SYLVAN GLEN BRIDGE

Final Foundation Report

Prepared For:

The Municipality of Port Hope

February 27, 2023

CREATING QUALITY SOLUTIONS TOGETHER

SYLVAN GLEN BRIDGE
FINAL FOUNDATION REPORT

PROJECT NO. 22549-1

Prepared For:

The Municipality of Port Hope

By:

Bill McLatchie, P.Eng.
Senior Geotechnical Engineer

Checked By:

Lois-Ann L. Hayes, P.Eng.
Vice President & Branch Manager

Ainley Graham & Associates Limited
1-50 Grant Timmins Drive
Kingston, ON K7M 8N2
Tel: (343) 266-0002
E-mail: kingston@ainleygroup.com

WWW.AINLEYGROUP.COM

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1.0 INTRODUCTION

Ainley Group was retained by the Municipality of Port Hope to carry out a geotechnical investigation for the replacement of the Sylvan Glen Bridge. It is understood the proposed works is due to the poor condition of the existing bridge. It is expected that the bridge will be fully replaced.

The objectives of the geotechnical assignment were:

- To secure soils and groundwater information/data about the proposed site that could affect the design and performance of the structure, including the effects that the soil and groundwater may have on construction procedures.
- To prepare a geotechnical report addressing foundation recommendations, backfilling, pavement structure rehabilitation and excavation during construction based on the information obtained during the geotechnical site investigation and laboratory analysis completed.

2.0 SITE DESCRIPTION

Sylvan Glen Bridge is a one and a half lane (5.6 m), two span concrete T beam structure located on Sylvan Glen Road approximately 0.7 kms south of 4th Line Road at the Ganaraska River, in the Municipality of Port Hope. The original 12.2 metre bridge span, constructed in 1921 has reinforced concrete T beams supported on concrete abutments and piers. A 7.3 metre span was added later with the same concrete T-beam type according to the following historical drawings. The existing deck of Sylvan Glen bridge is 22.1 m long. An OSIM inspection of Sylvan Glen Bridge was performed on 23/09/2020 and concluded the Bridge Condition Index (BCI) value of 45. The bridge is in poor condition and must be replaced considering the low value of BCI.

3.0 FIELDWORK / METHODOLOGY

The field program consisted of the advancement of two (2) foundation boreholes (BH) to investigate the sub-surface conditions. Prior to commencing the geotechnical investigation program, Ainley Group contacted local utility companies to obtain clearances for all underground services in the immediate area of the proposed field program.

The investigation was completed on June 8, 2022, under the constant supervision of a member of Ainley Group's geotechnical staff. A Site and Borehole Location Plan is attached to this report as **Figure No. 1.**

The boreholes were advanced to a depth of 7.50 m (BH1 and BH2) below ground surface using a truck mounted CME 55 drilling rig equipped for soil and bedrock sampling. Groundwater conditions in the boreholes were monitored during the field investigation and representative samples of the subsoil were secured for review and laboratory testing.

The location and ground surface elevations at each respective borehole location were surveyed using a Sokkia SRX3 Robotic Total Station with real time sub-centimeter accuracy, and referenced to the MTM Geodetic Coordinate System.

4.0 RESULTS OF THE INVESTIGATION

4.1 Subsurface Conditions

Full detail of the subsurface conditions encountered at the borehole locations are presented on the individual borehole logs included in **Appendix A.** It is emphasized however, that the soil types, their sequence, thickness and physical properties may vary between test locations and samples both vertically and horizontally.

Representative samples of the subsoil materials encountered within the boreholes were collected and returned to our office for further visual review by an Engineer having experience with soil classification and identification. A total of five (5) samples were selected and submitted to SNC Lavalin in Kingston, Ontario for gradation analysis and moisture content determination. Copies of the Grain Size Distribution results are included in **Appendix B**.

In general, the soils consist of a layer of surface treatment (roadway structure) overlying sand and gravel over silt and sand over boulders and cobbles.

The soil characteristics and engineering properties are described in detail as follows:

4.1.1 Surface Treatment

A 35 mm thick surface treatment wearing course was encountered in both boreholes. Material testing was not completed on this material.

4.1.2 Fill; Sand & Gravel

A layer of sand and gravel was encountered beneath the surface treatment layer and extended to a depth (elevation) of 0.90 m (105.36 m/104.95 m).

