cod Waste Dese +		265 GRAPHIC ART WA	STES		

Number of Site DΒ Map Key Direction/ Elevation Records Distance (m)

Waste Code: 263

Waste Description: ORGANIC LABORATORY CHEMICALS

Waste Code:

Waste Description: AROMATIC SOLVENTS

Waste Code:

Waste Description: **ORGANIC ACIDS** 

Waste Code: 231

Waste Description: LATEX WASTES

Waste Code:

Waste Description: OTHER SPECIFIED INORGANICS

Waste Code:

Waste Description: ALKALINE WASTES - OTHER METALS

Waste Code: 253

Waste Description: **EMULSIFIED OILS** 

Waste Code:

Waste Description: PATHOLOGICAL WASTES

Waste Code:

**NEUTRALIZED WASTES - OTHER METALS** Waste Description:

Waste Code:

PAINT/PIGMENT/COATING RESIDUES Waste Description:

Waste Code:

OTHER POLYMERIC WASTES Waste Description:

Waste Code: 252

Waste Description: WASTE OILS & LUBRICANTS

Waste Code:

Waste Description: ALKALINE WASTES - HEAVY METALS

24 of 41 SW/188.7 66.1 **BA BANKNOTE 59** 

OTTAWA DIV., DIV OF QUEBECOR PUBLITECH

**GEN** 

Order No: 20160822162

**INC./975 GLADSTONE AVENUE** 

**OTTAWA ON K1Y 4W5** 

Generator #: ON0297401 Approval Yrs: 89,90,92,93,97

SIC Code:

SIC Description: OTHER COMM. PRINTING

--- Details ---

Waste Code:

**GRAPHIC ART WASTES** Waste Description:

Waste Code:

Waste Description: **ORGANIC ACIDS** 

Waste Code:

Waste Description: PATHOLOGICAL WASTES

Waste Code: 112

Waste Description: ACID WASTE - HEAVY METALS

Waste Code:

ALKALINE WASTES - HEAVY METALS Waste Description:

Number of Direction/ Site DΒ Map Key Elevation Records Distance (m) 122 Waste Code: Waste Description: ALKALINE WASTES - OTHER METALS Waste Code: Waste Description: PAINT/PIGMENT/COATING RESIDUES Waste Code: Waste Description: OTHER SPECIFIED INORGANICS Waste Code: 148 Waste Description: INORGANIC LABORATORY CHEMICALS Waste Code: Waste Description: AROMATIC SOLVENTS Waste Code: Waste Description: ALIPHATIC SOLVENTS Waste Code: 231 Waste Description: LATEX WASTES Waste Code: Waste Description: OTHER POLYMERIC WASTES Waste Code: HALOGENATED SOLVENTS Waste Description: Waste Code: WASTE OILS & LUBRICANTS Waste Description: Waste Code: **EMULSIFIED OILS** Waste Description: Waste Code: 263 Waste Description: ORGANIC LABORATORY CHEMICALS Waste Code: Waste Description: PHOTOPROCESSING WASTES BA INTERNATIONAL INC. 25 of 41 SW/188.7 66.1 **59 GEN** 975 GLADSTONE AVENUE **OTTAWA ON K1Y 4W5** ON0297401 Generator #: Approval Yrs: 2010 SIC Code: 323119 SIC Description: Other Printing --- Details ---Waste Code: 221

Waste Description: LIGHT FUELS

Waste Code: 33

Waste Description: WASTE COMPRESSED GASES

+

Waste Code: 112

Waste Description: ACID WASTE - HEAVY METALS

+

Waste Code: 26

Waste Description: PHOTOPROCESSING WASTES

Waste Code: 267

Waste Description: ORGANIC ACIDS

Waste Code: 146

Number of Site DΒ Map Key Direction/ Elevation Records Distance (m)

Waste Description: OTHER SPECIFIED INORGANICS

Waste Code: 262

DETERGENTS/SOAPS Waste Description:

Waste Code:

Waste Description: AROMATIC SOLVENTS

Waste Code:

Waste Description: ALKALINE WASTES - OTHER METALS

Waste Code: 251

**OIL SKIMMINGS & SLUDGES** Waste Description:

Waste Code:

**NEUTRALIZED WASTES - OTHER METALS** Waste Description:

Waste Code:

**EMULSIFIED OILS** Waste Description:

Waste Code: 231

Waste Description: LATEX WASTES

Waste Code:

PAINT/PIGMENT/COATING RESIDUES Waste Description:

Waste Code:

Waste Description: ORGANIC LABORATORY CHEMICALS

Waste Code: 241

Waste Description: HALOGENATED SOLVENTS

Waste Code:

Waste Description: ALKALINE WASTES - HEAVY METALS

Waste Code: 265

Waste Description: **GRAPHIC ART WASTES** 

Waste Code: 233

Waste Description: OTHER POLYMERIC WASTES

Waste Code:

Waste Description: ALIPHATIC SOLVENTS

Waste Code:

Waste Description: WASTE OILS & LUBRICANTS

Waste Code:

PATHOLOGICAL WASTES Waste Description:

Waste Code:

**INORGANIC LABORATORY CHEMICALS** Waste Description:

26 of 41 SW/188.7 66.1 BA BANKNOTE INC. **59** 

975 GLADSTONE AVENUE OTTAWA ON K1N 8V4

**GEN** 

Order No: 20160822162

Generator #: ON0297401 Approval Yrs: 02,03

SIC Code: SIC Description:

--- Details ---

Waste Code:

ACID WASTE - HEAVY METALS Waste Description:

Map Key Number of Direction/ Elevation Site DB Records Distance (m) (m)

Waste Code: 121

Waste Description: ALKALINE WASTES - HEAVY METALS

Waste Code:

waste Code:

Waste Description: ALKALINE WASTES - OTHER METALS

+

Waste Code: 145

Waste Description: PAINT/PIGMENT/COATING RESIDUES

+

Waste Code: 146

Waste Description: OTHER SPECIFIED INORGANICS

+

Waste Code: 148

Waste Description: INORGANIC LABORATORY CHEMICALS

+

Waste Code: 211

Waste Description: AROMATIC SOLVENTS

+

Waste Code: 212

Waste Description: ALIPHATIC SOLVENTS

Waste Code: 231

Waste Description: LATEX WASTES

+

Waste Code: 233

Waste Description: OTHER POLYMERIC WASTES

+

Waste Code: 241

Waste Description: HALOGENATED SOLVENTS

+

Waste Code: 252

Waste Description: WASTE OILS & LUBRICANTS

+

Waste Code: 253

Waste Description: EMULSIFIED OILS

и

Waste Code: 263

Waste Description: ORGANIC LABORATORY CHEMICALS

+

Waste Code: 264

Waste Description: PHOTOPROCESSING WASTES

+

Waste Code: 265

Waste Description: GRAPHIC ART WASTES

Waste Code: 267

Waste Description: ORGANIC ACIDS

+

**59** 

Waste Code: 312

27 of 41

Waste Description: PATHOLOGICAL WASTES

BRITISH AMERICAN BANK NOTE INC. 975 GLADSTONE AVENUE C/O P.O. BOX 399, STATION A

**GEN** 

Order No: 20160822162

OTTAWA ON K1Y 4W5

 Generator #:
 ON0297401

 Approval Yrs:
 86,87

 SIC Code:
 2819

SIC Description: OTHER COMM. PRINTING

--- Details ---

Waste Code: 112

Waste Description: ACID WASTE - HEAVY METALS

SW/188.7

66.1

Number of Elevation Site DΒ Map Key Direction/ Records Distance (m) (m)

Waste Code:

ALKALINE WASTES - OTHER METALS Waste Description:

Waste Code:

PAINT/PIGMENT/COATING RESIDUES Waste Description:

Waste Code:

Waste Description: OTHER SPECIFIED INORGANICS

Waste Code:

Waste Description: AROMATIC SOLVENTS

Waste Code: 241

Waste Description: HALOGENATED SOLVENTS

Waste Code:

Waste Description: WASTE OILS & LUBRICANTS

Waste Code:

Waste Description: **GRAPHIC ART WASTES** 

**59** 28 of 41 SW/188.7 66.1 BA INTERNATIONAL INC. **GEN** 975 GLADSTONE AVENUE **OTTAWA ON K1Y 4W5** 

Order No: 20160822162

Generator #: ON0297401 Approval Yrs: 2012 SIC Code: 323119 SIC Description: Other Printing

--- Details ---

Waste Code:

Waste Description: PATHOLOGICAL WASTES

Waste Code:

PAINT/PIGMENT/COATING RESIDUES Waste Description:

Waste Code: 231

Waste Description: LATEX WASTES

Waste Code: 331

Waste Description: WASTE COMPRESSED GASES

Waste Code:

Waste Description: ALKALINE WASTES - OTHER METALS

Waste Code:

Waste Description: **OIL SKIMMINGS & SLUDGES** 

Waste Code:

**NEUTRALIZED WASTES - OTHER METALS** Waste Description:

Waste Code: 264 Waste Description: PHOTOPROCESSING WASTES

Waste Code: Waste Description: OTHER POLYMERIC WASTES

Waste Code: 252

Waste Description: WASTE OILS & LUBRICANTS

Waste Code:

**EMULSIFIED OILS** Waste Description:

Number of Site DΒ Map Key Direction/ Elevation Records Distance (m)

211 Waste Code:

Waste Description: AROMATIC SOLVENTS

Waste Code:

Waste Description: **GRAPHIC ART WASTES** 

Waste Code:

Waste Description: **DETERGENTS/SOAPS** 

Waste Code:

263

Waste Description: ORGANIC LABORATORY CHEMICALS

Waste Code: 267

**ORGANIC ACIDS** Waste Description:

Waste Code:

Waste Description: ALIPHATIC SOLVENTS

Waste Code:

Waste Description: ALKALINE WASTES - HEAVY METALS

Waste Code:

Waste Description: HALOGENATED SOLVENTS

Waste Code: 148

**INORGANIC LABORATORY CHEMICALS** Waste Description:

Waste Code:

OTHER SPECIFIED INORGANICS Waste Description:

Waste Code:

ACID WASTE - HEAVY METALS Waste Description:

Waste Code: 221

29 of 41

Waste Description: LIGHT FUELS

**59** 

**BA BANKNOTE** 975 GLADSTONE AVENUE OTTAWA ON K1N 8V4

Generator #: ON0297401 Approval Yrs: 98,99,00,01

SIC Code: 2819

OTHER COMM. PRINTING SIC Description:

--- Details ---

148 Waste Code:

Waste Description: **INORGANIC LABORATORY CHEMICALS** 

SW/188.7

66.1

Waste Code:

Waste Description: AROMATIC SOLVENTS

Waste Code:

ALIPHATIC SOLVENTS Waste Description:

Waste Code:

LATEX WASTES Waste Description:

Waste Code:

Waste Description: OTHER POLYMERIC WASTES

Waste Code:

HALOGENATED SOLVENTS Waste Description:

252 Waste Code:

**GEN** 

Number of Site DΒ Map Key Direction/ Elevation Records Distance (m)

Waste Description: WASTE OILS & LUBRICANTS

Waste Code: 253

**EMULSIFIED OILS** Waste Description:

Waste Code:

Waste Description: ORGANIC LABORATORY CHEMICALS

Waste Code:

Waste Description: PHOTOPROCESSING WASTES

Waste Code:

**GRAPHIC ART WASTES** Waste Description:

Waste Code:

**ORGANIC ACIDS** Waste Description:

Waste Code:

PATHOLOGICAL WASTES Waste Description:

Waste Code:

Waste Description: ACID WASTE - HEAVY METALS

Waste Code:

Waste Description: ALKALINE WASTES - HEAVY METALS

Waste Code:

Waste Description: ALKALINE WASTES - OTHER METALS

Waste Code: 145

Waste Description: PAINT/PIGMENT/COATING RESIDUES

Waste Code:

Waste Description: OTHER SPECIFIED INORGANICS

**59** 30 of 41 SW/188.7 66.1 BA INTERNATIONAL INC. 975 GLADSTONE AVENUE OTTAWA ON K1N 8V4

**GEN** 

Order No: 20160822162

ON0297401 Generator #: Approval Yrs: 04,05,06,07,08 SIC Code: 323119 Other Printing

SIC Description:

--- Details ---

Waste Code:

LIGHT FUELS Waste Description:

Waste Code: 262

DETERGENTS/SOAPS Waste Description:

Waste Code:

Waste Description: **OIL SKIMMINGS & SLUDGES** 

Waste Code:

Waste Description: TRANSFER STATION OILS WASTES

Waste Code: 998

Waste Description: NONHAZARDOUS WASTE

Waste Code:

**NEUTRALIZED WASTES - OTHER METALS** Waste Description:

Waste Code:

WASTE COMPRESSED GASES Waste Description:

Map Key Number of Direction/ Elevation Site DB
Records Distance (m) (m)

Waste Code: 145

Waste Description: PAINT/PIGMENT/COATING RESIDUES

+

Waste Code: 146

Waste Description: OTHER SPECIFIED INORGANICS

+

Waste Code: 148

Waste Description: INORGANIC LABORATORY CHEMICALS

+

Waste Code: 211

Waste Description: AROMATIC SOLVENTS

+

Waste Code: 212

Waste Description: ALIPHATIC SOLVENTS

+

Waste Code: 231

Waste Description: LATEX WASTES

+

Waste Code: 233

Waste Description: OTHER POLYMERIC WASTES

Waste Code: 241

Waste Description: HALOGENATED SOLVENTS

+

Waste Code: 252

Waste Description: WASTE OILS & LUBRICANTS

+

Waste Code: 253

Waste Description: EMULSIFIED OILS

+

Waste Code: 263

Waste Description: ORGANIC LABORATORY CHEMICALS

٠

Waste Code: 264

Waste Description: PHOTOPROCESSING WASTES

+

Waste Code: 265

Waste Description: GRAPHIC ART WASTES

t

Waste Code: 267

Waste Description: ORGANIC ACIDS

+

Waste Code: 312

Waste Description: PATHOLOGICAL WASTES

Waste Code: 1

Waste Description: ACID WASTE - HEAVY METALS

+

Waste Code: 121

Waste Description: ALKALINE WASTES - HEAVY METALS

+

Waste Code: 122

Waste Description: ALKALINE WASTES - OTHER METALS

59 31 of 41 SW/188.7 66.1 BA BANKNOTE 05-931

OTTAWA DIV., DIV OF QUEBECOR PUBLITECH

**INC./975 GLADSTONE AVENUE** 

OTTAWA ON K1Y 4W5

 Generator #:
 ON0297401

 Approval Yrs:
 94,95,96

 SIC Code:
 2819

SIC Description: OTHER COMM. PRINTING

**GEN** 

Number of Direction/ Elevation Site DΒ Map Key Records Distance (m) (m) --- Details ---Waste Code: ACID WASTE - HEAVY METALS Waste Description: Waste Code: ALKALINE WASTES - HEAVY METALS Waste Description: Waste Code: Waste Description: ALKALINE WASTES - OTHER METALS Waste Code: Waste Description: PAINT/PIGMENT/COATING RESIDUES Waste Code: 146 Waste Description: OTHER SPECIFIED INORGANICS Waste Code: Waste Description: INORGANIC LABORATORY CHEMICALS Waste Code: AROMATIC SOLVENTS Waste Description: Waste Code: 212 ALIPHATIC SOLVENTS Waste Description: Waste Code: LATEX WASTES Waste Description: Waste Code: Waste Description: OTHER POLYMERIC WASTES Waste Code: Waste Description: HALOGENATED SOLVENTS Waste Code: WASTE OILS & LUBRICANTS Waste Description: Waste Code: **EMULSIFIED OILS** Waste Description: Waste Code: 263 ORGANIC LABORATORY CHEMICALS Waste Description: Waste Code: PHOTOPROCESSING WASTES Waste Description: Waste Code: Waste Description: **GRAPHIC ART WASTES** Waste Code: Waste Description: **ORGANIC ACIDS** Waste Code: Waste Description: PATHOLOGICAL WASTES **59** 32 of 41 SW/188.7 66.1 Canadian Bank Note Company, limited **GEN** Gladstone 975 Gladstone avenue

Ottawa ON

Order No: 20160822162

Generator #: ON8483802 Approval Yrs: As of May 2015

SIC Code: SIC Description:

Мар Кеу	Number of Records	Direction/ Distance (m)	Elevation (m)	Site	DB
Details					
Waste Code Waste Desc		212 Aliphatic solvents	and residues		
+ Waste Code	e:	232			
Waste Desc		Polymeric resins			
Waste Code		252			
Waste Desc	cription:	Waste crankcase	oils and lubricant	S	
Waste Code		331			
Waste Desc	cription:	Waste compresse	d gases including	g cylinders	
+ Waste Code	e:	122			
Waste Desc	cription:	Alkaline slutions -	containing other	metals and non-metals (not cyanide)	
+ Waste Code	e:	265			
Waste Desc		Graphic arts waste	es		
+ Waste Code	•	146			
Waste Desc		Other specified inc	organic sludges, s	slurries or solids	
+	•				
Waste Code Waste Desc		145 Wastes from the u	ise of niaments of	coatings and paints	
+	inpuon.	Wastes from the a	ioc or pigmento, c	odungo and painto	
Waste Code		269		and bankinida wastan	
Waste Desc	cription:	Organic non-naiog	jenated pesticide	and herbicide wastes	
Waste Code		263			
Waste Desc	cription:	Misc. waste organ	ic chemicals		
Waste Code Waste Desc		213 Petroleum distillate	es		
+ Waste Code	a-	262			
Waste Desc		Detergents and so	paps		
Waste Code		131			
Waste Desc	cription:	Neutralized solution	ons - containing h	eavy metals	
Waste Code	e:	267			
Waste Desc	cription:	Organic acids			
Waste Code		148		a.la	
Waste Desc	cription:	Misc. wastes and	inorganic chemic	als	
<u>59</u>	33 of 41	SW/188.7	66.1	B.A. Banknote Inc. 975 Gladstone Ave Ottawa ON K1Y 4W5	SCT
Established:		1867			
Plant Size (ft	²) <i>:</i>	1007			
Employment		170			
Details					
Description SIC/NAICS		Other Printing 323119			
<u>59</u>	34 of 41	SW/188.7	66.1	BA International Inc. 975 Gladstone Ave Ottawa ON K1Y 4W5	SCT
Established: Plant Size (ft	²) <i>:</i>	1866			

Map Key	Number of Records	Direction/ Distance (m)	Elevation (m)	Site	DB
Employment	t:	170			
Details Description SIC/NAICS	n:	Other Printing 323119			
<u>59</u>	35 of 41	SW/188.7	66.1	BA International Inc. 975 Gladstone Ave Ottawa ON K1Y 4W5	SCT
Established: Plant Size (fi Employment	t²):	01-AUG-40			
Details Description SIC/NAICS	n:	Other Printing 323119			
<u>59</u>	36 of 41	SW/188.7	66.1	B A BANKNOTE 975 GLADSTONE AVE OTTAWA ON K1Y 4W5	SCT
Established: Plant Size (fi Employment	(t²):	0000 0 252			
Details Description SIC/NAICS	n:	COMMERCIAL PR 2752	INTING, LITHOGI	RAPHIC	
+ Description SIC/NAICS +		COMMERCIAL PR 2759	INTING, NOT ELS	SEWHERE CLASSIFIED	
Description SIC/NAICS		Other Printing 323119			
<u>59</u>	37 of 41	SW/188.7	66.1	B.A. Banknote 975 Gladstone Ave Ottawa ON K1Y 4W5	SCT
Established		1867			
Plant Size (fit Employment	,	170			
Details Description SIC/NAICS	n:	Other Printing 323119			
<u>59</u>	38 of 41	SW/188.7	66.1	BA International Inc. 975 Gladstone Ave Ottawa ON K1Y 4W5	SPL
Ref NO:		0352-789G8L			
Contaminan Contaminan		15 HYDRAULIC OIL			
Contaminan	t Quantity:	10 L			
Incident Cau Incident Dt:	ıse:	Pipe Or Hose Leak			
Incident Rea		Equipment Failure	d	Souther and doctor	
Incident Sun MOE Report		BA International: High	ydraulic oil to park	ing lot and drain	
Environmen	tal Impact:	Not Anticipated			
Nature of Im	pact:	Other Impact(s)			

Number of Direction/ Elevation Site DΒ Map Key Records Distance (m) (m) Receiving Medium: Land & Water SAC Action Class: Sector Source Type: Other Site Municipality: Ottawa **59** 39 of 41 SW/188.7 66.1 Drain-All Ltd. SPL 975 Gladstone Ave Ottawa ON K1Y 4W5 7780-7HAJKY Ref NO: Contaminant Code: **EFFLUENT (NOT OTHERWISE SPECIFIED)** Contaminant Name: Contaminant Quantity: Incident Cause: Incident Dt: Incident Reason: Incident Summary: Drain-All: 50 L effluent sol'n to rd. Cleaning. MOE Reported Dt: 8/7/2008 **Environmental Impact:** Not Anticipated Nature of Impact: Receiving Medium: SAC Action Class: Land Spills Sector Source Type: Other Site Municipality: Ottawa **59** 40 of 41 SW/188.7 66.1 BA International Inc. **SPL** 975 Gladstone Ave Ottawa ON K1Y 4W5 3258-76CGWF Ref NO: Contaminant Code: 99 Contaminant Name: CORROSIVE LIQUIDS, N.O.S. Contaminant Quantity: 0 other - see incident description Incident Cause: Other Discharges Incident Dt: Incident Reason: Process upset Incident Summary: Lacombe: small quantity 121 C liquid to parking lot MOE Reported Dt: 8/23/2007 Environmental Impact: Possible Nature of Impact: Soil Contamination Receiving Medium: Land SAC Action Class: Transport Truck Sector Source Type: Site Municipality: **Brant** SW/188.7 66.1 41 of 41 349977 Ontario Ltd. 59 SPL

975 Gladstone Ave

Ottawa ON K1Y 4W5

Order No: 20160822162

Ref NO: 6348-7Q2JKQ

Contaminant Code:

CAUSTIC SOLUTION (< 20%) Contaminant Name: Contaminant Quantity: 20 L

Incident Cause: Unknown Incident Dt:

Incident Reason: Other - Reason not otherwise defined

Incident Summary: Lacombe: 20 L caustic sol'n to pavement. Cleaning.

**MOE** Reported Dt: 3/11/2009 **Environmental Impact:** Not Anticipated

Nature of Impact: Receiving Medium:

	Records	Direction/ Distance (m)	Elevation (m)	Site	DB
SAC Action Cla		Land Spills			
Sector Source Site Municipali		Ottawa			
<u>60</u> 1	1 of 2	NNE/119.9	58.7	City of Ottawa 130 Preston Street Ottawa ON	CA
Certificate #: Application Ye. Issue Date: Approval Type Status: Application Ty, Client Name: Client Address Client City: Client Postal C Project Descrip Contaminants: Emission Cont	: pe: :: :: :: :: :: otion:	4093-5FNH89 2002 11/12/2002 Industrial Sewage V Approved	Vorks		
<u>60</u> 2	2 of 2	NNE/119.9	58.7	City of Ottawa 130 Preston St Ottawa ON K1R 7P5	GEN
Generator #: Approval Yrs: SIC Code: SIC Description	<b>n</b> :	ON7422806 03,04			
<u>61</u> 1	1 of 2	SE/69.0	60.9	L'ORA DI OTTAWA 203 LOUISA ST OTTAWA ON K1R 6Y9	SCT
Established: Plant Size (ft²): Employment:	•	1969 0 4			
Details Description: SIC/NAICS C	ode:	Newspaper Publish 511110	ers		
<u>61</u> 2	2 of 2	SE/69.0	60.9	L'Ora di Ottawa (1987) Ltd. 203 Louisa St Ottawa ON K1R 6Y9	SCT
Established: Plant Size (ft²): Employment:		01-AUG-68			
Details Description: SIC/NAICS C	ode:	Newspaper Publish 511110	ers		
<u>62</u> 1	1 of 2	ESE/116.2	59.2	OTTAWA CITY GLADSTONE AVE/PRESTON ST. CSO OTTAWA CITY ON	CA
Certificate #:		3-1102-97-			

DB Number of Direction/ Elevation Site Map Key Records Distance (m) (m) 97 Application Year: Issue Date: 8/20/1997 Municipal sewage Approval Type: Status: Approved Application Type: Client Name: Client Address: Client City: Client Postal Code: **Project Description:** Contaminants: **Emission Control:** R.M. OF OTTAWA-CARLETON 62 2 of 2 ESE/116.2 59.2 CA GLADSTONE AVE/PRESTON ST. OTTAWA CITY ON 7-1017-96-Certificate #: Application Year: 10/18/1996 Issue Date: Approval Type: Municipal water Status: Approved Application Type: Client Name: Client Address: Client City: Client Postal Code: Project Description: Contaminants: **Emission Control:** 1 of 1 W/129.3 64.6 OTTAWA HYDRO 63 SPL 99 BREEZE HILL AVENUE TRANSFORMER **OTTAWA CITY ON** Ref NO: 117044 Contaminant Code: Contaminant Name: Contaminant Quantity: Incident Cause: COOLING SYSTEM LEAK Incident Dt: 8/11/1995 Incident Reason: **EQUIPMENT FAILURE** OTTAWA HYDRO: 5 L OF TRANSFORMER OIL TO GRASS & SOIL: CLEANING UP Incident Summary: MOE Reported Dt: 8/11/1995 **Environmental Impact: POSSIBLE** Nature of Impact: Soil contamination Receiving Medium: LAND SAC Action Class: Sector Source Type: 20101 Site Municipality: 64 1 of 1 W/152.0 64.9 907462 ONTARIO LIMITED CA 111-113 BREEZEHILL AVE.N., SWM OTTAWA CITY ON K1Y 2H6 Certificate #: 3-0953-97-Application Year: 97

Order No: 20160822162

9/9/1997 Issue Date: Approval Type: Municipal sewage

Status: Approved

Application Type:

Number of Direction/ Elevation Site DΒ Map Key Records Distance (m) (m)

Client Name: Client Address: Client City: Client Postal Code: Project Description: Contaminants: **Emission Control:** 

Township:

+

65 1 of 1 S/142.4 69.5 **BORE** ON

Borehole ID: Type: Borehole

Geotechnical/Geological Investigation Use: Status:

Drill Method: Hollow stem auger UTM Zone: 18 Easting: 444022.05 Northing: 5027998.32 Location Accuracy: 99.9

Orig. Ground Elev m: Elev. Reliability Note: DEM Ground Elev m: 68.2 LRBH 03-3 Total Depth m: 4.6 Primary Name: Concession:

Lot: Municipality: Completion Date: 18-AUG-2003 Static Water Level: 3

Primary Water Use: Sec. Water Use:

--- Details ---Stratum ID: 218596124 Top Depth(m): 0.0

Bottom Depth(m): Stratum Desc: Asphalt 0.2

Stratum ID: 218596125 Top Depth(m): 0.2

Bottom Depth(m): Stratum Desc: Grey-Brown Compact to Dense Fill-Misc 2.3

Sand - Gravel Trace: Si

Stratum ID: 218596126 Top Depth(m):

Bottom Depth(m): Stratum Desc: Grey-Brown Loose to Compact Till sand 2.4

silt With: Cob W Blds Trace: Cl Tr Gr

Stratum ID: 218596127 Top Depth(m):

Bottom Depth(m): 4.0 Stratum Desc: Grey-Brown Very Stiff Weathered Crust

Silty Clay

Stratum ID: 218596128 Top Depth(m):

Bottom Depth(m): 4.6 Stratum Desc: Grey-Brown Hard Till sand silt Trace: CI Tr

OTTAWA ON K1Y 3E6

**GEN** 

Order No: 20160822162

1 of 4 S/127.6 68.4 DAVID BERMAN TYPOGRAPHICS LIMITED 66 950 GLADSTONE AVENUE 3RD FLOOR

ON0861503 Generator #: 99,00,01,02,03,04 Approval Yrs:

SIC Code:

SIC Description: OTHER COMM. PRINTING

--- Details ---

Waste Code: 264

PHOTOPROCESSING WASTES Waste Description:

S/127.6 68.4 DAVID BERMAN TYPOGRAPHICS LTD. 66 2 of 4 **GEN** 950 GLADSTONE AVE., 3RD FLOOR

**OTTAWA ON K1Y 3E6** 

Мар Кеу	Numbe Record			Site	DB
Generator # Approval Yr SIC Code: SIC Descrip	s:	ON0861503 94,95,96,97,98 2819 OTHER COMI			
Details Waste Cod Waste Des	de:	264 PHOTOPROC	ESSING WASTES		
<u>66</u>	3 of 4	S/127.6	68.4	TRADER MEDIA CORP 950 GLADSTONE AVE OTTAWA ON K1Y 3E6	SCT
Established	! <del>:</del>	0000			
Plant Size (f	ft²):	0			
Employmen	t:	20			
Details Descriptio SIC/NAICS	n:	Periodical Pub 511120	lishers		
<u>66</u>	4 of 4	S/127.6	68.4	DAVID BERMAN TYPO 950 GLADSTONE AVE OTTAWA ON K1Y 3E6	GRAPHICS LTD. SCT
Established	<u>'-</u>	0000			
Plant Size (f	ft²):	0			
Employmen	t:	0			
Details Descriptio SIC/NAICS	n:	Support Activit 323120	ies for Printing		
<u>67</u>	1 of 1	SSE/82.6	63.3	ON	BORE
Borehole ID Use: Drill Method Easting: Location Ac Elev. Reliab Total Depth Township: Lot: Completion Primary Was	d: ccuracy: illity Note: m: Date: ter Use:	847978 Geotechnical/Geological Diamond Drill 444170  7.4 NEPEAN LOT 38 05-DEC-1961	Investigation	Type: Status: UTM Zone: Northing: Orig. Ground Elev m: PEM Ground Elev m: Primary Name: Concession: Municipality: Static Water Level: Sec. Water Use:	Borehole Decommissioned 18 5028024 62.6 60 CON 1 ON OTTAWA RIVER -999.9
Details	-				
Stratum IE		6559454		Top Depth(m):	0.0
Bottom De	epth(m):	1.8		Stratum Desc:	BROWN SAND, SILT AND GRAVEL (PROBABLY FILL)
Stratum ID	):	6559455		Top Depth(m):	1.8
Bottom De		2.9		Stratum Desc:	GREY, STIFF. CLAYEY SILT
+	- (III).			ou atam Desc.	5, 5 5EE. 6.E.
Stratum ID	).	6559456		Top Depth(m):	2.9
Bottom De		7.4		Stratum Desc:	LIMESTONE BEDROCK 80%-100%
Zottom De				Gratam Book	RECOVERY

Number of Direction/ Elevation Site DΒ Map Key Records Distance (m) (m) 1010 Somerset St W NNW/136.7 60.7 68 1 of 19 **EHS** Ottawa ON Addit. Info Ordered: 20010316001 Order No.: Report Date: 3/20/01 Complete Report Report Type: Search Radius (km): 0.35 1010 Somerset Street West 68 2 of 19 NNW/136.7 60.7 **EHS** Ottawa ON Addit. Info Ordered: 20040723005 Order No.: Report Date: 8/3/04 Report Type: Complete Report Search Radius (km): 0.25 68 3 of 19 NNW/136.7 60.7 Public Works and Government Services Canada **GEN** 1010 Somerset Street Plouffe Park Shop Ottawa ON ON0144726 Generator #: Approval Yrs: 2010 SIC Code: 913910 SIC Description: Other Local Municipal and Regional Public Administration --- Details ---Waste Code: 148 INORGANIC LABORATORY CHEMICALS Waste Description: Waste Code: Waste Description: PETROLEUM DISTILLATES Waste Code: 222 Waste Description: **HEAVY FUELS** Waste Code: Waste Description: ACID WASTE - HEAVY METALS Waste Code: Waste Description: ALIPHATIC SOLVENTS Waste Code: Waste Description: AROMATIC SOLVENTS Waste Code: **ALKALINE WASTES - OTHER METALS** Waste Description: Waste Code: 253 Waste Description: **EMULSIFIED OILS** Waste Code: Waste Description: **OIL SKIMMINGS & SLUDGES** Waste Code: ORGANIC LABORATORY CHEMICALS Waste Description:

OTHER SPECIFIED INORGANICS

**ALKALINE WASTES - HEAVY METALS** 

Order No: 20160822162

Waste Code:

Waste Code:

Waste Description:

Waste Description:

Number of Elevation Site DΒ Map Key Direction/ Records Distance (m) (m)

Waste Code:

WASTE OILS & LUBRICANTS Waste Description:

Waste Code:

**GRAPHIC ART WASTES** Waste Description:

331 Waste Code:

Waste Description: WASTE COMPRESSED GASES

Waste Code:

Waste Description: HALOGENATED SOLVENTS

Waste Code: 243 Waste Description: **PCBS** 

Waste Code: 145

PAINT/PIGMENT/COATING RESIDUES Waste Description:

4 of 19 NNW/136.7 60.7 **PUBLIC WORKS CANADA** 68

MAINTENANCE SUPPORT SERVICES PLOUFFE

GEN

Order No: 20160822162

PARK- 1010 SOMERSET STREET WEST

OTTAWA ON

ON0144726 Generator #: Approval Yrs: 98,99,00,01 SIC Code: 8174

HOUSING ADMIN. SIC Description:

--- Details ---

Waste Code: 112

Waste Description: ACID WASTE - HEAVY METALS

Waste Code:

Waste Description: ALKALINE WASTES - HEAVY METALS

Waste Code:

Waste Description: ALKALINE WASTES - OTHER METALS

Waste Code:

PAINT/PIGMENT/COATING RESIDUES Waste Description:

Waste Code:

INORGANIC LABORATORY CHEMICALS Waste Description:

Waste Code:

Waste Description: AROMATIC SOLVENTS

Waste Code: 212

ALIPHATIC SOLVENTS Waste Description:

Waste Code:

PETROLEUM DISTILLATES Waste Description:

Waste Code: 222

Waste Description: **HEAVY FUELS** 

Waste Code: 241

HALOGENATED SOLVENTS Waste Description:

Waste Code: 243 Waste Description: PCB'S

Waste Code:

**OIL SKIMMINGS & SLUDGES** Waste Description:

Number of Direction/ Elevation Site DΒ Map Key Records Distance (m) (m) Waste Code: WASTE OILS & LUBRICANTS Waste Description: Waste Code: **EMULSIFIED OILS** Waste Description: 265 Waste Code: Waste Description: **GRAPHIC ART WASTES** Waste Code: Waste Description: WASTE COMPRESSED GASES NNW/136.7 68 5 of 19 60.7 public works government services canada **GEN** . 1010 SOMERSET STREET WEST OTTAWA ON ON8671552 Generator #: Approval Yrs: 2013 SIC Code: 531310 SIC Description: REAL ESTATE PROPERTY MANAGERS --- Details ---Waste Code: 252 WASTE OILS & LUBRICANTS Waste Description: Waste Code: 212 Waste Description: ALIPHATIC SOLVENTS Waste Code: Waste Description: ALKALINE WASTES - OTHER METALS Waste Code: LIGHT FUELS Waste Description: Waste Code: 146 OTHER SPECIFIED INORGANICS Waste Description: 6 of 19 NNW/136.7 60.7 SNC Lavalin O&M 68 **GEN** 1010 Somerset St. W Ottawa ON K1A 0K9 Generator #: ON9617269 Approval Yrs: 2010 SIC Code: 531310 SIC Description: Real Estate Property Managers --- Details ---Waste Code: 148 **INORGANIC LABORATORY CHEMICALS** Waste Description: Waste Code: Waste Description: ALKALINE WASTES - OTHER METALS Waste Code: 263 ORGANIC LABORATORY CHEMICALS Waste Description: Waste Code: Waste Description: WASTE COMPRESSED GASES Waste Code: PAINT/PIGMENT/COATING RESIDUES Waste Description:

Order No: 20160822162

ACID WASTE - HEAVY METALS

Waste Code:

Waste Description:

Number of Direction/ Elevation Site DΒ Map Key Records Distance (m) (m) Waste Code: WASTE OILS & LUBRICANTS Waste Description: Waste Code: NON-HALOGENATED PESTICIDES Waste Description: Waste Code: Waste Description: ALKALINE WASTES - HEAVY METALS Waste Code: Waste Description: ALIPHATIC SOLVENTS 7 of 19 NNW/136.7 GVT. OF CAN.-PUBLIC WORKS CANADA 68 60.7 **GEN** MAINTENANCE SUPPORT SERV. PLOUFFE PARK 1010 SOMERSET ST.W.C/O140 PROMENADE DU PORTAGE-OTTAWA ON K1A 0M3 Generator #: ON0144726 88,89,90 Approval Yrs: SIC Code: 8174 HOUSING ADMIN. SIC Description: --- Details ---Waste Code: Waste Description: ALKALINE WASTES - HEAVY METALS Waste Code: 145 Waste Description: PAINT/PIGMENT/COATING RESIDUES Waste Code: Waste Description: INORGANIC LABORATORY CHEMICALS Waste Code: AROMATIC SOLVENTS Waste Description: Waste Code: ALIPHATIC SOLVENTS Waste Description: Waste Code: PETROLEUM DISTILLATES Waste Description: Waste Code: Waste Description: HALOGENATED SOLVENTS 251 Waste Code: Waste Description: **OIL SKIMMINGS & SLUDGES** Waste Code: Waste Description: WASTE OILS & LUBRICANTS Waste Code: Waste Description: **EMULSIFIED OILS** Waste Code: **GRAPHIC ART WASTES** 

Waste Description:

**68** 8 of 19 NNW/136.7 60.7 **Public Works and Government Services Canada GEN** 1010 Somerset Street Plouffe Park Shop

Ottawa ON

Generator #: ON0144726 2011 Approval Yrs:

Number of Site DΒ Map Key Direction/ Elevation Records Distance (m) (m)

913910 SIC Code:

SIC Description: Other Local Municipal and Regional Public Administration

--- Details ---

Waste Code: 243 Waste Description: **PCBS** 

Waste Code:

ALKALINE WASTES - OTHER METALS Waste Description:

Waste Code:

HALOGENATED SOLVENTS Waste Description:

Waste Code: 253

Waste Description: **EMULSIFIED OILS** 

Waste Code: 213

Waste Description: PETROLEUM DISTILLATES

Waste Code:

Waste Description: **GRAPHIC ART WASTES** 

Waste Code: 211

AROMATIC SOLVENTS Waste Description:

Waste Code:

WASTE COMPRESSED GASES Waste Description:

Waste Code:

Waste Description: **OIL SKIMMINGS & SLUDGES** 

Waste Code: 145

Waste Description: PAINT/PIGMENT/COATING RESIDUES

Waste Code:

Waste Description: ALIPHATIC SOLVENTS

Waste Code:

Waste Description: ALKALINE WASTES - HEAVY METALS

Waste Code: 222

**HEAVY FUELS** Waste Description:

Waste Code:

OTHER SPECIFIED INORGANICS Waste Description:

Waste Code:

WASTE OILS & LUBRICANTS Waste Description:

Waste Code:

Waste Description: ACID WASTE - HEAVY METALS

Waste Code: 148

Waste Description: INORGANIC LABORATORY CHEMICALS

Waste Code:

9 of 19

Waste Description: ORGANIC LABORATORY CHEMICALS

ON0144726 Generator #: Approval Yrs: 03,04,05,06,07,08

SIC Code: 913910

NNW/136.7

60.7

68

**GEN** 

Public Works and Government Services Canada

1010 Somerset Street Plouffe Park Shop

Ottawa ON

Map Key Number of Direction/ Elevation Site DB
Records Distance (m) (m)

SIC Description: Other Municipal Public Administration

--- Details ---

Waste Code: 112

Waste Description: ACID WASTE - HEAVY METALS

Waste Code: 12

Waste Description: ALKALINE WASTES - HEAVY METALS

Waste Code: 122

Waste Description: ALKALINE WASTES - OTHER METALS

+

Waste Code: 145

Waste Description: PAINT/PIGMENT/COATING RESIDUES

+

Waste Code: 148

Waste Description: INORGANIC LABORATORY CHEMICALS

+

Waste Code: 211

Waste Description: AROMATIC SOLVENTS

+

Waste Code: 212

Waste Description: ALIPHATIC SOLVENTS

+

Waste Code: 213

Waste Description: PETROLEUM DISTILLATES

+

Waste Code: 222

Waste Description: HEAVY FUELS

+

Waste Code: 241

Waste Description: HALOGENATED SOLVENTS

Waste Code: 243

Waste Description: PCB'S

+

Waste Code: 251

Waste Description: OIL SKIMMINGS & SLUDGES

+

Waste Code: 253

Waste Description: WASTE OILS & LUBRICANTS

Waste Code: 253

Waste Description: EMULSIFIED OILS

+

Waste Code: 263

Waste Description: ORGANIC LABORATORY CHEMICALS

+

Waste Code: 265

Waste Description: GRAPHIC ART WASTES

+

68

Waste Code: 331

10 of 19

Waste Description: WASTE COMPRESSED GASES

 Generator #:
 ON0554822

 Approval Yrs:
 98,99,00,01

**SIC Code:** 7512

SIC Description: NON-RES. BLDG. OPER.