One (1) sample of the sand and gravel material from the roadway borehole was submitted for gradation analysis and Moisture Content determination. Results indicate the material is classified as sand and gravel with 58.6% passing the 4.75 mm sieve and 6.10% passing the 75 µm sieve. The Moisture Content was determined to be 3.5% at the time of the field investigation.

LAH458 (Sand & Gravel)	
Gravel	41.4%
Sand	52.5%
Silt and Clay	6.10%
Moisture Content	3.5%

4.1.3 Fill; Silt & Sand

A layer of silt and sand was encountered beneath the sand and gravel layer at a depth (elevation) of 0.90 m (105.36 m/104.95 m) and extended to a depth (elevation) of 1.80 m (104.46 m/104.05 m) and was found to be compact (BH1) and loose (BH2).

Two (2) samples of the silt and sand from the roadway boreholes were submitted for gradation analysis and Moisture Content determination. Results indicate the material is classified as silt, some sand and clay (BH1) and silt and sand (BH2) with 100% and 97.0%, respectively, passing the 4.75 mm sieve and 85.0% and 41.0%, respectively, passing the 75 µm sieve. The Moisture Contents were determined to be 20.3% and 20.2% at the time of the field investigation with a Low to Medium Susceptibility to Frost Heave (LSFH, MSFH).

LAH453 (Silt)	
Gravel	0.00%
Sand	15.0%
Silt	55.0%
Clay	30.0%
Moisture Content	20.3%

LAH459 (Silt & Sand)	
Gravel	3.00%
Sand	56.0%
Silt and Clay	41.0%
Moisture Content	20.2%

4.1.4 Topsoil Remnant

A layer of topsoil remnant was encountered beneath the silt and sand fill layer at depth (elevation) of 1.80 m (104.46 m/104.05 m) and extended to a depth (elevation) of 1.95 m (BH1-104.31 m) and 1.90 m (BH2-103.95 m).

Material testing was not completed on this material.

4.1.5 Sand

Multiple layers of sand were encountered beneath the topsoil remnant and extended to a depth (elevation) of 3.9 m (BH1-102.36 m) and 4.80 m (BH2-101.05 m) and was found to be in a compact state.

Material testing was not completed on this material.

4.1.6 Sandy Silt

A sandy silt layer was encountered in BH1 beneath the native sand layer at a depth (elevation) of 3.9 m (102.36 m) and extended to a depth (elevation) of 5.1 m (101.16 m). The sandy silt was in a dense state.

One (1) sample of the sandy silt material was submitted for gradation analysis and Moisture Content determination. Results indicate the material is classified as sandy silt trace gravel with 93.0% passing the 4.75 mm sieve and 71.0% passing the 75 µm sieve. The Moisture Content was determined to be 17.1% at the time of the field investigation.

LAH456 (Sandy Silt)	
Gravel	7.00%
Sand	22.0%
Silt	71.0%
Moisture Content	17.1%

4.1.7 Till

Glacial till was encountered at a depth (elevation) ranging from 4.80 m (101.05 m) and 5.1 m (101.16 m) and extended to a depth (elevation) of 7.50 m (98.76 m/98.32 m) where each borehole was terminated. The till layer was found to be in a hard to dense state and became very dense with depth. Cobbles and boulders became more pronounced below a depth (elevation) of 6.6 m (99.66 m/99.25 m).

One (1) sample of the till material was submitted for gradation analysis and Moisture Content determination. Results indicate the material is classified as sand with silt, some gravel with 85.0% passing the 4.75 mm sieve and 24.0% passing the 75 µm sieve. The Moisture Content was determined to be 13.3% at the time of the field investigation.

LAH463 (Silty Sand)	
Gravel	15.00%
Sand	61.0%
Silt	24.0%
Moisture Content	13.3%

4.2 Groundwater

Groundwater was encountered at depth (elevations) of 3.00 m (103.26 m) and 2.25 (103.60 m) m at the time of borehole investigation in BH1 and BH2, respectively.

5.0 DISCUSSION AND RECOMMENDATIONS

Based on the subsoil and groundwater conditions encountered at the test pit locations and considering them to be representative of the subsoil and groundwater conditions across the subject site, the following preliminary recommendations and comments are offered to advance the design and construction of the proposed building.

Should the assumptions of this report be inconsistent with the final site design it is recommended that the geotechnical engineer be consulted with to ensure all recommendations are consistent with the proposed design and modifications are not warranted.

5.1 Foundations

The new structure may be found on either spread foundations or piles. The spread footings should found on the glacial till encountered at depths (elevations) ranging from 4.80 m (101.05 m) to 5.10 m (101.16 m) below existing grades. Footings placed on this layer may be designed using a ULS bearing capacity of 300 kPa and an SLS capacity of 200 kPa. Total and differential settlements for foundations placed on the approved native soil under SLS pressure conditions should not exceed 25 mm and 19 mm respectively.

Should pile foundations be under consideration, the following pile capacities are offered based on a pile length of 6 m and a pile cap located 1.5 m below existing grade:

Pile Type	Factored Capacity (ULS)	Factored Capacity (SLS)
HP330 x 109	555 kN	450 kN
HP310 x 125	585 kN	470 kN
HP310 x 79	225 kN	180 kN
300 mm dia. closed pipe	265 kN	200 kN

The above geotechnical capacities should be verified for structural capacity by the structural designer. It is cautioned that due to the presence of cobbles in the fill deposit, difficulties may be experienced during the pile driving operation. Piling contractors should review the borehole logs and verify piling suitability based on experience under similar conditions. Full time inspection during the piling operation is recommended.

The piles should be installed as per OPSS 903. Piling equipment used to drive the piles should be capable of developing 30 kJ to 50 kJ per blow to set the piles. The load carrying capacity of

the piles should be verified using a dynamic pile driving formula or other approved methods during construction.

Due to the presence of cobbles and boulders, pile shoes will be required during installation. Should higher capacities be required, further discussion of the anticipated bridge components and layout will be required.

5.2 Abutment Backfill

Backfill to abutments should consist of OPSS 1010 Granular 'B', Type I with a maximum aggregate size of 100 mm. The backfill should be placed in suitable lifts to achieve compaction of 95% SPMDD up to the roadway subgrade level. The backfill should be extended back of the abutment for a minimum of 2 m and installation of a subdrain for drainage should be provided.

The following parameters may be used to determine lateral earth pressures using Granular 'B', Type I backfill:

Unit Weight – dry (kN/m^3)	21.2
Angle of Internal Friction	32
Coefficient of Earth Pressure at Rest (K_O)	0.50
Coefficient of Active Earth Pressure (K_A)	0.41
Coefficient of Passive Earth Pressure (K_P)	3.3

5.3 Groundwater Control/Subsurface Drainage

During construction, it is likely that construction will be conducted below the natural water level. It is recommended that construction occur during the dryer summer months, if possible. Dewatering of the construction area should be completed in accordance with OPSS 517 and OPSS 518. The groundwater level should be controlled at all times and be kept below the excavation levels during the construction period. It is noted that groundwater levels may vary with seasonal variation in weather.

5.4 Excavations

All excavations should be carried out in accordance with the provisions in the Occupational Health and Safety Act. At the time of the field investigation the fill material encountered across the site can be classified as Type 4 and the native subsoil as Type 3. Excavations below the water table will require dewatering and groundwater control such as cofferdams, sheet piling or creek diversion.

5.5 Roadway Reinstatement

The following pavement structure is recommended to reinstate the roadway:

50 mm	HL3 Surface Course
150 mm	Granular 'A'
300 mm	Granular 'B', Type II

The asphalt cement should consist of PG58-34 with an asphalt cement content of 5.0% for the Surface Course. All granular material shall conform to OPSS 1010 and shall be placed in suitable lifts to achieve 100% of their SPMDD.

5.6 Site Inspections

It is recommended that all foundation and subgrade materials be inspected by qualified geotechnical personnel prior to the placement of concrete for footings, in order to ensure that the materials and founding elevations are consistent with the recommendations of this report. It is also recommended that the placement and compaction of all granular fill soils be monitored and tested by qualified geotechnical personnel to ensure that the appropriate materials and compaction densities are achieved.

6.0 CLOSURE

The Limitations of Report attached, form an integral part of this report. We trust this report provides sufficient information for your present requirements in accordance with our Term of Reference. We trust this report is to your satisfaction. Should you have any questions concerning the above, please feel free to contact our office.