--- Details ---

Waste Code: 122

NNW/136.7

60.7

**GEN** 

**BROOKFIELD LEPAGE JOHNSON CONTROLS** 

1010 SOMERSET STREET PLOUFFE PARK

OTTAWA ON

 Map Key
 Number of Records
 Direction/ Distance (m)
 Elevation (m)
 Site

 Waste Description:
 ALKALINE WASTES - OTHER METALS

 +
 Waste Code:
 145

 Waste Description:
 PAINT/PIGMENT/COATING RESIDUES

Waste Code: 146

Waste Description: OTHER SPECIFIED INORGANICS

Waste Code: 212

Waste Description: ALIPHATIC SOLVENTS

Waste Code: 213

Waste Description: PETROLEUM DISTILLATES

+

Waste Code: 251

Waste Description: OIL SKIMMINGS & SLUDGES

+

Waste Code: 252

Waste Description: WASTE OILS & LUBRICANTS

68 11 of 19 NNW/136.7 60.7 public works government services canada environmental services directorate
1010 SOMERSET STREET WEST

OTTAWA ON

Generator #: ON8671552 Approval Yrs: As of May 2015

SIC Code: SIC Description:

--- Details ---

Waste Code: 221
Waste Description: Light fuels

T 14/0

Waste Code: 146

Waste Description: Other specified inorganic sludges, slurries or solids

+

Waste Code: 150

Waste Description: Inert organic wastes

+

Waste Code: 212

Waste Description: Aliphatic solvents and residues

+

Waste Code: 145

Waste Description: Wastes from the use of pigments, coatings and paints

+

Waste Code: 252

Waste Description: Waste crankcase oils and lubricants

+

Waste Code: 122

Waste Description: Alkaline slutions - containing other metals and non-metals (not cyanide)

Waste Code: 331

Waste Description: Waste compressed gases including cylinders

68 12 of 19 NNW/136.7 60.7 GVT. OF CAN.-PUBLIC WORKS CANADA 18-285

MAINTENANCE SUPPORT SERVICES PLOUFFE

PARK, 1010 SOMERSET STREET W. OTTAWA ON

 Generator #:
 ON0144726

 Approval Yrs:
 92,93,94,95,96,97

SIC Code: 8174

SIC Description: HOUSING ADMIN.

GEN

Map Key Number of Direction/ Elevation Site DB
Records Distance (m) (m)

--- Details ---

Waste Code: 112

Waste Description: ACID WASTE - HEAVY METALS

+

Waste Code: 12

Waste Description: ALKALINE WASTES - HEAVY METALS

+

Waste Code: 122

Waste Description: ALKALINE WASTES - OTHER METALS

+

Waste Code: 145

Waste Description: PAINT/PIGMENT/COATING RESIDUES

+

Waste Code: 148

Waste Description: INORGANIC LABORATORY CHEMICALS

+

Waste Code: 211

Waste Description: AROMATIC SOLVENTS

+

Waste Code: 212

Waste Description: ALIPHATIC SOLVENTS

Waste Code: 213

Waste Description: PETROLEUM DISTILLATES

+

Waste Code: 222

Waste Description: HEAVY FUELS

+

Waste Code: 241

Waste Description: HALOGENATED SOLVENTS

+

 Waste Code:
 243

 Waste Description:
 PCB'S

 +
 Waste Code:
 251

Waste Description: OIL SKIMMINGS & SLUDGES

+

Waste Code: 252

Waste Description: WASTE OILS & LUBRICANTS

+

Waste Code: 253

Waste Description: EMULSIFIED OILS

+

68

Waste Code: 265

Waste Description: GRAPHIC ART WASTES

Waste Code: 33

13 of 19

Waste Description: WASTE COMPRESSED GASES

Ot

NNW/136.7

60.7

Public Works and Government Services Canada 1010 Somerset Street Plouffe Park Shop

Ottawa ON

 Generator #:
 ON0144726

 Approval Yrs:
 2012

 SIC Code:
 913910

SIC Description: Other Local Municipal and Regional Public Administration

--- Details ---

Waste Code: 211

Waste Description: AROMATIC SOLVENTS

Waste Code: 146

Waste Description: OTHER SPECIFIED INORGANICS

+

**GEN** 

Number of Direction/ Site DΒ Map Key Elevation Records Distance (m)

121 Waste Code:

Waste Description: ALKALINE WASTES - HEAVY METALS

Waste Code:

Waste Description: PETROLEUM DISTILLATES

Waste Code:

Waste Description: ALIPHATIC SOLVENTS

Waste Code:

Waste Description: ALKALINE WASTES - OTHER METALS

Waste Code:

Waste Description: INORGANIC LABORATORY CHEMICALS

Waste Code:

Waste Description: ORGANIC LABORATORY CHEMICALS

Waste Code:

Waste Description: HALOGENATED SOLVENTS

Waste Code:

Waste Description: PAINT/PIGMENT/COATING RESIDUES

Waste Code:

WASTE OILS & LUBRICANTS Waste Description:

Waste Code:

ACID WASTE - HEAVY METALS Waste Description:

Waste Code:

**HEAVY FUELS** Waste Description:

Waste Code: 253

Waste Description: **EMULSIFIED OILS** 

Waste Code:

Waste Description: WASTE COMPRESSED GASES

Waste Code:

Waste Description: **GRAPHIC ART WASTES** 

Waste Code:

OIL SKIMMINGS & SLUDGES Waste Description:

Waste Code: 243 **PCBS** Waste Description:

14 of 19

Generator #: ON0144726

Approval Yrs: 2013 SIC Code: 913910

SIC Description:

--- Details ---

68

Waste Code:

Waste Description: **GRAPHIC ART WASTES** 

Waste Code:

Waste Description: ACID WASTE - HEAVY METALS

121 Waste Code:

NNW/136.7

60.7

**GEN** 

Public Works and Government Services Canada

1010 Somerset Street Plouffe Park Shop

Ottawa ON

Map Key	Number of Records	Direction/ Distance (m)	Elevation (m)	Site	DB
Waste Desc	cription:	ALKALINE WASTES	S - HEAVY METALS		
+ Waste Cod Waste Desc		146 OTHER SPECIFIED	INORGANICS		
+ Waste Cod Waste Desc +		122 ALKALINE WASTES	S - OTHER METALS		
Waste Cod Waste Desc +		263 ORGANIC LABORA	TORY CHEMICALS		
Waste Cod Waste Desc +		148 INORGANIC LABOR	RATORY CHEMICAI	_S	
Waste Cod Waste Desc +		213 PETROLEUM DISTI	ILLATES		
Waste Cod Waste Desc		222 HEAVY FUELS			
Waste Code Waste Desc		145 PAINT/PIGMENT/C	OATING RESIDUES		
Waste Cod Waste Desc		211 AROMATIC SOLVE	NTS		
+ Waste Cod Waste Desc		253 EMULSIFIED OILS			
+ Waste Cod Waste Desc		252 WASTE OILS & LUE	BRICANTS		
+ Waste Cod Waste Desc		251 OIL SKIMMINGS &	SLUDGES		
+ Waste Cod Waste Desc		331 WASTE COMPRES	SED GASES		
+ Waste Cod Waste Desc +		212 ALIPHATIC SOLVEI	NTS		
Waste Cod Waste Desc		243 PCBS			
Waste Cod Waste Desc		241 HALOGENATED SC	DLVENTS		
<u>68</u>	15 of 19	NNW/136.7	60.7	PUBLIC WORK & GOV'T SER CANADA 1010 SOMERSET st OTTAWA ON	GEN
Generator #: Approval Yrs SIC Code: SIC Descripti		ON3451496 03,04			
<u>68</u>	16 of 19	NNW/136.7	60.7	public works government services canada 1010 SOMERSET STREET WEST OTTAWA ON	GEN
Generator #: Approval Yrs SIC Code:	:	ON8671552 2012 531310			

Number of Direction/ Elevation Site DΒ Map Key Records Distance (m)

Real Estate Property Managers SIC Description:

17 of 19 NNW/136.7 60.7 Public Works and Government Services Canada 68

1010 Somerset Street Plouffe Park Shop

**GEN** 

Order No: 20160822162

Ottawa ON

Generator #: ON0144726 2009 Approval Yrs: SIC Code: 913910

Other Local Municipal and Regional Public Administration SIC Description:

--- Details ---

Waste Code: 148

**INORGANIC LABORATORY CHEMICALS** Waste Description:

Waste Code:

Waste Description: AROMATIC SOLVENTS

Waste Code:

ALIPHATIC SOLVENTS Waste Description:

Waste Code: 213

Waste Description: PETROLEUM DISTILLATES

Waste Code:

Waste Description: **HEAVY FUELS** 

Waste Code:

Waste Description: HALOGENATED SOLVENTS

Waste Code: 243 Waste Description: **PCBS** 

Waste Code: 251

Waste Description: **OIL SKIMMINGS & SLUDGES** 

Waste Code:

252

Waste Description: WASTE OILS & LUBRICANTS

Waste Code:

Waste Description: **EMULSIFIED OILS** 

Waste Code:

Waste Description: ORGANIC LABORATORY CHEMICALS

Waste Code: 265

Waste Description: **GRAPHIC ART WASTES** 

Waste Code:

WASTE COMPRESSED GASES Waste Description:

Waste Code:

ACID WASTE - HEAVY METALS Waste Description:

Waste Code: 121

Waste Description: ALKALINE WASTES - HEAVY METALS

Waste Code:

ALKALINE WASTES - OTHER METALS Waste Description:

Waste Code:

PAINT/PIGMENT/COATING RESIDUES Waste Description:

Waste Code: 146 Map Key Number of Direction/ Elevation Site DB
Records Distance (m) (m)

Waste Description: OTHER SPECIFIED INORGANICS

68 18 of 19 NNW/136.7 60.7 1010 SOMERSET ST, OTTAWA PINC

Incident ID:

Tank Status: RC Established

Attribute Category: FS-Perform P-line Inc Invest

Task Number: 5417237

Type: FS-Pipeline Incident

Incident Number: 1603296

Status Code: Pipeline Damage Reason Est

Summary: 1010 SOMERSET ST, OTTAWA - PIPELINE HIT - 2"

Spills Action Centre:

Reported By: Tracy Penney - ENBRIDGE

Affiliation:

Method Details:E-mailFuel Category:Natural Gas

Fuel Occurrence Type:

Date of Occurrence:
Occurrence Start Date: 3/25/2015

Health Impact:
Occurrence Desc:
Environment Impact:

Property Damage: Yes

Service Interupt: Fuel Type:

Enforce Policy: Yes

Operation Type:

Damage Reason: Excavation practices not sufficient

Public Relation: Pipeline System: Pipeline Type: Depth:

Pipe Material: Regualtor Location:

PSIG:

Regulator Type:

Notes:

68

NNW/136.7 60.7 SHELL CANADA PRODUCTS LTD.

DEPT OF PUBLIC WORKS 1010 SUMMERSET TANK TRUCK (CARGO)

OTTAWA CITY ON

**Ref NO:** 66275

19 of 19

Contaminant Code: Contaminant Name: Contaminant Quantity:

Incident Cause: CONTAINER OVERFLOW

Incident Dt: 1/20/1992

Incident Reason: EQUIPMENT FAILURE

Incident Summary: SHELL - 0.5L FURNACE OIL OUTSIDE WALL & BESIDE TK VENT PIPE. CLEANED UP.

**MOE Reported Dt:** 1/21/1992

Environmental Impact: NOT ANTICIPATED

Nature of Impact:

Receiving Medium: LAND

SAC Action Class: Sector Source Type:

Site Municipality: 20101

**SPL** 

Map Key	Number Records		Elevation (m)	Site	DB
<u>69</u>	1 of 1	S/143.2	69.3	ON	BORE
				ON	
Borehole ID:	:	808371		Type:	Borehole
Use:		Geotechnical/Geological Inves	stigation	Status:	
Drill Method	<b>:</b>	Hollow stem auger		UTM Zone:	18
Easting:		444030.19		Northing:	5027989.17
Location Ac	•			Orig. Ground Elev m:	100
Elev. Reliabi	•	4.6		DEM Ground Elev m:	68.4
Total Depth Township:	m:	4.0		Primary Name: Concession:	LRBH 03-2
Lot:				Municipality:	
Completion Primary Wat		15-AUG-2003		Static Water Level: Sec. Water Use:	3.1
Timary Wat	.c. <b>0</b> 50.			oco. Water osc.	
Details					
Stratum ID	):	218596121		Top Depth(m):	0.0
Bottom De	epth(m):	0.2		Stratum Desc:	Asphalt
+					
Stratum ID	):	218596122		Top Depth(m):	0.2
Bottom De	epth(m):	3.0		Stratum Desc:	Grey-Brown Compact Fill-Misc Sand - Gravel With: Si W Cob W Blds
+					
Stratum ID	):	218596123		Top Depth(m):	3.0
Bottom De	epth(m):	4.6		Stratum Desc:	Grey-Brown Loose to Compact Till sand silt With: Cob W Blds Trace: Cl Tr Gr
<u>70</u>	1 of 1	S/153.3	68.9		BORE
				ON	BOKE
Borehole ID:	:	808369	etigation	Type:	Borehole

<u>70</u>	1 of 1	S/153.3	68.9	ON	BORE
				ON	
Borehole IL	D:	808369	laatiaatiaa	Туре:	Borehole
Use: Drill Metho	d.	Geotechnical/Geological Hollow stem auger	investigation	Status: UTM Zone:	18
Easting:	u.	444015.36		Northing:	5027989.44
Location A	•			Orig. Ground Elev m:	100
Elev. Relial	•	4.6		DEM Ground Elev m:	68.6 LRBH 03-1
Total Depth Township:	ı m:	4.0		Primary Name: Concession:	LKBH 03-1
Lot:				Municipality:	
Completion		14-AUG-2003		Static Water Level:	2.9
Primary Wa	ater Use:			Sec. Water Use:	
Details -					
Stratum I	D:	218596110		Top Depth(m):	0.0
Bottom D	epth(m):	0.2		Stratum Desc:	Asphalt
+					
Stratum I	D:	218596111		Top Depth(m):	0.2
Bottom D	epth(m):	0.6		Stratum Desc:	Grey Compact Fill-Misc Sand - Gravel
+					
Stratum I	D:	218596112		Top Depth(m):	0.6
Bottom D	epth(m):	1.8		Stratum Desc:	Brown Compact Fill-Misc Sand Trace: Gr
+					
Stratum I	D:	218596113		Top Depth(m):	1.8
Bottom D	epth(m):	2.9		Stratum Desc:	Grey-Brown Very Stiff Weathered Crust Silty Clay
+					
Stratum I	D:	218596114		Top Depth(m):	2.9
Bottom D	epth(m):	4.6		Stratum Desc:	Grey Loose Till Silt - Sand Trace: Cl Tr Gr

Map Key	Number of Records	Direction/ Distance (m)	Elevation (m)	Site	DB
<u>71</u>	1 of 4	WNW/118.1	64.8	73 Breezehill Avenue North Ottawa ON K1Y 2H6	EHS
Addit. Info O Order No.: Report Date: Report Type Search Radi	: :	Fire Insur. Maps ar 20080924003 10/2/2008 Standard Report 0.25	nd/or Site Plans; Title	Search; City Directory	
<u>71</u>	2 of 4	WNW/118.1	64.8	A R C INDUSTRIES 73 BREEZEHILL AVE N OTTAWA ON K1Y 2H6	SCT
Established: Plant Size (fi Employment	t²):	1974 0 15			
Details Description SIC/NAICS	n:	MILLWORK 2431			
<u>71</u>	3 of 4	WNW/118.1	64.8	Arc Industries - Div. of OCAPDD 73 Breezehill Ave N Ottawa ON K1Y 2H6	SCT
Established: Plant Size (fi Employment	t²):	1973 6			
<u>71</u>	4 of 4	WNW/118.1	64.8	ARC Industries 73 Breezehill Ave N Ottawa ON K1Y 2H6	SCT
Established: Plant Size (fi Employment	t²):	1973			
Details Description SIC/NAICS	n:	All Other Miscellan 339990	eous Manufacturing		
<u>72</u>	1 of 1	SW/219.3	66.6	City of Ottawa Breezehill Ave N between Laurel and Gladstone Ottawa ON	SPL
Ref NO:		0381-83NPSF			
Contaminan		41 PAINT AND PIGME	ENT WASTES		
Contaminan	t Quantity:				
Incident Cau Incident Dt:			ss To A Watercourse		
Incident Rea	nmary:	Spill of paint to stor	ent) - Caused by lack m system	c of diligence	
MOE Report Environmen		3/18/2010 Not Anticipated			
Nature of Im Receiving M	pact:	Surface Water Poll	ution		
SAC Action Sector Source Site Municip	Class: ce Type:	Watercourse Spills Other			

Original Depth:

Original Depth:

Material:

Material:

1.2 m

TILL

4.9 m

TILL

Order No: 20160822162

.7 m

3.7 m

**BROWN** 

**BROWN** 

Thickness:

Thickness:

Material Colour:

Material Colour:

Map Key Number of Direction/ Elevation Site DΒ Records Distance (m) (m) 1 of 1 WNW/137.9 64.2 A & T AUTO PARTS **76 AUWR** 55 BREEZEHILL AVE N OTTAWA ON K1Y 2H6 Automobile Parts & Supplies-Used & Rebuilt Facility: Description: 1 of 1 SE/124.1 60.1 179 LOUISA STREET, OTTAWA

**ON K1R 6Y9** 

INC

**GEN** 

Order No: 20160822162

2284250 Incident ID: Incident Number: 133414 SR Type: FS-Incident

Causal Analysis Complete Status Code:

Summary: 179 LOUISA STREET, OTTAWA - 2" PIPELINE HIT

Drainage System: Sub Surface Contam.: Aff. Prop. Use Water: Contam. Migrated: Contact Natural Env.: Near Body of Water: Approx. Quant. Rel.: **Equipment Model:** Serial No:

**77** 

Residential App. Type: Commercial App. Type:

Industrial App. Type: Institutional App. Type:

Venting Type:

Vent Connector Mater.: Vent Chimney Mater.:

Notes:

Pipeline Type: Main Distribution Pipeline

Pipeline Involved: Pipe Material: Steel

Depth Ground Cover: 0.7 Regulator Location: Outside

Regulator Type: Service Regulator (up to 60 psi intake)

Operation Pressure:

Pipeline Notes: Liquid Prop Make: Liquid Prop Model: Liquid Prop Serial No: **Equipment Type:** Cylinder Capacity: Cylinder Capac. Units: Cylinder Material Type: Tank Capacity: Tank Material Type: Tank Storage Type: Tank Location Type:

Pump Flow Rate Capac.: Liquid Prop Notes:

1 of 8

NNW/173.8 58.3 Centretown Professional Corporation

955 Somerset st Ottawa ON

ON2653748 Generator #: Approval Yrs: 2012 541940 SIC Code:

SIC Description: Veterinary Services

**78** 

Map Key	Number of Records	Direction/ Distance (m)	Elevation (m)	Site	DB
Details Waste Cod Waste Des		261 PHARMACEUTICA	ALS		
Waste Cod Waste Desc		312 PATHOLOGICAL \	WASTES		
<u>78</u>	2 of 8	NNW/173.8	58.3	PARSON REFRIGERATION (1985) LTD. 955 SOMERSET STREET WEST OTTAWA ON K1R 6R8	GEN
Generator #: Approval Yrs SIC Code: SIC Descript	s:	ON2204200 02,03,04,05,06,	07,08		
Details Waste Cod Waste Desc		252 WASTE OILS & LU	JBRICANTS		
<u>78</u>	3 of 8	NNW/173.8	58.3	Centretown Professional Corporation 955 Somerset st Ottawa ON K1R 6R8	GEN
Generator #: Approval Yrs SIC Code: SIC Descript	s:	ON2653748 As of May 2015			
Details Waste Cod Waste Desc	le:	312 Pathological waste	s		
+ Waste Cod Waste Desc		261 Pharmaceuticals			
<u>78</u>	4 of 8	NNW/173.8	58.3	Centretown Professional Corporation 955 Somerset st Ottawa ON	GEN
Generator #: Approval Yrs SIC Code: SIC Descript	s:	ON2653748 2010 541940 Veterinary Services	S		
Details Waste Cod Waste Desc +	le:	261 PHARMACEUTICA	ALS		
Waste Cod Waste Desc		312 PATHOLOGICAL \	WASTES		
78	5 of 8	NNW/173.8	58.3	Centretown Professional Corporation 955 Somerset st Ottawa ON	GEN
Generator #: Approval Yrs SIC Code: SIC Descripti	s: ion:	ON2653748 2011 541940 Veterinary Services	5		

Map Key	Number of Records	Direction/ Distance (m)	Elevation (m)	Site	DB
Waste Coo Waste Des		312 PATHOLOGICAL V	VASTES		
+ Waste Cod Waste Des		261 PHARMACEUTICA	ALS		
<u>78</u>	6 of 8	NNW/173.8	58.3	Centretown Professional Corporation 955 Somerset st Ottawa ON	GEN
Generator #: Approval Yrs SIC Code: SIC Descript	s:	ON2653748 2009 541940 Veterinary Services	5		
Details Waste Coo Waste Des	le:	261 PHARMACEUTIC <i>A</i>	ALS		
+ Waste Coo Waste Des		312 PATHOLOGICAL V	VASTES		
<u>78</u>	7 of 8	NNW/173.8	58.3	PARSON REFRIGERATION (1988) LTD. 955 SOMERSET STREET WEST OTTAWA ON K1R 6R8	GEN
Generator #: Approval Yr: SIC Code: SIC Descript	s:	ON2204200 97,98,99,00,01 4253 COMMER. REFRIO	G. WORK		
Details Waste Coo Waste Des	le:	252 WASTE OILS & LU	JBRICANTS		
<u>78</u>	8 of 8	NNW/173.8	58.3	Centretown Professional Corporation 955 Somerset st Ottawa ON	GEN
Generator #: Approval Yrs SIC Code: SIC Descript	s:	ON2653748 2013 541940 VETERINARY SER	RVICES		
Details Waste Coo Waste Des	le:	261 PHARMACEUTIC <i>A</i>	ALS		
+ Waste Cod Waste Des		312 PATHOLOGICAL V	VASTES		
<u>79</u>	1 of 1	N/166.6	58.3	935/943 Somerset St. Ottawa ON	EHS
Addit. Info C Order No.: Report Date: Report Type Search Radi	; :	20021129004 12/9/02 Complete Report 0.25			
80	1 of 1	N/173.8	58.3	OTTAWA HYDRO	SPL

Number of Direction/ Elevation Site DΒ Map Key

Records Distance (m) (m)

> 947 SOMMERSET ST WEST TRANSFORMER **OTTAWA CITY ON**

Ref NO: 36234

Contaminant Code: Contaminant Name: Contaminant Quantity:

COOLING SYSTEM LEAK Incident Cause:

Incident Dt: 6/14/1990

Incident Reason: **EQUIPMENT FAILURE** 

Incident Summary: OTTAWA HYDRO: 150 ML MINERAL OIL TO LAND FROM OVERHEATED TRANSFORMER

6/14/1990 MOE Reported Dt: **POSSIBLE Environmental Impact:** Soil contamination Nature of Impact:

Receiving Medium: LAND

SAC Action Class: Sector Source Type:

20101 Site Municipality:

81 1 of 1 N/169.6 58.2 J.M. HILL & SON LTD. SCT 935 SOMERSET ST W OTTAWA ON K1R 6R8

1922 Established: Plant Size (ft2): 0 Employment: 40

--- Details ---

**BOOKBINDING AND RELATED WORK** Description:

SIC/NAICS Code: 2789

OFFICE EQUIPMENT Description:

SIC/NAICS Code: 5044

Other Printing Description: SIC/NAICS Code: 323119

Description: Support Activities for Printing

SIC/NAICS Code: 323120

**82** 1 of 1 NW/172.7 58.1 **BORE** ON

Type:

847975 Borehole ID:

Geotechnical/Geological Investigation Status: Decommissioned Use:

**Drill Method:** Diamond Drill UTM Zone: 18 443871 5028492 Easting: Northing:

Location Accuracy: Orig. Ground Elev m: 58.4 Elev. Reliability Note: DEM Ground Elev m: 58.8

Total Depth m: 5.5 Primary Name:

Township: **NEPEAN** Concession: CON 1 ON OTTAWA RIVER LOT 38 Lot: Municipality:

Completion Date: 01-DEC-1961 Static Water Level: -999.9

Primary Water Use: Sec. Water Use:

--- Details ---

6559445 0.0 Stratum ID: Top Depth(m):

FILL (SAND, GRAVEL AND SMALL Bottom Depth(m): 1.9 Stratum Desc:

**BOULDERS**)

Order No: 20160822162

Borehole

Stratum ID: 6559446 Top Depth(m):

Bottom Depth(m): 5.5 Stratum Desc: SAND, GRAVEL AND BOULDERS

Мар Кеу	Number of Records	Direction/ Distance (m)	Elevation (m)	Site	DB
<u>83</u>	1 of 21	S/149.0	67.6	City of Ottawa 175 Loretta Ave N Ottawa ON K1Y 4L8	ECA
Record Type	e:				
PDF URL:		2020 001 1/07			
CofA Number Date:	er:	3038-8SLKC7 3/23/2012			
Status:		Approved			
Project Type	e:	Air/Noise			
83	2 of 21	S/149.0	67.6	REGIONAL MUNICIPALITY OF OTTAWA CARLETON ATTN : MARC LEVESQUE 175 LORETTA AV N OTTAWA ON K1Y 4L8	FSTH
License Issu	ue Date:	1/22/1991			
Tank Status		Licensed			
Tank Status		August 2007			
Operation T	ype:	Private Fuel Outlet			
Facility Type	e:	Gasoline Station - S	Self Serve		
Details	_				
Status:		Active			
Capacity:		22700			
Year of Ins		1991			
Corrosion Tank Fuel +	Protection: Type:	Liquid Fuel Single	Wall UST - Gasoline		
Status:		Active			
Capacity:		22700			
Year of Ins		1991			
	Protection:	Liquid Fuel Cingle	Well LICT Diseas		
Tank Fuel	туре:	Liquid Fuel Single	vvali 051 - Diesei		
<u>83</u>	3 of 21	S/149.0	67.6	REGIONAL MUNICIPALITY OF OTTAWA CARLETON ATTN : MARC LEVESQUE 175 LORETTA AV N OTTAWA ON K1Y 4L8	FSTH
License Issu	ue Date:	1/22/1991			
Tank Status	:	Licensed			
Tank Status		December 2008			
Operation T Facility Type		Private Fuel Outlet Gasoline Station - S			
Details	_				
Status:		Active			
Capacity:		22700			
Year of Ins		1991			
Corrosion Tank Fuel	Protection:	Liquid Fuel Single	Wall UST - Gasoline		
+	. , , , ,	Elquid I del Olligle	Cor - Casonile		
Status:		Active			
Capacity:		22700			
Year of Ins	stallation: Protection:	1991			
Tank Fuel		Liquid Fuel Single	Wall UST - Diesel		
83	4 of 21	S/149.0	67.6	OTTAWA-CARLTON, REGIONAL MUN OF	054
_				REGIONAL ROAD #13 AT MANOTICK 175	GEN

Number of Direction/ Elevation Site DΒ Map Key Records Distance (m) (m) LORETTA AVE N OTTAWA ON K1Y 4L8 Generator #: ON0303100 Approval Yrs: 86,87 SIC Code: 8351 SIC Description: EXEC./LEGIS. ADMIN. --- Details ---Waste Code: 252 WASTE OILS & LUBRICANTS Waste Description: 83 5 of 21 S/149.0 67.6 OTTAWA-CARLETON, REGIONAL MUN. OF **GEN SIGNALS AND COMMUNICATIONS 175** LORETTA AVENUE NORTH **OTTAWA ON K1Y 4L8** ON0303108 Generator #: Approval Yrs: 86,87,88 SIC Code: 8371 SIC Description: TRANSPORTATION ADMIN. --- Details ---Waste Code: 213 Waste Description: PETROLEUM DISTILLATES 83 6 of 21 S/149.0 67.6 Corporation City of Ottawa **GEN** 175 Loretta Ave N Ottawa ON K1Y 4L8 Generator #: ON2247318 Approval Yrs: 02,03,04,05,06,07,08 SIC Code: SIC Description: --- Details ---Waste Code: 146 Waste Description: OTHER SPECIFIED INORGANICS Waste Code: 145 PAINT/PIGMENT/COATING RESIDUES Waste Description: Waste Code: Waste Description: **OIL SKIMMINGS & SLUDGES** Waste Code: LIGHT FUELS Waste Description: 7 of 21 S/149.0 67.6 OTTAWA-CARLTON, REGIONAL MUNICIPALITY 83 **GEN** OF 175 LORETTA AVENUE NORTH OTTAWA ON K1Y 4L8 Generator #: ON0303108 Approval Yrs: 92,93,94,95,96,97,98,99,00,01 SIC Code: 8371 SIC Description: TRANSPORTATION ADMIN --- Details ---Waste Code: ALKALINE WASTES - HEAVY METALS Waste Description: Waste Code: Waste Description: OTHER SPECIFIED INORGANICS

Number of Direction/ Elevation Site DΒ Map Key Records Distance (m) (m) Waste Code: 211 AROMATIC SOLVENTS Waste Description: Waste Code: PETROLEUM DISTILLATES Waste Description: 83 8 of 21 S/149.0 67.6 City of Ottawa **GEN** 175 LORETTA AVENUE NORTH OTTAWA ON K1Y 4L8 ON0303108 Generator #: 2011 Approval Yrs: SIC Code: 488490 SIC Description: Other Support Activities for Road Transportation --- Details ---Waste Code: 145 PAINT/PIGMENT/COATING RESIDUES Waste Description: Waste Code: Waste Description: WASTE OILS & LUBRICANTS Waste Code: OTHER SPECIFIED INORGANICS Waste Description: Waste Code: 211 Waste Description: AROMATIC SOLVENTS 83 9 of 21 S/149.0 67.6 City of Ottawa **GEN** 175 LORETTA AVENUE NORTH OTTAWA ON K1Y 4L8 Generator #: ON0303108 Approval Yrs: 2010 488490 SIC Code: SIC Description: Other Support Activities for Road Transportation --- Details ---Waste Code: 146 Waste Description: OTHER SPECIFIED INORGANICS Waste Code: Waste Description: WASTE OILS & LUBRICANTS Waste Code: AROMATIC SOLVENTS Waste Description: Waste Code: PAINT/PIGMENT/COATING RESIDUES Waste Description: 83 10 of 21 S/149.0 67.6 City of Ottawa **GEN** 175 LORETTA AVENUE NORTH OTTAWA ON K1Y 4L8 Generator #: ON0303108 Approval Yrs: 02,03,04,05,06,07,08 SIC Code: SIC Description: --- Details ---Waste Code:

Order No: 20160822162

WASTE OILS & LUBRICANTS

Waste Description:

Number of Direction/ Elevation Site DΒ Map Key Records Distance (m) (m) Waste Code: 145 Waste Description: PAINT/PIGMENT/COATING RESIDUES Waste Code: Waste Description: PAINT/PIGMENT/COATING RESIDUES Waste Code: Waste Description: ALKALINE WASTES - HEAVY METALS Waste Code: Waste Description: PETROLEUM DISTILLATES Waste Code: Waste Description: OTHER SPECIFIED INORGANICS Waste Code: Waste Description: AROMATIC SOLVENTS 83 11 of 21 S/149.0 67.6 Corporation City of Ottawa GEN 175 Loretta Ave N Ottawa ON K1Y 4L8 ON2247318 Generator #: Approval Yrs: 2011 913150 SIC Code: SIC Description: Municipal Regulatory Services --- Details ---Waste Code: 252 Waste Description: WASTE OILS & LUBRICANTS Waste Code: Waste Description: LIGHT FUELS Waste Code: **OIL SKIMMINGS & SLUDGES** Waste Description: Waste Code: PAINT/PIGMENT/COATING RESIDUES Waste Description: Waste Code: 243 Waste Description: **PCBS** Waste Code: Waste Description: OTHER SPECIFIED INORGANICS Corporation City of Ottawa 83 12 of 21 S/149.0 67.6 **GEN** 175 Loretta Ave N Ottawa ON K1Y 4L8 ON2247318 Generator #: Approval Yrs: 2010 SIC Code: 913150 SIC Description: Municipal Regulatory Services --- Details ---Waste Code: Waste Description: OTHER SPECIFIED INORGANICS Waste Code: Waste Description: **OIL SKIMMINGS & SLUDGES** Waste Code: 243 Waste Description: **PCBS** 

Number of Direction/ Site DΒ Map Key Elevation Records Distance (m) 252 Waste Code: Waste Description: WASTE OILS & LUBRICANTS Waste Code: Waste Description: PAINT/PIGMENT/COATING RESIDUES Waste Code: LIGHT FUELS Waste Description: City of Ottawa 83 13 of 21 S/149.0 67.6 **GEN** 175 LORETTA AVENUE NORTH OTTAWA ON K1Y 4L8 Generator #: ON0303108 2009 Approval Yrs: 488490 SIC Code: SIC Description: Other Support Activities for Road Transportation --- Details ---Waste Code: PAINT/PIGMENT/COATING RESIDUES Waste Description: Waste Code: OTHER SPECIFIED INORGANICS Waste Description: Waste Code: Waste Description: AROMATIC SOLVENTS Waste Code: 252 Waste Description: WASTE OILS & LUBRICANTS 83 14 of 21 S/149.0 67.6 OTTAWA-CARLTON, REGIONAL MUN OF **GEN** REGIONAL ROAD #28 (NAVAN ROAD) 175 LORETTA AVENUE NORTH **OTTAWA ON K1Y 4L8** ON0303101 Generator #: Approval Yrs: 86,87 SIC Code: 8351 SIC Description: EXEC./LEGIS. ADMIN. --- Details ---Waste Code: Waste Description: WASTE OILS & LUBRICANTS 15 of 21 S/149.0 67.6 Corporation City of Ottawa 83 **GEN** 175 Loretta Ave N Ottawa ON K1Y 4L8 Generator #: ON2247318 Approval Yrs: 2009 SIC Code: 913150 Municipal Regulatory Services SIC Description: --- Details ---Waste Code: Waste Description: PAINT/PIGMENT/COATING RESIDUES Waste Code: 146 OTHER SPECIFIED INORGANICS Waste Description: Waste Code: LIGHT FUELS Waste Description:

Map Key	Number of Records	Direction/ Distance (m)	Elevation (m)	Site	DB
Waste Cod Waste Des		251 OIL SKIMMINGS 8	SLUDGES		
+ Waste Cod Waste Des		252 WASTE OILS & LU	JBRICANTS		
<u>83</u>	16 of 21	S/149.0	67.6	OTTAWA-CARLTON, REGIONAL MUN. OF SIGNALS AND COMMUNICATIONS 175 LORETTA AVENUE NORTH OTTAWA ON K1Y 4L8	GEN
Generator #: Approval Yrs SIC Code: SIC Descript	s:	ON0303108 89,90 8371 TRANSPORTATIO	N ADMIN		
Details Waste Cod Waste Des +	le:	146 OTHER SPECIFIE	D INORGANICS		
Waste Cod Waste Des +		211 AROMATIC SOLVI	ENTS		
Waste Cod Waste Des		213 PETROLEUM DIS	TILLATES		
<u>83</u>	17 of 21	S/149.0	67.6	Corporation City of Ottawa 175 Loretta Ave N Ottawa ON K1Y 4L8	GEN
Generator #: Approval Yrs SIC Code: SIC Descript	s:	ON2247318 2012 913150 Municipal Regulato	ry Services		
Details Waste Cod Waste Des	le:	221 LIGHT FUELS			
Waste Cod Waste Des		243 PCBS			
+ Waste Cod Waste Des		251 OIL SKIMMINGS 8	SLUDGES		
Waste Cod Waste Des		252 WASTE OILS & LU	JBRICANTS		
+ Waste Cod Waste Des +		145 PAINT/PIGMENT/0	COATING RESIDUES		
Waste Cod Waste Des		146 OTHER SPECIFIE	D INORGANICS		
<u>83</u>	18 of 21	S/149.0	67.6	Corporation City of Ottawa 175 Loretta Ave N Ottawa ON K1Y 4L8	GEN
Generator #: Approval Yrs SIC Code: SIC Descript	s:	ON2247318 As of May 2015			
Details					

Number of Records	Direction/ Distance (m)	Elevation (m)	Site	DB		
e: cription:	146 Other specified ino	rganic sludges, slu	rries or solids			
e: cription:	252 Waste crankcase c	oils and lubricants				
e: cription:	251 Waste oils/sludges	(petroleum based)				
e: cription:	221 Light fuels					
e: cription:	243 PCB					
19 of 21	S/149.0	67.6	City of Ottawa 175 LORETTA AVENUE NORTH OTTAWA ON K1Y 4L8	GEN		
: ion:	ON0303108 2012 488490 Other Support Activ	vities for Road Tran	nsportation			
e: cription:	145 PAINT/PIGMENT/0	COATING RESIDU	ES			
e: cription:	211 AROMATIC SOLVENTS					
e: cription:	146 OTHER SPECIFIE	D INORGANICS				
e: cription:	252 WASTE OILS & LU	JBRICANTS				
20 of 21	S/149.0	67.6	REGIONAL MUNICIPALITY OF OTTAWA CARLETON ATTN : DO 175 LORETTA AV N OTTAWA ON K1Y 4L8	PRT		
	10987 private					
	45000.00 0001056845					
21 of 21	S/149.0	67.6	KENT FUELS 175 LORETTA AVE. RMOC GARAGE TANK TRUCK (CARGO) OTTAWA CITY ON	SPL		
Code: Name: Quantity: se: son: mary: ed Dt:	12/10/1992 ERROR KENT FUELS - 25 12/10/1992	L OF DIESEL FU	JEL TO GROUND DUE TO OVERFILL OF TANK			
	Records  Exiption:  Exiption:  Exiption:  Exiption:  Exiption:  19 of 21  Exiption:  Exi	## Records   Distance (m)   ## 146	### Records   Distance (m) (m)	146		

DB Number of Direction/ Elevation Site Map Key Records Distance (m) (m) Nature of Impact: Receiving Medium: LAND SAC Action Class: Sector Source Type: Site Municipality: 20101 67.9 1 of 1 SW/248.4 150 BREEZEHILL AVENUE NORTH 84 HINC OTTAWA ON K1Y 2H8 FS INC 0905-02838 External File Num: Date of Occurrence: Fuel Occurrence Type: Fuel Type Involved: Status Desc: Pending Level 1 Occurrence Investigation Job Type Desc: Incident/Near-Miss Occurrence (FS) Oper. Type Involved: Service Interruptions: Property Damage: Fuel Life Cycle Stage: Root Cause: Reported Details: Fuel Category: Gaseous Fuel Occurrence Type: Incident Industry Stakeholder (Licensee/Registration/Certificate Holder, Facility Owner, etc.) Affiliation: County Name: Ottawa Approx. Quant. Rel: Nearby body of water: Enter Drainage Syst.: Approx. Quant. Unit: **Environmental Impact: 85** 1 of 1 E/216.5 62.0 **Central Tenant Services GEN** 865 Gladstone Ottawa ON ON3858285 Generator #: Approval Yrs: As of May 2015 SIC Code: SIC Description: --- Details ---Waste Code: Waste Description: Wastes from the use of pigments, coatings and paints 1 of 15 S/153.3 67.8 CITY OF OTTAWA 86 **NPRI** 175 LORETTA AVE. NORTH **OTTAWA ON K1Y4L8** -75.7144 Longitude: NPRI #: 0000004773 2004 Year: Latitude: 45.4028 --- Details ---Units: tonnes Air: .23 Water: Substances Released: Toluene Land:

Map Key	Number of Records	Direction/ Distance (m)	Elevation (m)	Site	DB
86	2 of 15	S/153.3	67.8	REGIONAL MUNICIPALITY OF OTTAWA CARLETON 175 LORETTA AVE. NORTH OTTAWA ON K1Y 4L8	NPRI
Longitude: NPRI #: Year: Latitude:		-75.7144 0000004773 1998 45.4028			
Details Units: Air: Water:		tonnes			
Substances Land:	Released:	Toluene			
<u>86</u>	3 of 15	S/153.3	67.8	CITY OF OTTAWA 175 LORETTA AVE. NORTH OTTAWA ON K1Y4L8	NPRI
Longitude: NPRI #: Year:		-75.7144 0000004773 2008			
Latitude:		45.4028			
Details Units: Air:		tonnes			
Water: Substances Land:	Released:	Toluene			
<u>86</u>	4 of 15	S/153.3	67.8	City of Ottawa 175 LORETTA AVE. NORTH OTTAWA ON K1Y 4L8	NPRI
Longitude: NPRI #: Year:		-75.7144 0000004773 2000			
Latitude:		45.4028			
Details Units: Air: Water:		tonnes			
Substances Land:	Released:	Toluene			
<u>86</u>	5 of 15	S/153.3	67.8	CITY OF OTTAWA 175 LORETTA AVE. NORTH OTTAWA ON K1Y 4L8	NPRI
Longitude: NPRI #: Year: Latitude:		-75.7144 0000004773 2002 45.4028			
Details Units: Air:		tonnes .21			
Water: Substances Land:	Released:	Toluene			

Мар Кеу	Number of Records	Direction/ Distance (m)	Elevation (m)	Site	DB
86	6 of 15	S/153.3	67.8	TRAFFIC OPERATIONS BRANCH R.M.O.C 175 LORETTA AVE. NORTH OTTAWA ON K1Y 4L8	NPRI
Longitude: NPRI #: Year: Latitude:		-75.7144 0000004773 1995 45.4028			
Details Units: Air:		tonnes			
Water: Substances Land:	Released:	Toluene			
86	7 of 15	S/153.3	67.8	REGIONAL MUNICIPALITY OF OTTAWA CARLETON 175 LORETTA AVE. NORTH OTTAWA ON K1Y 4L8	NPRI
Longitude: NPRI #: Year:		-75.7144 0000004773 1997			
Latitude: Details Units: Air:		45.4028 tonnes			
Water: Substances Land:	Released:	Toluene			
<u>86</u>	8 of 15	S/153.3	67.8	REGIONAL MUNICIPALITY OF OTTAWA CARLETON 175 LORETTA AVE. NORTH OTTAWA ON K1Y 4L8	NPRI
Longitude: NPRI #: Year: Latitude:		-75.7144 0000004773 1999 45.4028			
Details Units: Air:		tonnes			
Water: Substances Land:	Released:	Toluene			
<u>86</u>	9 of 15	S/153.3	67.8	CITY OF OTTAWA 175 LORETTA AVE. NORTH OTTAWA ON K1Y4L8	NPRI
Longitude: NPRI #: Year: Latitude:		-75.7144 0000004773 2007 45.4028			
Details Units: Air:		tonnes			

Map Key	Number of Records	Direction/ Distance (m)	Elevation (m)	Site	DB
Water: Substances Land:	Released:	Toluene			
<u>86</u>	10 of 15	S/153.3	67.8	City of Ottawa 175 LORETTA AVE. NORTH OTTAWA ON K1Y 4L8	NPRI
Longitude: NPRI #: Year: Latitude:		-75.7144 0000004773 2001 45.4028			
Details Units: Air:		tonnes			
Water: Substances Land:	Released:	Toluene			
<u>86</u>	11 of 15	S/153.3	67.8	REGIONAL MUNICIPALITY OF OTTAWA CARLETON 175 LORETTA AVE. NORTH OTTAWA ON K1Y 4L8	NPRI
Longitude: NPRI #: Year: Latitude:		-75.7144 0000004773 1996 45.4028			
Details Units: Air:		tonnes			
Water: Substances Land:	Released:	Toluene			
<u>86</u>	12 of 15	S/153.3	67.8	CITY OF OTTAWA 175 LORETTA AVE. NORTH OTTAWA ON K1Y4L8	NPRI
Longitude: NPRI #: Year: Latitude:		-75.7144 0000004773 2006 45.4028			
Details Units: Air: Water:		tonnes			
Substances Land:	Released:	Toluene			
<u>86</u>	13 of 15	S/153.3	67.8	CITY OF OTTAWA 175 LORETTA AVE. NORTH OTTAWA ON K1Y4L8	NPRI
Longitude: NPRI #: Year: Latitude:		-75.7144 0000004773 2009 45.4028			
Details					

Map Key	Number of Records	Direction/ Distance (m)	Elevation (m)	Site	DB
Units: Air: Water:		tonnes			
Substances Land:	s Released:	Toluene			
<u>86</u>	14 of 15	S/153.3	67.8	CITY OF OTTAWA 175 LORETTA AVE. NORTH OTTAWA ON K1Y4L8	NPRI
Longitude: NPRI #: Year: Latitude:		-75.7144 0000004773 2005 45.4028			
Details Units: Air: Water:		tonnes .27			
Substances Land:	s Released:	Toluene			
86	15 of 15	S/153.3	67.8	CITY OF OTTAWA 175 LORETTA AVE. NORTH OTTAWA ON K1Y4L8	NPRI
Longitude:		-75.7144			
NPRI #: Year:		0000004773 2003			
Latitude:		45.4028			
Details					
Units: Air:		tonnes .22			
Water:					
Substances Land:	s Released:	Toluene			
<u>87</u>	1 of 6	S/151.2	67.7	CITY OF OTTAWA 175 LORETTA OTTAWA ON	EASR
Longitude: Latitude: Record Type PDF URL:	:				
CofA Number	r:	R-002-5384270056	•		
Date: Status:		31-OCT-13 Registered			
Project Type.	:	Standby Power Sys	stem		
<u>87</u>	2 of 6	S/151.2	67.7	REGIONAL MUNICIPALITY OF OTTAWA CARLETON ATTN : MARC LEVESQUE 175 LORETTA AVE N OTTAWA ON K1Y 4L8	FST
Instance Nun	nber:	10904148			
Cont Name: Instance Typ	e <sup>.</sup>	FS Liquid Fuel Tan	k		
Fuel Type:	<b>.</b> .	Diesel			
Status:		Active 22700			
Capacity:		22100			

Number of Direction/ Elevation Site DΒ Map Key Records Distance (m) (m) Steel Tank Material: **Corrosion Protection:** Sacrificial anode Single Wall UST Tank Type: Install Year: Parent Facility Type: Fuels Safety Private Fuel Outlet - Self Serve FS Liquid Fuel Tank Facility Type: **87** 3 of 6 S/151.2 67.7 REGIONAL MUNICIPALITY OF OTTAWA **FST CARLETON ATTN: MARC LEVESQUE** 175 LORETTA AVE N OTTAWA ON K1Y 4L8 Instance Number: 10904127 Cont Name: Instance Type: FS Liquid Fuel Tank Fuel Type: Gasoline Status: Active 22700 Capacity: Tank Material: Steel Sacrificial anode **Corrosion Protection:** Tank Type: Single Wall UST Install Year: 1991 Fuels Safety Private Fuel Outlet - Self Serve Parent Facility Type: FS Liquid Fuel Tank Facility Type: Corporation City of Ottawa 87 4 of 6 S/151.2 67.7 **GEN** 175 Loretta Ave N Ottawa ON ON2247318 Generator #: Approval Yrs: 2013 SIC Code: 913150 SIC Description: --- Details ---Waste Code: 221 LIGHT FUELS Waste Description: Waste Code: Waste Description: PAINT/PIGMENT/COATING RESIDUES Waste Code: WASTE OILS & LUBRICANTS Waste Description: Waste Code: **OIL SKIMMINGS & SLUDGES** Waste Description: Waste Code: 243 **PCBS** Waste Description: Waste Code: 146 Waste Description: OTHER SPECIFIED INORGANICS 87 5 of 6 S/151.2 67.7 City of Ottawa Public Works Department **GEN** 175 Loretta Ave N. Ottawa ON

Order No: 20160822162

Generator #: ON0303108
Approval Yrs: As of May 2015
SIC Code:

SIC Code: SIC Description:

Мар Кеу	Number of Records	Direction/ Distance (m)	Elevation (m)	Site	DB
Details Waste Cod Waste Desc		145 Wastes from the u	se of pigments, coa	atings and paints	
Waste Cod Waste Desc		211 Aromatic solvents			
Waste Cod Waste Desc		252 Waste crankcase o	oils and lubricants		
<u>87</u>	6 of 6	S/151.2	67.7	City of Ottawa 175 LORETTA AVENUE NORTH OTTAWA ON	GEN
Generator #: Approval Yrs SIC Code: SIC Descript	s:	ON0303108 2013 488490 OTHER SUPPORT	Γ ACTIVITIES FOR	ROAD TRANSPORTATION	
Details Waste Cod Waste Desc +		146 OTHER SPECIFIE	D INORGANICS		
Waste Code Waste Desc		211 AROMATIC SOLV	ENTS		
Waste Cod Waste Desc +		252 WASTE OILS & LU	JBRICANTS		
Waste Cod Waste Desc		145 PAINT/PIGMENT/0	COATING RESIDU	IES	
<u>88</u>	1 of 5	NNW/188.6	57.6	ROBT TAPE LIMITED 989 SOMERSET ST. W. OTTAWA ON K1R 6R8	GEN
Generator #: Approval Yrs SIC Code: SIC Descript	s:	ON0194400 88,89,90 3081 MACHINE SHOP I	ND.		
Details Waste Cod Waste Desc		253 EMULSIFIED OILS	5		
<u>88</u>	2 of 5	NNW/188.6	57.6	ROBT TAPE LIMITED 33-483 989 SOMERSET ST. W. OTTAWA ON K1R 6R8	GEN
Generator #: Approval Yrs SIC Code: SIC Descript	s:	ON0194400 92,93,94,95,96,97 3081 MACHINE SHOP I	ND.		
Details Waste Cod Waste Desc		253 EMULSIFIED OILS	6		
88	3 of 5	NNW/188.6	57.6	ROBT. TAPE LTD. 989 Somerset St. West Ottawa ON K1R 6R8	GEN
Generator #:		ON0194400			

Map Key	Number of Records	Direction/ Distance (m)	Elevation (m)	Site	DB
Approval Yrs SIC Code: SIC Descript		02,03,04,05			
Details					
Waste Cod Waste Des		253 EMULSIFIED OILS			
<u>88</u>	4 of 5	NNW/188.6	57.6	ROBT TAPE LIMITED 989 SOMERSET STREET WEST OTTAWA ON K1R 6R8	GEN
Generator #:		ON0194400			
Approval Yrs	s:	98,99,00,01			
SIC Code: SIC Descript	ion:	3081 MACHINE SHOP IN	ID.		
•					
Details Waste Cod	e:	253			
Waste Des	cription:	EMULSIFIED OILS			
<u>88</u>	5 of 5	NNW/188.6	57.6	ROBERT TAPE LIMITED 989 SOMERSET ST W OTTAWA ON K1R 6R8	SCT
Established:		1945			
Plant Size (ft		8000			
Employment	:	10			
Details Description SIC/NAICS		INDUSTRIAL AND ( 3599	COMMERCIAL M	ACHINERY AND EQUIPMENT, NOT ELSEWHERE CLASSIFIED	
+ Description SIC/NAICS		Machine Shops 332710			
<u>89</u>	1 of 4	SE/129.7	60.7	KEITEL FURNITURE REPAIR LTD 184 Louisa Street Ottawa ON K1R 6Z1	GEN
Generator #:		ON2295700			
Approval Yrs	s:	2010			
SIC Code: SIC Descript	ion:	321999 All Other Miscellane	ous Wood Produc	et Manufacturing	
		All Other Miscellane	,003 77000 770000	or Mandiacturing	
Details Waste Cod	'or	211			
Waste Des		AROMATIC SOLVE	ENTS		
<u>89</u>	2 of 4	SE/129.7	60.7	KEITEL FURNITURE REPAIR LTD 184 Louisa Street Ottawa ON K1R 6Z1	GEN
Generator #:		ON2295700			
Approval Yrs		2011			
SIC Code: SIC Descript	ion:	321999 All Other Miscellane	ous Wood Produc	et Manufacturing	
•	ion.	All Other Miscellatie	ous vvouu Floduc	st manaraciumi	
Details Waste Cod		211			
Waste Des		AROMATIC SOLVE	ENTS		

Map KeyNumber ofDirection/ElevationSiteDBRecordsDistance (m)(m)

89 3 of 4 SE/129.7 60.7 KEITEL FURNITURE REPAIR LTD

184 Louisa Street Ottawa ON K1R 6Z1 **GEN** 

**GEN** 

Order No: 20160822162

 Generator #:
 ON2295700

 Approval Yrs:
 2009

 SIC Code:
 321999

SIC Description: All Other Miscellaneous Wood Product Manufacturing

--- Details ---

Waste Code: 211

Waste Description: AROMATIC SOLVENTS

89 4 of 4 SE/129.7 60.7 KEITEL FURNITURE REPAIR LTD

184 LOUISA STREET OTTAWA ON K1R 6Z1

Generator #: ON2295700

**Approval Yrs:** 97,98,99,00,01,02,03,04,05,06,07,08

SIC Code: 5421

SIC Description: HOUSEHOLD FURN.

--- Details ---

Waste Code: 211

Waste Description: AROMATIC SOLVENTS

90 1 of 1 N/178.8 58.7 901 SOMERSET ST. HINC

External File Num:FS INC 0809-05349Date of Occurrence:9/10/2008Fuel Occurrence Type:Pipeline StrikeFuel Type Involved:Natural Gas

 Status Desc:
 Completed - Causal Analysis(End)

 Job Type Desc:
 Incident/Near-Miss Occurrence (FS)

 Oper. Type Involved:
 Construction Site (pipeline strike)

Service Interruptions: Yes Property Damage: Yes

Fuel Life Cycle Stage: Transmission, Distribution and Transportation

Root Cause: Equipment/Material/Component:No Procedures:Yes Maintenance:No Design:No

Training:No Management:Yes Human Factors:Yes Reported Details:

Fuel Category: Gaseous Fuel Occurrence Type: Incident

Affiliation: Industry Stakeholder (Licensee/Registration/Certificate Holder, Facility Owner, etc.)

County Name: Ottawa

Approx. Quant. Rel: Nearby body of water: Enter Drainage Syst.: Approx. Quant. Unit: Environmental Impact:

91 1 of 1 S/200.0 71.4 166 LORETTA AVENUE, OTTAWA PINC

Incident ID:

Tank Status: RC Established

Attribute Category: FS-Perform P-line Inc Invest

Task Number: 5666667

Type: FS-Pipeline Incident

Incident Number: 1682814

Status Code: Pipeline Damage Reason Est

Summary: 166 LORETTA AVENUE, OTTAWA - PIPELINE HIT - 1 ½"

DB Map Key Number of Direction/ Elevation Site Records Distance (m) (m) Spills Action Centre: Reported By: Bernie Monette - ENBRIDGE Affiliation: Method Details: E-mail Fuel Category: Natural Gas Fuel Occurrence Type: Date of Occurrence: 8/28/2015 Occurrence Start Date: Health Impact: Occurrence Desc: **Environment Impact:** Property Damage: Yes Service Interupt: Fuel Type: Enforce Policy: Yes Operation Type: Damage Reason: Excavation practices not sufficient Public Relation: Pipeline System: Pipeline Type: Depth: Pipe Material: Regualtor Location: PSIG: Regulator Type: Notes: 1 of 2 N/186.6 59.1 R.M. OF OTTAWA-CARLETON 92 CA SOMERSET ST/PRESTON ST. OTTAWA CITY ON Certificate #: 7-0582-97-Application Year: 97 Issue Date: 7/7/1997 Municipal water Approval Type: Approved Status: Application Type: Client Name: Client Address: Client City: Client Postal Code: Project Description: Contaminants: **Emission Control:** 92 2 of 2 N/186.6 59.1 **OTTAWA CITY** CA SOMERSET ST.W./PRESTON ST.,CSO OTTAWA CITY ON Certificate #: 3-0703-97-Application Year: 97 Issue Date: 7/11/1997 Approval Type: Municipal sewage Status: Approved Application Type: Client Name: Client Address: Client City: Client Postal Code:

Order No: 20160822162

Project Description: Contaminants: Emission Control: Map Key Number of Direction/ Elevation Site DΒ Records Distance (m) (m)

65.9 1 of 1 NW/163.6 93 **BORE** ON

847981 Borehole Borehole ID: Type: Status:

Use: Geotechnical/Geological Investigation Decommissioned Drill Method: Diamond Drill UTM Zone: 18

443792 5028435 Northing: Easting: Location Accuracy: Orig. Ground Elev m: 58.2 **DEM Ground Elev m:** Elev. Reliability Note: 64.5 Total Depth m: 7.8 Primary Name:

**NEPEAN** CON 1 ON OTTAWA RIVER Township: Concession: LOT 38 Municipality: Lot:

Completion Date: 15-DEC-1961 Static Water Level: Sec. Water Use: Primary Water Use:

--- Details ---Stratum ID: 6559465 Top Depth(m): 0.0

**BROWN SAND AND GRAVEL WITH** Bottom Depth(m): 3.2 Stratum Desc:

-999.9

**MAC'S CONVENIENCE STORES INC\*\*** 

**EXP** 

Order No: 20160822162

**BOULDERS (POSSIBLE FILL)** 

Stratum ID: 6559466 Top Depth(m):

SOFT TO FIRM GREY CLAY, TRACE OF Bottom Depth(m): 6.4 Stratum Desc:

SILT

Stratum ID: 6559467 Top Depth(m):

Bottom Depth(m): 7.8 Stratum Desc: VERY DENSE SILTY TILL, SOME SAND

AND GRAVEL

60.0

284 PRESTON ST OTTAWA ON K1R 7R6

Instance ID: 52585

1 of 11

TSSA Program Area: Maximum Hazard Rank:

94

Facility Type: FS Liquid Fuel Tank

Expired Date: 3/2/1995 Instance Number: 10905549 FS Liquid Fuel Tank

Instance Type:

Status: **EXPIRED** 

Description: FS Gasoline Station - Full Serve

SE/149.3

94 2 of 11 SE/149.3 60.0 **MAC'S CONVENIENCE STORES INC\*\* EXP** 

284 PRESTON ST OTTAWA ON K1R 7R6

Instance ID: 50988

TSSA Program Area: Maximum Hazard Rank:

FS Liquid Fuel Tank Facility Type:

**Expired Date:** 3/2/1995 10905543 Instance Number: FS Liquid Fuel Tank Instance Type:

Status: **EXPIRED** 

Description: FS Gasoline Station - Full Serve

**MAC'S CONVENIENCE STORES INC\*\*** 3 of 11 SE/149.3 60.0 94 **EXP** 284 PRESTON ST

Map Key	Number of Records	Direction/ Distance (m)	Elevation (m)	Site	DB
				OTTAWA ON K1R 7R6	
Instance ID: TSSA Prograi Maximum Haz Facility Type: Expired Date: Instance Num Instance Type Status:	zard Rank: : : : :hber:	3/2/1995 10905549 FS Liquid Fuel Tank EXPIRED	ζ.		
Description:					
94	4 of 11	SE/149.3	60.0	MAC'S CONVENIENCE STORES INC** 284 PRESTON ST OTTAWA ON K1R 7R6	EXP
Instance ID: TSSA Progra Maximum Haz Facility Type:	zard Rank:				
Expired Date:	•	3/2/1995			
Instance Num Instance Type		9757232 FS Facility			
Status: Description:		EXPIRED			
94	5 of 11	SE/149.3	60.0	MAC'S CONVENIENCE STORES INC** 284 PRESTON ST OTTAWA ON	EXP
Instance ID: TSSA Prograi Maximum Haz Facility Type:	zard Rank:	50842			
Expired Date: Instance Num Instance Type Status: Description:	nber:	10905558 FS Piping EXPIRED FS Piping			
94	6 of 11	SE/149.3	60.0	MAC'S CONVENIENCE STORES INC** 284 PRESTON ST OTTAWA ON K1R 7R6	EXP
Instance ID: TSSA Prograi Maximum Haz Facility Type:	zard Rank:				
Expired Date: Instance Num Instance Type Status: Description:	: nber:	3/2/1995 10905525 FS Liquid Fuel Tanl EXPIRED	κ.		
94	7 of 11	SE/149.3	60.0	MAC'S CONVENIENCE STORES INC** 284 PRESTON ST OTTAWA ON	EXP
Instance ID:		50716			

Мар Кеу	Number of Records	Direction/ Distance (m)	Elevation (m)	Site	DB
TSSA Progra Maximum Ha Facility Type Expired Date	nzard Rank: n:				
Instance Nur Instance Typ Status: Description:	mber: pe:	10905567 FS Piping EXPIRED FS Piping			
		. 3			
<u>94</u>	8 of 11	SE/149.3	60.0	MAC'S CONVENIENCE STORES INC** 284 PRESTON ST OTTAWA ON K1R 7R6	EXP
Instance ID: TSSA Progra Maximum Ha	azard Rank:				
Facility Type Expired Date Instance Nur Instance Typ Status: Description:	o: mber: oe:	3/2/1995 10905543 FS Liquid Fuel Tank EXPIRED	ζ.		
94	9 of 11	SE/149.3	60.0	MAC'S CONVENIENCE STORES INC** 284 PRESTON ST OTTAWA ON K1R 7R6	EXP
Instance ID: TSSA Progra		51865			
Maximum Ha Facility Type Expired Date Instance Nur Instance Typ	: o: nber:	FS Liquid Fuel Tank 3/2/1995 10905525 FS Liquid Fuel Tank			
Status: Description:		EXPIRED FS Gasoline Station	ı - Full Serve		
94	10 of 11	SE/149.3	60.0	MAC'S CONVENIENCE STORES INC** 284 PRESTON ST OTTAWA ON K1R 7R6	EXP
Instance ID: TSSA Progra Maximum Ha Facility Type Expired Date Instance Nur Instance Typ Status: Description:	nzard Rank: o: o: o: o: o:	3/2/1995 10905534 FS Liquid Fuel Tank EXPIRED	(		
94	11 of 11	SE/149.3	60.0	MAC'S CONVENIENCE STORES INC** 284 PRESTON ST OTTAWA ON K1R 7R6	EXP
Instance ID: TSSA Progra		51396			
Maximum Ha Facility Type		FS Liquid Fuel Tank	(		

Map Key	Number Records		Direction/ Distance (m)	Elevation (m)	Site	DB
Expired Date Instance Nur Instance Typ Status: Description:	nber:		3/2/1995 10905534 FS Liquid Fuel Tank EXPIRED FS Gasoline Station			
95	1 of 5		WNW/168.1	64.1	1040 Somerset St. W Ottawa ON	EHS
Addit. Info O Order No.: Report Date: Report Type: Search Radiu	<del>.</del>		20120516034 28-MAY-12 Standard Report .25			
95	2 of 5		WNW/168.1	64.1	AERO MECHTRONICS LIMITED 01-0 1040 SOMERSET STREET WEST OTTAWA ON K1Y 4L3	984 GEN
Generator #: Approval Yrs SIC Code: SIC Descript	s:		ON0507400 92,93,94,95,96,97,96 3041 COATING OF META			
Details Waste Cod Waste Desc			131 NEUTRALIZED WA	STES - HEAVY ME	TALS	
<u>95</u>	3 of 5		WNW/168.1	64.1	AERO MECHTRONICS LIMITED 1040 SOMERSET STREET WEST OTTAWA ON K1Y 4L3	GEN
Generator #: Approval Yrs SIC Code: SIC Descript	s:		ON0507400 99,00,01 3041 COATING OF META	AL PR.		
Details Waste Cod Waste Des			131 NEUTRALIZED WAS	STES - HEAVY ME	TALS	
<u>95</u>	4 of 5		WNW/168.1	64.1	AERO MECHTRONICS LIMITED 1040 SOMERSET STREET WEST OTTAWA ON K1Y 4L3	GEN
Generator #: Approval Yrs SIC Code: SIC Descript	s:		ON0507400 86,87,88,89 3041 COATING OF META	AL PR.		
Details Waste Cod Waste Des			131 NEUTRALIZED WA	STES - HEAVY ME	TALS	
<u>95</u>	5 of 5		WNW/168.1	64.1	OTTAWA ON	wwis
Well ID: Concession: County: Easting Nad		7184358			Lot: Concession Name: Municipality: Northing Nad83:	

Map Key Numbe Record		Direction/ Distance (m)	Elevation (m)	Site		DB
Zone: Primary Water Use: Sec. Water Use: Pump Rate: Flow Rate:	Monitoring			Utm Reliability: Construction Date: Well Depth: Static Water Level: Clear/Cloudy:	unknown UTM 18-JUN-12 24.3 m	
Specific Capacity: Construction Method: Elevation (m): Depth to Bedrock: Water Type:	Other Meth	ood		Final Well Status: Flowing (y/n): Elevation Reliability: Overburden/Bedrock: Casing Material:	Test Hole FRESH, MINERIAL	
Details				Ü	,	
Thickness:	2.1 m			Original Depth:	2.1 m	
Material Colour:	BROWN			Material:	SAND, SILT, STONES	
+					, ,	
Thickness:	.9 m			Original Depth:	3 m	
Material Colour:	BROWN			Material:	CLAY, SILT, HARD	
+						
Thickness:	7.9 m			Original Depth:	10.9 m	
Material Colour:	GREY			Material:	CLAY, SILT, HARD	
+						
Thickness:	2.5 m			Original Depth:	13.4 m	
Material Colour:	GREY			Material:	SILT, STONES, SAND	
+	0			011.10.4	440	
Thickness: Material Colour:	.9 m GREY			Original Depth: Material:	14.3 m	
+	GRET			waterial.	GRAVEL, , PACKED	
Thickness:	10 m			Original Depth:	24.3 m	
Material Colour:	GREY			Material:	LIMESTONE, , LAYERED	
96 1 of 1		S/193.2	70.1	ON		wwis
Well ID:	1508421			Lot:		
Concession: County:	ΟΤΤΔW/Δ-(	CARLETON		Concession Name: Municipality:	OTTAWA CITY	
Easting Nad83:	444040.7	5/11CE 1 614		Northing Nad83:	5027922	
Zone: Primary Water Use:	18 Domestic			Utm Reliability: Construction Date:	unknown UTM 07-FEB-50	
Sec. Water Use:	Domestic			Well Depth:	139 ft	
Pump Rate: Flow Rate:	5 GPM			Static Water Level: Clear/Cloudy:	17 ft CLEAR	
Specific Capacity:				Final Well Status:	Water Supply	
Construction Method:	Cable Tool			Flowing (y/n):	N	
Elevation (m): Depth to Bedrock: Water Type:	70.93 80 FRESH			Elevation Reliability: Overburden/Bedrock: Casing Material:	Bedrock FRESH, MINERIAL	
Details						
Thickness:	75 ft			Original Depth:	75 ft	
Material Colour:				Material:	MEDIUM SAND	

Original Depth:

Original Depth:

Material:

80 ft

139 ft

CLAY, SILT

Order No: 20160822162

5 ft

59 ft

Thickness:

Thickness:

Material Colour:

Map Key	Number of Records	Direction/ Distance (m)	Elevation (m)	Site		DB
Material Colour:				Material:		
97	1 of 1	SE/152.4	60.0	C CORP (ONTAR PAYABLE 284 PRESTON ST OTTAWA ON K1F		PRT
Location ID: Type: Expiry Date: Capacity (L) Licence #:		11043 retail 1996-02-28 63500 0053322001				
98	1 of 1	N/196.6	59.2	122 PRESTON ST OTTAWA ON K1F		HINC

External File Num: FS INC 0807-03397

Date of Occurrence:6/23/2008Fuel Occurrence Type:Pipeline StrikeFuel Type Involved:Natural Gas

 Status Desc:
 Completed - Causal Analysis(End)

 Job Type Desc:
 Incident/Near-Miss Occurrence (FS)

 Oper. Type Involved:
 Construction Site (pipeline strike)

Service Interruptions: Yes Property Damage: No

Fuel Life Cycle Stage: Transmission, Distribution and Transportation

Root Cause: Equipment/Material/Component:No Procedures:Yes Maintenance:No Design:Yes

Training:No Management:No Human Factors:No

Reported Details:
Fuel Category: Gaseous Fuel
Occurrence Type: Incident

Affiliation: Industry Stakeholder (Licensee/Registration/Certificate Holder, Facility Owner, etc.)

County Name: Ottawa

Approx. Quant. Rel: Nearby body of water: Enter Drainage Syst.: Approx. Quant. Unit: Environmental Impact:

99

1 of 1 N/202.3 59.3 114 PRESTION STREET
OTTAWA ON
HINC

Order No: 20160822162

External File Num: FS INC 0808-04635

Date of Occurrence:8/7/2008Fuel Occurrence Type:Pipeline StrikeFuel Type Involved:Natural Gas

 Status Desc:
 Completed - Causal Analysis(End)

 Job Type Desc:
 Incident/Near-Miss Occurrence (FS)

 Oper. Type Involved:
 Construction Site (pipeline strike)

Service Interruptions: Yes Property Damage: Yes

Fuel Life Cycle Stage: Transmission, Distribution and Transportation

Root Cause: Equipment/Material/Component:No Procedures:No Maintenance:No Design:No

Training:No Management:Yes Human Factors:Yes

Reported Details:
Fuel Category: Gaseous Fuel
Occurrence Type: Incident

Affiliation: Industry Stakeholder (Licensee/Registration/Certificate Holder, Facility Owner, etc.)

County Name: Ottawa

Approx. Quant. Rel: Nearby body of water:

DΒ Number of Direction/ Elevation Site Map Key Records Distance (m) (m) Enter Drainage Syst.: Approx. Quant. Unit: **Environmental Impact:** NNW/219.7 100 1 of 2 56.3 The District in Lebreton Flats Inc. CA 148-158 Spruce Street Ottawa ON K1R 6P2 Certificate #: 9980-5WVVDM 2004 Application Year: Issue Date: 3/16/2004 Approval Type: Municipal and Private Sewage Works Status: Approved Application Type: Client Name: Client Address: Client City: Client Postal Code: Project Description: Contaminants: **Emission Control:** 100 2 of 2 NNW/219.7 56.3 **Domicile Corporation GEN** 148-158 Spruce Street Ottawa ON K1R 6P2 Generator #: ON2357665 03,04 Approval Yrs: SIC Code: SIC Description: 101 1 of 1 NW/211.9 57.2 **WWIS** Ottawa ON Well ID: 7173325 I of Concession: Concession Name: **OTTAWA-CARLETON OTTAWA CITY** Municipality: County: Northing Nad83: Easting Nad83: 443858 5028529 Utm Reliability: margin of error : 30 m - 100 m Zone: 18 Primary Water Use: Monitoring and Test Hole Construction Date: 01-NOV-11 Sec. Water Use: Well Depth: 4.27 m Pump Rate: Static Water Level: Flow Rate: Clear/Cloudy: Specific Capacity: Final Well Status: Test Hole Construction Method: Flowing (y/n): Other Method Elevation Reliability: Elevation (m): Depth to Bedrock: Overburden/Bedrock: Water Type: Casing Material: --- Details ---Thickness: 3.1 m Original Depth: 3.1 m Material Colour: **BROWN** Material: SAND, FILL, SOFT Thickness: 1.17 m Original Depth: 4.27 m **BROWN** Material Colour: Material: SAND, GRAVEL, HARD SLR Consulting (Canada) Ltd. 102 1 of 13 W/191.7 64.6 **GEN** 100 Breezehill Ave

Map Key	Number of Records	Direction/ Distance (m)	Elevation (m)	Site	DB
				Ottawa ON K1Y 2H5	
Generator #: Approval Yrs SIC Code: SIC Descript	s:	ON7477757 07,08 611690 All Other Schools a	nd Instruction		
Details Waste Cod Waste Des	le:	221 LIGHT FUELS			
Waste Cod Waste Des		222 HEAVY FUELS			
102	2 of 13	W/191.7	64.6	Ottawa-Carleton District School Board Devonshire Community PS 100 Breezehill Avenue Ottawa ON K1Y 2H5	GEN
Generator #: Approval Yrs SIC Code: SIC Descript	s:	ON7620039 02,03,04			
Details Waste Cod Waste Des	le:	243 PCB'S			
102	3 of 13	W/191.7	64.6	Ottawa-Carleton District School Board Devonshire PS 100 Breezehill Avenue Ottawa ON	GEN
Generator #: Approval Yrs SIC Code: SIC Descript	s:	ON8413809 03,04			
102	4 of 13	W/191.7	64.6	Ottawa-Carleton District School Board 100 Breezehille Ave. Ottawa ON	GEN
Generator #: Approval Yrs SIC Code: SIC Descript	s:	ON7473867 2009 611110 Elementary and Se	condary Schools		
Details Waste Cod Waste Des	le:	145 PAINT/PIGMENT/C	COATING RESIDU	ES	
+ Waste Cod Waste Des		148 INORGANIC LABO	RATORY CHEMIC	CALS	
+ Waste Cod Waste Des		252 WASTE OILS & LU	BRICANTS		
+ Waste Cod Waste Des		263 ORGANIC LABORA	ATORY CHEMICA	LS	
+ Waste Cod Waste Des		331 WASTE COMPRES	SSED GASES		

Map Key	Number of Records	Direction/ Distance (m)	Elevation (m)	Site	DB
102	5 of 13	W/191.7	64.6	OTTAWA BOARD OF EDUCATION 100 BREEZEHILL AVENUE OTTAWA ON K1Y 2H5	GEN
Generator #:		ON0375224			
Approval Yrs	s:	96,97,98,99,00,01			
SIC Code:		8511			
SIC Descript	ion:	ELEMT./SECON. E	EDUC.		
Details					
Waste Cod		221			
Waste Des	cription:	LIGHT FUELS			
102	6 of 13	W/191.7	64.6	Ottawa-Carleton District School Board 100 Breezehille Ave. Ottawa ON	GEN
Generator #:		ON7473867			
Approval Yrs	s:	2013			
SIC Code:		611110		0.10.01.0	
SIC Descript	tion:	ELEMENTARY AN	D SECONDARY S	CHOOLS	
Details					
Waste Cod Waste Des		148 INORGANIC LABC	RATORY CHEMIC	CALS	
+ Waste Cod	lo:	263			
Waste Des		ORGANIC LABOR	ATORY CHEMICA	LS	
Waste Cod Waste Des +		145 PAINT/PIGMENT/0	COATING RESIDU	ES	
Waste Cod Waste Des		252 WASTE OILS & LU	JBRICANTS		
Waste Cod Waste Des		331 WASTE COMPRES	SSED GASES		
<u>102</u>	7 of 13	W/191.7	64.6	Ottawa-Carleton District School Board 100 Breezehille Ave. Ottawa ON K1Y 2H5	GEN
Generator #:	•	ON7473867			
Approval Yrs		2012			
SIC Code:		611110			
SIC Descript	tion:	Elementary and Se	condary Schools		
Details Waste Cod Waste Des	le:	252 WASTE OILS & LU	JBRICANTS		
+ Waste Cod Waste Des		148 INORGANIC LABO	RATORY CHEMIC	CALS	
+ Waste Cod Waste Des		331 WASTE COMPRES	SSED GASES		
+ Waste Cod Waste Des +		145 PAINT/PIGMENT/0	COATING RESIDU	ES	
Waste Cod Waste Des		263 ORGANIC LABOR	ATORY CHEMICA	LS	

Мар Кеу	Number of Records	Direction/ Distance (m)	Elevation (m)	Site	DB
102	8 of 13	W/191.7	64.6	Ottawa-Carleton District School Board Health & Safety 100 Breezehille Ave. Ottawa ON K1Y 2H5	GEN
Generator #: Approval Yrs SIC Code: SIC Descripti		ON7473867 As of May 2015			
Details					
Waste Code Waste Desc		122 Alkaline slutions - c	containing other met	tals and non-metals (not cyanide)	
Waste Code Waste Desc		148 Misc. wastes and ir	norganic chemicals		
Waste Code Waste Desc		252 Waste crankcase o	ils and lubricants		
+ Waste Code Waste Desc		145 Wastes from the us	se of pigments, coat	ings and paints	
Waste Code Waste Desc		331 Waste compressed	I gases including cy	linders	
+ Waste Code Waste Desc		263 Misc. waste organio	c chemicals		
Waste Code Waste Desc		213 Petroleum distillate	s		
+ Waste Code Waste Desc		112 Acid solutions - cor	ntaining heavy meta	ls	
102	9 of 13	W/191.7	64.6	Ottawa-Carleton District School Board 100 Breezehille Ave. Ottawa ON	GEN
Generator #: Approval Yrs SIC Code: SIC Descripti		ON7473867 2010 611110 Elementary and Se	condary Schools		
Details Waste Code Waste Desc		263 ORGANIC LABOR	ATORY CHEMICAL	.s	
Waste Code Waste Desc		252 WASTE OILS & LU	JBRICANTS		
+ Waste Code Waste Desc		148 INORGANIC LABO	RATORY CHEMIC	ALS	
+ Waste Code Waste Desc		331 WASTE COMPRES	SSED GASES		
+ Waste Code Waste Desc		145 PAINT/PIGMENT/0	COATING RESIDUE	ES	
102	10 of 13	W/191.7	64.6	SLR Consulting (Canada) Ltd. 100 Breezehill Ave Ottawa ON	GEN
Generator #:		ON7477757			

Map Key	Number of Records	Direction/ Distance (m)	Elevation (m)	Site	DB
Approval Yrs SIC Code: SIC Descript		2009 611690 All Other Schools a	and Instruction		•
Details Waste Cod Waste Desc	le:	221 LIGHT FUELS			
Waste Cod Waste Desc		222 HEAVY FUELS			
102	11 of 13	W/191.7	64.6	Ottawa-Carleton District School Board 100 Breezehille Ave. Ottawa ON	GEN
Generator #: Approval Yrs SIC Code: SIC Descript	s:	ON7473867 2011 611110 Elementary and Se	econdary Schools		
Details Waste Cod Waste Desc +	e: cription:		COATING RESIDUI	ES	
Waste Cod Waste Desc +		331 WASTE COMPRE	SSED GASES		
Waste Cod Waste Desc		252 WASTE OILS & LU	JBRICANTS		
Waste Cod Waste Desc		148 INORGANIC LABO	DRATORY CHEMIC	ALS	
+ Waste Cod Waste Desc		263 ORGANIC LABOR	ATORY CHEMICAI	_S	
<u>102</u>	12 of 13	W/191.7	64.6	SEACOR Environmental Inc. 100 Breezehill Ave Ottawa ON	GEN
Generator #: Approval Yrs SIC Code: SIC Descript	s:	ON7477757 06 611690 All Other Schools a	and Instruction		
Details Waste Cod Waste Desc	le:	222 HEAVY FUELS			
<u>102</u>	13 of 13	W/191.7	64.6	Ottawa-Carleton District School Board 100 Breezehille Ave. Ottawa ON K1Y 2H5	GEN
Generator #: Approval Yrs SIC Code: SIC Descript	s:	ON7473867 07,08 611110 Elementary and Se	econdary Schools		
Details Waste Cod Waste Desc +	le: cription:	145 PAINT/PIGMENT/0	COATING RESIDUI	ES	
Waste Cod Waste Des		148 INORGANIC LABO	DRATORY CHEMIC	ALS	

Number of Elevation Site DΒ Map Key Direction/ Records Distance (m) (m)

Waste Code:

WASTE OILS & LUBRICANTS Waste Description:

Waste Code:

ORGANIC LABORATORY CHEMICALS Waste Description:

331 Waste Code:

Waste Description: WASTE COMPRESSED GASES

103 1 of 1 N/211.2 59.4 106 PRESTON STREET **HINC** OTTAWA ON K1R 7P2

External File Num: FS INC 0808-04642

Date of Occurrence: 8/1/2008 Pipeline Strike Fuel Occurrence Type: Fuel Type Involved: Natural Gas

Status Desc: Completed - Causal Analysis(End) Incident/Near-Miss Occurrence (FS) Job Type Desc: Oper. Type Involved: Construction Site (pipeline strike)

Service Interruptions: Yes Property Damage: Yes

Transmission, Distribution and Transportation Fuel Life Cycle Stage:

Root Cause: Root Cause: Equipment/Material/Component:No Procedures:No Maintenance:No Design:No

Training:No Management:Yes Human Factors:No

Reported Details:

Gaseous Fuel Fuel Category: Occurrence Type: Incident

Affiliation: Industry Stakeholder (Licensee/Registration/Certificate Holder, Facility Owner, etc.)

County Name: Ottawa

Approx. Quant. Rel: Nearby body of water: Enter Drainage Syst.: Approx. Quant. Unit: **Environmental Impact:** 

> 104 1 of 1 N/212.7 59.6 105 Preston Street **EHS** Ottawa ON

Fire Insur. Maps and/or Site Plans Addit. Info Ordered:

Order No.: 20081124016 Report Date: 12/3/2008 Standard Report Report Type:

Search Radius (km): 0.25

55.8 105 1 of 1 NW/216.4 **WWIS** Ottawa ON

Lot:

Order No: 20160822162

7173323

Concession Name: Concession: County: OTTAWA-CARLETON Municipality: **OTTAWA CITY** 443839 Northing Nad83: 5028526 Easting Nad83:

Utm Reliability: Zone:

margin of error: 30 m - 100 m Primary Water Use: Monitoring and Test Hole 01-NOV-11 Construction Date:

Sec. Water Use: Well Depth: 3.35 m Pump Rate: Static Water Level: Clear/Cloudy:

Specific Capacity: Final Well Status: Test Hole

**Construction Method:** Other Method Flowing (y/n): Elevation Reliability: Elevation (m): Depth to Bedrock: Overburden/Bedrock: Water Type: Casing Material:

Flow Rate:

Well ID:

DΒ Map Key Number of Direction/ Elevation Site Records Distance (m) (m) --- Details ---2.44 m 2.44 m Thickness: Original Depth: **BROWN** Material Colour: Material: SAND, SOFT, DRY Thickness: .91 m Original Depth: 3.35 m **BROWN** Material Colour: Material: SAND, GRAVEL, HARD 106 1 of 1 NW/218.3 55.8 **WWIS** Ottawa ON Well ID: 7173324 I of Concession: Concession Name: **OTTAWA CITY OTTAWA-CARLETON** Municipality: County: Easting Nad83: 443839 Northing Nad83: 5028528 Utm Reliability: margin of error: 30 m - 100 m Zone: 18 Construction Date: Primary Water Use: Monitoring and Test Hole 01-NOV-11 Sec. Water Use: Well Depth: 3.35 m Static Water Level: Pump Rate: Flow Rate: Clear/Cloudy: Final Well Status: Specific Capacity: Test Hole **Construction Method:** Other Method Flowing (y/n): Elevation (m): Elevation Reliability: Overburden/Bedrock: Depth to Bedrock: Water Type: Casing Material: --- Details ---Thickness: 2.44 m Original Depth: 2.44 m Material Colour: **BROWN** Material: SAND, SOFT, DRY Thickness: .91 m Original Depth: 3.35 m **BROWN** Material Colour: Material: SAND, GRAVEL, HARD SSE/180.1 64.9 107 1 of 1 **BORE** ON Borehole ID: 847367 Borehole Type: Geotechnical/Geological Investigation Status: Decommissioned Use: Diamond Drill Drill Method: UTM Zone: 18 444191 5027927 Easting: Northing: Location Accuracy: Orig. Ground Elev m: 63.1 Elev. Reliability Note: DEM Ground Elev m: 67.7 Total Depth m: Primary Name: **NEPEAN CON 1 ON OTTAWA RIVER** Township: Concession: LOT 38 Lot: Municipality: Completion Date: 08-MAY-1959 Static Water Level: -999.9 Primary Water Use: Sec. Water Use: --- Details ---Stratum ID: 6557036 Top Depth(m): 0.0 Bottom Depth(m): 1.2 Stratum Desc: **FILL** Stratum ID: 6557037 Top Depth(m):

Stratum Desc:

Top Depth(m):

Stratum Desc:

MEDIUM DENSE FINE SAND

MEDIUM DENSE SANDY SILT WITH

Order No: 20160822162

Bottom Depth(m):

Bottom Depth(m):

Stratum ID:

1.8

2.3

6557038

Map Key	Numbe Record		Direction/ Distance (m)	Elevation (m)	Site		DB
						FEW PEBBLES	
+							
Stratum ID:		6557039			Top Depth(m):	2.3	
Bottom Dep	oth(m):	3.4			Stratum Desc:	SHALEY LIMESTONE, CORE RECOVERY 85%	
+							
Stratum ID:	;	6557040			Top Depth(m):	3.4	
Bottom Dep	oth(m):	5.0			Stratum Desc:	SHALEY LIMESTONE, CORE RECOVERY 80%	
108	1 of 1		NNW/227.3	57.3	ON		WWIS
Well ID:		1514863			Lot:		
Concession:					Concession Name:		
County:		OTTAWA- 443982.7	CARLETON		Municipality: Northing Nad83:	OTTAWA CITY 5028597	
Easting Nad8 Zone:	53.	443962. <i>1</i> 18			Utm Reliability:	margin of error : 100 m - 300 m	
Primary Wate		Industrial			Construction Date:	30-JUL-75	
Sec. Water U	se:	12 GPM			Well Depth: Static Water Level:	200 ft 15 ft	
Pump Rate: Flow Rate:		12 GFIVI			Clear/Cloudy:	CLEAR	
Specific Capa	acity:				Final Well Status:	Water Supply	
Construction		Rotary (Air	r)		Flowing (y/n):	N	
Elevation (m) Depth to Bed		56.83 23			Elevation Reliability: Overburden/Bedrock:	Bedrock	
Water Type:		SULPHUR	1		Casing Material:	FRESH	
Details							
Thickness:		23 ft			Original Depth:	23 ft	
Material Co	olour:				Material:	SAND, GRAVEL	
+							
Thickness:		177 ft			Original Depth:	200 ft	
Material Co	olour:				Material:	LIMESTONE	
<u>109</u>	1 of 1		W/226.7	65.5	PRIVATE RESIDENCE 69 BAYSWATER AVE. I OTTAWA CITY ON K1Y		SPL
Ref NO:			171718				
Contaminant Contaminant Contaminant Incident Caus	Name: Quantity:		ABOVE-GROUND	TANK I EAK			
Incident Dt:			8/20/1999				
Incident Reas			CORROSION	105 11511/01157 4840		A OFMENT AND BRAIN	
Incident Sum MOE Reporte			PRIVATE RESIDEN 8/20/1999	ICE-UNKNW AMO	OUNT FURNACE OIL TO	BASEMENT AND DRAIN.	
Environment			NOT ANTICIPATED	)			
Nature of Imp			Other				
Receiving Me SAC Action (		`	WATER				
Sector Source							
Site Municipa	ality:	2	20101				
<u>110</u>	1 of 1		NW/227.2	56.5	077411/4 5::		wwis
14/ //		74000			OTTAWA ON		
Well ID:		7192921			Lot:		

Number of Direction/ Elevation Site DΒ Map Key Records Distance (m) (m) Concession Name: Concession: **OTTAWA-CARLETON** Municipality: **OTTAWA CITY** County: Northing Nad83: Easting Nad83: 443847 5028541 margin of error: 30 m - 100 m Zone: 18 Utm Reliability: Primary Water Use: Monitoring and Test Hole Construction Date: 21-NOV-12 Sec. Water Use: Well Depth: 3.35 m Pump Rate: Static Water Level: Clear/Cloudy: Flow Rate: Specific Capacity: Final Well Status: Observation Wells Construction Method: Rotary (Convent.) Flowing (y/n): Elevation Reliability: Elevation (m): Depth to Bedrock: Overburden/Bedrock: Not stated Water Type: Casing Material: --- Details ---Thickness: 2.74 m Original Depth: 2.74 m **BLACK** MUCK, CLAY, SOFT Material Colour: Material: Thickness: .61 m Original Depth: 3.35 m Material Colour: **BROWN** Material: OTHER, COARSE SAND, HARD 1 of 1 SSE/182.9 63.4 111 **BORE** ON 847368 Borehole Borehole ID: Type: Geotechnical/Geological Investigation Use: Status: Decommissioned Drill Method: Diamond Drill UTM Zone: 18 5027939 Easting: 444227 Northing: Location Accuracy: Orig. Ground Elev m: 61.6 Elev. Reliability Note: **DEM Ground Elev m:** 68.4 Total Depth m: 5.4 Primary Name: CON 1 ON OTTAWA RIVER **NEPEAN** Concession: Township: LOT 38 Municipality: Lot: Completion Date: 05-MAY-1959 Static Water Level: .8 Sec. Water Use: Primary Water Use: --- Details ---Stratum ID: 6557041 Top Depth(m): 0.0 **FILL** Bottom Depth(m): 1.7 Stratum Desc: Stratum ID: 6557042 Top Depth(m): 1.7 Bottom Depth(m): WEATHERED OR FRACTURED Stratum Desc: 2.3 LIMESTONE, CORE RECOVERY 54%

2.3 Stratum ID: 6557043 Top Depth(m):

Stratum Desc: SHALEY LIMESTONE, CORE Bottom Depth(m): 3.8

**RECOVERY 77%** 

6557044 Stratum ID: Top Depth(m):

Bottom Depth(m): Stratum Desc: SHALEY LIMESTONE, CORE NOT 5.4

**RECOVERED** 

1 of 1 NW/230.5 56.4 112 **WWIS** OTTAWA ON

Order No: 20160822162

Well ID: 7192922 Lot:

Concession: Concession Name: **OTTAWA-CARLETON** 

**NEPEAN TOWNSHIP** County: Municipality:

443848 5028545 Easting Nad83: Northing Nad83:

Number of Direction/ Elevation Site DΒ Map Key Records Distance (m) (m) Utm Reliability: margin of error: 30 m - 100 m Zone: 18 Primary Water Use: Monitoring and Test Hole Construction Date: 21-NOV-12 3.66 m Sec. Water Use: Well Depth: Static Water Level: Pump Rate: Flow Rate: Clear/Cloudy: Test Hole Final Well Status: Specific Capacity: Flowing (y/n): **Construction Method:** Rotary (Convent.) Elevation (m): Elevation Reliability: Depth to Bedrock: Overburden/Bedrock: Water Type: Casing Material: Not stated --- Details ---2 74 m Original Depth: 2.74 m Thickness: **BLACK** MUCK, CLAY, SOFT Material Colour: Material: Thickness: .92 m Original Depth: 3.66 m **BROWN** Material Colour: Material: OTHER, COARSE SAND, HARD 1 of 1 W/227.9 65.1 57 Bayswater Ave 113 **EHS** Ottawa ON K1Y 2E8 Addit. Info Ordered: Fire Insur. Maps And /or Site Plans Order No.: 20070322010 3/30/2007 Report Date: CAN - Custom Report Report Type: Search Radius (km): 0.25 1 of 1 NW/224.2 57.0 114 **WWIS** OTTAWA ON 7192919 Well ID: Lot: Concession: Concession Name: County: **OTTAWA-CARLETON** Municipality: **OTTAWA CITY** Easting Nad83: 443806 Northing Nad83: 5028520 Utm Reliability: margin of error: 30 m - 100 m Zone: Primary Water Use: Monitoring and Test Hole Construction Date: 21-NOV-12 Sec. Water Use: Well Depth: 5.49 m Pump Rate: Static Water Level: Clear/Cloudy: Flow Rate: Specific Capacity: Final Well Status: **Observation Wells** Construction Method: Rotary (Convent.) Flowing (y/n): Elevation Reliability: Elevation (m): Depth to Bedrock: Overburden/Bedrock: Not stated Water Type: Casing Material: --- Details ---3.35 m Thickness: Original Depth: 3.35 m Material Colour: **BROWN** Material: OTHER, COARSE SAND, DRY Thickness: 2.14 m Original Depth: 5.49 m **BROWN** Material Colour: Material: OTHER, COARSE SAND, HARD 65.2 57 Bayswater Ave 115 1 of 1 W/232.6**EHS** Ottawa ON K1Y2E8

Order No: 20160822162

Addit. Info Ordered:

 Order No.:
 20130801025

 Report Date:
 09-AUG-13

Map Key	Numbe Record		Elevation n) (m)	Site	DB
Report Type Search Radi		Custom Report .25			
116	1 of 1	SSE/188.3	70.4	ON	BORE
Borehole ID:	;	613107		Type:	Borehole
Use: Drill Method				Status: UTM Zone:	18
Easting:	•	444251		Northing:	5027942
Location Ac				Orig. Ground Elev m:	62.3
Elev. Reliabi		-999		DEM Ground Elev m: Primary Name:	69.1
Total Depth Township:	111.	-999		Concession:	
Lot:				Municipality:	
Completion Primary Wat				Static Water Level: Sec. Water Use:	-999.9
Details					
Stratum ID		218393743		Top Depth(m):	0.0
Bottom De	epth(m):	1.0		Stratum Desc:	FILL.
+ Ctuatum 10		240202744		Ton Donath(ms):	1.0
Stratum ID		218393744		Top Depth(m):	1.0
Bottom De	eptn(m):	1.3		Stratum Desc:	SILT.
Stratum ID	) <i>:</i>	218393745		Top Depth(m):	1.3
Bottom De	epth(m):	2.3		Stratum Desc:	TILL. COMPACT.
+ Stratum ID	) <i>-</i>	218393746		Top Depth(m):	2.3
Bottom De		210000140		Stratum Desc:	BEDROCK SAND. GREY, DENSE.
Dottom Do	,pan(m).			Gadam Desc.	SAND-FINE TO MEDIUM.GREY,DENSE. 00040 010 0000000400
117	1 of 4	N/234.7	59.5	DAVID SAUNDERS O/A CONTROL 110 SPRUCE ST, APT 3 OTTAWA OI	PES
Licence No.: Licence Typ					
117	2 of 4	N/234.7	59.5	PARAMOUNT PEST CO 110 SPRUCE ST; APT OTTAWA ON	
Licence No.: Licence Typ		Operator			
117	3 of 4	N/234.7	59.5	PARAMOUNT PEST CO 110 SPRUCE ST APT#3 OTTAWA OF	BEC
Licence No.: Licence Typ		Operator			

Map Key Numbe Record			Elevation (m)	Site		DB
117	4 of 4	N/234.7	59.5	DAVID SAUNDERS O/A CONTROL 110 SPRUCE ST, APT OTTAWA ON		PES
Licence No. Licence Typ	:=	Operator				
118	1 of 1	NW/228.2	56.9	OTTAWA ON		wwis
Well ID: Concession County: Easting Nac Zone: Primary Wa Sec. Water Pump Rate: Flow Rate: Specific Ca Constructio Elevation (n Depth to Be Water Type: Details Thickness Material C	ter Use: Use: Use: pacity: n Method: n): drock:	7192920 OTTAWA-CARLETON 443805 18 Monitoring and Test Hole  Rotary (Convent.)  2.74 m BROWN		Lot: Concession Name: Municipality: Northing Nad83: Utm Reliability: Construction Date: Well Depth: Static Water Level: Clear/Cloudy: Final Well Status: Flowing (y/n): Elevation Reliability: Overburden/Bedrock: Casing Material:  Original Depth: Material:	OTTAWA CITY 5028524 margin of error : 30 m - 100 m 21-NOV-12 5.49 m  Observation Wells  Not stated  2.74 m SAND, OTHER, DRY	
Material C +	olour:	BROWN		Materiai:	SAND, OTHER, DRY	
Thickness	s:	2.75 m		Original Depth:	5.49 m	
Material C	colour:	BROWN		Material:	SAND, OTHER	
119	1 of 1	SSE/197.6	61.4	ON		BORE
Borehole ID Use: Drill Method Easting: Location Ad Elev. Reliab Total Depth Township: Lot: Completion Primary Wa	d: ccuracy: illity Note: m: Date: ter Use:	847366 Geotechnical/Geological Involutional Drill 444208  5.7 NEPEAN LOT 38 07-MAY-1959	estigation	Type: Status: UTM Zone: Northing: Orig. Ground Elev m: DEM Ground Elev m: Primary Name: Concession: Municipality: Static Water Level: Sec. Water Use:	Borehole Decommissioned 18 5027915 63.2 69 CON 1 ON OTTAWA RIVER -999.9	
Details Stratum IL Bottom De	D:	6557030 0.8		Top Depth(m): Stratum Desc:	0.0 FILL	
+ Stratum IL Bottom De +		6557031 1.8		Top Depth(m): Stratum Desc:	0.8 MEDIUM DENSE FINE SAND	
Stratum IE Bottom De		6557032 2.4		Top Depth(m): Stratum Desc:	1.8 MEDIUM DENSE SANDY SILT	

Map Key	Numbe Record		Direction/ Distance (m)	Elevation (m)	Site	DB
Stratum ID:	•	6557033			Top Depth(m):	2.4
Bottom Dep	oth(m):	2.7			Stratum Desc:	DENSE SILT AND STONES WITH A LITTLE SAND
Stratum ID:	•	6557034			Top Depth(m):	2.7
Bottom Dep		4.2			Stratum Desc:	SHALEY LIMESTONE, CORE RECOVERY 88%
+		0557005			<b>- - - - - - - - - -</b>	4.0
Stratum ID:		6557035			Top Depth(m):	4.2 SHALEY LIMESTONE, CORE
Bottom Dep	otn(m):	5.7			Stratum Desc:	RECOVERY 98%
<u>120</u>	1 of 1		SSE/202.5	60.3	Young Street & Loretta Ottawa ON	Avenue EHS
Addit. Info Oi Order No.: Report Date: Report Type: Search Radiu	,	2	20130110032 21-JAN-13 Standard Select F 25	Report		
121	1 of 1		NNE/246.2	62.1	883 Somerset St W Ottawa ON	EHS
Addit. Info Or Order No.: Report Date: Report Type: Search Radiu		2	City Directory 20130225003 05-MAR-13 Standard Report 25			
122	1 of 1		SSE/202.2	59.7	ON	BORE
Borehole ID: Use: Drill Method: Easting: Location Acc Elev. Reliabil Total Depth n Township: Lot: Completion L Primary Wate	curacy: lity Note: n: Oate:	847369 Geotechnic Diamond E 444226 5.7 NEPEAN LOT 38 06-MAY-19		restigation	Type: Status: UTM Zone: Northing: Orig. Ground Elev m: DEM Ground Elev m: Primary Name: Concession: Municipality: Static Water Level: Sec. Water Use:	Borehole Decommissioned 18 5027918 62.2 69.1 CON 1 ON OTTAWA RIVER 2.1
Details						
Stratum ID:	•	6557046			Top Depth(m):	0.0
Bottom Dep	oth(m):	1.5			Stratum Desc:	FILL
+						
Stratum ID:		6557047			Top Depth(m):	1.5
Bottom Dep	oth(m):	2.5			Stratum Desc:	DENSE FINE SAND AND STONES WITH A LITTLE CLAY AND SILT
+ Stratum ID:	•	6557048			Top Depth(m):	2.5
Bottom Dep		4.0			Stratum Desc:	SHALY LIMESTONE, CORE RECOVERY 76%
+						

Мар Кеу	Numbe Record		Direction/ Distance (m)	Elevation (m)	Site	DB
Stratum ID:	•	6557049			Top Depth(m):	4.0
Bottom Dep	oth(m):	4.2			Stratum Desc:	SHALY LIMESTONE, CORE RECOVERY 80%
+ Stratum ID:	-	6557050			Ton Donth/m)	4.2
Bottom Dep		5.7			Top Depth(m): Stratum Desc:	SHALY LIMESTONE, CORE RECOVERY 90%
<u>123</u>	1 of 1		N/242.5	60.3	Ottawa ON	wwis
Well ID:		7108782			Lot:	
Concession: County:		OTTAWA-	CARLETON		Concession Name: Municipality:	OTTAWA CITY
Easting Nad8	33 <i>:</i>	444101	O/ (INCLE I OI)		Northing Nad83:	5028624
Zone:		18			Utm Reliability:	margin of error : 10 - 30 m
Primary Wate Sec. Water U Pump Rate:		Not Used			Construction Date: Well Depth: Static Water Level:	02-JUL-08 10 m
Flow Rate:					Clear/Cloudy:	
Specific Capa Construction					Final Well Status: Flowing (y/n):	Abandoned-Other
Elevation (m)		59.7			Elevation Reliability:	
Depth to Bed Water Type:	lrock:				Overburden/Bedrock: Casing Material:	
Details		0.0			a :	
Thickness:		-3.6 m			Original Depth:	6 m
Material Co	lour:				Material:	
+ Thickness:		.4 m			Ovininal Danth	6.4 m
Material Co		.4 111			Original Depth: Material:	0.4 III
+	ioui.				wateriar.	
Thickness:		-2.5 m			Original Depth:	7.5 m
Material Co		2.0			Material:	7.5 m
+					matorian	
Thickness:		9.6 m			Original Depth:	9.6 m
Material Co					Material:	
+						
Thickness:		3.6 m			Original Depth:	10 m
Material Co	lour:				Material:	
+ Thickness:		0 m			Original Depth:	10 m
Material Co	lour:				Material:	
124	1 of 3		WNW/221.8	62.9	ACKLANDS LIMITED 1050 SOMERSET ST. W OTTAWA ON K1Y 3C5	/EST GEN
Generator #:		(	ON0021803			
Approval Yrs		9	90			
SIC Code: SIC Descripti			6359 OTHER VEH. REPA	AIR		
Details			100			

122 ALKALINE WASTES - OTHER METALS

Order No: 20160822162

Waste Code: Waste Description:

Мар Кеу	Number of Records	Direction/ Distance (m)	Elevation (m)	Site	DB
124	2 of 3	WNW/221.8	62.9	ACKLANDS LIMITED 02-414 1050 SOMERSET ST. WEST OTTAWA ON K1Y 3C5	GEN
Generator #: Approval Yrs SIC Code: SIC Descript	<b>5</b> :	ON0021803 92,93,94,95,96,97 6359 OTHER VEH. REP	AIR		
Details Waste Cod Waste Des		122 ALKALINE WASTE	ES - OTHER METALS	3	
124	3 of 3	WNW/221.8	62.9	ACKLANDS LIMITED 1050 SOMERSET STREET WEST OTTAWA ON K1Y 3C5	GEN
Generator #: Approval Yrs SIC Code: SIC Descript	<b>:</b> :	ON0021803 98 6359 OTHER VEH. REP	AIR		
Details Waste Cod Waste Des		122 ALKALINE WASTE	ES - OTHER METALS	<b>s</b>	
125	1 of 12	ESE/237.8	66.4	City of Ottawa 301 Preston St Ottawa ON K1R 0A6	CA
Certificate #: Application N Issue Date: Approval Typ Status: Application N Client Name: Client Addre Client City: Client Postal Project Desc Contaminant Emission Co	Year:  Type:  ss:  Code:  ription:	7204-76CQS7 2007 8/24/2007 Municipal and Priva Approved	ate Sewage Works		
125	2 of 12	ESE/237.8	66.4	300 Rochester Street Ottawa ON K1R 7N4	EHS
Addit. Info O Order No.: Report Date: Report Type. Search Radio	;	Title Search 20050506007 5/17/2005 0.35			
125	3 of 12	ESE/237.8	66.4	OTTAWA-CARLETON DISTRICT SCHOOL BOARD ADULT HIGH SCHOOL 300 ROCHESTER STREET OTTAWA ON K1P 7N4	GEN
Generator #:		ON0375211			

Map Key Number of Direction/ Elevation Site DB Records Distance (m) (m)

**Approval Yrs:** 98,99,00,01,02,03,04,05,06,07,08

SIC Code: 8511

SIC Description: ELEMT./SECON. EDUC.

--- Details ---

Waste Code: 145

Waste Description: PAINT/PIGMENT/COATING RESIDUES

+

Waste Code: 331

Waste Description: WASTE COMPRESSED GASES

+

Waste Code: 212

Waste Description: ALIPHATIC SOLVENTS

+

Waste Code: 221

Waste Description: LIGHT FUELS

Τ...

Waste Code: 148

Waste Description: INORGANIC LABORATORY CHEMICALS

Waste Code: 263

Waste Description: ORGANIC LABORATORY CHEMICALS

125 4 of 12 ESE/237.8 66.4 OTTAWA-CARLETON DISTRICT SCHOOL

BOARD

ADULT HIGH SCHOOL 300 ROCHESTER

**GEN** 

**GEN** 

Order No: 20160822162

STREET

OTTAWA ON K1R 7N4

 Generator #:
 ON0375211

 Approval Yrs:
 2010

 SIC Code:
 611110

SIC Description: Elementary and Secondary Schools

--- Details ---

Waste Code: 263

Waste Description: ORGANIC LABORATORY CHEMICALS

Waste Code: 21:

Waste Description: ALIPHATIC SOLVENTS

+

Waste Code: 331

Waste Description: WASTE COMPRESSED GASES

+

Waste Code: 148

Waste Description: INORGANIC LABORATORY CHEMICALS

Waste Code:

Waste Description: PAINT/PIGMENT/COATING RESIDUES

Waste Code: 221

Waste Description: LIGHT FUELS

125 5 of 12 ESE/237.8 66.4 Ottawa-Carleton District School Board

**Adult Continuing Education Centre 300** 

Rochester St.

Ottawa ON K1R 7N4

 Generator #:
 ON7850245

 Approval Yrs:
 02,03,04

SIC Code: SIC Description:

--- Details ---

Waste Code: 243

Мар Кеу	Number of Records	Direction/ Distance (m)	Elevation (m)	Site	DB
Waste Des	cription:	PCB'S			
125	6 of 12	ESE/237.8	66.4	OTTAWA BOARD OF EDUCATION 29-129 HIGH SCHOOL OF COMMERCE,300 ROCHESTERST C/O 330 GILMOUR ST. OTTAWA ON K1R 7N4	GEN
Generator #: Approval Yr: SIC Code: SIC Descript	s:	ON0375211 94,95,96 8511 ELEMT./SECON. E	EDUC.		
Details Waste Coo Waste Des	le:	148 INORGANIC LABO	DRATORY CHEMICA	LS	
Waste Cod Waste Des		263 ORGANIC LABOR	ATORY CHEMICALS	3	
125	7 of 12	ESE/237.8	66.4	OTTAWA-CARLETON DISTRICT SCHOOL BOARD ADULT HIGH SCHOOL 300 ROCHESTER STREET OTTAWA ON K1R 7N4	GEN
Generator #: Approval Yr: SIC Code: SIC Descript	s:	ON0375211 2012 611110 Elementary and Se	condary Schools		
Details Waste Cod Waste Des	le:	331 WASTE COMPRE	SSED GASES		
Waste Cod Waste Des		145 PAINT/PIGMENT/0	COATING RESIDUES	3	
+ Waste Cod Waste Des		212 ALIPHATIC SOLVI	ENTS		
+ Waste Cod Waste Des		221 LIGHT FUELS			
+ Waste Cod Waste Des		148 INORGANIC LABO	DRATORY CHEMICA	LS	
+ Waste Cod Waste Des		263 ORGANIC LABOR	ATORY CHEMICALS	3	
125	8 of 12	ESE/237.8	66.4	OTTAWA-CARLETON DISTRICT SCHOOL BOARD ADULT HIGH SCHOOL 300 ROCHESTER STREET OTTAWA ON K1R 7N4	GEN
Generator #: Approval Yr: SIC Code: SIC Descript	s:	ON0375211 2011 611110 Elementary and Se	econdary Schools		
Details Waste Coo Waste Des	le:	212 ALIPHATIC SOLVI	ENTS		

Number of Direction/ Site DΒ Map Key Elevation Records Distance (m) (m) 263 Waste Code: Waste Description: ORGANIC LABORATORY CHEMICALS Waste Code: Waste Description: WASTE COMPRESSED GASES Waste Code: Waste Description: LIGHT FUELS Waste Code: 148 Waste Description: INORGANIC LABORATORY CHEMICALS Waste Code: Waste Description: PAINT/PIGMENT/COATING RESIDUES OTTAWA-CARLETON DISTRICT SCHOOL 125 9 of 12 ESE/237.8 66.4 **GEN BOARD Health and Safety ADULT HIGH SCHOOL 300 ROCHESTER** STREET OTTAWA ON K1R 7N4 Generator #: ON0375211 Approval Yrs: As of May 2015 SIC Code: SIC Description: --- Details ---Waste Code: 112 Waste Description: Acid solutions - containing heavy metals Waste Code: 212 Waste Description: Aliphatic solvents and residues Waste Code: Waste Description: Wastes from the use of pigments, coatings and paints Waste Code: Waste Description: Alkaline slutions - containing other metals and non-metals (not cyanide) Waste Code: 263 Waste Description: Misc. waste organic chemicals Waste Code: Misc. wastes and inorganic chemicals Waste Description: Waste Code: Waste compressed gases including cylinders Waste Description: 267 Waste Code: Organic acids Waste Description: 125 10 of 12 ESE/237.8 66.4 OTTAWA-CARLETON DISTRICT SCHOOL **GEN BOARD ADULT HIGH SCHOOL 300 ROCHESTER** STREET OTTAWA ON K1R 7N4 Generator #: ON0375211

Order No: 20160822162

 Generator #:
 ON037521

 Approval Yrs:
 2009

 SIC Code:
 611110

SIC Description: Elementary and Secondary Schools

--- Details ---

Waste Code: 145

Waste Description: PAINT/PIGMENT/COATING RESIDUES

Number of Elevation Site DΒ Map Key Direction/ Records Distance (m) (m) Waste Code: INORGANIC LABORATORY CHEMICALS Waste Description: Waste Code: ALIPHATIC SOLVENTS Waste Description: Waste Code: 221 Waste Description: LIGHT FUELS Waste Code: 263 Waste Description: ORGANIC LABORATORY CHEMICALS Waste Code: 331 Waste Description: WASTE COMPRESSED GASES OTTAWA BOARD OF EDUCATION 125 11 of 12 ESE/237.8 66.4 **GEN** HIGH SCHOOL OF COMMERCE 300 ROCHESTER STREET OTTAWA ON K1R 7N4 Generator #: ON0375211 Approval Yrs: 92,93,97 SIC Code: 8511 ELEMT./SECON. EDUC. SIC Description: --- Details ---Waste Code: 148 INORGANIC LABORATORY CHEMICALS Waste Description: Waste Code: 263 Waste Description: ORGANIC LABORATORY CHEMICALS 125 12 of 12 ESE/237.8 66.4 OTTAWA BOARD OF EDUCATION **GEN** HIGH SCHOOL OF COMMERCE,300 ROCHESTERST C/O 330 GILMOUR ST. OTTAWA ON K1R 7N4 Generator #: ON0375211 Approval Yrs: 86,87,88,89,90 8511 SIC Code: SIC Description: ELEMT./SECON. EDUC. --- Details ---148 Waste Code: Waste Description: INORGANIC LABORATORY CHEMICALS Waste Code: ORGANIC LABORATORY CHEMICALS Waste Description: 1 of 1 ESE/234.4 66.3 126 OTTAWA-CARLETON DISTRICT SCHOOL GEN **BOARD ADULT HIGH SCHOOL 300 ROCHESTER** STREET OTTAWA ON

Order No: 20160822162

 Generator #:
 ON0375211

 Approval Yrs:
 2013

 SIC Code:
 611110

SIC Description: ELEMENTARY AND SECONDARY SCHOOLS

--- Details ---

Waste Code: 212

Waste Description: ALIPHATIC SOLVENTS

Map Key Number of Direction/ Elevation Site DB
Records Distance (m) (m)

Waste Code: 267

Waste Description: ORGANIC ACIDS

+

Waste Code: 148

Waste Description: INORGANIC LABORATORY CHEMICALS

۲

Waste Code: 331

Waste Description: WASTE COMPRESSED GASES

+

Waste Code: 122

Waste Description: ALKALINE WASTES - OTHER METALS

+

Waste Code: 263

Waste Description: ORGANIC LABORATORY CHEMICALS

+

Waste Code: 112

Waste Description: ACID WASTE - HEAVY METALS

+

Waste Code: 145

Waste Description: PAINT/PIGMENT/COATING RESIDUES

Waste Code: 221

Waste Description: LIGHT FUELS

127 1 of 2 W/238.4 64.5 49 Bayswater Avenue, Ottawa ON K1Y 2E7

Order No: 20160822162

Incident ID:2551556Incident Number:399906SR Type:FS-Incident

Status Code: Causal Analysis Complete

Summary: 49 Bayswater Avenue, Ottawa - 1" Pipeline Hit

Sub Surface Contam.:
Aff. Prop. Use Water:
Contam. Migrated:
Contact Natural Env.:
Near Body of Water:
Approx. Quant. Rel.:
Equipment Model:
Serial No:

Drainage System:

Residential App. Type: Commercial App. Type: Industrial App. Type: Institutional App. Type: Venting Type:

Vent Connector Mater.: Vent Chimney Mater.:

Notes:

Pipeline Type: Service / Riser Distribution Pipeline

Pipeline Involved:

Pipe Material:PlasticDepth Ground Cover:0.6Regulator Location:Outside

Regulator Type: Service Regulator (up to 60 psi intake)

Operation Pressure:

Pipeline Notes:
Liquid Prop Make:
Liquid Prop Model:
Liquid Prop Serial No:
Equipment Type:
Cylinder Capacity:
Cylinder Capac. Units:
Cylinder Material Type:

169

Number of Direction/ Elevation Site DΒ Map Key Records Distance (m) (m)

Tank Capacity: Tank Material Type: Tank Storage Type: Tank Location Type: Pump Flow Rate Capac.: Liquid Prop Notes:

> 127 2 of 2 W/238.4 64.5 Broadband Maintenance Inc. <UNOFFICIAL>

> > 49 Bayswater Ave Ottawa ON K1Y 2E7

SPL

Order No: 20160822162

Ref NO: 5553-863QB4

Contaminant Code:

METHANE GAS, COMPRESSED (NATURAL GAS) Contaminant Name:

Contaminant Quantity:

Incident Cause: Discharge or Emission to Air Incident Dt:

Incident Reason:

TSSA FSB: 1inch plastic made safe Incident Summary:

MOE Reported Dt: 6/3/2010 Environmental Impact: Not Anticipated

Nature of Impact: Receiving Medium:

SAC Action Class: TSSA - Fuel Safety Branch

Sector Source Type: Other

Site Municipality:

128 1 of 1 SSE/219.8 66.3 **BORE** ON

Borehole ID: 847371 Borehole Type: Status: Decommissioned

Use: Geotechnical/Geological Investigation Drill Method: Diamond Drill UTM Zone: 18 444177 Northing: 5027881 Easting:

Location Accuracy: Orig. Ground Elev m: 65.3 Elev. Reliability Note: DEM Ground Elev m: 70.2

Total Depth m: 6.8 Primary Name: **NEPEAN** CON 1 ON OTTAWA RIVER Township: Concession:

LOT 38 Municipality: Lot: Completion Date: 12-MAY-1959 Static Water Level: .8

Primary Water Use:

--- Details ---

Stratum ID: 6557056 Top Depth(m): 0.0 Stratum Desc: **FILL** 1.2

Bottom Depth(m):

Stratum ID: 6557057 Top Depth(m): 1.2

DENSE TILL WITH SOME SMALL SAND Bottom Depth(m): Stratum Desc: 2.3

Sec. Water Use:

**POCKETS** 

Stratum ID: 6557058 Top Depth(m): 2.3

Stratum Desc: MEDIUM DENSE FINE SAND WITH Bottom Depth(m): 2.7

PEBBLES AND A 2in. SILT LAYER

2.7 Stratum ID: 6557059 Top Depth(m):

Bottom Depth(m): Stratum Desc: LOOSE SANDY TILL 3.6

6557060 Stratum ID: Top Depth(m): 3.6

Map Key	Numbe Record		Direction/ Distance (m)	Elevation (m)	Site		DB
Bottom Dep	th(m):	5.2			Stratum Desc:	SHALY LIMESTONE, CORE REC	COVERY
+						89%	
T Stratum ID:		6557061			Top Depth(m):	5.2	
• • • • • • • • • • • • • • • • • • • •	4h/m).	6.8			Stratum Desc:	SHALY LIMESTONE, CORE REC	COVEDV
Bottom Dep	un(m):	0.0			Stratum Desc:	84%	JOVERI
129	1 of 1		SSE/218.6	64.9			BORE
					ON		
Borehole ID:		847365			Туре:	Borehole	
Use:			cal/Geological Inve	stigation	Status:	Decommissioned	
Drill Method:		Diamond [	Orill		UTM Zone:	18 5027893	
Easting: Location Accu	uracv:	444209			Northing: Orig. Ground Elev m:	64.6	
Elev. Reliabilit					DEM Ground Elev m:	67.9	
Total Depth m		6.8			Primary Name:		
Township: Lot:		NEPEAN LOT 38			Concession: Municipality:	CON 1 ON OTTAWA RIVER	
Completion Da Primary Water		13-MAY-1	959		Static Water Level: Sec. Water Use:	1.4	
Details							
Stratum ID:		6557026			Top Depth(m):	0.0	
Bottom Dep	th(m):	3.0			Stratum Desc:	FILL	
Stratum ID:		6557027			Top Depth(m):	3.0	
Bottom Dep	th(m):	3.8			Stratum Desc:	MEDIUM DENSE FINE SAND WI	ITH A
+						TEW FEBBLES	
Stratum ID:		6557028			Top Depth(m):	3.8	
Bottom Dep	th(m):	5.3			Stratum Desc:	SHALEY LIMESTONE, CORE RECOVERY 96%	
+ Ctuatum ID:		6557020			Ton Donath (m)	F 2	
Stratum ID:		6557029			Top Depth(m):	5.3	
Bottom Dep	th(m):	6.8			Stratum Desc:	SHALEY LIMESTONE, CORE RECOVERY 100%	
130	1 of 1		SSE/225.6	66.9			2025
					ON		BORE
Borehole ID:		847372			Type:	Borehole	
Use:		Geotechni	cal/Geological Inve	stigation	Status:	Decommissioned	
Drill Method:		Diamond [	Drill		UTM Zone:	18	
Easting:		444144			Northing:	5027870	
Location Accu					Orig. Ground Elev m:	65.8 72.1	
Elev. Reliabilit Total Depth m		9.1			DEM Ground Elev m: Primary Name:	12.1	
Township:	••	NEPEAN			Concession:	CON 1 ON OTTAWA RIVER	
Lot:		LOT 38			Municipality:		
Completion De Primary Water		12-MAY-1	959		Static Water Level: Sec. Water Use:	1.9	
Details							
Stratum ID:		6557062			Top Depth(m):	0.0	
Bottom Dep	th(m):	8.0			Stratum Desc:	FILL	
+		0557000					

Top Depth(m):

8.0

Order No: 20160822162

6557063

Stratum ID:

Stratum   D:   6557064   Top Depth(m):   1.5   Stratum Desc:   MEDIUM DENSE TILL		Numbe Record		Direction/ Distance (m)	Elevation (m)	Site	DB
Stratum   D:   6557064   Top   Depth(m):   1.5	Bottom Depth	(m):	1.5			Stratum Desc:	MEDIUM DENSE TILL
### Stratum ID:	+						
## Stratum ID: 6557065   Top Depth(m): 2.3   ## Stratum ID: 6557066   Top Depth(m): 3.0   ## Stratum ID: 6557066   Top Depth(m): 3.0   ## Stratum ID: 6557066   Top Depth(m): 3.0   ## Stratum ID: 6557067   Top Depth(m): 3.4   ## Stratum ID: 6557067   Top Depth(m): 3.8   ## Stratum ID: 6557068   Top Depth(m): 3.8   ## Stratum ID: 6557068   Top Depth(m): 3.8   ## Stratum ID: 6557068   Top Depth(m): 3.8   ## Stratum ID: 6557069   Top Depth(m): 3.8   ## Stratum ID: 6557069   Top Depth(m): 4.4   ## Stratum ID: 6557070   Top Depth(m): 4.7   ## Stratum ID: 6557070   Top Depth(m): 4.7   ## Stratum ID: 6557071   Top Depth(m): 4.7   ## Stratum ID: 6557071   Top Depth(m): 6.1   ## Stratum ID: 6557072   Stratum Desc: MEDIUM DENSE TILL ## Stratum ID: 6557072   Top Depth(m): 7.6   ## Stratu	Stratum ID:		6557064			Top Depth(m):	1.5
Stratum ID:	Bottom Depth	(m):	2.3			Stratum Desc:	DENSE TILL
### ### ### ### ### ### ### ### ### ##	+						
Stratum ID: 6557066   Top Depth(m): 3.0	Stratum ID:		6557065			Top Depth(m):	2.3
Stratum ID:   6557066   Top Depth(m):   3.0	Bottom Depth	(m):	3.0			Stratum Desc:	MEDIUM DENSE SANDY TILL
Bottom Depth(m): 3.4   Stratum Desc:	+						
Stratum ID:   6557067   Top Depth(m):   3.4	Stratum ID:		6557066			Top Depth(m):	3.0
Stratum ID: 6557067   Top Depth(m): 3.4	-	(m):	3.4			Stratum Desc:	
## Stratum ID: 6557068   Top Depth(m): 3.8   Stratum Desc: LOOSE TILL WITH SILT POCKETS   ## Top Depth(m): 3.8   Stratum Desc: MEDIUM DENSE FINE SAND WITH A LITTLE COARSE SAND   ## Stratum ID: 6557069   Top Depth(m): 4.4   Stratum Desc: MEDIUM DENSE FINE SAND WITH A LITTLE COARSE SAND   ## Stratum ID: 6557070   Top Depth(m): 4.7   Stratum Desc: MEDIUM DENSE SANDY SILT   ## Stratum ID: 6557071   Top Depth(m): 4.7   Stratum Desc: MEDIUM DENSE TILL   ## Stratum ID: 6557071   Top Depth(m): 6.1   Stratum Desc: SHALY LIMESTONE, CORE RECOVERY 91%   ## Stratum ID: 6557072   Top Depth(m): 7.6   Stratum Desc: SHALY LIMESTONE, CORE RECOVERY 91%   ## Stratum ID: 6557072   Top Depth(m): 7.6   Stratum Desc: SHALY LIMESTONE, CORE RECOVERY 91%   ## Stratum ID: Stratum Desc: SHALY LIMESTONE, CORE RECOVERY 9100%   ## ON ON WWIS   ## WWIS   ## DOTTAWA-CARLETON ON THAWA-CARLETON ON THAWA-CARLETON ON WWIS   ## Stratum Water Use: Sec. Water Use: Utm Reliability: Construction Method: Clear/Coudy: Final Well Status: Flowing (y/n): Elevation (m): Depth to Bedrock: Water Type:   ## DOTTAWA ON WWIS   ## DESCRIPTION ON THAWA ON WWIS   ## DOTTAWA ON WWIS   ## DESCRIPTION ON THAWA ON WWIS   ## DOTTAWA ON   ## DOTTAWA ON WWIS   ## DOTTAWA							
** Stratum ID: 6557068							
Stratum ID:   6557068   Top Depth(m):   3.8	Bottom Depth	(m):	3.8			Stratum Desc:	LOOSE TILL WITH SILT POCKETS
## ## ## ## ## ## ## ## ## ## ## ## ##	+						
## Stratum ID: 6557069	Stratum ID:		6557068			Top Depth(m):	3.8
Stratum ID: 6557069	-	(m):	4.4			Stratum Desc:	
## ## ## ## ## ## ## ## ## ## ## ## ##			6557060			Tan Danth/m\.	4.4
## Stratum ID: 6557070		(m)					
## Bottom Depth(m): 6.1  ## Stratum ID: 6557071  ## Bottom Depth(m): 7.6  ## Stratum ID: 6557072  ## Bottom Depth(m): 9.1  ## Stratum ID: 6557072  ## Bottom Depth(m): 9.1  ## Stratum ID: 6557072  ## Bottom Depth(m): 9.1  ## Stratum Desc: SHALY LIMESTONE, CORE RECOVERY 91%  ## ON  ## Depth(m): 7.6  ## Stratum Desc: SHALY LIMESTONE, CORE RECOVERY 100%  ## ON  ## ON  ## WWIS  ## ON  ## WWIS  ## ON  ## ON  ## WIS  ## ON  #		(III):	4.7			Stratum Desc:	MEDIUM DENSE SANDY SILI
## Stratum ID: 6557071	Stratum ID:		6557070			Top Depth(m):	4.7
Stratum ID:   6557071   Top Depth(m):   6.1	Bottom Depth	(m):	6.1			Stratum Desc:	MEDIUM DENSE TILL
## Stratum ID: 6557072	+						
# Stratum ID: 6557072	Stratum ID:		6557071			Top Depth(m):	6.1
Stratum ID: 6557072   Top Depth(m): 7.6	-	(m):	7.6			Stratum Desc:	
131   1 of 2   SE/219.9   59.8   ON			6557072			Ton Donth(m):	7.6
131   1 of 2   SE/219.9   59.8   ON		(m)·					
Well ID: 7041554 Lot: Concession: County: OTTAWA-CARLETON Municipality: OTTAWA CITY Easting Nad83: 444372 Northing Nad83: 5028022 Zone: 18 Utm Reliability: margin of error: 10 - 30 m Primary Water Use: Sec. Water Use: Sec. Water Use: Pump Rate: Flow Rate: Specific Capacity: Construction Method: Elevation (m): 62.16 Depth to Bedrock: Water Type:  ON  Lot: Concession Name: Municipality: OTTAWA CITY Northing Nad83: 5028022 margin of error: 10 - 30 m Primary Water Use: Static Water Level: Clear/Cloudy: Final Well Status: Flowing (y/n): Elevation Reliability: Overburden/Bedrock: Water Type:  OTTAWA ON  WWIS	воиот вери	(111).	5.1			Stratum Desc.	
Well ID: 7041554 Lot: Concession: County: OTTAWA-CARLETON Municipality: OTTAWA CITY Easting Nad83: 444372 Northing Nad83: 5028022 Zone: 18 Utm Reliability: margin of error: 10 - 30 m Primary Water Use: Construction Date: 25-JAN-07 Sec. Water Use: Well Depth: Static Water Level: Clear/Cloudy: Specific Capacity: Construction Method: Flowing (y/n): Elevation (m): 62.16 Elevation (m): Elevation Reliability: Overburden/Bedrock: Water Type: Sez/219.9 59.8  131  2 of 2 SE/219.9 59.8  OTTAWA CITY Municipality: OTTAWA CITY Municipality: OTTAWA CITY OTTAWA C	<u>131</u> 1	of 2		SE/219.9	59.8	ON	wwis www.s
Concession: County: County: County: County: Concession Name: Municipality: Concession Name: Concession Name: Municipality: Construction Date: Constr							
County: OTTAWA-CARLETON Easting Nad83: 444372 Zone: 18  Utm Reliability: margin of error: 10 - 30 m  Construction Date: 25-JAN-07  Sec. Water Use: Well Depth: Sump Rate: Static Water Level: Clear/Cloudy: Specific Capacity: Construction Method: Flowing (y/n): Elevation (m): 62.16  Depth to Bedrock: Water Type: Cortawa OTTAWA CITY  Municipality: OTTAWA CITY  Northing Nad83: 5028022  margin of error: 10 - 30 m  25-JAN-07  Clear/Cloudy: Static Water Level: Clear/Cloudy: Final Well Status: Flowing (y/n): Elevation Reliability: Overburden/Bedrock: Casing Material:  131  2 of 2  SE/219.9  59.8  OTTAWA ON  WWIS			7041554				
Easting Nad83: 444372 Zone: 18  Primary Water Use: Construction Date: 25-JAN-07  Sec. Water Use: Well Depth: Static Water Level: Clear/Cloudy: Final Well Status: Flowing (y/n): Elevation (m): 62.16  Depth to Bedrock: Water Type: Construction Material:  Northing Nad83: 5028022  margin of error: 10 - 30 m  25-JAN-07  Sec. Water Level: Clear/Cloudy: Static Water Level: Clear/Cloudy: Final Well Status: Clear/Cloudy: Final Well Status: Construction Method: Flowing (y/n): Elevation Reliability: Overburden/Bedrock: Casing Material: Www.scaling Materia			OTTAWA-	CARLETON			OTTAWA CITY
Primary Water Use: Sec. Water Use: Pump Rate: Flow Rate: Static Water Level: Flow Rate: Specific Capacity: Construction Method: Flowing (y/n): Elevation (m): Depth to Bedrock: Water Type:  Construction Date: Static Water Level: Clear/Cloudy: Final Well Status: Flowing (y/n): Elevation Reliability: Overburden/Bedrock: Casing Material:  WWIS	•						
Sec. Water Use: Pump Rate: Flow Rate: Static Water Level: Flow Rate: Clear/Cloudy: Specific Capacity: Construction Method: Flowing (y/n): Elevation (m): Depth to Bedrock: Water Type:  Final Well Status: Flowing (y/n): Elevation Reliability: Overburden/Bedrock: Casing Material:  Mell Depth: Static Water Level: Final Well Status: Flowing (y/n): Elevation Reliability: Casing Material:  WWIS			18			•	· ·
Pump Rate: Flow Rate: Static Water Level: Flow Rate: Specific Capacity: Construction Method: Flowing (y/n): Elevation (m): Depth to Bedrock: Water Type:  131 2 of 2  SE/219.9  59.8  Clear/Cloudy: Final Well Status: Flowing (y/n): Elevation Reliability: Overburden/Bedrock: Casing Material:  WWIS							25-JAN-07
Flow Rate:  Specific Capacity: Construction Method: Elevation (m): Depth to Bedrock: Water Type:  Clear/Cloudy: Final Well Status: Flowing (y/n): Elevation Reliability: Overburden/Bedrock: Casing Material:  OTTAWA ON  WWIS							
Specific Capacity:  Construction Method:  Elevation (m):  Depth to Bedrock:  Water Type:  Final Well Status:  Flowing (y/n):  Elevation Reliability:  Overburden/Bedrock:  Casing Material:  OTTAWA ON  WWIS	•						
Elevation (m): 62.16 Elevation Reliability: Depth to Bedrock: Overburden/Bedrock: Water Type: Casing Material:  131 2 of 2 SE/219.9 59.8 OTTAWA ON WWIS		ty:				Final Well Status:	
Depth to Bedrock: Water Type:  Overburden/Bedrock: Casing Material:  131 2 of 2 SE/219.9 59.8 OTTAWA ON  WWIS		ethod:	00.40				
131 2 of 2 SE/219.9 59.8 OTTAWA ON WWIS		ck:	02.10				
OTTAWA ON WWIS	Water Type:					Casing Material:	
OTTAWA ON WWIS	131 2	of 2		SE/219.9	59.8		
<b>Well ID:</b> 7045529 <b>Lot:</b>	<del></del>					OTTAWA ON	wwis
	Well ID:		7045529			Lot:	

Number of Direction/ Elevation Site DΒ Map Key Records Distance (m) (m) Concession: Concession Name: **OTTAWA-CARLETON** Municipality: **OTTAWA CITY** County: Northing Nad83: Easting Nad83: 444372 5028022 18 Utm Reliability: margin of error: 10 - 30 m Zone: Primary Water Use: Construction Date: 13-JUN-07 Sec. Water Use: Well Depth: Pump Rate: Static Water Level: Clear/Cloudy: Flow Rate: Specific Capacity: Final Well Status: Abandoned-Other **Construction Method:** Flowing (y/n): 62.16 Elevation (m): Elevation Reliability: Depth to Bedrock: Overburden/Bedrock: No formation data **FRESH** Water Type: Casing Material: **132** 1 of 1 SE/214.0 66.8 **BORE** ON 847361 Borehole ID: Type: Borehole Use: Geotechnical/Geological Investigation Status: Decommissioned Drill Method: Boring UTM Zone: 18 444333 Northing: 5027972 Easting: Location Accuracy: Orig. Ground Elev m: 59.5 DEM Ground Elev m: Elev. Reliability Note: 65.4 Total Depth m: 4.2 Primary Name: **NEPEAN** CON 1 ON OTTAWA RIVER Township: Concession: LOT 39 Municipality: Lot: Completion Date: 25-MAY-1959 Static Water Level: Primary Water Use: Sec. Water Use: --- Details ---Stratum ID: 6557007 Top Depth(m): 0.0 Bottom Depth(m): 1.3 Stratum Desc: **FILL** Stratum ID: 6557008 Top Depth(m): 1.3 Bottom Depth(m): 3.0 Stratum Desc: LIMESTONE, CORE RECOVERY 91% Stratum ID: 6557009 Top Depth(m): 3.0 Bottom Depth(m): 4.2 Stratum Desc: LIMESTONE, CORE RECOVERY 89% 63.1 133 1 of 1 SSE/221.8 **BORE** ON Borehole ID: 847370 Borehole Type: Use: Geotechnical/Geological Investigation Status: Decommissioned Drill Method: Diamond Drill UTM Zone: 18 444246 5027904 Easting: Northing: Location Accuracy: Orig. Ground Elev m: 64.9 Elev. Reliability Note: DEM Ground Elev m: 66.3 9.4 Total Depth m: Primary Name: **NEPEAN** CON 1 ON OTTAWA RIVER Township: Concession: Lot: LOT 38 Municipality: Completion Date: 14-MAY-1959 Static Water Level: -999.9

Sec. Water Use:

Top Depth(m):

Stratum Desc:

0.0 FILL

Order No: 20160822162

erisinfo.com | Environmental Risk Information Services

6557051

4.1

Primary Water Use:

Bottom Depth(m):

--- Details ---Stratum ID:

Map Key	Numbe Record		Direction/ Distance (m)	Elevation (m)	Site	DB
Stratum ID:		6557052			Top Depth(m):	4.1
Bottom Dep	oth(m):	4.6			Stratum Desc:	MEDIUM DENSE SANDY TILL
+						
Stratum ID:		6557053			Top Depth(m):	4.6
Bottom Dep	oth(m):	6.4			Stratum Desc:	DENSE SANDY TILL
+						
Stratum ID:		6557054			Top Depth(m):	6.4
Bottom Dep	oth(m):	7.9			Stratum Desc:	SHALY LIMESTONE, CORE RECOVERY
_						100%
+		0557055			To a Donath (see)	7.0
Stratum ID:		6557055			Top Depth(m):	7.9
Bottom Dep	otn(m):	9.4			Stratum Desc:	SHALY LIMESTONE, CORE RECOVERY 100%
134	1 of 1		SSE/239.5	65.5	Lixar IT Inc. 47A Young St Ottawa ON K1S 3H6	SCT
Established: Plant Size (ft² Employment:			01-AUG-99			
Details Description SIC/NAICS ( +			Software Publisher 511210	s		
Description SIC/NAICS (			Data Processing, F 518210	losting, and Relate	ed Services	
Description SIC/NAICS			Software Publisher 511210	S		
Description SIC/NAICS			Computer Systems 541510	Design and Relate	ed Services	
135	1 of 1		SE/238.1	65.4	ON	BORE
Borehole ID: Use: Drill Method: Easting: Location Acc Elev. Reliabili Total Depth n	uracy: ity Note:	Boring 444372 6.4	ical/Geological Inve	stigation	Type: Status: UTM Zone: Northing: Orig. Ground Elev m: DEM Ground Elev m: Primary Name:	Borehole Decommissioned 18 5027984 59.6 66.1
Township: Lot: Completion D Primary Wate		NEPEAN LOT 39 28-MAY-1	959		Concession: Municipality: Static Water Level: Sec. Water Use:	CON 1 ON OTTAWA RIVER -999.9
Details						
Stratum ID:		6557010			Top Depth(m):	0.0
Bottom Dep		0.9			Stratum Desc:	FILL
+	1 2 -				- · · · · · · · · · · · · · · · · · · ·	
Stratum ID:		6557011			Top Depth(m):	0.9
Bottom Dep		1.2			Stratum Desc:	MEDIUM DENSE TO DENSE SILTY FINE
zottom bep	(/-				Ca atam boot.	SAND WITH A FEW PEBBLES
+						
Stratum ID:		6557012			Top Depth(m):	1.2

Map Key	Numbe Record		Direction/ Distance (m)	Elevation (m)	Site	DB
Bottom Dep	oth(m):	3.0			Stratum Desc:	TILL
+						
Stratum ID:		6557013			Top Depth(m):	3.0
Bottom Dep	oth(m):	4.7			Stratum Desc:	LIMESTONE, CORE RECOVERY 98%
+						
Stratum ID:		6557014			Top Depth(m):	4.7
Bottom Dep	oth(m):	6.4			Stratum Desc:	LIMESTONE, CORE RECOVERY INDEFINITE
136	1 of 1		SE/237.3	67.2	ON	BORE
Borehole ID: Use: Drill Method: Easting: Location Acc Elev. Reliabil. Total Depth n Township: Lot: Completion E Primary Wate	ity Note: n: Date:	847360 Geotechnic Boring 444351 5 NEPEAN LOT 39 05-JUN-19	cal/Geological Inves	stigation	Type: Status: UTM Zone: Northing: Orig. Ground Elev m: DEM Ground Elev m: Primary Name: Concession: Municipality: Static Water Level: Sec. Water Use:	Borehole Decommissioned 18 5027958 60.1 67 CON 1 ON OTTAWA RIVER -999.9
Details		0557004			To a Donath (an)	0.0
Stratum ID:		6557004 1.8			Top Depth(m): Stratum Desc:	0.0 FILL
Bottom Dep	otn(m):	1.0			Stratum Desc:	FILL
+		0557005			T D (b/)	4.0
Stratum ID:		6557005			Top Depth(m):	1.8
Bottom Dep	otn(m):	3.4			Stratum Desc:	LIMESTONE, CORE RECOVERY 88%
+		0557000			To a Donath (an)	2.4
Stratum ID:		6557006			Top Depth(m):	3.4
Bottom Dep	otn(m):	5.0			Stratum Desc:	LIMESTONE, CORE RECOVERY 91%

## Unplottable Summary

Total: 100 Unplottable sites

DB	Company Name/Site Name	Address	City	Postal
CA	Ottawa-Carleton District School Board		Ottawa ON	
CA	Drain-All Ltd.	Mobile System	Ottawa ON	
CA	Public Works and Government Services Canada		Ottawa ON	
CA	Public Works and Government Services Canada		Ottawa ON	
CA	Public Works Government Services Canada	Building #19, Tunney's Pasture Ottawa	Ottawa ON	
CA	PUBLIC WORKS CANADA	LABORATORY SERVICES	OTTAWA CITY ON	
CA	City of Ottawa	Balsam Street	Ottawa ON	
CA	OTTAWA CITY	BAYSWATER AVE.	OTTAWA CITY ON	
CA	OTTAWA CITY	BAYSWATER AVE.	OTTAWA CITY ON	
CA	City of Ottawa	Somerset St W	Ottawa ON	
CA	City of Ottawa	Gladstone Avenue	Ottawa ON	
CA	City of Ottawa	Gladstone Avenue	Ottawa ON	
CA	City of Ottawa	Gladstone Avenue	Ottawa ON	
CA		Gladstone Avenue	Ottawa ON	
CA		Gladstone Avenue	Ottawa ON	
CA	City of Ottawa	Larch Street and Laurel Street	Ottawa ON	
CA	City of Ottawa	Preston Street	Ottawa ON	

CA	City of Ottawa	Preston Street (Albert Street to Carling Avenue)	Ottawa ON	
CA	REG.MUN.OF OTTAWA- CARLETON	QUEENSWAY N.	OTTAWA ON	
CA	City of Ottawa	Somerset Street between West of Preston Street to Preston St	Ottawa ON	
CA	R.M. OF OTTAWA-CARLETON	SOMERSET STREET	OTTAWA CITY ON	
CA	City of Ottawa	Somerset St W	Ottawa ON	
CA	CITY	BREEZEHILL AVE.	OTTAWA CITY ON	
CONV	DRAIN-ALL LTD.		ON	
ECA	Shell Canada Limited	Nepean	Ottawa ON	
ECA	City of Ottawa	Gladstone Avenue	City of Ottawa ON	
EHS		0 Breezehill Avenue	n/a ON	
EHS		0 Loretta Avenue	n/a ON	
EHS		Highway 417, CN Rail	Ottawa ON	
EHS		Hwy 417	Ottawa ON	
GEN	R.W Tomlinson	LRT Central Site Hwy 417 Widening	ottawa ON	
GEN	PITTS ENGINEERING CONSTRUCTION	BANISTER CONT. LTD. C/O BOX 8008 OTTAWA TERMINAL HURDMAN BRIDGE AT HWY. 417	OTTAWA-CARLETON ON	K1G 3H6
GEN	NATIONAL RESEARCH COUNCIL 18-109	PUBLIC WORKS CANADA ENV. SERVICES CFB OTTAWA BUILDINGS U61, U62, U66	OTTAWA ON	
GEN	Ecoplans Limited	Highway 417 West onramp accessed off Moodie Drive	Ottawa ON	K2H 8G3
GEN	PITTS (OUT OF BUS) 31-354	BANISTER CONT. LTD. C/O BOX 8008 OTTAWA TERMINAL HURDMAN BRIDGE AT HWY. 417	OTTAWA-CARLETON ON	K1G 3H6
GEN	PITTS ENGINEERING CONSTRUCTION 31-354	BANISTER CONT. LTD. C/O BOX 8008 OTTAWA TERMINAL HURDMAN BRIDGE AT HWY. 417	OTTAWA-CARLETON ON	K1G 3H6
NPCB	PUBLIC WORKS CANADA	TUNNEY'S PASTURE COMPLEX CENTRAL HEA TI NG PLANT	OTTAWA ON	K1A 0M3
NPCB	OLYMPIA & YORK DEVELOPMENTS LTD.	SHELL CENTER	OTTAWA ON	
NPCB	PUBLIC WORKS CANADA	TUNNEY'S PASTURE COMPLEX BROOKE	Ottawa ON	

## **CLAXTON BUILD**

NPCB	PUBLIC WORKS CANADA	TUNNEY'S PASTURE COMPLEX BROOKE CLAXTON BUILDING	OTTAWA ON	K1A 0M3
NPCB	PUBLIC WORKS CANADA	CENTRAL EXPERIMENTAL FARM; K W NEETBY BUILDING/ROO	OTTAWA ON	
NPCB	OLYMPIA & YORK DEVELOPMENTS LTD.	SHELL CENTER	OTTAWA ON	
NPCB	OLYMPIA & YORK DEVELOPMENTS LTD.	SHELL CENTER	Ottawa ON	
NPCB	PUBLIC WORKS CANADA	TUNNEY'S PASTURE COMPLEX	Ottawa ON	
NPRI	PUBLIC WORKS AND GOVERNMENT SERVICES CANADA		Ottawa ON	
RST	ROB'S SHELL	RR 66 LCD S	OTTAWA ON	K1T 3Z4
SPL	TRANSPORT TRUCK	QUEENSWAY MOTOR VEHICLE (OPERATING FLUID)	OTTAWA CITY ON	
SPL	Loblaws Company East <unofficial></unofficial>	Queensway, from Greenbank Exit to 1735 Iris Road (Pine Crest Shopping Centre - infront of IKEA) <unofficial></unofficial>	Ottawa ON	
SPL	UNKNOWN	BLAIR STATION AND QUEENSWAY	OTTAWA CITY ON	
SPL	TOP VALU	PRESTON STREET, SOUTH OF GLADSTONE SERVICE STATION	OTTAWA-CARLETON R.M. ON	
SPL	Penske Truck Leasing Canada Inc.	Hwy 417 east, at exit 88, Vars	Ottawa ON	
SPL	Drain-All Ltd.	Hwy 417 Westbound near Carling off-ramp	Ottawa ON	
SPL	Ottawa LRT <unofficial></unofficial>	Hwy 417 near Lees Avenue	Ottawa ON	
SPL		central transit way adjacent to hwy 417 between nicholas ave and lees ave	Ottawa ON	
SPL	Glenview Iron and Steel Ltd. <unofficial></unofficial>	Hwy 417 - Woodroffe W. Bnd, On-Ramp	Ottawa ON	
SPL		Hwy 417 Under Overpass @ Castlefrank Road	Ottawa ON	
SPL	Unisource Canada, Inc.	HWY 417-West near Km 117 on the Vanier Prk Way,	Ottawa ON	
SPL	City of Ottawa	Hwy 417 West bound, between the Carling Ave Exit and the Maitland Exit	Ottawa ON	
SPL		417 eastbound, east of exit 104	Ottawa ON	

SPL		Hwy 417 to the corner of Rideau and King Edward	Ottawa ON
SPL	Purolator Courier Ltd.	Hwy 417 Eastbound @ Mile Marker 180	Ottawa ON
SPL	Enbridge Gas Distribution Inc.	HWY 417 at Vars Bridge	Ottawa ON
SPL		Hwy 417 at Hurdman Bridge, SW Corner	Ottawa ON
SPL	Tomlinson Environmental Services Ltd.; SNC-Lavalin Constructors (Pacific) Inc	Highway 417 at Hurdman Bridge	Ottawa ON
SPL		417 EASTBOUND - NICHOLAS ON RAMP <unofficial></unofficial>	Ottawa ON
SPL	S. 21(1)(f)	Hwy 417 E between Vanier Parkway and St. Laurent <unofficial></unofficial>	Ottawa ON
SPL	Ferguson Fuels <unofficial></unofficial>	HWY 417 EASTBOUND AT THE EAGLESON OFF RAMP <unofficial></unofficial>	Ottawa ON
SPL	CITY OF OTTAWA SNOW PLOW <unofficial></unofficial>	TERRY FOX DRIVE AT THE HWY. 417 OVERPASS <unofficial></unofficial>	Ottawa ON
SPL	Waste Services Inc.	Highway 417 East bound West of Terry Fox	Ottawa ON
SPL	LECLAIR FUELS LTD.	HWY 417 BTWN INNIS & PKWY TANK TRUCK (CARGO)	OTTAWA CITY ON
SPL	Waste Management Inc.	HWY 417 EASTBOUND, ST. LAURENT EXIT (115) <unofficial></unofficial>	Ottawa ON
SPL	Sita Ontario Inc.	Highway 417(westbound) and Moodie Drive ramp	Ottawa ON
SPL	TRANSPORT TRUCK	HWY 417 BETWEEN NICOLAS AND VANIER PARKWAY MOTOR VEHICLE (OPERATING FLUID)	OTTAWA CITY ON
SPL	TRANSPORT TRUCK	HWY # 417 AT ROCHESTER EXIT. MOTOR VEHICLE (OPERATING FLUID)	OTTAWA CITY ON
SPL	TRANSPORT TRUCK	HWY. 417 MOTOR VEHICLE (OPERATING FLUID)	OTTAWA ON
SPL	Thermal Shell	Highway 417 West of Eagleson Rd	Ottawa ON
SPL		HWY 417 ONRAMP AT TERRY FOX EXIT <unofficial></unofficial>	Ottawa ON
SPL	Wilway Transport <unofficial></unofficial>	Highway 417 eastbound, panmure exit(exit 162) MVA - HIGHWAY 417 EASTBOUND AT PANMURE EXIT (EXIT 163) <unofficial></unofficial>	Ottawa ON
SPL		HIGHWAY 417 EASTBOUND, EAST OF ROCKDALE EXIT <unofficial></unofficial>	Ottawa ON
SPL	City of Ottawa	Highway 417	Ottawa ON

SPL	TRANSPORT TRUCK	HWY 417 AT MILE MARKER 5, EASTBOUND MOTOR VEHICLE (OPERATING FLUID)	OTTAWA CITY ON
SPL	Enbridge Gas Distribution Inc.	Anderson Rd. ¿ 2km South of Renaud Rd.	Ottawa ON
SPL	Public Works and Government Services Canada	Terrace Bay Pulp Mill	Ottawa ON
SPL		SNC Lavalin Profac	Ottawa ON
SPL	Public Works and Government Services Canada	Tunney's Pasture Heating Plant <unofficial></unofficial>	Ottawa ON
SPL	Public Works and Government Services Canada <unofficial></unofficial>	Parliament Hill	Ottawa ON
SPL	Shell Canada Products Limited	Shell Canada	Ottawa ON
SPL	PUBLIC WORKS CANADA	VARIOUS LOCATION GOVERNMENT BUILDING OR PROPERTY	OTTAWA CITY ON
SPL	SHELL CANADA PRODUCTS LTD.	TANK TRUCK (CARGO)	OTTAWA CITY ON
SPL	SHELL CANADA PRODUCTS LTD.	TANK TRUCK (CARGO)	OTTAWA CITY ON
SPL	SHELL CANADA PRODUCTS LTD.	TANK TRUCK (CARGO)	OTTAWA CITY ON
SPL	SHELL CANADA PRODUCTS LTD.	TANK TRUCK (CARGO)	OTTAWA CITY ON
SPL	SHELL CANADA PRODUCTS LTD.	TANK TRUCK (CARGO)	OTTAWA CITY ON
SPL	SHELL CANADA PRODUCTS LTD.	SERVICE STATION	OTTAWA CITY ON
SPL	SHELL CANADA PRODUCTS LTD.	TANK TRUCK (CARGO)	OTTAWA CITY ON
SPL	SHELL CANADA PRODUCTS LTD.	TANK TRUCK (CARGO)	OTTAWA CITY ON
SPL	SHELL CANADA PRODUCTS LTD.	TANK TRUCK (CARGO)	OTTAWA CITY ON
SPL	SHELL CANADA PRODUCTS LTD.	NICHOLS SERVICE STATION, HIGHWAY MARKET, RR 1 WOODLAWN, WEST CARLETON SERVICE STATION	OTTAWA-CARLETON K1T 3Z4 R.M. ON
SPL	SHELL CANADA PRODUCTS LTD.	TANK TRUCK (CARGO)	OTTAWA CITY ON
SPL	PUBLIC WORKS CANADA	TILLEY BUILDING CONFEDERATION HEIGHTS	OTTAWA CITY ON

## Unplottable Report

Site: Ottawa-Carleton District School Board

Ottawa ON

Database:

 Certificate #:
 3668-7ZNLYJ

 Application Year:
 2010

 Issue Date:
 2/11/2010

 Approval Type:
 Air

 Status:
 Approved

Application Type: Client Name: Client Address: Client City: Client Postal Code: Project Description: Contaminants: Emission Control:

Site: Drain-All Ltd.

Mobile System Ottawa ON

Database: CA

 Certificate #:
 A860302

 Application Year:
 2006

 Issue Date:
 8/4/2006

Approval Type: Waste Management Systems

Status: Approved

Application Type: Client Name: Client Address: Client City: Client Postal Code: Project Description: Contaminants:

**Emission Control:** 

<u>Site:</u> Public Works and Government Services Canada

Ottawa ON

Database: CA

 Certificate #:
 5638-6AXR4D

 Application Year:
 2005

 Issue Date:
 3/29/2005

Approval Type: Municipal and Private Sewage Works

Status: Approved

Application Type: Client Name: Client Address: Client City: Client Postal Code: Project Description.

Project Description: Contaminants: Emission Control:

Public Works and Government Services Canada

Ottawa ON

Database:

Order No: 20160822162

Site:

4810-6ASSBE Certificate #:

Application Year: 2005 4/1/2005 Issue Date:

Municipal and Private Sewage Works Approval Type:

Status: Approved

Application Type: Client Name: Client Address: Client City: Client Postal Code: Project Description: Contaminants: **Emission Control:** 

Site: Public Works Government Services Canada

Building #19, Tunney's Pasture Ottawa Ottawa ON

Certificate #: 2549-6MGQ3H

2006 Application Year: Issue Date: 3/27/2006 Approval Type: Air Status: Approved

Application Type: Client Name: Client Address: Client City: Client Postal Code: **Project Description:** Contaminants: **Emission Control:** 

Site: **PUBLIC WORKS CANADA** 

LABORATORY SERVICES OTTAWA CITY ON

8-4116-87-Certificate #:

Application Year: 87

8/26/1987 Issue Date: Approval Type: Industrial air Approved Status:

Application Type: Client Name: Client Address: Client City: Client Postal Code:

Project Description: LAB EXHAUST

Chromium (Di-, Tri-, Hexavalent Forms), Other Organic Compounds, Methyl Alcohol, Hexane, Other Organic Contaminants:

Compounds, Other Organic Compounds, Cyclohexane

**Emission Control:** Absolute Filters

Balsam Street Ottawa ON

Certificate #: 3889-6R6NVK Application Year: 2006 Issue Date: 6/29/2006

City of Ottawa

Municipal and Private Sewage Works Approval Type:

Status: Approved

Application Type: Client Name: Client Address: Client City:

Client Postal Code:

Database:

Database:

Database:

Order No: 20160822162

Site:

Project Description: Contaminants: Emission Control:

Site: OTTAWA CITY

BAYSWATER AVE. OTTAWA CITY ON

Database:

 Certificate #:
 7-0907-89 

 Application Year:
 89

 Issue Date:
 6/15/1989

 Approval Type:
 Municipal water

 Status:
 Approved

Application Type: Client Name: Client Address: Client City: Client Postal Code: Project Description: Contaminants: Emission Control:

Site: OTTAWA CITY

BAYSWATER AVE. OTTAWA CITY ON

Database:

Certificate #:3-1076-89-Application Year:89Issue Date:6/15/1989Approval Type:Municipal sewageStatus:Approved

Application Type: Client Name: Client Address: Client City: Client Postal Code: Project Description: Contaminants:

**Emission Control:** 

Site: City of Ottawa

Somerset St W Ottawa ON

Database: CA

 Certificate #:
 6180-8JKNNV

 Application Year:
 2011

 Issue Date:
 7/22/2011

Approval Type: Municipal and Private Sewage Works

Status: Approved

Application Type: Client Name: Client Address: Client City: Client Postal Code: Project Description: Contaminants: Emission Control:

Site: City of Ottawa

Gladstone Avenue Ottawa ON

Database: CA

Order No: 20160822162

 Certificate #:
 7239-738KJA

 Application Year:
 2007

 Issue Date:
 6/18/2007

Approval Type: Municipal and Private Sewage Works

Status:

Application Type: Client Name: Client Address: Client City: Client Postal Code: Project Description: Contaminants: Emission Control: Approved

Database:

Site: City of Ottawa

Gladstone Avenue Ottawa ON

 Certificate #:
 3692-6PGP9X

 Application Year:
 2006

 Issue Date:
 5/6/2006

Approval Type: Municipal and Private Sewage Works

Status: Approved

Application Type: Client Name: Client Address: Client City: Client Postal Code: Project Description:

Contaminants:

Emission Control:

Site: City of Ottawa

Gladstone Avenue Ottawa ON

Database: CA

Order No: 20160822162

 Certificate #:
 6651-73WP47

 Application Year:
 2007

 Issue Date:
 6/6/2007

Approval Type: Municipal and Private Sewage Works

Status: Approved

Application Type: Client Name: Client Address: Client City: Client Postal Code

Client Postal Code: Project Description: Contaminants: Emission Control:

Site:
Gladstone Avenue Ottawa ON

Database:
CA

Certificate #: 4558-4LXLWW
Application Year: 00

Issue Date: 7/5/00

Approval Type: Municipal & Private water

Status: Approved

Application Type: New Certificate of Approval

Client Name: Corporation of the Regional Municipality of Ottawa-Carleton

Client Address: 111 Lisgar Street

Client City: Ottawa
Client Postal Code: K2P 2L7

Project Description: Watermains to be constructed on Gladstone Ave. and Percy St. in the City of Ottawa

Contaminants: Emission Control: Site: Database: CA

Gladstone Avenue Ottawa ON

Certificate #: 2461-4LXMEM

00 Application Year: Issue Date: 7/5/00

Approval Type: Municipal & Private sewage

Status: Approved

Application Type: New Certificate of Approval Corporation of the City of Ottawa Client Name: 111 Sussex Drive, 7th Floor Client Address:

Client City: Ottawa Client Postal Code: K1N 5A1

Project Description:

Construction of Storm and Sanitary sewers on Gladstone Avenue from Bronson Avenue to Bay Street

City of Ottawa

Larch Street and Laurel Street Ottawa ON

Database: CA

9051-7BLLPL Certificate #: Application Year: 2008 3/25/2008 Issue Date:

Municipal and Private Sewage Works Approval Type:

Status: Approved

Application Type: Client Name: Client Address: Client City:

Contaminants: **Emission Control:** 

Site:

Client Postal Code: Project Description: Contaminants: **Emission Control:** 

City of Ottawa Site:

Preston Street Ottawa ON

Database: CA

Certificate #: 0057-7EKK59 Application Year: 2008 Issue Date: 5/22/2008

Municipal and Private Sewage Works Approval Type:

Status: Approved

Application Type: Client Name: Client Address: Client City: Client Postal Code:

Project Description: Contaminants: **Emission Control:** 

City of Ottawa Site:

Preston Street (Albert Street to Carling Avenue) Ottawa ON

Database: CA

Order No: 20160822162

Certificate #: 0959-7EGRT6 Application Year: 2008 Issue Date: 5/15/2008

Municipal and Private Sewage Works Approval Type:

Status: Approved

Application Type: Client Name: Client Address:

Client City: Client Postal Code: Project Description: Contaminants: Emission Control:

<u>Site:</u> REG.MUN.OF OTTAWA-CARLETON

QUEENSWAY N. OTTAWA ON

**Certificate #:** 3-0468-85-006

Application Year:85Issue Date:6/4/85

Approval Type:Municipal sewageStatus:Approved

Application Type: Client Name: Client Address: Client City: Client Postal Code:

Emission Control:

Project Description: Contaminants:

Site: City of Ottawa

Somerset Street between West of Preston Street to Preston St Ottawa ON

Database:

Database:

Database:

 Certificate #:
 8215-89TKG8

 Application Year:
 2010

 Issue Date:
 10/8/2010

Approval Type: Municipal and Private Sewage Works

Status: Approved

Application Type: Client Name: Client Address: Client City: Client Postal Code:

Client Postal Code: Project Description: Contaminants: Emission Control:

Site: R.M. OF OTTAWA-CARLETON

SOMERSET STREET OTTAWA CITY ON

 Certificate #:
 7-0096-88 

 Application Year:
 88

 Issue Date:
 2/10/1988

 Approval Type:
 Municipal water

 Status:
 Approved

Application Type: Client Name: Client Address: Client City: Client Postal Code:

Client Postal Code: Project Description: Contaminants: Emission Control:

Site: City of Ottawa

Somerset St W Ottawa ON

Certificate #: 0195-8HMLH2

Database:

Order No: 20160822162

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Application Year: 2011 6/15/2011 Issue Date:

Municipal and Private Sewage Works Approval Type: Approved

Status:

Application Type: Client Name: Client Address: Client City: Client Postal Code: Project Description: Contaminants: **Emission Control:** 

Site:

BREEZEHILL AVE. OTTAWA CITY ON CA

Database:

Order No: 20160822162

3-1423-85-006 Certificate #:

Application Year: 85 11/22/85 Issue Date:

Approval Type: Municipal sewage Approved

Status: Application Type: Client Name: Client Address: Client City:

Client Postal Code: Project Description: Contaminants: **Emission Control:** 

DRAIN-ALL LTD. Site: Database: ON CONV

File No.:

Crown Brief No.: 98-0000-9004

**Ministry District:** 

**EASTERN REGION** Region:

Description: THIS IS THE EASTERN BRIEF FOR ALL P.O.A. TICKETS

--- Details ---

4/14/99 Date Charged: Fine: \$305.00 Act/Regulation/Section: EPA- -186(3)

Charge Disposition: SUSPENDED SENTENCE

Site: Shell Canada Limited Database: Nepean Ottawa ON **ECA** 

Record Type: PDF URL:

CofA Number: 1454-96LJDX Date: 19-APR-13 Approved Status: Project Type: Industrial Sewage

Site: City of Ottawa Database: **ECA** Gladstone Avenue City of Ottawa ON

Record Type: PDF URL:

3935-98BQWQ CofA Number: Date: 01-AUG-13

Status: Approved

Municipal and Private Sewage Project Type:

Site: Database: 0 Breezehill Avenue n/a ON

Addit. Info Ordered: 20080226017w Order No.: Report Date: 2/26/2008 Report Type: Online Mapless

Search Radius (km): 0.25

Site: Database: 0 Loretta Avenue n/a ON **EHS** 

Addit. Info Ordered: Order No.: 20080226021w Report Date: 2/26/2008 Online Mapless Report Type:

Search Radius (km): 0.25

Database: Site: Highway 417, CN Rail Ottawa ON **EHS** 

Addit. Info Ordered:

20051017044 Order No.: Report Date: 10/18/2005 Report Type: Site Report Search Radius (km): 0.25

Site: Database: Hwy 417 Ottawa ON **EHS** 

Addit. Info Ordered:

Order No.: 20120509053 Report Date: 5/16/2012 Report Type: Custom Report

Search Radius (km): 0.25

Site: R.W Tomlinson Database: **GEN** LRT Central Site Hwy 417 Widening ottawa ON

Generator #: ON9834153 Approval Yrs: As of May 2015

SIC Code: SIC Description:

--- Details ---

Waste Code:

Other specified inorganic sludges, slurries or solids Waste Description:

Waste Code: 252

Waste Description: Waste crankcase oils and lubricants

188

212 Waste Code:

Waste Description: Aliphatic solvents and residues

PITTS ENGINEERING CONSTRUCTION Database: Site: GEN

## BANISTER CONT. LTD. C/O BOX 8008 OTTAWA TERMINAL HURDMAN BRIDGE AT HWY. 417 OTTAWA-CARLETON ON K1G 3H6

**Generator #:** ON0760802 **Approval Yrs:** 86,87,88,89,90

SIC Code: 4121

SIC Description: HIGHWAYS, STR., ETC.

--- Details ---

Waste Code: 252

Waste Description: WASTE OILS & LUBRICANTS

Site: NATIONAL RESEARCH COUNCIL 18-109 Database: PUBLIC WORKS CANADA ENV. SERVICES CFB OTTAWA BUILDINGS U61, U62, U66 OTTAWA ON GEN

 Generator #:
 ON0195803

 Approval Yrs:
 92,93,94,95,96,97

**SIC Code:** 8176

SIC Description: RESEARCH ADMIN.

--- Details ---

Waste Code: 112

Waste Description: ACID WASTE - HEAVY METALS

Waste Code: 148

Waste Description: INORGANIC LABORATORY CHEMICALS

+

Waste Code: 211

Waste Description: AROMATIC SOLVENTS

+

Waste Code: 212

Waste Description: ALIPHATIC SOLVENTS

+

Waste Code: 213

Waste Description: PETROLEUM DISTILLATES

+

Waste Code: 221

Waste Description: LIGHT FUELS

+

Waste Code: 241

Waste Description: HALOGENATED SOLVENTS

+

Waste Code: 251

Waste Description: OIL SKIMMINGS & SLUDGES

+

Waste Code: 252

Waste Description: WASTE OILS & LUBRICANTS

Waste Code: 253

Waste Description: EMULSIFIED OILS

+

Waste Code: 263

Waste Description: ORGANIC LABORATORY CHEMICALS

<u>Site:</u> Ecoplans Limited

Highway 417 West onramp accessed off Moodie Drive Ottawa ON K2H 8G3

Database:
GEN

Order No: 20160822162

 Generator #:
 ON3922236

 Approval Yrs:
 2010

 SIC Code:
 541620

SIC Description: Environmental Consulting Services

--- Details ---

Waste Code: 241

Waste Description: HALOGENATED SOLVENTS

PITTS (OUT OF BUS) Site: 31-354

BANISTER CONT. LTD. C/O BOX 8008 OTTAWA TERMINAL HURDMAN BRIDGE AT HWY. 417 OTTAWA-

**CARLETON ON K1G 3H6** 

ON0760802 Generator #: Approval Yrs: 97,98 SIC Code: 4121

HIGHWAYS, STR., ETC. SIC Description:

--- Details ---

252 Waste Code:

Waste Description: WASTE OILS & LUBRICANTS

Site: PITTS ENGINEERING CONSTRUCTION 31-354

BANISTER CONT. LTD. C/O BOX 8008 OTTAWA TERMINAL HURDMAN BRIDGE AT HWY. 417 OTTAWA-

**CARLETON ON K1G 3H6** 

ON0760802 Generator #: Approval Yrs: 92,93,94,95,96

SIC Code: 4121

HIGHWAYS, STR., ETC. SIC Description:

--- Details ---

252 Waste Code:

Waste Description: WASTE OILS & LUBRICANTS

Site: **PUBLIC WORKS CANADA** 

**NPCB** TUNNEY'S PASTURE COMPLEX CENTRAL HEA TI NG PLANT OTTAWA ON K1A 0M3

Company Code: O3210

Industry: **PUBLICS WORKS CANADA** Site Status: **DELETED FEDERAL SITES** 

Transaction Date: 12/4/1994 Inspection Date: 3/13/1991

OLYMPIA & YORK DEVELOPMENTS LTD. Site:

SHELL CENTER OTTAWA ON

Company Code: O0163D Industry: Other Site Status:

Transaction Date: 10/7/1993

Inspection Date:

**PUBLIC WORKS CANADA** Site: Database: **NPCB** 

TUNNEY'S PASTURE COMPLEX BROOKE CLAXTON BUILD Ottawa ON

O3211

Company Code: Industry: Public Works Canada

Site Status: In- Use Transaction Date: 3/14/1991 Inspection Date: 3/14/1991

--- Details ---Label: Serial No.:

PCB Type/Code: Askarel/Askarel

BROOKE CLAXTON BLDG. Location:

Item/State: No. of Items: Manufacturer:

In-Use Status:

Contents:

erisinfo.com | Environmental Risk Information Services

Order No: 20160822162

Database:

**GEN** 

Database:

**GEN** 

Database:

Database: **NPCB** 

190

+

Label: Serial No.:

PCB Type/Code: Askarel/Askarel

Location: BROOKE CLAXTON BUILDING

Item/State: No. of Items: Manufacturer:

Status: In-Use

Contents:

Site: PUBLIC WORKS CANADA

TUNNEY'S PASTURE COMPLEX BROOKE CLAXTON BUILDING OTTAWA ON K1A 0M3

Database: NPCB

Company Code: 03211

Industry:PUBLICS WORKS CANADASite Status:FEDERAL FACILITIES (IN USE)

 Transaction Date:
 11/19/1993

 Inspection Date:
 3/14/1991

--- Details ---

 Label:
 OR22597

 Serial No.:
 G3045-2

PCB Type/Code: ASKAREL/ASKAREL

Location:
Item/State: TRANSFORMER/FULL

No. of Items:

Manufacturer:

Status: IN-USE Contents: 6807 L

+

 Label:
 OR22596

 Serial No.:
 G3044-1

PCB Type/Code: ASKAREL/ASKAREL
Location:
Item/State: TRANSFORMER/FULL

No. of Items:

Manufacturer:

Status: IN-USE Contents: 6807 L

+

 Label:
 OR22598

 Serial No.:
 G3044-2

PCB Type/Code: ASKAREL/ASKAREL

Location:

Item/State: TRANSFORMER/FULL

No. of Items:

Manufacturer:

Status: IN-USE Contents: 6807 L

+

 Label:
 OR24321

 Serial No.:
 G3045-1

PCB Type/Code: ASKAREL/ASKAREL

Location:

Item/State: TRANSFORMER/FULL

No. of Items:

Manufacturer:

Status: IN-USE Contents: 6807 L

Site: PUBLIC WORKS CANADA

CENTRAL EXPERIMENTAL FARM; K W NEETBY BUILDING/ROO OTTAWA ON

Database: NPCB

Order No: 20160822162

Company Code: O3085

Industry: Public Works Canada

Site Status:

Transaction Date: 5/30/1990 11/24/1987 Inspection Date:

Site: **OLYMPIA & YORK DEVELOPMENTS LTD.** SHELL CENTER OTTAWA ON

Database:

O0163D Company Code: Industry: OTHER

POTENTIAL FOR INSPECTION (TR) Site Status:

Transaction Date: 7/10/1993

Inspection Date:

--- Details ---

Label: OR21844

Serial No.: PCB Type/Code: ASKAREL/ASKAREL

Location:

Item/State: TRANSFORMER/FULL

No. of Items:

Manufacturer:

Status: IN-USE 3333 L Contents:

OR21846 Label:

Serial No.:

PCB Type/Code: ASKAREL/ASKAREL Location: Item/State: TRANSFORMER/FULL

No. of Items:

Manufacturer:

Status: IN-USE 3333 L Contents:

Label: OR21845

Serial No.:

PCB Type/Code: ASKAREL/ASKAREL Location:

Item/State: TRANSFORMER/FULL 1

No. of Items:

Manufacturer:

Status: IN-USE Contents: 3333 L

OLYMPIA & YORK DEVELOPMENTS LTD. Site: SHELL CENTER Ottawa ON

O0163D Company Code: Industry: Other Site Status: In- Use Transaction Date: 11/9/1989

Inspection Date:

--- Details ---Label: Serial No.:

PCB Type/Code: Askarel/Askarel

Location: Item/State: No. of Items: Manufacturer:

Status: In-Use

Contents:

**PUBLIC WORKS CANADA** Site:

TUNNEY'S PASTURE COMPLEX Ottawa ON

Database:

Order No: 20160822162

Database:

**NPCB** 

Company Code: O3086

Industry: Public Works Canada

Site Status: In- Use Transaction Date: 10/27/1989

Inspection Date:

--- Details ---Label: Serial No.:

PCB Type/Code: Askarel/Askarel

Location: PUMPHOUSE, TUNNEY'S PASTURE

In-Use

Item/State: No. of Items:

Manufacturer: Status:

Contents:

+

Label: Serial No.:

PCB Type/Code: Askarel/Askarel
Location: RESEARCH CENTER

Item/State: No. of Items: Manufacturer:

Status: In-Use

Contents: + Label:

Serial No.:

PCB Type/Code:Askarel/AskarelLocation:TUNNEY'S PASTURE

Item/State: No. of Items: Manufacturer:

Status: In-Use

Contents:

<u>Site:</u> PUBLIC WORKS AND GOVERNMENT SERVICES CANADA

Ottawa ON

Longitude:

**NPRI #:** 7200010178 **Year:** 2011

Latitude:

Site: ROB'S SHELL

RR 66 LCD S OTTAWA ON K1T 3Z4

Facility: Service Stations-Gasoline, Oil & Natural Gas

Description:

Site: TRANSPORT TRUCK

QUEENSWAY MOTOR VEHICLE (OPERATING FLUID) OTTAWA CITY ON

**Ref NO:** 224201

Contaminant Code: Contaminant Name: Contaminant Quantity:

Incident Cause: OTHER TRANSPORTATION ACCIDENT

Incident Dt: 4/19/2002
Incident Reason: ERROR

Incident Summary: LOBLAWS: 450L DIESEL FROMTRUCK TO ROAD ONLY; OPP; MTO.

**MOE Reported Dt:** 4/19/2002

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193

Order No: 20160822162

Database:

Database: RST

Database:

SPL

Environmental Impact: CONFIRMED
Nature of Impact: Soil contamination

Receiving Medium:

SAC Action Class: Sector Source Type:

Site Municipality: 20107

Site: Loblaws Company East<UNOFFICIAL>

Queensway, from Greenbank Exit to 1735 Iris Road (Pine Crest Shopping Centre - infront of IKEA)<UNOFFICIAL>

Ottawa ON

**Ref NO:** 6833-6H4GWP

Contaminant Code:

Contaminant Name: DIESEL FUEL

Contaminant Quantity:

Incident Cause: Pipe Or Hose Leak
Incident Dt: 10/12/2005

Incident Reason: Unknown - Reason not determined

Incident Summary: Loblaws: 10 to 15 L diesel to road/parking lot

LAND

MOE Reported Dt: 10/12/2005
Environmental Impact: Not Anticipated

Nature of Impact:

Receiving Medium: Land Spills Land Spills

Sector Source Type: Other Motor Vehicle

Site Municipality: Ottawa

Site: UNKNOWN

**BLAIR STATION AND QUEENSWAY OTTAWA CITY ON** 

SPL 1

Database:

Database:

Database:

SPL

Order No: 20160822162

**Ref NO:** 239018

Contaminant Code: Contaminant Name: Contaminant Quantity:

Incident Cause:UNKNOWNIncident Dt:9/11/2002Incident Reason:UNKNOWN

Incident Summary: SOURCE UNK: UNK VOLUME OF ANTIFREEZE IN THE STORMSEWER, CLEANING

MOE Reported Dt:9/11/2002Environmental Impact:POSSIBLE

Nature of Impact: Water course or lake Receiving Medium: LAND, WATER

SAC Action Class: Sector Source Type:

Site Municipality: 20107

Site: TOP VALU

PRESTON STREET, SOUTH OF GLADSTONE SERVICE STATION OTTAWA-CARLETON R.M. ON

Contaminant Code:

Ref NO:

Contaminant Name:
Contaminant Quantity:

Incident Cause: CONTAINER OVERFLOW

Incident Dt: 10/16/1990
Incident Reason: ERROR

Incident Summary: TOP VALU- 5 L DIESEL FUELTO GROUND

42188

MOE Reported Dt: 10/16/1990
Environmental Impact: POSSIBLE

Nature of Impact: Water course or lake

Receiving Medium: LAND

SAC Action Class: Sector Source Type: Site Municipality: 20000

Site: Penske Truck Leasing Canada Inc.

Hwy 417 east, at exit 88, Vars Ottawa ON

**Ref NO:** 5218-5LGE4L

Contaminant Code: 13

Contaminant Name: DIESEL FUEL

Contaminant Quantity: 100 L

Incident Cause:

Incident Dt: 4/10/2003

Incident Reason:

Summit Food: truck diesel to shoulder. contained

Incident Summary:Summit Formatty:MOE Reported Dt:4/10/2003Environmental Impact:Possible

Nature of Impact: Soil Contamination

Receiving Medium: Land

SAC Action Class: Spill to Highway (Accident)

Sector Source Type: Transport Truck

Site Municipality: Ottawa

Site: Drain-All Ltd.

Hwy 417 Westbound near Carling off-ramp Ottawa ON

Database: SPL

Database:

**Ref NO:** 6127-8K6T47

Contaminant Code: 15

Contaminant Name: MOTOR OIL

Contaminant Quantity: 10 L

Incident Cause: Pipe Or Hose Leak Incident Dt: 7/27/2011

Incident Reason: Equipment/Vehicles

Incident Summary: 10 L's of motor oil to Queensway, cleaned

MOE Reported Dt: 7/27/2011
Environmental Impact: Not Anticipated

Nature of Impact:

Receiving Medium:

SAC Action Class: Highway Spills (usually highway accidents)

Sector Source Type: Motor Vehicle Site Municipality: Ottawa

Site: Ottawa LRT < UNOFFICIAL>

Hwy 417 near Lees Avenue Ottawa ON

Ref NO: 0640-9MYHCJ

Contaminant Code: 15

Contaminant Name: HYDRAULIC OIL

Contaminant Quantity:
Incident Cause:
Incident Dt:
Incident Reason:

15 L
Leak/Break
2014/08/07
Incident Reason:
Equipment Failure

Incident Summary: Ottawa LRT: late report of hyd oil spill to grnd

MOE Reported Dt:2014/08/14Environmental Impact:Not AnticipatedNature of Impact:Soil Contamination

Receiving Medium:

SAC Action Class: Land Spills

Sector Source Type: Pipeline/Components

Site Municipality: Ottawa

Site:

central transit way adjacent to hwy 417 between nicholas ave and lees ave Ottawa ON

Database:

Order No: 20160822162

Database:

SPL

8444-9FTKCZ Ref NO:

Contaminant Code: 99 Contaminant Name: WATER Contaminant Quantity: 200 L

Incident Cause: Unknown / N/A Incident Dt: 2014/01/29 Incident Reason: Unknown / N/A

Incident Summary: RW Tomlinson: Dewatering to CB,

MOE Reported Dt: 2014/01/29 **Environmental Impact:** Confirmed

Surface Water Pollution Nature of Impact:

Receiving Medium: SAC Action Class: Land Spills Unknown / N/A Sector Source Type: Site Municipality: Ottawa

Site: Glenview Iron and Steel Ltd.<UNOFFICIAL>

Hwy 417 - Woodroffe W. Bnd, On-Ramp Ottawa ON

Ref NO: 0000-5NA2HN

Contaminant Code: 13

**DIESEL FUEL** Contaminant Name:

Contaminant Quantity: 50 L

Incident Cause: Other Transport Accident

Incident Dt: 6/6/2003

Incident Reason:

Ottawa Hwy 417 - MVA, diesel to ditch Incident Summary:

**MOE** Reported Dt: 6/6/2003 **Environmental Impact:** Not Anticipated Nature of Impact: Soil Contamination

Receiving Medium: Land

Spill to Highway (Accident); Spill to Land SAC Action Class:

Sector Source Type: Transport Truck

Ottawa Site Municipality:

Site: Hwy 417 Under Overpass @ Castlefrank Road Ottawa ON

Ref NO: 7705-67XN2B

Contaminant Code: 13

**DIESEL FUEL** Contaminant Name:

Contaminant Quantity:

Incident Cause: Other Transport Accident

Incident Dt: 12/22/2004 Incident Reason: Weather

Incident Summary: MVA: 200L diesel to Ditch

MOE Reported Dt: 12/23/2004 **Environmental Impact:** Confirmed

Nature of Impact: Groundwater Pollution; Other Impact(s); Soil Contamination; Surface Water Pollution

Receiving Medium: Land & Water SAC Action Class:

Transport Truck Sector Source Type:

Site Municipality: Ottawa

Unisource Canada, Inc. Site:

HWY 417-West near Km 117 on the Vanier Prk Way, Ottawa ON

Ref NO: 5066-7B6KDT Contaminant Code: 13 **DIESEL FUEL** Contaminant Name:

Contaminant Quantity: 250 L

Incident Cause: Other Transport Accident

Database:

Database:

SPL

Order No: 20160822162

Database:

Incident Dt:

Unknown - Reason not determined Incident Reason:

Incident Summary: TT MVA- >250L diesel HWY 417 W/ Drain-all to clean up spill.

MOE Reported Dt: 1/24/2008 **Environmental Impact:** Not Anticipated

Nature of Impact: Receiving Medium:

SAC Action Class: Highway Spills (usually highway accidents)

Transport Truck Sector Source Type:

Site Municipality: Ottawa

Site: City of Ottawa

Hwy 417 West bound, between the Carling Ave Exit and the Maitland Exit Ottawa ON

Database:

Database:

SPL

Database:

Ref NO: 5074-6J2RLX

Contaminant Code: Contaminant Name:

Contaminant Quantity:

ETHYLENE GLYCOL (ANTIFREEZE)

Pipe Or Hose Leak Incident Cause: Incident Dt: 11/11/2005

Incident Reason: Unknown - Reason not determined

Incident Summary: OC Transpo (Ottawa): 20L antifreeze to grnd, clng

MOE Reported Dt: 11/11/2005 **Environmental Impact:** Confirmed

Nature of Impact: Soil Contamination

Receiving Medium: Land SAC Action Class: Land Spills

Sector Source Type: Other Motor Vehicle

Site Municipality: Ottawa

Site:

417 eastbound, east of exit 104 Ottawa ON

Ref NO: 2172-9F4M4N

Contaminant Code: 13

Contaminant Name: **DIESEL FUEL** Contaminant Quantity: 100 L

Incident Cause: Leak/Break 2014/01/06 Incident Dt:

Incident Reason: Weather Conditions

Incident Summary: Day & Ross: diesel on Hwy 417 exit 104

2014/01/06 MOE Reported Dt: Environmental Impact: Confirmed

Nature of Impact: Soil Contamination

Receiving Medium:

SAC Action Class: Land Spills Motor Vehicle Sector Source Type: Site Municipality: Ottawa

Site:

Hwy 417 to the corner of Rideau and King Edward Ottawa ON

Ref NO: 5750-74BMWG

Contaminant Code:

Contaminant Name: OIL (PETROLEUM BASED, NOT SPECIFIED)

Contaminant Quantity: 50 L Unknown Incident Cause:

Incident Dt:

Incident Reason: Unknown - Reason not determined Incident Summary: UnknTransport Truck: 50L Oil to Road, Cln

**MOE** Reported Dt: 6/19/2007 **Environmental Impact:** Not Anticipated Nature of Impact: Other Impact(s)

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Order No: 20160822162

197

Receiving Medium: Land

SAC Action Class:

**Transport Truck** Sector Source Type: Site Municipality: Ottawa

Site: Purolator Courier Ltd.

Hwy 417 Eastbound @ Mile Marker 180 Ottawa ON

Database:

Database:

Database:

SPL

Order No: 20160822162

8553-8S9HPE Ref NO:

Contaminant Code:

DIESEL FUEL Contaminant Name:

Contaminant Quantity:

Incident Cause: Other Transport Accident

Incident Dt: 10-MAR-12 Incident Reason: Spill

TT Accident: 300L to grnd Incident Summary:

MOE Reported Dt: 10-MAR-12 **Environmental Impact:** Not Anticipated

Other Impact(s); Soil Contamination Nature of Impact: Receiving Medium: Sewage - Municipal/Private and Commercial

SAC Action Class: Land Spills

Sector Source Type:

Site Municipality: Ottawa

Enbridge Gas Distribution Inc. Site:

HWY 417 at Vars Bridge Ottawa ON

Ref NO: 6748-7X7R4U

Contaminant Code: 46

USED MOTOR OIL Contaminant Name:

Contaminant Quantity: 30 L

Incident Cause: Incident Dt: Incident Reason:

Incident Summary: Motor Vehicle-30 L Used Motor Oil to Hwy 417.

MOE Reported Dt: 10/26/2009 **Environmental Impact:** Not Anticipated

Nature of Impact: Receiving Medium:

SAC Action Class:

Highway Spills (usually highway accidents)

Sector Source Type: Site Municipality:

Site:

Hwy 417 at Hurdman Bridge, SW Corner Ottawa ON

Ref NO: 6747-9RDR6G

Contaminant Code: 13

Contaminant Name: HYDROCARBON LIGHT

Contaminant Quantity: 4 L

Incident Cause: Unknown / N/A 2014/12/01 Incident Dt: Incident Reason: Unknown / N/A

Ottawa LRT Project - 4L petroleum to grd, cleaning Incident Summary:

MOE Reported Dt: 2014/12/01

**Environmental Impact:** 

Land Nature of Impact:

Receiving Medium:

Land Spills SAC Action Class: Sector Source Type: Unknown / N/A Site Municipality: Ottawa

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Tomlinson Environmental Services Ltd.; SNC-Lavalin Constructors (Pacific) Inc Site:

Highway 417 at Hurdman Bridge Ottawa ON

Ref NO: 1322-9K2JFE

Contaminant Code: 41 Contaminant Name: WATER/SEDIMENT

Contaminant Quantity: 5 L

Leak/Break Incident Cause: Incident Dt: 2014/05/07 Incident Reason: Unknown / N/A

OLRT: Spill of Concrete Drilling Fluid to Hwy 417 CB Incident Summary:

MOE Reported Dt: 2014/05/12 Environmental Impact: Not Anticipated Nature of Impact: Surface Water Pollution

Receiving Medium:

SAC Action Class: Watercourse Spills Sector Source Type: **Drilling Operation** 

Ottawa Site Municipality:

Database: Site: 417 EASTBOUND - NICHOLAS ON RAMP<UNOFFICIAL> Ottawa ON

Ref NO: 1151-5R4LZR Contaminant Code: 13

Contaminant Name: **DIESEL FUEL** 

Contaminant Quantity: 100 L

Incident Cause: Other Discharges

Incident Dt: 9/5/2003

Incident Reason: Other - Reason not otherwise defined

Hwy 417 - diesel spill Incident Summary:

MOE Reported Dt: 9/5/2003 **Environmental Impact:** Not Anticipated

Nature of Impact:

Receiving Medium: Land

SAC Action Class:

Other Sector Source Type: Ottawa Site Municipality:

Site: S. 21(1)(f) Database: Hwy 417 E between Vanier Parkway and St. Laurent<UNOFFICIAL> Ottawa ON

1301-6XAFSY

Contaminant Code: 13

Contaminant Name: **DIESEL FUEL** 

Contaminant Quantity: 150 L

Incident Cause: Other Transport Accident

Incident Dt:

Incident Reason:

Incident Summary: Andleaur Transp & S. 21(1)(f) - 150 L diesel to Hwy and sewer

MOE Reported Dt: 1/9/2007 Not Anticipated Environmental Impact: Nature of Impact: Surface Water Pollution

Receiving Medium: Water

SAC Action Class:

Sector Source Type: Other Motor Vehicle

Site Municipality: Ottawa

Site: Ferguson Fuels<UNOFFICIAL> Database: HWY 417 EASTBOUND AT THE EAGLESON OFF RAMP<UNOFFICIAL> Ottawa ON

Ref NO: 2342-6QAQYF

Contaminant Code:

Database: SPL

SPL

Contaminant Name: **DIESEL FUEL** 

Contaminant Quantity: 60 L

Incident Cause: Other Transport Accident

Incident Dt: 5/30/2006

Incident Reason:

Incident Summary: Ferguson Fuels ~60 L diesel spill, Hwy 417, Eagleson exit

MOE Reported Dt: 5/30/2006 **Environmental Impact:** Confirmed

Nature of Impact: Soil Contamination; Surface Water Pollution

Receiving Medium: Land & Water

SAC Action Class:

Sector Source Type: Other Motor Vehicle

Site Municipality: Ottawa

CITY OF OTTAWA SNOW PLOW<UNOFFICIAL> Site:

TERRY FOX DRIVE AT THE HWY. 417 OVERPASS<UNOFFICIAL> Ottawa ON

Database: **SPL** 

Ref NO: 0881-5HS47B

Contaminant Code: 13

Contaminant Name: **DIESEL FUEL** Contaminant Quantity:

180 L Incident Cause:

Container Leak (Fuel Tank Barrels)

Incident Dt: 1/13/2003

Incident Reason: Error-Operator error

Incident Summary: CITY OF OTTAWA - 180 L OF DIESEL FUEL TO GROUND.

MOE Reported Dt: 1/13/2003 Environmental Impact: Not Anticipated

Nature of Impact:

Receiving Medium: Land Spill to Land SAC Action Class:

Sector Source Type:

Site Municipality: Ottawa

Site: Waste Services Inc.

Highway 417 East bound West of Terry Fox Ottawa ON

Database:

1683-5S3Q8B Ref NO:

Contaminant Code: 15

HYDRAULIC OIL Contaminant Name:

Contaminant Quantity: 60 L

Incident Cause: Other Transport Accident

Incident Dt: 10/6/2003

Incident Reason: Equipment Failure - Malfunction of system components

Incident Summary: Waste Services Inc. - Hydraulic oil spill

MOE Reported Dt: 10/6/2003 **Environmental Impact:** Possible

Soil Contamination; Surface Water Pollution Nature of Impact:

Receiving Medium: Land & Water SAC Action Class: Spill to Land Sector Source Type: Other Site Municipality: Ottawa

Site: LECLAIR FUELS LTD.

HWY 417 BTWN INNIS & PKWY TANK TRUCK (CARGO) OTTAWA CITY ON

Database:

Order No: 20160822162

Ref NO: 4525

Contaminant Code: Contaminant Name: Contaminant Quantity:

Incident Cause: ABOVE-GROUND TANK LEAK

Incident Dt: 5/31/1988 **UNKNOWN** Incident Reason:

Incident Summary: 15 LTR. DIESEL TO HWY. FROM TRUCK FUEL TANK. **MOE Reported Dt:** 5/31/1988

Environmental Impact:

Nature of Impact:
Receiving Medium:

LAND

SAC Action Class: Sector Source Type:

Site Municipality: 20101

Site: Waste Management Inc.

HWY 417 EASTBOUND, ST. LAURENT EXIT (115)<UNOFFICIAL> Ottawa ON

Database:

**Ref NO:** 8781-6L7M7T

Contaminant Code: 15

Contaminant Name: HYDRAULIC OIL

Contaminant Quantity: 200 L

Incident Cause:

Incident Dt: 1/19/2006

Incident Reason:

Incident Summary: HWY 417: garbage truck fire, 45 gal hyd. oil to road

MOE Reported Dt: 1/19/2006
Environmental Impact: Not Anticipated
Nature of Impact: Soil Contamination

Receiving Medium: Land

SAC Action Class:

Sector Source Type: Other Motor Vehicle

Site Municipality: Ottawa

Site: Sita Ontario Inc.

Highway 417(westbound) and Moodie Drive ramp Ottawa ON

Database: SPL

Ref NO: 4124-6DJQGX

Contaminant Code:
Contaminant Name: DIESEL FUEL

Contaminant Quantity:

Incident Cause: Other Transport Accident

Incident Dt: 6/20/2005

Incident Reason:

Incident Summary: MVA: SITA Can.: 50 L diesel to Hwy 417/Moodie Dr.

MOE Reported Dt:6/20/2005Environmental Impact:Not AnticipatedNature of Impact:Soil Contamination

Receiving Medium: Land

SAC Action Class: Spills to Highways (usually highway accidents)

Sector Source Type: Transport Truck

Site Municipality: Ottawa

Site: TRANSPORT TRUCK

HWY 417 BETWEEN NICOLAS AND VANIER PARKWAY MOTOR VEHICLE (OPERATING FLUID) OTTAWA CITY ON

Database: SPL

Order No: 20160822162

**Ref NO:** 240047

Contaminant Code: Contaminant Name: Contaminant Quantity:

Incident Cause: BLADDER FAILURE

*Incident Dt:* 9/20/2002

Incident Reason: DAMAGE BY MOVING EQUIPMENT

Incident Summary: MOLSON'S:300L DIESEL TO GRD,50L TO SEWER, CONTAI-NED AND CLEANING

MOE Reported Dt: 9/20/2002 Environmental Impact: POSSIBLE

Nature of Impact: Water course or lake Receiving Medium: LAND, WATER

SAC Action Class: Sector Source Type: Site Municipality: 20107

Site: TRANSPORT TRUCK

HWY # 417 AT ROCHESTER EXIT. MOTOR VEHICLE (OPERATING FLUID) OTTAWA CITY ON

Database:

SPL

**Ref NO:** 172543

Contaminant Code: Contaminant Name: Contaminant Quantity:

Incident Cause: OTHER CONTAINER LEAK

*Incident Dt:* 9/10/1999

Incident Reason: ADVERSE ROAD CONDITION

Incident Summary: PROVIGO DISTRIBUTION-20 LDIESEL FROM TRUCK AT HWY EXIT, FD, WILL CLEANUP.

**MOE Reported Dt:** 9/10/1999

Environmental Impact: NOT ANTICIPATED

Nature of Impact:

Receiving Medium: LAND

SAC Action Class: Sector Source Type:

Site Municipality: 20101

Site: TRANSPORT TRUCK

HWY. 417 MOTOR VEHICLE (OPERATING FLUID) OTTAWA ON

Database: SPL

Database:

SPL

**Ref NO:** 191523

Contaminant Code: Contaminant Name: Contaminant Quantity:

Incident Cause: TRUCK/TRAILER OVERTURN

Incident Dt: 12/4/2000 Incident Reason: 0THER

Incident Summary: RSR ENVIRONMENTAL:SPILL OF 50-100 L DIESEL DUE TO ROLLOVER. CONTAINED.

MOE Reported Dt:12/4/2000Environmental Impact:POSSIBLENature of Impact:Soil contamination

Receiving Medium: LAND

SAC Action Class: Sector Source Type:

Site Municipality: 20107

Site: Thermal Shell
Highway 417 West of Eagleson Rd Ottawa ON

**Ref NO:** 2847-5NPPU5

Contaminant Code: 13
Contaminant Name: FUEL OIL

Contaminant Quantity:

Incident Cause: Container Leak (Fuel Tank Barrels)

Incident Dt: 6/20/2003

Incident Reason: Unknown - Reason not determined

Incident Summary: Spill:Thermashell truck- 20L of fuel oil to ground

MOE Reported Dt: 6/20/2003
Environmental Impact: Possible

Nature of Impact: Soil Contamination

Receiving Medium: Land SAC Action Class: Spill to Land

Sector Source Type:

Site Municipality: Ottawa

<u>Site:</u>
HWY 417 ONRAMP AT TERRY FOX EXIT<UNOFFICIAL> Ottawa ON

Database:

Ref NO: 5448-5KXU3S

Contaminant Code:

Contaminant Name: HYDRAULIC OIL

Contaminant Quantity: 68 L

Incident Cause:

Incident Dt: 3/24/2003

Incident Reason:

Incident Summary: Dundas Drilling- 68 L hydr.oil to ditch, cleaning

3/24/2003 MOE Reported Dt: **Environmental Impact:** Possible

Soil Contamination Nature of Impact:

Receiving Medium: Land SAC Action Class: Spill to Land

Sector Source Type:

Site Municipality: Ottawa

Site: Wilway Transport<UNOFFICIAL>

Highway 417 eastbound, panmure exit(exit 162) MVA - HIGHWAY 417 EASTBOUND AT PANMURE EXIT (EXIT

163)<UNOFFICIAL> Ottawa ON

Ref NO: 5853-6SC638

Contaminant Code: 13

Contaminant Name: **DIESEL FUEL** 

Contaminant Quantity: 50 L

Incident Cause: Other Transport Accident

Incident Dt: 8/3/2006

Equipment/Vehicles Incident Reason:

Incident Summary: MVA: Hwy 417 eastbnd, Panmure exit, diesel to median

8/3/2006 MOE Reported Dt: **Environmental Impact:** Confirmed

Nature of Impact: Soil Contamination; Vegetation Damage

Receiving Medium: Land

SAC Action Class:

Transport Truck Sector Source Type:

Site Municipality: Ottawa

Site: HIGHWAY 417 EASTBOUND, EAST OF ROCKDALE EXIT<UNOFFICIAL> Ottawa ON

Ref NO: 2415-6M4SUB

Contaminant Code: 12

Contaminant Name: **GASOLINE** Not specified 12 Contaminant Quantity: Other Transport Accident Incident Cause:

Incident Dt: 2/17/2006

Incident Reason: **Equipment Failure** 

Hwy 417 eastbound, 36 vehicle MVA - operating fluid to grnd Incident Summary:

**MOE** Reported Dt: 2/17/2006 **Environmental Impact:** Not Anticipated

Nature of Impact: Human Health/Safety; Other Impact(s); Soil Contamination

Receiving Medium: Land

SAC Action Class:

Other Motor Vehicle Sector Source Type:

Site Municipality: Ottawa

City of Ottawa Site:

Highway 417 Ottawa ON

3043-7QMTYH Ref NO:

Contaminant Code: Contaminant Name: **ENGINE OIL** Contaminant Quantity: 10 L

Database:

Database: SPL

Database: SPL

Incident Cause: Pipe Or Hose Leak

Incident Dt:
Incident Reason:
Unknown - Reason not determined

Incident Summary: OC Transpo: 10L engine oil to grnd on Hwy 417

MOE Reported Dt: 3/30/2009
Environmental Impact: Not Anticipated
Nature of Impact: Other Impact(s)

Receiving Medium:

SAC Action Class: Primary Assessment of Incident

Sector Source Type: Other Site Municipality: Ottawa

Site: TRANSPORT TRUCK

HWY 417 AT MILE MARKER 5, EASTBOUND MOTOR VEHICLE (OPERATING FLUID) OTTAWA CITY ON

Database: SPL

**Ref NO:** 233267

Contaminant Code: Contaminant Name: Contaminant Quantity:

Incident Cause: OTHER TRANSPORTATION ACCIDENT

Incident Dt: 7/25/2002
Incident Reason: UNKNOWN

Incident Summary: BELFAST FRUIT INC. MVA PUT TRUCK IN DITCH. DIE-SEL FROM SADDLE TANKS.

MOE Reported Dt:7/25/2002Environmental Impact:POSSIBLENature of Impact:Soil contamination

Receiving Medium: LAND

SAC Action Class: Sector Source Type:

Site Municipality: 20107

Site: Enbridge Gas Distribution Inc.

Anderson Rd. ¿ 2km South of Renaud Rd. Ottawa ON

Database:

**Ref NO:** 1545-89WMQM

Contaminant Code: 35

Contaminant Name: NATURAL GAS (METHANE)

Contaminant Quantity: 1000000 L

Incident Cause: Discharge or Emission to Air

Incident Dt:

Incident Reason:

Incident Summary: TSSA-FSB: natural gas leak from 16" steel main.

MOE Reported Dt: 10/4/2010
Environmental Impact: Not Anticipated

Nature of Impact:

Receiving Medium:

SAC Action Class: Air Spills - Gases and Vapours

Sector Source Type: Other

Site Municipality:

Site: Public Works and Government Services Canada

Terrace Bay Pulp Mill Ottawa ON

Database: SPL

Order No: 20160822162

**Ref NO:** 0141-72MNRW

Contaminant Code: 13

Contaminant Name: DIESEL FUEL

Contaminant Quantity: 0 other - see incident description

Incident Cause: Unknown

Incident Dt:

Incident Reason: Unknown - Reason not determined

Incident Summary: EPS: possible leaking AST at Federal building

MOE Reported Dt: 4/26/2007 Environmental Impact: Not Anticipated Nature of Impact: Soil Contamination

Receiving Medium:

SAC Action Class: Sector Source Type:

Pulp and Paper (MISA)

Site Municipality: Terrace Bay

Site: Database: SNC Lavalin Profac Ottawa ON SPL

Ref NO: 5272-7UEPGA

Contaminant Code:
Contaminant Name:
Contaminant Quantity:
Incident Cause:

REFRIGERANT GAS, R123.
0 other - see incident description
Discharge or Emission to Air

Incident Dt:

 Incident Reason:
 Unknown - Reason not determined

 Incident Summary:
 SNC Lavalin Profac: potential R123 to atm.

MOE Reported Dt: 7/29/2009
Environmental Impact: Not Anticipated
Nature of Impact: Air Pollution

Receiving Medium:

SAC Action Class: Air Spills - Gases and Vapours

Sector Source Type: Other Site Municipality: Ottawa

Site: Public Works and Government Services Canada Database:
Tunney's Pasture Heating Plant<UNOFFICIAL> Ottawa ON SPL

**Ref NO:** 7033-862QPR

Contaminant Code: 3

Contaminant Name: FREON R-22 (CFC)

Contaminant Quantity: 0 other - see incident description

Incident Cause: Incident Dt: Incident Reason:

Incident Summary: PWGSC: unknown amnt R22 to atm.

MOE Reported Dt: 6/2/2010
Environmental Impact: Not Anticipated
Nature of Impact: Air Pollution

Receiving Medium:

SAC Action Class: Air Spills - Gases and Vapours

Sector Source Type: Other

Site Municipality:

Site: Public Works and Government Services Canada<UNOFFICIAL> Database:
Parliament Hill Ottawa ON SPL

Ref NO:2716-7XYQR5Contaminant Code:15

Contaminant Name: HYDRAULIC OIL

Contaminant Quantity: 5

Incident Cause: Valve / Fitting Leak Or Failure
Incident Dt:

Incident Reason: Other - Reason not otherwise defined

Incident Summary: Government Services Canada: < 5L of Hydraulic oil to asphalt

MOE Reported Dt: 11/20/2009
Environmental Impact: Not Anticipated

Nature of Impact: Other Impact(s); Soil Contamination

Receiving Medium:

SAC Action Class: Primary Assessment of Spills

Sector Source Type: Other

Site Municipality:

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Site: Shell Canada Products Limited

Shell Canada Ottawa ON

Database:

Ref NO: 6267-5M2K7H

Contaminant Code: Contaminant Name: **GASOLINE** 

Contaminant Quantity:

Incident Cause:

Incident Dt: 4/28/2003

Incident Reason:

Incident Summary: Shell - 1L gasoline

MOE Reported Dt: 4/28/2003 **Environmental Impact:** Possible Nature of Impact: Other Impact(s)

Receiving Medium: Land SAC Action Class: Spills

Sector Source Type:

Site Municipality: Ottawa

Site: **PUBLIC WORKS CANADA** 

VARIOUS LOCATION GOVERNMENT BUILDING OR PROPERTY OTTAWA CITY ON

Database: SPL

Database:

Ref NO: 234129

Contaminant Code: Contaminant Name: Contaminant Quantity:

Incident Cause: PIPE/HOSE LEAK

Incident Dt: 5/23/2002

Incident Reason: **EQUIPMENT FAILURE** 

Incident Summary: PUBLIC WORKS CANADA: 4 X R22 RELEASES TO ATM

MOE Reported Dt: 7/31/2002 **Environmental Impact:** CONFIRMED Air Pollution Nature of Impact:

Receiving Medium: AIR

SAC Action Class: Sector Source Type:

20107 Site Municipality:

Site: SHELL CANADA PRODUCTS LTD.

TANK TRUCK (CARGO) OTTAWA CITY ON

Ref NO: 16382

Contaminant Code: Contaminant Name: Contaminant Quantity:

VALVE/FITTING LEAK OR FAILURE Incident Cause:

Incident Dt: 3/27/1989

**EQUIPMENT FAILURE** Incident Reason:

Incident Summary: UPLANDS AIRPORT - 20 L OF JET FUEL TO GROUND.

MOE Reported Dt: 3/27/1989

**Environmental Impact:** 

Nature of Impact:

Receiving Medium: LAND

SAC Action Class: Sector Source Type:

20101 Site Municipality:

SHELL CANADA PRODUCTS LTD. Site:

TANK TRUCK (CARGO) OTTAWA CITY ON

21872 Ref NO:

Database: SPL

Order No: 20160822162

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Contaminant Code: Contaminant Name: Contaminant Quantity:

Incident Cause: PIPE/HOSE LEAK Incident Dt: 7/11/1989

Incident Reason: EQUIPMENT FAILURE

Incident Summary: SHELL REFUELING VEHICLE- 70 L AVIATION FUEL TO GROUND.

MOE Reported Dt:

Environmental Impact: Nature of Impact:

Receiving Medium:

LAND

7/11/1989

SAC Action Class: Sector Source Type:

Site Municipality: 20101

Site: SHELL CANADA PRODUCTS LTD.

TANK TRUCK (CARGO) OTTAWA CITY ON

Database: SPL

Ref NO: Contaminant Code:

Contaminant Name:
Contaminant Quantity:

Incident Cause: VALVE/FITTING LEAK OR FAILURE

23253

Incident Dt:

Incident Reason: EQUIPMENT FAILURE

Incident Summary: SHELL- 4.5 LTR SPILL OF JET FUEL AT UPLANDS AIRPORT

**MOE Reported Dt:** 8/7/1989

Environmental Impact: Nature of Impact:

Receiving Medium: LAND

SAC Action Class: Sector Source Type:

Site Municipality: 20101

Site: SHELL CANADA PRODUCTS LTD.

TANK TRUCK (CARGO) OTTAWA CITY ON

Database:

**Ref NO:** 26231

Contaminant Code: Contaminant Name: Contaminant Quantity:

Incident Cause: VALVE/FITTING LEAK OR FAILURE

Incident Dt: 10/5/1989

Incident Reason: EQUIPMENT FAILURE

Incident Summary: SHELL CANADA - 120L JET FUEL TO TERMINAL RAMP

**MOE Reported Dt:** 10/5/1989

Environmental Impact: NOT ANTICIPATED

Nature of Impact:

Receiving Medium: LAND

SAC Action Class: Sector Source Type:

Site Municipality: 20101

Site: SHELL CANADA PRODUCTS LTD.

TANK TRUCK (CARGO) OTTAWA CITY ON

Database: SPL

Order No: 20160822162

Ref NO: Contaminant Code:

Contaminant Code: Contaminant Name: Contaminant Quantity:

Incident Cause: VALVE/FITTING LEAK OR FAILURE

30521

Incident Dt: 2/2/1990
Incident Reason: ERROR

Incident Summary: SHELL TANK TRUCK-50 L AVIATION FUEL TO ASPHALT

2/2/1990

MOE Reported Dt:

Environmental Impact: Nature of Impact:

Receiving Medium: LAND / AIR

SAC Action Class: Sector Source Type:

Site Municipality: 20101

<u>Site:</u> SHELL CANADA PRODUCTS LTD. SERVICE STATION OTTAWA CITY ON Database: SPL

**Ref NO:** 60160

Contaminant Code: Contaminant Name: Contaminant Quantity:

Incident Cause: OTHER CONTAINER LEAK

LAND

Incident Dt: 11/24/1991
Incident Reason: CORROSION

Incident Summary: SHELL SERVICE STATION - 25 L. OF GASOLINE TO GROUND FROM LEAKY CAR

MOE Reported Dt: 11/25/1991

Environmental Impact: NOT ANTICIPATED Nature of Impact:

Receiving Medium:

SAC Action Class: Sector Source Type:

Site Municipality: 20101

Site: SHELL CANADA PRODUCTS LTD.

TANK TRUCK (CARGO) OTTAWA CITY ON

Database: SPL

Ref NO: 81836

Contaminant Code: Contaminant Name: Contaminant Quantity:

Incident Cause: PIPE/HOSE LEAK

Incident Dt: 2/14/1993
Incident Reason: ERROR

Incident Summary: SHELL-25L OF JET A-1 FUELTO GROUND DURING FUELLINGCONTAINED, CLEANED UP.

**MOE Reported Dt:** 2/14/1993

Environmental Impact: NOT ANTICIPATED

Nature of Impact:

Receiving Medium: LAND

SAC Action Class: Sector Source Type:

Site Municipality: 20101

Site: SHELL CANADA PRODUCTS LTD.

TANK TRUCK (CARGO) OTTAWA CITY ON

Database: SPL

**Ref NO:** 81843

Contaminant Code: Contaminant Name: Contaminant Quantity:

Incident Cause: VALVE/FITTING LEAK OR FAILURE

Incident Dt: 2/14/1993
Incident Reason: UNKNOWN

Incident Summary: SHELL CANADA - 20 L OF AVIATION FUEL TO RAMP DUE TO TRUCK LEAK

**MOE Reported Dt:** 2/14/1993

Environmental Impact: NOT ANTICIPATED

Nature of Impact:

Receiving Medium: LAND

SAC Action Class:

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Sector Source Type:

20101 Site Municipality:

SHELL CANADA PRODUCTS LTD. Site:

TANK TRUCK (CARGO) OTTAWA CITY ON

Database:

Database:

SPL

Database: SPL

Order No: 20160822162

84404 Ref NO:

Contaminant Code: Contaminant Name: Contaminant Quantity:

VALVE/FITTING LEAK OR FAILURE Incident Cause:

Incident Dt: 4/21/1993 Incident Reason: **ERROR** 

SHELL CANADA - 40 L OF AVIATION FUEL AT GATE A DUE TO TRUCK LEAK Incident Summary:

4/22/1993 MOE Reported Dt:

NOT ANTICIPATED **Environmental Impact:** 

Nature of Impact:

Receiving Medium: LAND

SAC Action Class: Sector Source Type:

Site Municipality: 20101

Site: SHELL CANADA PRODUCTS LTD.

NICHOLS SERVICE STATION, HIGHWAY MARKET, RR 1 WOODLAWN, WEST CARLETON SERVICE STATION

OTTAWA-CARLETON R.M. ON K1T 3Z4

Ref NO: 33287

Contaminant Code: Contaminant Name: Contaminant Quantity:

UNDERGROUND TANK LEAK Incident Cause:

Incident Dt: 4/17/1990 Incident Reason: CORROSION

SHELL-GASOLINE POCKETS ON GROUND Incident Summary:

MOE Reported Dt: 4/17/1990

**Environmental Impact:** 

Nature of Impact:

Receiving Medium: LAND

SAC Action Class: Sector Source Type:

Site Municipality: 20000

SHELL CANADA PRODUCTS LTD. Site:

TANK TRUCK (CARGO) OTTAWA CITY ON

Ref NO: 8471

Contaminant Code: Contaminant Name: Contaminant Quantity:

Incident Cause: ABOVE-GROUND TANK LEAK

Incident Dt: 8/22/1988 **ERROR** Incident Reason:

Incident Summary: UPLANDS AIRPORT - 50 L OF JET FUEL TO PAVEMENT FROM TANK TRUCK.

MOE Reported Dt: 8/22/1988

Environmental Impact:

Nature of Impact:

LAND Receiving Medium:

SAC Action Class: Sector Source Type:

Site Municipality: 20101

erisinfo.com | Environmental Risk Information Services

**PUBLIC WORKS CANADA** Site: Database: SPL

TILLEY BUILDING CONFEDERATION HEIGHTS OTTAWA CITY ON

Ref NO: 96173

Contaminant Code: Contaminant Name: Contaminant Quantity:

Incident Cause: PIPE/HOSE LEAK Incident Dt: 2/9/1994 Incident Reason: GASKET/JOINT

Incident Summary: PUBLIC WORKS CANADA - 400L #2 OIL FROM LINE TO LAND & SUMP

MOE Reported Dt: 2/9/1994 Environmental Impact: **POSSIBLE** Nature of Impact: Soil contamination

LAND Receiving Medium:

SAC Action Class:

Sector Source Type:

20101 Site Municipality:

# Appendix: Database Descriptions

Environmental Risk Information Services (ERIS) can search the following databases. The extent of historical information varies with each database and current information is determined by what is publicly available to ERIS at the time of update. **Note:** Databases denoted with " \* " indicates that the database will no longer be updated. See the individual database description for more information.

## Abandoned Aggregate Inventory:

Provincial

**AAGR** 

The MAAP Program maintains a database of abandoned pits and quarries. Please note that the database is only referenced by lot and concession and city/town location. The database provides information regarding the location, type, size, land use, status and general comments.\*

Government Publication Date: Sept 2002\*

Aggregate Inventory:

Provincial AGR

The Ontario Ministry of Natural Resources maintains a database of all active pits and quarries. The database provides information regarding the registered owner/operator, location name, operation type, approval type, and maximum annual tonnage.

Government Publication Date: Up to Mar 2015

## **Abandoned Mine Information System:**

Provincial

AMIS

The Abandoned Mines Information System contains data on known abandoned and inactive mines located on both Crown and privately held lands. The information was provided by the Ministry of Northern Development and Mines (MNDM), with the following disclaimer: "the database provided has been compiled from various sources, and the Ministry of Northern Development and Mines makes no representation and takes no responsibility that such information is accurate, current or complete". Reported information includes official mine name, status, background information, mine start/end date, primary commodity, mine features, hazards and remediation.

Government Publication Date: 1800-Oct 2014

## Anderson's Waste Disposal Sites:

Private

ANDR

The information provided in this database was collected by examining various historical documents which aimed to characterize the likely position of former waste disposal sites from 1860 to present. The research initiative behind the creation of this database was to identify those sites that are missing from the Ontario MOE Waste Disposal Site Inventory, as well as to provide revisions and corrections to the positions and descriptions of sites currently listed in the MOE inventory. In addition to historic waste disposal facilities, the database also identifies certain auto wreckers and scrap yards that have been extrapolated from documentary sources. Please note that the data is not warranted to be complete, exhaustive or authoritative. The information was collected for research purposes only.

Government Publication Date: 1860s-Present

## **Automobile Wrecking & Supplies:**

Private

AUWR

Order No: 20160822162

This database provides an inventory of known locations that are involved in the scrap metal, automobile wrecking/recycling, and automobile parts & supplies industry. Information is provided on the company name, location and business type.

Government Publication Date: 2001-Jul 2014

Borehole: Provincial BORE

A borehole is the generalized term for any narrow shaft drilled in the ground, either vertically or horizontally. The information here includes geotechnical investigations or environmental site assessments, mineral exploration, or as a pilot hole for installing piers or underground utilities. Information is from many sources such as the Ministry of Transportation (MTO) boreholes from engineering reports and projects from the 1950 to 1990's in Southern Ontario. Boreholes from the Ontario Geological Survey (OGS) including The Urban Geology Analysis Information System (UGAIS) and the York Peel Durham Toronto (YPDT) database of the Conservation Authority Moraine Coalition. This database will include fields such as location, stratigraphy, depth, elevation, year drilled, etc. For all water well data or oil and gas well data for Ontario please refer to WWIS and OOGW.

Government Publication Date: 1875-Jul 2014

Certificates of Approval: Provincial CA

This database contains the following types of approvals: Air & Noise, Industrial Sewage, Municipal & Private Sewage, Waste Management Systems and Renewable Energy Approvals. The MOE in Ontario states that any facility that releases emissions to the atmosphere, discharges contaminants to ground or surface water, provides potable water supplies, or stores, transports or disposes of waste, must have a Certificate of Approval before it can operate lawfully. Fields include approval number, business name, address, approval date, approval type and status. This database will no longer be updated, as CofA's have been replaced by either Environmental Activity and Sector Registry (EASR) or Environmental Compliance Approval (ECA). Please refer to those individual databases for any information after Oct.31, 2011.

Government Publication Date: 1985-Oct 30, 2011\*

Commercial Fuel Oil Tanks:

Provincial CFOT

Since May 2002, Ontario developed a new act where it became mandatory for fuel oil tanks to be registered with Technical Standards & Safety Authority (TSSA). This data would include all commercial underground fuel oil tanks in Ontario with fields such as location, registration number, tank material, age of tank and tank size.

Government Publication Date: 1948-Dec 2015

<u>Chemical Register:</u> Private CHEM

This database includes information from both a one time study conducted in 1992 and private source and is a listing of facilities that manufacture or distribute chemicals. The production of these chemical substances may involve one or more chemical reactions and/or chemical separation processes (i.e. fractionation, solvent extraction, crystallization, etc.).

Government Publication Date: 1992, 1999-Jul 2014

## Inventory of Coal Gasification Plants and Coal Tar Sites:

Provincial COAL

This inventory includes both the "Inventory of Coal Gasification Plant Waste Sites in Ontario-April 1987" and the Inventory of Industrial Sites Producing or Using Coal Tar and Related Tars in Ontario-November 1988) collected by the MOE. It identifies industrial sites that produced and continue to produce or use coal tar and other related tars. Detailed information is available and includes: facility type, size, land use, information on adjoining properties, soil condition, site operators/occupants, site description, potential environmental impacts and historic maps available. This was a one-time inventory.\*

Government Publication Date: Apr 1987 and Nov 1988\*

Compliance and Convictions: Provincial

This database summarizes the fines and convictions handed down by the Ontario courts beginning in 1989. Companies and individuals named here have been found guilty of environmental offenses in Ontario courts of law.

Government Publication Date: 1989-Feb 2014

#### Certificates of Property Use:

Provincial CPU

This is a subset taken from Ontario's Environmental Registry (EBR) database. It will include all CPU's on the registry such as (EPA s. 168.6) - Certificate of Property Use.

Government Publication Date: 1994-Jan 2016

Drill Hole Database:

Provincial DRI

The Ontario Drill Hole Database contains information on more than 113,000 percussion, overburden, sonic and diamond drill holes from assessment files on record with the department of Mines and Minerals. Please note that limited data is available for southern Ontario, as it was the last area to be completed. The database was created when surveys submitted to the Ministry were converted in the Assessment File Research Image Database (AFRI) project. However, the degree of accuracy (coordinates) as to the exact location of drill holes is dependent upon the source document submitted to the MNDM. Levels of accuracy used to locate holes are: centering on the mining claim; a sketch of the mining claim; a 1:50,000 map; a detailed company map; or from submitted a "Report of Work".

Government Publication Date: 1886-Jun 2014

## **Environmental Activity and Sector Registry:**

Provincial

EASR

CONV

On October 31, 2011, a smarter, faster environmental approvals system came into effect in Ontario. The EASR allows businesses to register certain activities with the ministry, rather than apply for an approval. The registry is available for common systems and processes, to which preset rules of operation can be applied. The EASR is currently available for: heating systems, standby power systems and automotive refinishing. Businesses whose activities aren't subject to the EASR may apply for an ECA (Environmental Compliance Approval), Please see our ECA database.

Government Publication Date: Feb 29, 2016

Environmental Registry:

Provincial EBR

The Environmental Registry lists proposals, decisions and exceptions regarding policies, Acts, instruments, or regulations that could significantly affect the environment. Through the Registry, thirteen provincial ministries notify the public of upcoming proposals and invite their comments. For example, if a local business is requesting a permit, license, or certificate of approval to release substances into the air or water; these are notified on the registry. Data includes: Approval for discharge into the natural environment other than water (i.e. Air) - EPA s. 9, Approval for sewage works - OWRA s. 53(1), and EPA s. 27 - Approval for a waste disposal site. For information regarding Permit to Take Water (PTTW), Certificate of Property Use (CPU) and (ORD) Orders please refer to those individual databases.

Government Publication Date: 1994-Jan 2016

## Environmental Compliance Approval:

Provincial

**ECA** 

Order No: 20160822162

On October 31, 2011, a smarter, faster environmental approvals system came into effect in Ontario. In the past, a business had to apply for multiple approvals (known as certificates of approval) for individual processes and pieces of equipment. Today, a business either registers itself, or applies for a single approval, depending on the types of activities it conducts. Businesses whose activities aren't subject to the EASR may apply for an ECA. A single ECA addresses all of a business's emissions, discharges and wastes. Separate approvals for air, noise and waste are no longer required. This database will also include Renewable Energy Approvals. For certificates of approval prior to Nov 1st, 2011, please refer to the CA database. For all Waste Disposal Sites please refer to the WDS database.

Government Publication Date: Feb 29, 2016

#### **Environmental Effects Monitoring:**

Federal

FFM

The Environmental Effects Monitoring program assesses the effects of effluent from industrial or other sources on fish, fish habitat and human usage of fisheries resources. Since 1992, pulp and paper mills have been required to conduct EEM studies under the Pulp and Paper Effluent Regulations. This database provides information on the mill name, geographical location and sub-lethal toxicity data.

Government Publication Date: 1992-2007\*

ERIS Historical Searches: Private EHS

ERIS has compiled a database of all environmental risk reports completed since March 1999. Available fields for this database include: site location, date of report, type of report, and search radius. As per all other databases, the ERIS database can be referenced on both the map and "Statistical Profile" page.

Government Publication Date: 1999-Aug 2014

## **Environmental Issues Inventory System:**

Federal

EIIS

The Environmental Issues Inventory System was developed through the implementation of the Environmental Issues and Remediation Plan. This plan was established to determine the location and severity of contaminated sites on inhabited First Nation reserves, and where necessary, to remediate those that posed a risk to health and safety; and to prevent future environmental problems. The EIIS provides information on the reserve under investigation, inventory number, name of site, environmental issue, site action (Remediation, Site Assessment), and date investigation completed.

Government Publication Date: 1992-2001\*

## **Emergency Management Historical Event:**

Provincial

**EMHE** 

The Emergency Management Historical Event data class will store the locations of historical occurrences of emergency events. Events captured will include those assigned to the Ministry of Natural Resources by Order-In-Council (OIC) under the Emergency Management and Civil Protection Act as well as events where MNR provided requested emergency response assistance. Many of these events will have involved community evacuations, significant structural loss, and/or involvement of MNR emergency response staff. These events fall into one of ten (10) type categories: Dam Failure; Drought / Low Water; Erosion; Flood; Forest Fire; Soil and Bedrock Instability; Petroleum Resource Center Event, EMO Requested Assistance, Continuity of Operations Event, Other Requested Assistance.

Government Publication Date: May 31, 2014

## **List of TSSA Expired Facilities:**

Provincial

EXP

This is a list of all expired facilities that fall under the TSSA (TSSA Act & Safety Regulations), including the six regulations that exist under the Fuels Safety Division. It will include facilities such as private fuel outlets, bulk plants, fuel oil tanks, gasoline stations, marinas, propane filling stations, liquid fuel tanks, piping systems, etc. These tanks have been removed and automatically fall under the expired facilities inventory held by TSSA.

Government Publication Date: Current to Nov 2015

Federal Convictions:

Federal

**FCON** 

Environment Canada maintains a database referred to as the "Environmental Registry" that details prosecutions under the Canadian Environmental Protection Act (CEPA) and the Fisheries Act (FA). Information is provided on the company name, location, charge date, offence and penalty.

Government Publication Date: 1988-Jun 2007\*

#### Contaminated Sites on Federal Land:

Federal

**FCS** 

The Federal Contaminated Sites Inventory includes information on known federal contaminated sites under the custodianship of departments, agencies and consolidated Crown corporations as well as those that are being or have been investigated to determine whether they have contamination arising from past use that could pose a risk to human health or the environment. The inventory also includes non-federal contaminated sites for which the Government of Canada has accepted some or all financial responsibility. It does not include sites where contamination has been caused by, and which are under the control of, enterprise Crown corporations, private individuals, firms or other levels of government.

Government Publication Date: June 2000-Oct 2015

## Fisheries & Oceans Fuel Tanks:

Federal

**FOFT** 

Fisheries & Oceans Canada maintains an inventory of aboveground & underground fuel storage tanks located on Fisheries & Oceans property or controlled by DFO. Our inventory provides information on the site name, location, tank owner, tank operator, facility type, storage tank location, tank contents & capacity, and date of tank installation.

Government Publication Date: 1964-Sept 2003

Fuel Storage Tank:

Provincial

FST

Order No: 20160822162

The Technical Standards & Safety Authority (TSSA), under the Technical Standards & Safety Act of 2000 maintains a database of registered private and retail fuel storage tanks in Ontario with fields such as location, tank status, license date, tank type, tank capacity, fuel type, installation year and facility type.

Government Publication Date: 2010-Nov 2015

Fuel Storage Tank - Historic: Provincial FSTH

The Technical Standards & Safety Authority (TSSA), under the Technical Standards & Safety Act of 2000 maintains a database of registered private and retail fuel storage tanks in Ontario with fields such as location, tank status, license date, tank type, tank capacity, fuel type, installation year and facility type.

Government Publication Date: Pre-Jan 2010\*

## Ontario Regulation 347 Waste Generators Summary:

Provincial

GEN

Regulation 347 of the Ontario EPA defines a waste generation site as any site, equipment and/or operation involved in the production, collection, handling and/or storage of regulated wastes. A generator of regulated waste is required to register the waste generation site and each waste produced, collected, handled, or stored at the site. This database contains the registration number, company name and address of registered generators including the types of hazardous wastes generated. It includes data on waste generating facilities such as: drycleaners, waste treatment and disposal facilities, machine shops, electric power distribution etc. This information is a summary of all years from 1986 including the most currently available data. Some records may contain, within the company name, the phrase "See & Use..." followed by a series of letters and numbers. This occurs when one company is amalgamated with or taken over by another registered company. The number listed as "See & Use", refers to the new ownership and the other identification number refers to the original ownership. This phrase serves as a link between the 2 companies until operations have been fully transferred.

Government Publication Date: 1986-May 2015

#### **Greenhouse Gas Emissions from Large Facilities:**

Federal

GHG

List of greenhouse gas emissions from large facilities made available by Environment Canada. Greenhouse gas emissions in kilotonnes of carbon dioxide equivalents (kt CO2 eq).

Government Publication Date: Dec 31, 2013

TSSA Historic Incidents:

Provincial HINC

This database will cover all incidences recorded by TSSA with their older system, before they moved to their new management system. TSSA's Fuels Safety Program administers the Technical Standards & Safety Act 2000, providing fuel-related safety services associated with the safe transportation, storage, handling and use of fuels such as gasoline, diesel, propane, natural gas and hydrogen. Under this Act, TSSA regulates fuel suppliers, storage facilities, transport trucks, pipelines, contractors and equipment or appliances that use fuels. The TSSA works to protect the public, the environment and property from fuel-related hazards such as spills, fires and explosions. This database will include spills and leaks from pipelines, diesel, fuel oil, gasoline, natural gas, propane and hydrogen recorded by the TSSA.

Government Publication Date: 2006-June 2009\*

### Indian & Northern Affairs Fuel Tanks:

Federal

۸ГТ

The Department of Indian & Northern Affairs Canada (INAC) maintains an inventory of aboveground & underground fuel storage tanks located on both federal and crown land. Our inventory provides information on the reserve name, location, facility type, site/facility name, tank type, material & ID number, tank contents & capacity, and date of tank installation.

Government Publication Date: 1950-Aug 2003\*

TSSA Incidents: Provincial INC

TSSA's Fuels Safety Program administers the Technical Standards & Safety Act 2000, providing fuel-related safety services associated with the safe transportation, storage, handling and use of fuels such as gasoline, diesel, propane, natural gas and hydrogen. Under this Act, TSSA regulates fuel suppliers, storage facilities, transport trucks, pipelines, contractors and equipment or appliances that use fuels. Includes incidents from fuel-related hazards such as spills, fires and explosions. This database will include spills and leaks from diesel, fuel oil, gasoline, natural gas, propane and hydrogen recorded by the TSSA.

Government Publication Date: June 2009 - Nov 2015

#### **Landfill Inventory Management Ontario:**

Provincial

LIMO

Order No: 20160822162

The Landfill Inventory Management Ontario (LIMO) database is updated every year, as the ministry compiles new and updated information. The inventory will include small and large landfills. Additionally, each year the ministry will request operators of the larger landfills complete a landfill data collection form that will be used to update LIMO and will include the following information from the previous operating year. This will include additional information such as estimated amount of total waste received, landfill capacity, estimated total remaining landfill capacity, fill rates, engineering designs, reporting and monitoring details, size of location, service area, approved waste types, leachate of site treatment, contaminant attenuation zone and more. The small landfills will include information such as site owner, site location and certificate of approval # and status.

Government Publication Date: 2012

<u>Canadian Mine Locations:</u> Private MINE

This information is collected from the Canadian & American Mines Handbook. The Mines database is a national database that provides over 290 listings on mines (listed as public companies) dealing primarily with precious metals and hard rocks. Listed are mines that are currently in operation, closed, suspended, or are still being developed (advanced projects). Their locations are provided as geographic coordinates (x, y and/or longitude, latitude). As of 2002, data pertaining to Canadian smelters and refineries has been appended to this database.

Government Publication Date: 1998-2009\*

Mineral Occurrences:

Provincial MNR

In the early 70's, the Ministry of Northern Development and Mines created an inventory of approximately 19,000 mineral occurrences in Ontario, in regard to metallic and industrial minerals, as well as some information on building stones and aggregate deposits. Please note that the "Horizontal Positional Accuracy" is approximately +/- 200 m. Many reference elements for each record were derived from field sketches using pace or chain/tape measurements against claim posts or topographic features in the area. The primary limiting factor for the level of positional accuracy is the scale of the source material. The testing of horizontal accuracy of the source materials was accomplished by comparing the plan metric (X and Y) coordinates of that point with the coordinates of the same point as defined from a source of higher accuracy.

Government Publication Date: 1846-Apr 2013

## National Analysis of Trends in Emergencies System (NATES):

Federal

NATE

In 1974 Environment Canada established the National Analysis of Trends in Emergencies System (NATES) database, for the voluntary reporting of significant spill incidents. The data was to be used to assist in directing the work of the emergencies program. NATES ran from 1974 to 1994. Extensive information is available within this database including company names, place where the spill occurred, date of spill, cause, reason and source of spill, damage incurred, and amount, concentration, and volume of materials released.

Government Publication Date: 1974-1994\*

Non-Compliance Reports:

Provincial

NCPL

The Ministry of the Environment provides information about non-compliant discharges of contaminants to air and water that exceed legal allowable limits, from regulated industrial and municipal facilities. A reported non-compliance failure may be in regard to a Control Order, Certificate of Approval, Sectoral Regulation or specific regulation/act.

Government Publication Date: 1994-2013

#### National Defense & Canadian Forces Fuel Tanks:

Federal

NDFT

The Department of National Defense and the Canadian Forces maintains an inventory of all aboveground & underground fuel storage tanks located on DND lands. Our inventory provides information on the base name, location, tank type & capacity, tank contents, tank class, date of tank installation, date tank last used, and status of tank as of May 2001. This database will no longer be updated due to the new National Security protocols which have prohibited any release of this database.

Government Publication Date: Up to May 2001\*

### National Defense & Canadian Forces Spills:

Federal

NDSP

The Department of National Defense and the Canadian Forces maintains an inventory of spills to land and water. All spill sites have been classified under the "Transportation of Dangerous Goods Act - 1992". Our inventory provides information on the facility name, location, spill ID #, spill date, type of spill, as well as the quantity of substance spilled & recovered.

Government Publication Date: Mar 1999-Aug 2010

#### National Defence & Canadian Forces Waste Disposal Sites:

Federal

NDWD

The Department of National Defence and the Canadian Forces maintains an inventory of waste disposal sites located on DND lands. Where available, our inventory provides information on the base name, location, type of waste received, area of site, depth of site, year site opened/closed and status.

Government Publication Date: 2001-Apr 2007\*

#### National Energy Board Wells:

Federal

**NEBW** 

The NEBW database contains information on onshore & offshore oil and gas wells that are outside provincial jurisdiction(s) and are thereby regulated by the National Energy Board. Data is provided regarding the operator, well name, well ID No./UWI, status, classification, well depth, spud and release

Government Publication Date: 1920-Feb 2003\*

## National Environmental Emergencies System (NEES):

Federal

NEES

Order No: 20160822162

In 2000, the Emergencies program implemented NEES, a reporting system for spills of hazardous substances. For the most part, this system only captured data from the Atlantic Provinces, some from Quebec and Ontario and a portion from British Columbia. Data for Alberta, Saskatchewan, Manitoba and the Territories was not captured. However, NEES is also a repository for previous Environment Canada spill datasets. NEES is composed of the historic datasets 'or Trends' which dates from approximately 1974 to present. NEES Trends is a compilation of historic databases, which were merged and includes data from NATES (National Analysis of Trends in Emergencies System), ARTS (Atlantic Regional Trends System), and NEES. In 2001, the Emergencies Program determined that variations in reporting regimes and requirements between federal and provincial agencies made national spill reporting and trend analysis difficult to achieve. As a consequence, the department has focused efforts on capturing data on spills of substances which fall under its legislative authority only (CEPA and FA). As such, the NEES database will be decommissioned in December 2004.

Government Publication Date: 1974-2003\*

National PCB Inventory: Federal NPCB

Environment Canada's National PCB inventory includes information on in-use PCB containing equipment in Canada including federal, provincial and private facilities. Federal out-of-service PCB containing equipment and PCB waste owned by the federal government or by federally regulated industries such as airlines, railway companies, broadcasting companies, telephone and telecommunications companies, pipeline companies, etc. are also listed. Although it is not Environment Canada's mandate to collect data on non-federal PCB waste, the National PCB inventory includes some information on provincial and private PCB waste and storage sites. Some addresses provided may be Head Office addresses and are not necessarily the location of where the waste is being used or stored.

Government Publication Date: 1988-2008\*

#### National Pollutant Release Inventory:

Federal

**NPRI** 

Environment Canada has defined the National Pollutant Release Inventory ("NPRI") as a federal government initiative designed to collect comprehensive national data regarding releases to air, water, or land, and waste transfers for recycling for more than 300 listed substances.

Government Publication Date: Dec 31, 2014

Oil and Gas Wells:

Private OGW

The Nickle's Energy Group (publisher of the Daily Oil Bulletin) collects information on drilling activity including operator and well statistics. The well information database includes name, location, class, status and depth. The main Nickle's database is updated on a daily basis, however, this database is updated on a monthly basis. More information is available at www.nickles.com.

Government Publication Date: 1988-2015

Ontario Oil and Gas Wells:

Provincial

OOGW

In 1998, the MNR handed over to the Ontario Oil, Gas and Salt Resources Corporation, the responsibility of maintaining a database of oil and gas wells drilled in Ontario. The OGSR Library has over 20,000+ wells in their database. Information available for all wells in the ERIS database include well owner/operator, location, permit issue date, and well cap date, license No., status, depth and the primary target (rock unit) of the well being drilled. All geology/stratigraphy table information, plus all water table information is also provide for each well record.

Government Publication Date: 1800-Aug 2015

#### **Inventory of PCB Storage Sites:**

Provincial

OPCB

The Ontario Ministry of Environment, Waste Management Branch, maintains an inventory of PCB storage sites within the province. Ontario Regulation 11/82 (Waste Management - PCB) and Regulation 347 (Generator Waste Management) under the Ontario EPA requires the registration of inactive PCB storage equipment and/or disposal sites of PCB waste with the Ontario Ministry of Environment. This database contains information on: 1) waste quantities; 2) major and minor sites storing liquid or solid waste; and 3) a waste storage inventory.

Government Publication Date: 1987-Oct 2004; 2012-Dec 2013

Orders:

Provincial ORD

This is a subset taken from Ontario's Environmental Registry (EBR) database. It will include all Orders on the registry such as (EPA s. 17) - Order for remedial work, (EPA s. 18) - Order for preventative measures, (EPA s. 43) - Order for removal of waste and restoration of site, (EPA s. 44) - Order for conformity with Act for waste disposal sites, (EPA s. 136) - Order for performance of environmental measures.

Government Publication Date: 1994-Jan 2016

<u>Canadian Pulp and Paper:</u> Private

This information is part of the Pulp and Paper Canada Directory. The Directory provides a comprehensive listing of the locations of pulp and paper mills and the products that they produce.

Government Publication Date: 1999, 2002, 2004, 2005, 2009

### Parks Canada Fuel Storage Tanks:

Federal

PCFT

Order No: 20160822162

PAP

Canadian Heritage maintains an inventory of known fuel storage tanks operated by Parks Canada, in both National Parks and at National Historic Sites. The database details information on site name, location, tank install/removal date, capacity, fuel type, facility type, tank design and owner/operator.

Government Publication Date: 1920-Jan 2005\*

Pesticide Register:

Provincial PES

The Ontario Ministry of Environment maintains a database of all manufacturers and vendors of registered pesticides.

Government Publication Date: 1988-Jun 2013

<u>TSSA Pipeline Incidents:</u> Provincial PINC

TSSA's Fuels Safety Program administers the Technical Standards & Safety Act 2000, providing fuel-related safety services associated with the safe transportation, storage, handling and use of fuels such as gasoline, diesel, propane, natural gas and hydrogen. Under this Act, TSSA regulates fuel suppliers, storage facilities, transport trucks, pipelines, contractors and equipment or appliances that use fuels. This database will include spills, strike and leaks from recorded by the TSSA.

Government Publication Date: Nov 30, 2015

#### Private and Retail Fuel Storage Tanks:

Provincial

PRT

The Fuels Safety Branch of the Ontario Ministry of Consumer and Commercial Relations maintained a database of all registered private fuel storage tanks and licensed retail fuel outlets. This database includes an inventory of locations that have gasoline, oil, waste oil, natural gas and/or propane storage tanks on their property. The MCCR no longer collects this information. This information is now collected by the Technical Standards and Safety Authority (TSSA).

Government Publication Date: 1989-1996\*

Permit to Take Water:

Provincial PTTW

This is a subset taken from Ontario's Environmental Registry (EBR) database. It will include all PTTW's on the registry such as OWRA s. 34 - Permit to take water

Government Publication Date: 1994-Jan 2016

## Ontario Regulation 347 Waste Receivers Summary:

Provincial

REC

Part V of the Ontario Environmental Protection Act ("EPA") regulates the disposal of regulated waste through an operating waste management system or a waste disposal site operated or used pursuant to the terms and conditions of a Certificate of Approval or a Provisional Certificate of Approval. Regulation 347 of the Ontario EPA defines a waste receiving site as any site or facility to which waste is transferred by a waste carrier. A receiver of regulated waste is required to register the waste receiving facility. This database represents registered receivers of regulated wastes, identified by registration number, company name and address, and includes receivers of waste such as: landfills, incinerators, transfer stations, PCB storage sites, sludge farms and water pollution control plants. This information is a summary of all years from 1986 including the most currently available data.

Government Publication Date: 1986-2013

Record of Site Condition:

Provincial RSC

The Record of Site Condition (RSC) is part of the Ministry of the Environment's Brownfields Environmental Site Registry. Protection from environmental cleanup orders for property owners is contingent upon documentation known as a record of site condition (RSC) being filed in the Environmental Site Registry. In order to file an RSC, the property must have been properly assessed and shown to meet the soil, sediment and groundwater standards appropriate for the use (such as residential) proposed to take place on the property. The Record of Site Condition Regulation (O. Reg. 153/04) details requirements related to site assessment and clean up.

RSCs filed after July 1, 2011 will also be included as part of the new (O.Reg. 511/09).

Government Publication Date: 1997-Sept 2001, Oct 2004-Jan 2016

Retail Fuel Storage Tanks:

Private RST

This database includes an inventory of retail fuel outlet locations (including marinas) that have on their property gasoline, oil, waste oil, natural gas and / or propane storage tanks.

Government Publication Date: 1999-Jul 2014

#### Scott's Manufacturing Directory:

Private

SCT

Scott's Directories is a data bank containing information on over 200,000 manufacturers across Canada. Even though Scott's listings are voluntary, it is the most comprehensive database of Canadian manufacturers available. Information concerning a company's address, plant size, and main products are included in this database.

Government Publication Date: 1992-Mar 2011\*

Ontario Spills:

Provincial SPL

This database identifies information such as location (approximate), type and quantity of contaminant, date of spill, environmental impact, cause, nature of impact, etc. Information from 1988-2002 was part of the ORIS (Occurrence Reporting Information System). The SAC (Spills Action Centre) handles all spills reported in Ontario. Regulations for spills in Ontario are part of the MOE's Environmental Protection Act, Part X.

Government Publication Date: 1988-Jun 2015

## Wastewater Discharger Registration Database:

Provincial

SRDS

Order No: 20160822162

Information under this heading is combination of the following 2 programs. The Municipal/Industrial Strategy for Abatement (MISA) division of the Ontario Ministry of Environment maintained a database of all direct dischargers of toxic pollutants within nine sectors including: Electric Power Generation; Mining; Petroleum Refining; Organic Chemicals; Inorganic Chemicals; Pulp & Paper; Metal Casting; Iron & Steel; and Quarries. All sampling information is now collected and stored within the Sample Result Data Store (SRDS).

Government Publication Date: 1990-2013

Anderson's Storage Tanks:

The information provided in this database was collected by examining various historical documents, which identified the location of former storage tanks, containing substances such as fuel, water, gas, oil, and other various types of miscellaneous products. Information is available in regard to business operating at tank site, tank location, permit year, permit & installation type, no. of tanks installed & configuration and tank capacity. Data contained within this database pertains only to the city of Toronto and is not warranted to be complete, exhaustive or authoritative. The information was collected for research purposes only.

Government Publication Date: 1915-1953\*

#### Transport Canada Fuel Storage Tanks:

Federal

CFT

List of fuel storage tanks currently or previously owned or operated by Transport Canada. This inventory also includes tanks on The Pickering Lands, which refers to 7,530 hectares (18,600 acres) of land in Pickering, Markham, and Uxbridge owned by the Government of Canada since 1972; properties on this land has been leased by the government since 1975, and falls under the Site Management Policy of Transport Canada, but is administered by Public Works and Government Services Canada. This inventory provides information on the site name, location, tank age, capacity and fuel type.

Government Publication Date: 1970-Mar 2007

#### TSSA Variances for Abandonment of Underground Storage Tanks:

Provincial

VAR

The TSSA, under the Liquid Fuels Handling Code and the Fuel Oil Code, all underground storage tanks must be removed within two years of disuse. If removal of a tank is not feasible, you may apply to seek a variance from this code requirement. This is a list of all variances granted for abandoned tanks

Government Publication Date: Current to Nov 2015

#### Waste Disposal Sites - MOE CA Inventory:

Provincial

WDS

The Ontario Ministry of Environment, Waste Management Branch, maintains an inventory of known open (active or inactive) and closed disposal sites in the Province of Ontario. Active sites maintain a Certificate of Approval, are approved to receive and are receiving waste. Inactive sites maintain Certificate(s) of Approval but are not receiving waste. Closed sites are not receiving waste. The data contained within this database was compiled from the MOE's Certificate of Approval database. Locations of these sites may be cross-referenced to the Anderson database described under ERIS's Private Source Database section, by the CA number. All new Environmental Compliance Approvals handed out after Oct 31, 2011 for Waste Disposal Sites will still be found in this database.

Government Publication Date: Feb 29, 2016

#### Waste Disposal Sites - MOE 1991 Historical Approval Inventory:

Provincial

WDSH

In June 1991, the Ontario Ministry of Environment, Waste Management Branch, published the "June 1991 Waste Disposal Site Inventory", of all known active and closed waste disposal sites as of October 30st, 1990. For each "active" site as of October 31st 1990, information is provided on site location, site/CA number, waste type, site status and site classification. For each "closed" site as of October 31st 1990, information is provided on site location, site/CA number, closure date and site classification. Locations of these sites may be cross-referenced to the Anderson database described under ERIS's Private Source Database section, by the CA number.

Government Publication Date: Up to Oct 1990\*

#### Water Well Information System:

Provincial

wwis

Order No: 20160822162

This database describes locations and characteristics of water wells found within Ontario in accordance with Regulation 903. It includes such information as coordinates, construction date, well depth, primary and secondary use, pump rate, static water level, well status, etc. Also included are detailed stratigraphy information, approximate depth to bedrock and the approximate depth to the water table.

Government Publication Date: 1955-Mar 2014

## **Definitions**

<u>Database Descriptions:</u> This section provides a detailed explanation for each database including: source, information available, time coverage, and acronyms used. They are listed in alphabetic order.

<u>Detail Report</u>: This is the section of the report which provides the most detail for each individual record. Records are summarized by location, starting with the project property followed by records in closest proximity.

<u>Distance:</u> The distance value is the distance between plotted points, not necessarily the distance between the sites' boundaries. All values are an approximation.

<u>Direction</u>: The direction value is the compass direction of the site in respect to the project property and/or center point of the report.

*Elevation:* The elevation value is taken from the location at which the records for the site address have been plotted. All values are an approximation. Source: Google Elevation API.

**Executive Summary:** This portion of the report is divided into 3 sections:

'Report Summary'- Displays a chart indicating how many records fall on the project property and, within the report search radii.

'Site Report Summary'-Project Property'- This section lists all the records which fall on the project property. For more details, see the 'Detail Report' section.

'Site Report Summary-Surrounding Properties'- This section summarizes all records on adjacent properties, listing them in order of proximity from the project property. For more details, see the 'Detail Report' section.

<u>Map Key:</u> The map key number is assigned according to closest proximity from the project property. Map Key numbers always start at #1. The project property will always have a map key of '1' if records are available. If there is a number in brackets beside the main number, this will indicate the number of records on that specific property. If there is no number in brackets, there is only one record for that property.

The symbol and colour used indicates 'elevation': the red inverted triangle will dictate 'ERIS Sites with Lower Elevation', the yellow triangle will dictate 'ERIS Sites with Higher Elevation' and the orange square will dictate 'ERIS Sites with Same Elevation.'

<u>Unplottables:</u> These are records that could not be mapped due to various reasons, including limited geographic information. These records may or may not be in your study area, and are included as reference.



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City Directory Information Source	

Vernon's Ottawa And Area, Ontario City Directory

PROJECT NUMBER: 20160822162	
Site Address:	933 Gladstone Avenue, Ottawa, Ontario
Year: 2011	
Site Listing:	-Address Not Listed
Adjacent Properties:	
Gladstone Avenue (900-970)	-All Residential
	910-The Gladstone
	916-Dragon Auto Services
	925-Preston Importing
	928-Arthur Murray Franchised Dance Studio
	949-Orville's Auto Electric
	950-Hypernet
	-Lashley & Assoc.
	-H3 Creative

	-Canadian Assoc. Of Second Language Teachers
	-Southam Design
	-Mindwire
	-Media Awareness Network
	-Mars Work
	951-Enriched Bread Artists Studio
	953-Leaping Raster
	-Twelfth Root
	955-Northern Art Glass
	957-Defalco's For Brewers & Winemakers
Balsam Street (70-145)	-All Residential
Larch Street (All)	-All Residential
	17-V Steel Works
Laurel Street (All)	-All Residential
	28-Delta Hardwood Flooring
	35-Signs In 23 Hours.Com
Loretta Avenue North (All)	-All Residential
	129-Buchanan Lighting
	131-Beacon Lite
	145-Prepress Integration
	-Terrapro Corp.
	155-Ottawa Aikikai
	-Hoco Brands

Louisa Street (All)	-All Residential
	18-Dalhousie Food Action Group
	-Canadian Lacrosse Assoc.
	-International Table Tennis Federation
	-TMS International
	-Canadian Table Tennis Assoc.
	54-Holliday Auto Centre
	66-Bair Bair Construction
	-Grace General Contractors
	152-Plomberie Plumbing
	184-Keitel Furniture Repair
Preston Street (225-300)	-All Residential
	225-Divino Wine Studio
	-Vasto Dry Goods
	-Appletree Medical Centre
	226-Paesani's Café
	228-Big Easy Rest
	241-Preston Garage
	248-Preston Hardware
	254-Trattoria Café
	256-Green Papaya Rest
	262-Café La Grotta
	268-Lindenhof Rest
	270-Ital-Can Video Services
	276-R & M Enterprises

300-Domino's Pizza
-Reggina Pastry
-No Listings
-

PROJECT NUMBER: 20160822162	
Site Address:	933 Gladstone Avenue, Ottawa, Ontario
Year: 2006-07	
Site Listing:	-Address Not Listed
Adjacent Properties:	
Gladstone Avenue (900-970)	-All Residential
	910-Great Canadian Theatre
	925-Preston Importing
	-Preston Hardware
	928-Arthur Murray Franchised Dance Studio
	949-Orville's Auto Electric
	950-Segue Inc.
	-Lixar
	-Mac Group
	-Renters News
	-Auto Trader
	-Mindwire

	-Mars Work
	951-Enriched Bread Artists
	953-Leaping Raster
	-Twelfth Root
	-Television Factory
	955-Northern Art Glass
	957-Defalco's For Brewers & Winemakers
	-Industrial Cleaning Supplies
Balsam Street (70-145)	-All Residential
Larch Street (All)	-All Residential
	17-V Steel Works
Laurel Street (All)	-All Residential
	28-Delta Hardwood Flooring
	33-Ago Anything Goes Online
	35-International Duplication Services
Loretta Avenue North (All)	-All Residential
	129-Buchanan Lighting
	131-Beacon Lite
	145-Terrapro Corp.
	155-Hoco Brands
Louisa Street (All)	-Street Not Listed

Preston Street (225-300)	-All Residential
	226-Paesani's Café
	228-Vecchia Trattoria
	234-BBS Construction
	241-Preston Garage
	248-Preston Hardware
	252-Vasto Dry Goods
	254-Trattoria Café
	256-Dar Tajine Rest
	262-Ottawa Tigers Soccer Club
	268-Seafood Grill Rest
	270-Ital-Can Video Services
	276-Broan Nutone Service Depot
	-Robway Sales
	300-Domino's Pizza
	-Reggina Pastry
Trans Canada Highway (Highway 417)	-No Listings
<u> </u>	

PROJECT NUMBER: 20160822162	
Site Address:	933 Gladstone Avenue, Ottawa, Ontario
Year: 2001-02	
Site Listing:	-St. Joseph Print Group

Adjacent Properties:	
Gladstone Avenue (900-970)	-All Residential
	910-Great Canadian Theatre
	916-P B Auto Centre
	925-Ital Plus Imports
	928-Fleischer Photography
	949-Orville's Auto Electric
	-Iron Logic
	950-Mac Group
	-Renters News
	-Auto Trader
	-Bonsall Communications
	-Berman Technographics
	-Artistic Reno
	Employment News
	951-Enriched Bread Artists
	-Silkwear
	953-Central Billiards
	955-Northern Art Glass
	-Aboutface
	-Elephant's Trunk
	957-Defalco's For Brewers & Winemakers
	-Industrial Cleaning Supplies
Balsam Street (70-145)	-All Residential

Larch Street (All)	-All Residential
	17-V Steel Works
	-Venice Iron Works
Laurel Street (All)	-All Residential
	28-Delta Hardwood Flooring
	33-Crolla Construction Corp.
	35-International Duplication Services
Loretta Avenue North (All)	-All Residential
	131-Beacon Lite
	155-Hoco Brands
	-Sportive Sportswear Manufacturers
	-Champagne Cartages & Construction
Louisa Street (All)	-All Residential
	18-Salvation Army
	66-Grace General contractors
	-Bair Bair Construction
	184-Red Bird Refinishing
	-Keitel Furniture Repair
	188-Motorworks
Preston Street (225-300)	-All Residential
	225-Canton Market
	-II Garage Rest
	226-Used Sound

	228-Al Dente Piano Bar
	241-Preston Garage
	-Amerco Rentals
	-U-Haul Co
	248-Preston Street Business Improvement Area
	-Preston Hardware
	250-Tropical Cafe
	252-Vasto Dry Goods
	254-Trattoria Café
	256-Dar Tajine Rest
	262-Ottawa Tigers Soccer Club
	268-Gusti Rest
	270-Ital-Can Video Services
	276-Robway Sales
	300-Domino's Pizza
	-Reggina Pastry
Trans Canada Highway (Highway 417)	-No Listings

PROJECT NUMBER: 20160822162	
Site Address:	933 Gladstone Avenue, Ottawa, Ontario
Year: 1996-97	
Site Listing:	-Address Not Listed

Adjacent Properties:	
Gladstone Avenue (900-970)	-All Residential
	910-Great Canadian Theatre
	916-A V I Auto Centre
	925-Preston Hardware
	928-Fleischer Photography
	949-Orville's Auto Electric
	-Vesuvio Iron Work's
	950-Renters News
	-Auto Trader
	-Berman Typographics
	-Connelly Business Exhibits
	-Industrial Cleaning Supplies
	-First Nation Management & Assoc.
	-Affintiy Group
	951-Trevor Studios
	-Silkwear
	-Axiom Photography
	-Hidden Secrets
	953-Central Billiards
	955-Northern Art Glass
	957-Defalco's For Brewers & Winemakers
	964-Pantusa Tile & Marble
Balsam Street (70-145)	-All Residential

Larch Street (All)	-All Residential
	17-Venice Iron Works
Laurel Street (All)	-All Residential
	28-Delta Hardwood Flooring
	35-International Duplication Services
Loretta Avenue North (All)	-All Residential
	129-Buchanan Lighting
	131-Beacon Lite
	155-Hoco Brands
	-Sportive Sportswear Manufacturers
	-Champagne Cartages & Construction
	-Ben General Construction & Snow Plowing
Louisa Street (All)	-All Residential
	18-Societe Franco Ontarienne Histoire Et De Genealogie
	-Parents Day Care Centre
	-Children At Risk Communication Development Program
	-Ethiopian Community Assoc.
	66-Grace General Contractors
	-Bair Bair Construction
	184-Keitel Furniture Repair
Preston Street (225-300)	-All Residential
	225-Capital City Surplus
	-Peppee's Deli & Café

	241-Jason Auto Centre
	248-Preston Importing
	-Preston Hardware
	250-Café Isole
	252-Vasto Dry Goods
	256-Dar Tajine Rest
	268-Beatrice Rest
	270-A Choices
	276-Robway Sales
	-Faulkner Electric
	300-Domino's Pizza
	-Reggina Pastry
	-Roof Garden Billiards
Trans Canada Highway (Highway 417)	-No Listings

PROJECT NUMBER: 20160822162	
Site Address:	933 Gladstone Avenue, Ottawa, Ontario
Year: 1992	
Site Listing:	-Address Not Listed
Adjacent Properties:	

Gladstone Avenue (900-970)	-All Residential
	910-Great Canadian Theatre
	916-Khera Auto Repair
	-Abouseral Body Repair
	928-Fleischer Photography
	-Ital-Can Video Services
	949-Mario Garage
	-Vesuvio Iron Work's
	950-Auto Trader
	-Habitec General Contracting
	-Sunoco Carpet Cleaning
	-Blue Bird Carpet Cleaning
	-Genesis Graphics
	-Metro Publishing
	953-Central Billiards
	955-Northern Art Glass
	957-Defalco's For Brewers & Winemakers
	964-Pantusa Tile & Marble
Balsam Street (70-145)	-All Residential
Larch Street (All)	-All Residential
	17-Venice Iron Works
Laurel Street (All)	-All Residential
	28-Delta Hardwood Flooring

	33-Art Millwork Industries
	35-International Duplication Services
Loretta Avenue North (All)	-All Residential
	129-Buchanan Lighting
	131-Beacon Lite
	155-Hoco Brands
	-Sportive Sportswear Manufacturers
	-Champagne Cartages & Construction
	-Ben General Construction & Snow Plowing
Louisa Street (All)	-All Residential
	18-Alternative Learning Styles & Outlooks
	-Parents Day Care Centre
	-Children At Risk Communication Development Program
	-Ethiopian Community Assoc.
	54-Holiday Auto Centre
	66-Grace General Contractors
	-Bair Bair Construction
	184-Keitel Furniture Repair
Preston Street (225-300)	-All Residential
	225-Nordic Bedding
	-Carm's Auto Repair
	226-Used Sound
	228-Café Italia
	241-Preston Auto Centre

	248-Preston Hardware
	254-Mario's Ottawa Furniture
	256-Dar Tajine Rest
	266-Rota Insurance
	276-Robway Sales
	-Faulkner Electric
	300-Domino's Pizza
	-Reggina Pastry
	-Vastro Dry Goods
Trans Canada Highway (Highway 417)	-No Listings

PROJECT NUMBER: 20160822162	
Site Address:	933 Gladstone Avenue, Ottawa, Ontario
Year: 1987	
Site Listing:	-Address Not Listed
Adjacent Properties:	
Gladstone Avenue (900-970)	-All Residential
	910-Great Canadian Theatre 916-Khera Auto Repair
	921-Handyman Personnel
	927-Bartan's Tailoring

	928-Ottawa Wedding Specialists
	949-Vesuvio Iron Work's
	950-Auto Trader
	-White's Print & Copy
	-Herb's Small Engine Repair
	-Bota Consulting
	-Sheet Metal Ltd.
	-Joint Venture Edition
	951-Love Printing Service
	953-Central Billiards & Rest
	957-Defalco's Wine Cellar's Inc.
Balsam Street (70-145)	-All Residential
Larch Street (All)	-All Residential
	17-Venice Iron Works
	18-Millward Precision
Laurel Street (All)	-All Residential
Loretta Avenue North (All)	-All Residential
	129-Buchanan Lighting
	131-Beacon Lite
	145-B A Bank Note
	155-Hoco Brands
	-Sportive Sportswear Manufacturers
	-Champagne Cartages & Construction

	-Spec Tech Designer
Louisa Street (All)	-All Residential
	18-Alternative Learning Styles & Outlooks
	-Parents Day Care Centre
	-Children At Risk
	-Immigrant Women's Centre
	54-Holiday Auto Centre
Preston Street (225-300)	-All Residential
	225-S & S Truck Parts
	226-Used Sound Music Store
	228-Café Italia
	234-Preston Hardware
	241-Petro Canada Service Station
	246-Preston Hardware Ofc
	252-Marina Foods
	254-Ottawa Furniture & Intreriors
	256-Villa Reggio Rest
	274-Café Azzurri
	276-Robway Sales
	284-Top Value Gasmart
Trans Canada Highway (Highway 417)	-No Listings

PROJECT NUMBER: 20160822162	

Site Address:	933 Gladstone Avenue, Ottawa, Ontario
Year: 1981-82	
Site Listing:	-Address Not Listed
Adjacent Properties:	
Gladstone Avenue (900-970)	-All Residential
	910-Sal Auto & Trucks Serv Centre
	916-R & M Automotive Finishes
	921-Ankerman Industries
	927-Custom Drapery
	928-Federal Paving Co
	949-Vesuvio Iron Work's
	950-White's Print & Copy
	-Herb's Small Engine Repair
	-Queensway Insulation Supply Company
	-Pri-Tel Inter-Connect
	-Decorators Assoc.
	-Reincourt Inc.
	951-Love Printing Service
	953-Central Billiards & Rest
	955-Ottawa Towel & Linen Sales
	957-Defalco's Wine Cellar's Inc.
Balsam Street (70-145)	-All Residential

Larch Street (All)	-All Residential
Laurel Street (All)	-All Residential
Loretta Avenue North (All)	-All Residential
	129-Buchanan Lighting
	131-Beacon Lite
	145-B A Security Research
	155-Regional Textiles
	-Canadian Toners
	-Popular Printing
	157-Hoco Brand Nut
	175-Regional Gov't Of Ottawa Transportation Dept.
Louisa Street (All)	-All Residential
	18-Saint Agnes Separate School
	54-Holiday Auto Centre
Preston Street (225-300)	-All Residential
	225-S & S Truck Parts
	228-Café Italia
	234-Consumers Distributing
	241-Panuccio BP Service Station
	246-Preston Hardware
	252-Preston Billiards
	254-Mario Foodliner

	274-Tony's Snack Bar
	276-Robway Sales
	-Faulkner Electric
	284-Top Value Gasmarts
Trans Canada Highway (Highway 417)	-No Listings

PROJECT NUMBER: 20160822162	
Site Address:	933 Gladstone Avenue, Ottawa, Ontario
Year: 1976	
Site Listing:	-Address Not Listed
Site Listing:	-Address Not Listed
Adjacent Properties:	
Gladstone Avenue (900-970)	-All Residential
	927-Chiarrelli & Assoc.
	928-Federal Paving Co
	**-Design's Unlimited
	-Brydon & Lariviere
	-MacPherson Inc.
	951-Love Printing Service
	953-Central Billiards & Rest 955-Golden Triangle Floor Covering
	555-Golden mangle Floor Covering

Balsam Street (70-145)	-All Residential
Larch Street (All)	-All Residential
	14-International Cabinet Ott Ltd.
Laurel Street (All)	-All Residential
Loretta Avenue North (All)	-All Residential
	129-Buchanan Lighting
	131-Beacon Lite
	145-Chenevert Heating & Air Conditioning
	-National Grocers Co
	155-Golego Graphics Of Outaquias
	157-City Queensway Taxi
	-Riverside Taxi
	175-Regional Gov't Of Ottawa
Louisa Street (All)	-All Residential
	18-Saint Agnes Separate School
Preston Street (225-300)	-All Residential
	225-S & S Truck Parts
	228-Café Italia
	230-Italian Shoes
	234-Consumers Distributing
	241-Panuccio BP Service Station
	248-Preston Hardware

	274-Ace Sports Club
	276-Phyl's Beauty Salon
	280-Mitchel & Sullivan Real Estate
	284-Top Value Gas Mart
	300-Preston Shoe Repair
Trans Canada Highway (Highway 417)	-No Listings

PROJECT NUMBER: 20160822162	
Site Address:	933 Gladstone Avenue, Ottawa, Ontario
Year: 1971	
Site Listing:	-Address Not Listed
Adjacent Properties:	
Gladstone Avenue (900-970)	-All Residential
	921-Giamberardino & Bros Plastering
	938-Ottawa Valley Movers
	950-Performance Coating
	-Armstrong & Richards
	-Electrohome
	-Brisk Sanitation
	951-Love Printing Service
	953-Central Billiards

	955-Golden Triangle Floor Covering
Balsam Street (70-145)	-All Residential
Larch Street (All)	-All Residential
Laurel Street (All)	-All Residential
Loretta Avenue North (All)	-All Residential
	127-North American Candy Co
	131-Empire Mtce
	-Beacon Lite
	145-Chenevert Heating & Air Conditioning
	-National Grocers Co
	155-Canada Printing Ink
	157-City Queensway Taxi
	-Riverside Taxi
	175-General Supply Co Of Can
Louisa Street (All)	-All Residential
	18-Saint Agnes Separate School
Preston Street (225-300)	-All Residential
	225-Malmberg Auto Service
	228-Café Italia
	230-Italian Shoes
	241-Panuccio BP Service Station

	248-Preston Hardware
	250-Ace Sports Club
	252-Lizzie Billiards
	254-Consumers Distributing
	274-Preston Travel Agency
	276-Phyl's Beauty Salon
	280-Mitchel & Sullivan Real Estate
	300-Preston Shoe Repair
Trans Canada Highway (Highway 417)	-No Listings

PROJECT NUMBER: 20160822162	
Site Address:	933 Gladstone Avenue, Ottawa, Ontario
Year: 1966	
Site Listing:	-Address Not Listed
Adjacent Properties:	
Gladstone Avenue (900-970)	-All Residential
	921-Demarinis Construction 950-Gray-Harvey Hardware
Balsam Street (70-145)	-All Residential
Daisaili Street (70-145)	133-G & M Lumber Wooden Boxes

Larch Street (All)	-All Residential
Laurel Street (All)	-All Residential
Loretta Avenue North (All)	-All Residential
	**-St. Gerard Separate School
	127-North American Candy Co
	155-Standard Bread
	175-General Supply Co Of Can
Louisa Street (All)	-All Residential
Preston Street (225-300)	-All Residential
	225-Malmberg Auto Service
	228-Café Italia
	230-Maiella Rest
	241-Panuccio BP Service Station
	248-Preston Hardware
	274-Preston Travel Agency
	276-Phyl's Beauty Salon
	280-Morgan Barber Shop
	300-Preston Shoe Repair
Trans Canada Highway (Highway 417)	-No Listings

PROJECT NUMBER: 20160822162	
Site Address:	933 Gladstone Avenue, Ottawa, Ontario
Year: 1962	
Site Listing:	-Address Not Listed
Adjacent Properties:	
Gladstone Avenue (900-970)	-All Residential
	938-Ottawa Corp Of District F
	940-Hodgins Bros Ltd.
	950-Gray-Harvey Hardware
Balsam Street (70-145)	-All Residential
Larch Street (All)	-All Residential
Laurel Street (All)	-All Residential
Loretta Avenue North (All)	-All Residential
	127-North American Candy Co
	155-Standard Bread
	166-Economy Electric
	**-St. Gerard Separate School
	175-General Supply Co Of Can

Louisa Street (All)	-All Residential
Preston Street (225-300)	-All Residential
	225-Malmberg Auto Service
	228-Café Italia
	241-Mazzocato Service Station
	248-Preston Hardware
	252-Preston Beauty Salon
	253-Preston Lunch Rest
	275-Chiarelli & Son Butcher
	276-Phyl's Beauty Salon
	277-Shipman Ltd.
	280-Morgan Barber Shop
	288-Halpenny Oil Burners
	300-Shoe Repair
Trans Canada Highway (Highway 417)	-No Listings

PROJECT NUMBER: 20160822162	
Site Address:	933 Gladstone Avenue, Ottawa, Ontario
Year: 1956	
Site Listing:	-Address Not Listed
Adjacent Properties:	

Gladstone Avenue (900-970)	-All Residential
	938-Ottawa Corp Of District F
	940-Hodgins Bros Ltd.
	941-Standard Bread
Balsam Street (70-145)	-All Residential
Larch Street (All)	-All Residential
Laurel Street (All)	-All Residential
Loretta Avenue North (All)	-All Residential
	**-St. Gerard Separate School
	175-General Supply Co Of Can
Louisa Street (All)	-All Residential
Preston Street (225-300)	-All Residential
	225-Malmberg Auto Service
	248-Preston Hardware
	253-Kelly's Korner Confy
	275-Chiarelli & Son Butcher
	276-Phyl's Beauty Salon
	277-Morgan Barber
	288-Rena Ware Distributors

Trans Canada Highway (Highway 417)	-No Listings

PROJECT NUMBER: 20160822162	
Site Address:	933 Gladstone Avenue, Ottawa, Ontario
Year: 1951	
Site Listing:	-Address Not Listed
Adjacent Properties:	
Gladstone Avenue (900-970)	-All Residential
	938-Ottawa Corp Of District F
	941-Standard Bread 950-Blackwell Ltd. Dry Clng
Balsam Street (70-145)	-All Residential
Larch Street (All)	-All Residential
Laurel Street (All)	-Not Built Upon
Loretta Avenue North (All)	-All Residential
	**-St. Gerard Separate School
	175-General Supply Co Of Can

Louisa Street (All)	-All Residential
Preston Street (225-300)	-All Residential
	225-Malmberg Auto Service
	248-Preston Hardware
	250-Smoothie Popcorn Products Confy
	253-Corner Shack
	276-Phyl's Beauty Salon
	277-Morgan Barber
	280-Superior Cleaners
Trans Canada Highway (Highway 417)	-No Listings

PROJECT NUMBER: 20160822162	
Site Address:	933 Gladstone Avenue, Ottawa, Ontario
Year: 1946	
Teal. 1340	
Site Listing:	-Address Not Listed
Adjacent Properties:	
(000 070)	
Gladstone Avenue (900-970)	-All Residential
	940-Leach & Co
	941-Standard Bread

Balsam Street (70-145)	-All Residential
Larch Street (All)	-All Residential
Laurel Street (All)	-All Residential
Loretta Avenue North (All)	-All Residential
	**-St. Gerard Separate School
Louisa Street (All)	-All Residential
Preston Street (225-300)	-All Residential
	225-United Garage
	228-Gladstone Fruit Store
	248-Preston Hardware
	250-Art's Washing Machine Repair
	253-Service Centre Medicine
Trans Canada Highway (Highway 417)	-No Listings

PROJECT NUMBER: 20160822162	
Site Address:	933 Gladstone Avenue, Ottawa, Ontario
Year: 1941	
Site Listing:	-Address Not Listed

Laurel Chrosch (All)	All Davidantial
Laurel Street (All)	-All Residential
Laurer Street (All)	-Aii Nesidentiai
Loretta Avenue North (All)	-All Residential
	**-St. Gerard Separate School
Louisa Street (All)	-All Residential
Preston Street (225-300)	-All Residential
	225-United Garage
	228-Gladstone Fruit Store
	250-Star Shoe Repair
	253-Gladstone Specialties Patent Medicines
I and the second	

<b>PROJECT NUMBER</b> : 20160822162	
Site Address:	933 Gladstone Avenue, Ottawa, Ontario
Year: 1936	
Site Listing:	-Address Not Listed
Adjacent Properties:	
Gladstone Avenue (900-970)	-All Residential
	941-Standard Bread
	950-Thatched Roof Co
Balsam Street (70-145)	-All Residential
Larch Street (All)	-All Residential
Laurel Street (All)	-All Residential
Loretta Avenue North (All)	-All Residential
	**-St. Gerard Separate School
Louisa Street (All)	-All Residential
Preston Street (225-300)	-All Residential
	228-Bernard Barber Shop
	250-Star Shoe Repair
	· ·

	253-Low's Drug Store
	277-Diamond Tailors
Trans Canada Highway (Highway 417)	-No Listings

PROJECT NUMBER: 20160822162	
Site Address:	933 Gladstone Avenue, Ottawa, Ontario
V	
Year: 1931	
Site Listing:	-Address Not Listed
Site Listing.	-Address Not Listed
Adjacent Properties:	
Gladstone Avenue (900-970)	-All Residential
	940-Bryson Graham Ltd
	540 Bryson Granam Eta
	941-Standard Bread
	950-Olivier And Sons
Balsam Street (70-145)	-All Residential
Larch Street (All)	-All Residential
Laurel Street (All)	-All Residential
Lovette Avenue North (AII)	All Besidential
Loretta Avenue North (All)	-All Residential
	•

	**-St. Gerard Separate School
Louisa Street (All)	-All Residential
Preston Street (225-300)	-All Residential
Trans Canada Highway (Highway 417)	-No Listings

PROJECT NUMBER: 20160822162	
1 NOJECT NOMBEN. 20100022102	
Site Address:	933 Gladstone Avenue, Ottawa, Ontario
Year: 1926	
Site Listing:	-Address Not Listed
Adjacent Properties:	
Gladstone Avenue (900-970)	-No Listings within Radius
Balsam Street (70-145)	-All Residential
Larch Street (All)	-All Residential
Laurel Street (All)	-All Residential
Loretta Avenue North (All)	-All Residential

	**-St. Gerard Separate School
Louisa Street (All)	-All Residential
Preston Street (225-300)	-All Residential
Trans Canada Highway (Highway 417)	-No Listings

PROJECT NUMBER: 20160822162	
PROJECT NUIVIDER: 20100822162	
Site Address:	933 Gladstone Avenue, Ottawa, Ontario
Year: 1921	
Site Listing:	-Address Not Listed
Adjacent Properties:	
Gladstone Avenue (900-970)	-No Listings within Radius
Balsam Street (70-145)	-All Residential
Larch Street (All)	-All Residential
Laurel Street (All)	-All Residential
Loretta Avenue North (All)	-All Residential

	**-St. Gerard Separate School
Louisa Street (All)	-All Residential
Preston Street (225-300)	-All Residential
Trans Canada Highway (Highway 417)	-No Listings

PROJECT NUMBER: 20160822162	
1 NOTE: NOMBER. 20100022102	
Site Address:	933 Gladstone Avenue, Ottawa, Ontario
Year: 1916	
Site Listing:	-Address Not Listed
Adjacent Properties:	
Gladstone Avenue (900-970)	-No Listings within Radius
Balsam Street (70-145)	-All Residential
Larch Street (All)	-All Residential
Laurel Street (All)	-All Residential
Loretta Avenue North (All)	-All Residential

Louisa Street (All)	-All Residential
Preston Street (225-300)	-All Residential
Trans Canada Highway (Highway 417)	-No Listings

PROJECT NUMBER: 20160822162	
Site Address:	933 Gladstone Avenue, Ottawa, Ontario
Year: 1910	
Site Listing:	-Address Not Listed
Adjacent Properties:	
Gladstone Avenue (900-970)	-No Listings within Radius
Balsam Street (70-145)	-No Listings within Radius
Larch Street (All)	-All Residential
Laurel Street (All)	-All Residential
Loretta Avenue North (All)	-All Residential

Louisa Street (All)	-All Residential
Preston Street (225-300)	-All Residential
Trans Canada Highway (Highway 417)	-No Listings

933 Gladstone Avenue, Ottawa, Ontario
-Address Not Listed
No Participant Participant
-No Listings within Radius
-All Residential
-All Residential
-Street Not Listed
-Street Not Listed
-Street Not Listed
-All Residential

Preston Street (225-300)	-All Residential
Trans Canada Highway (Highway 417)	-No Listings

PROJECT NUMBER: 20160822162	
Site Address:	933 Gladstone Avenue, Ottawa, Ontario
Year: 1900	
Site Listing:	-Address Not Listed
Adjacent Properties:	
Gladstone Avenue (900-970)	-No Listings within Radius
Balsam Street (70-145)	-All Residential
Larch Street (All)	-Street Not Listed
Laurel Street (All)	-Street Not Listed
Loretta Avenue North (All)	-Street Not Listed
Louisa Street (All)	-All Residential

Preston Street (225-300)	-All Residential
	**-Fire Swept
	-Lumber Yards
Trans Canada Highway (Highway 417)	-No Listings

PROJECT NUMBER: 20160822162	
Site Address:	933 Gladstone Avenue, Ottawa, Ontario
Year: 1895-96	
Site Listing:	-Address Not Listed
Adjacent Proporties	
Adjacent Properties:	
Gladstone Avenue (900-970)	-No Listings within Radius
Balsam Street (70-145)	-All Residential
Larch Street (All)	-Street Not Listed
Laurel Street (All)	-Street Not Listed
Loretta Avenue North (All)	-Street Not Listed
Louisa Street (All)	-All Residential

Preston Street (225-300)	-All Residential
Trans Canada Highway (Highway 417)	-No Listings

PROJECT NUMBER: 20160822162	
PROJECT NOIVIDER: 20100822102	
Site Address:	933 Gladstone Avenue, Ottawa, Ontario
Year: 1890-91	
Site Listing:	-Address Not Listed
Adjacent Properties:	
Gladstone Avenue (900-970)	-Street Not Listed
Balsam Street (70-145)	-All Residential
	**-Lumber Yard
Larch Street (All)	-Street Not Listed
Laurel Street (All)	-Street Not Listed
Loretta Avenue North (All)	-Street Not Listed
Louisa Street (All)	-All Residential
	residential

Preston Street (225-300)	-All Residential
Trans Canada Highway (Highway 417)	-No Listings

PROJECT NUMBER: 20160822162	
Site Address:	933 Gladstone Avenue, Ottawa, Ontario
Year: 1885-86	
Site Listing:	-Address Not Listed
Adjacent Properties:	
Gladstone Avenue (900-970)	-Street Not Listed
Balsam Street (70-145)	-Street Not Listed
Larch Street (All)	-Street Not Listed
Laurel Street (All)	-Street Not Listed
Loretta Avenue North (All)	-Street Not Listed
Louisa Street (All)	-Street Not Listed

Preston Street (225-300)	-Street Not Listed
Trans Canada Highway (Highway 417)	-No Listings

- -All listings for businesses were listed as they are in the city directory.
- -Listings that are residential are listed as "residential" with the number of tenants. The name of the residential tenant is not listed in the above city directory

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# PHASE ONE ENVIRONMENTAL SITE ASSESSMENT 933 GLADSTONE AVENUE, OTTAWA, ONTARIO

## **APPENDIX C**

**Aerial Photographs** 







PHASE ONE SITE BOUNDARY

**METRES** 

NOTE(S)

1. THIS FIGURE IS TO BE READ IN CONJUNCTION WITH THE ACCOMPANYING GOLDER ASSOCIATES LTD. REPORT NO. 1661627.

REFERENCE(S)
1. PROJECTION: TRANSVERSE MERCATOR DATUM: NAD 83
COORDINATE SYSTEM: MTM ZONE 9 VERTICAL DATUM: CGVD28

CLIENT

CITY OF OTTAWA

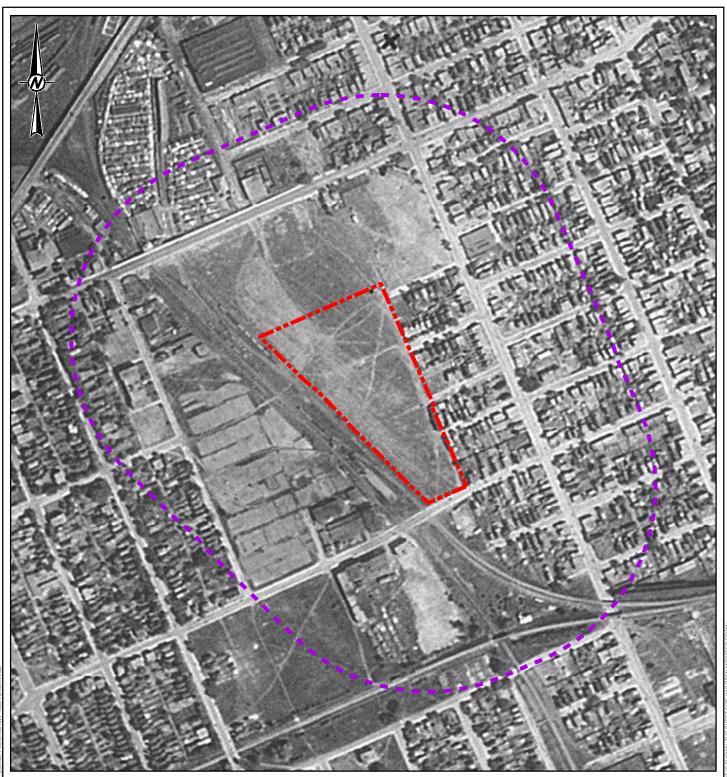
PHASE ONE ENVIRONMENTAL SITE ASSESSMENT 933 GLADSTONE AVENUE, OTTAWA, ONTARIO

CONSULTANT

1928 AIR PHOTO

YYYY-MM-DD	2016-11-22	_
DESIGNED		
PREPARED	JEM	
REVIEWED	AW	
APPROVED	EDW	_

PROJECT NO. APPENDIX 1661627 1000





PHASE ONE SITE BOUNDARY

**METRES** 

NOTE(S)

1. THIS FIGURE IS TO BE READ IN CONJUNCTION WITH THE ACCOMPANYING GOLDER ASSOCIATES LTD. REPORT NO. 1661627.

REFERENCE(S)
1. PROJECTION: TRANSVERSE MERCATOR DATUM: NAD 83
COORDINATE SYSTEM: MTM ZONE 9 VERTICAL DATUM: CGVD28

CITY OF OTTAWA

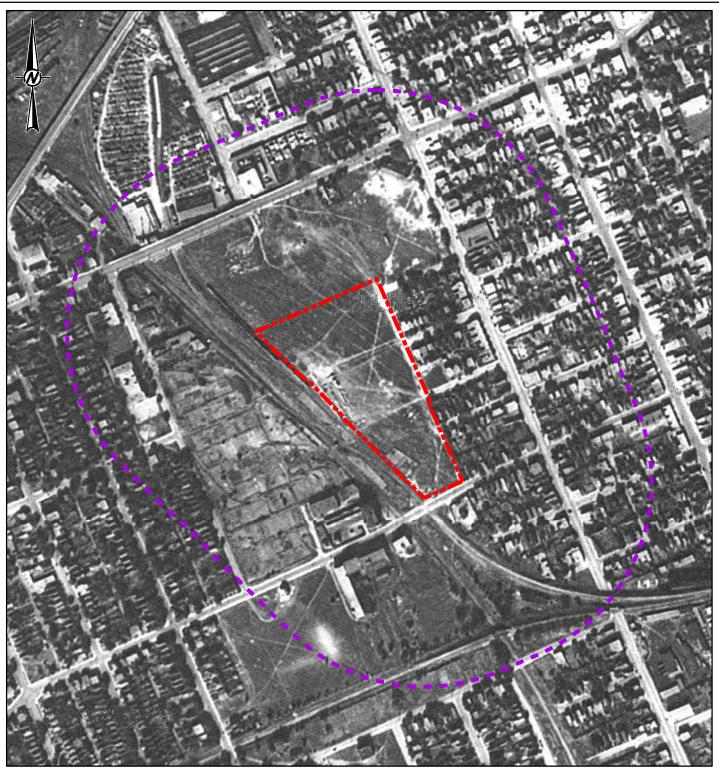
PHASE ONE ENVIRONMENTAL SITE ASSESSMENT 933 GLADSTONE AVENUE, OTTAWA, ONTARIO

CONSULTANT

1932 AIR PHOTO

YYYY-MM-DD	2016-11-22	
DESIGNED		
PREPARED	JEM	
REVIEWED	AW	
APPROVED	EDW	_

PROJECT NO. APPENDIX 1661627 1000 C2



PHASE ONE SITE BOUNDARY

CONSULTANT

**METRES** 

NOTE(S)

1. THIS FIGURE IS TO BE READ IN CONJUNCTION WITH THE ACCOMPANYING GOLDER ASSOCIATES LTD. REPORT NO. 1661627.

REFERENCE(S)
1. PROJECTION: TRANSVERSE MERCATOR DATUM: NAD 83
COORDINATE SYSTEM: MTM ZONE 9 VERTICAL DATUM: CGVD28

CITY OF OTTAWA

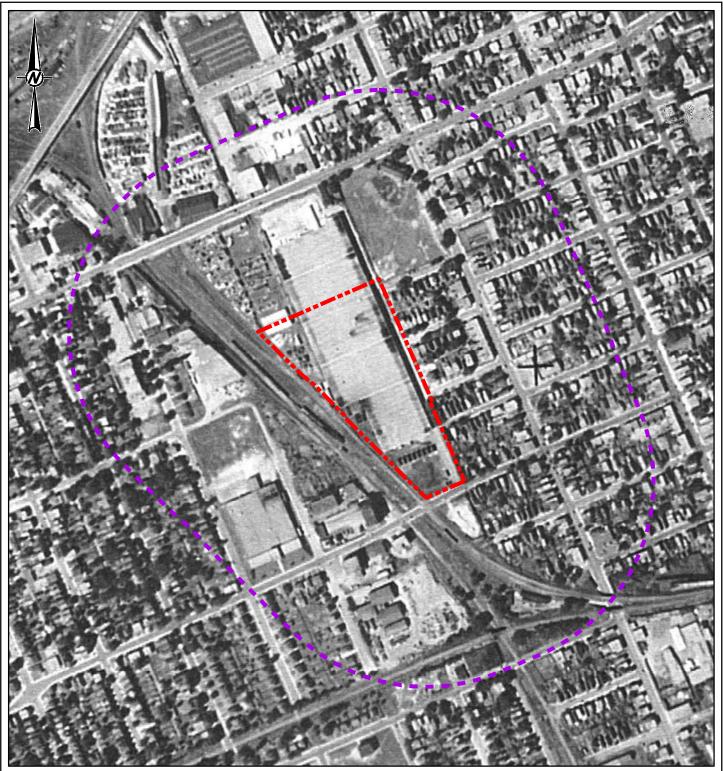
PHASE ONE ENVIRONMENTAL SITE ASSESSMENT 933 GLADSTONE AVENUE, OTTAWA, ONTARIO

1938 AIR PHOTO

Golder Associates
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YYYY-MM-DD	2016-11-22	_
DESIGNED		_
PREPARED	JEM	
REVIEWED	AW	_
APPROVED	EDW	_

PROJECT NO. APPENDIX 1661627 1000





PHASE ONE SITE BOUNDARY

**METRES** 

NOTE(S)

1. THIS FIGURE IS TO BE READ IN CONJUNCTION WITH THE ACCOMPANYING GOLDER ASSOCIATES LTD. REPORT NO. 1661627.

REFERENCE(S)
1. PROJECTION: TRANSVERSE MERCATOR DATUM: NAD 83
COORDINATE SYSTEM: MTM ZONE 9 VERTICAL DATUM: CGVD28

CLIENT

CITY OF OTTAWA

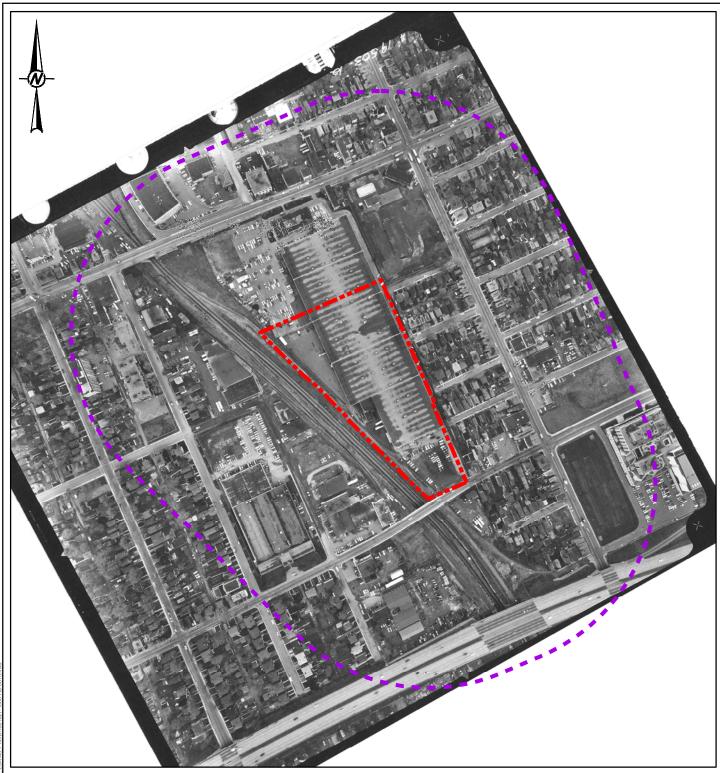
PHASE ONE ENVIRONMENTAL SITE ASSESSMENT 933 GLADSTONE AVENUE, OTTAWA, ONTARIO

CONSULTANT

1952 AIR PHOTO

YYYY-MM-DD	2016-11-22	
DESIGNED		
PREPARED	JEM	
REVIEWED	AW	
APPROVED	EDW	

PROJECT NO. APPENDIX 1661627 1000 C4



PHASE ONE SITE BOUNDARY

**METRES** 

NOTE(S)

1. THIS FIGURE IS TO BE READ IN CONJUNCTION WITH THE ACCOMPANYING GOLDER ASSOCIATES LTD. REPORT NO. 1661627.

REFERENCE(S)
1. PROJECTION: TRANSVERSE MERCATOR DATUM: NAD 83
COORDINATE SYSTEM: MTM ZONE 9 VERTICAL DATUM: CGVD28

CLIENT

CITY OF OTTAWA

PHASE ONE ENVIRONMENTAL SITE ASSESSMENT 933 GLADSTONE AVENUE, OTTAWA, ONTARIO

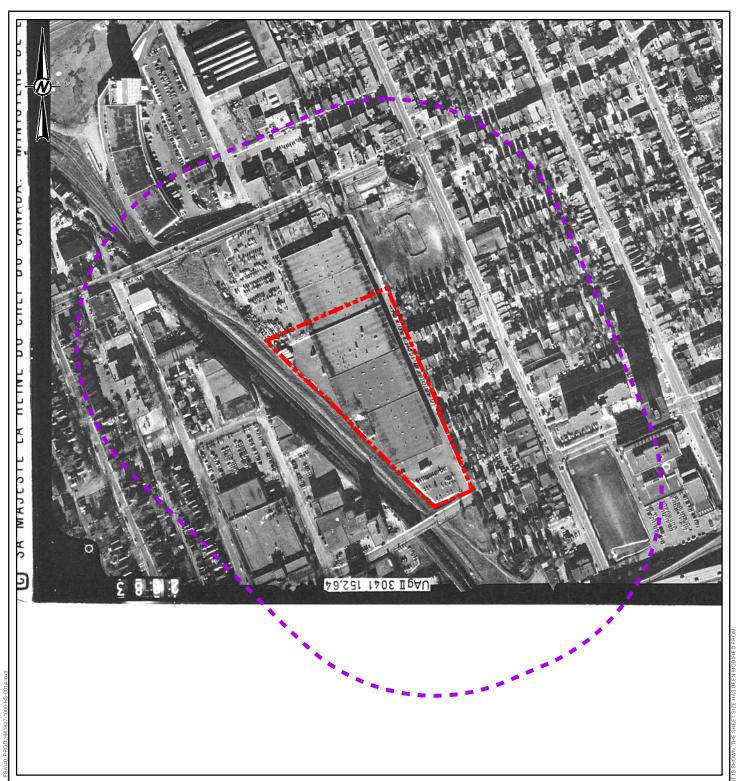
CONSULTANT

**1969 AIR PHOTO** 

YYYY-MM-DD	2016-11-22	
DESIGNED		
PREPARED	JEM	
REVIEWED	AW	
APPROVED	EDW	_

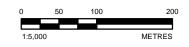
PROJECT NO. 1661627 1000

APPENDIX





PHASE ONE SITE BOUNDARY



NOTE(S)

1. THIS FIGURE IS TO BE READ IN CONJUNCTION WITH THE ACCOMPANYING GOLDER ASSOCIATES LTD. REPORT NO. 1661627.

REFERENCE(S)
1. PROJECTION: TRANSVERSE MERCATOR DATUM: NAD 83
COORDINATE SYSTEM: MTM ZONE 9 VERTICAL DATUM: CGVD28

CLIENT

CITY OF OTTAWA

PHASE ONE ENVIRONMENTAL SITE ASSESSMENT 933 GLADSTONE AVENUE, OTTAWA, ONTARIO

CONSULTANT

**1979 AIR PHOTO** 

YYYY-MM-DD	2016-11-22
DESIGNED	
PREPARED	JEM
REVIEWED	AW
APPROVED	EDW

PROJECT NO. APPENDIX 1661627 1000

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REFERENCE(S)
1. PROJECTION: TRANSVERSE MERCATOR DATUM: NAD 83
COORDINATE SYSTEM: MTM ZONE 9 VERTICAL DATUM: CGVD28

PHASE ONE STUDY AREA PHASE ONE SITE BOUNDARY

NOTE(S)

1. THIS FIGURE IS TO BE READ IN CONJUNCTION WITH THE ASSOCIATES LTD. REPORT NO. 1661627.

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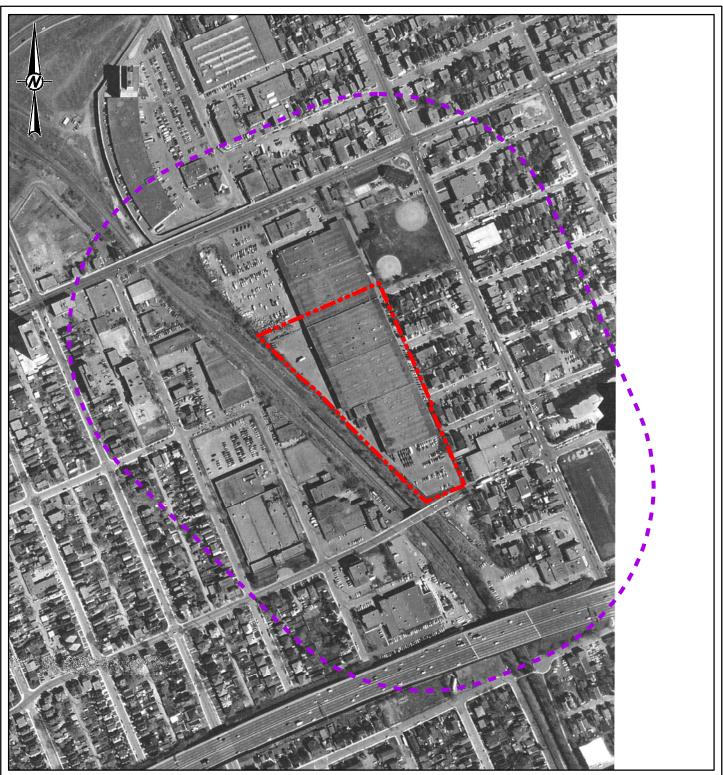
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NOTE(S)

1. THIS FIGURE IS TO BE READ IN CONJUNCTION WITH THE ACCOMPANYING GOLDER ASSOCIATES LTD. REPORT NO. 1661627.

REFERENCE(S)

1. PROJECTION: TRANSVERSE MERCATOR DATUM: NAD 83
COORDINATE SYSTEM: MTM ZONE 9 VERTICAL DATUM: CGVD28

CLIENT

CITY OF OTTAWA

PHASE ONE ENVIRONMENTAL SITE ASSESSMENT 933 GLADSTONE AVENUE, OTTAWA, ONTARIO

CONSULTANT

1995 AIR PHOTO

YYYY-MM-DD	2016-11-22
DESIGNED	
PREPARED	JEM
REVIEWED	AW
APPROVED	EDW

PROJECT NO. APPENDIX 1661627 1000



# PHASE ONE ENVIRONMENTAL SITE ASSESSMENT 933 GLADSTONE AVENUE, OTTAWA, ONTARIO

## **APPENDIX D**

**Site Photographs** 







Photo 1: AST in storage area in northwest corner of 933 Gladstone, facing northwest.



Photo 2: AST in storage area in northwest corner of 933 Gladstone, facing south.





Photo 3: Buckets of hydraulic fluid in northwest corner of 933 Gladstone.



Photo 4: Debris in storage area of 933 Gladstone, facing east.







Photo 5: Debris in storage area of 933 Gladstone, facing west.



Photo 6: Overview of storage area, facing northeast toward masonry dome, 933 Gladstone.







Photo 7: Storm drain, 933 Gladstone, Facing northwest from southern edge of Site beside Gladstone Ave.



Photo 8: View facing north along east side of Site, toward DND storage trailers.





Photo 9: View facing southwest from centre east side of Site, toward Gladstone Ave.

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#### GLADSTONE VILLAGE, 933 GLADSTONE AVENUE - FUNCTIONAL SERVICING REPORT

Appendix F Conceptual Servicing Drawings

#### Appendix F CONCEPTUAL SERVICING DRAWINGS