Sincerely,

AINLEY GRAHAM & ASSOCIATES LIMITED

Lois-Ann L. Hayes

Lois-Ann L. Hayes P.Eng.
Vice President and Branch Manager

Limitations of Report

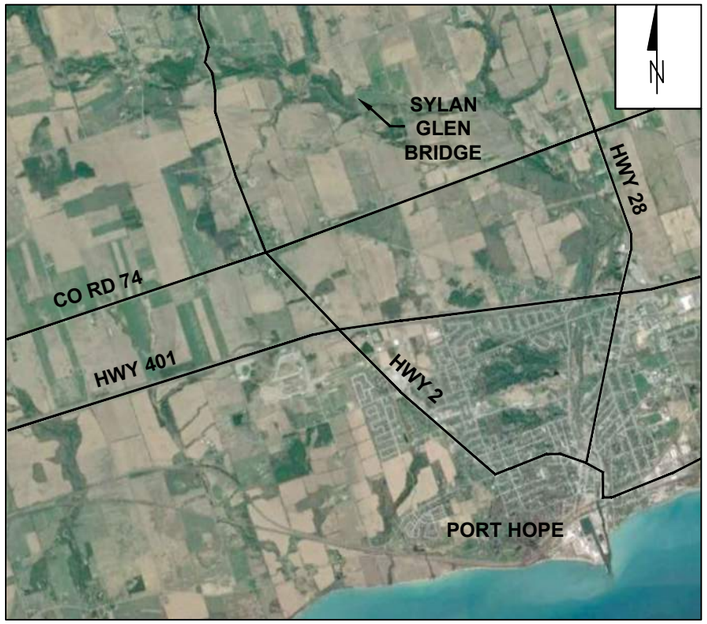
The conclusions and recommendations given in this report are based on information determined at the borehole locations. Subsurface and groundwater conditions between and beyond the test holes may differ from those encountered at the test locations, and conditions may become apparent during construction, which could not be detected or anticipated at the time of the site investigation. It is recommended practice that the Soils Engineer be retained during construction to confirm that the subsurface conditions throughout the site do not deviate materially from those encountered in the boreholes.

The comments made in this report are intended only for the guidance of the designer. The number of test pits may not be sufficient to determine all factors that may affect construction methods and costs. The contractors bidding on this project or undertaking the construction should therefore make their own interpretation of the factual information presented and draw their own conclusions as to how the subsurface conditions may affect their work.

This report has been prepared for design purposes, for the sole use of The Municipality of Port Hope. Any uses, which a Third Party makes of this report, or any reliance or decisions to be made based on it, are the responsibilities of said Third Parties. Ainley Group accepts no responsibility for damages if any, suffered by any Third Party as a result of decisions made or actions based on this report.

Figure No. 1

Site and Borehole Location Plan



KEY MAP
N.T.S.

TEST PIT DATA			
ID	TOP OF GRADE ELEVATION (masl)	BEDROCK ELEVATION (masl)	GROUNDWATER ELEVATION (masl)
BH1	106.28	NA	103.60
BH2	105.85	NA	103.28

LEGEND
⌖ = BOREHOLE LOCATION
NE = FEATURE NOT ENCOUNTERED

Ainley GROUP CONSULTING ENGINEERS PLANNERS

FIGURE NO. 1
SITE AND BOREHOLE LOCATION PLAN

Appendix A

Borehole Logs

Ainley Group
1-50 Grant Timmins Drive
Kingston, Ontario
K7M 8N3

Log of Borehole: BH1

Project: *Sylvan Glen Bridge*

Project No.: *22549-1*

Client: *Municipality of Port Hope*

Location: *Sylven Glen Bridge*

Ground Elevation (masl): 106.26

Water Elevation (masl): 103.26

Depth to Water (m): 3.00

SUBSURFACE PROFILE			SAMPLE				Head Space Vapour (ppm)			
Depth (ft / m)	Elevation	Description	Number	Type	SPT	SPT Graph (10 20 30 40)	Hexane	PID-VOCs	Groundwater	Symbol Log
0 / 0	106.26	Ground Surface								
	0.00	***Surface Treatment*** 35 mm.								
1		***Fill*** Sand and gravel, trace cobbles, brown.								
2										
3 / 1	105.36									
	0.90	***Fill*** Silt, some sand and clay, brown, moist, firm. % Passing LAH453 4.75 mm = 100 75 um = 85.0 5 um = 30.0 2 um = 18.0 Moisture Content = 20.3%								
4										
5										
	104.46									
6	1.80	***Topsoil*** Topsoil remnant.	LAH 453	SS	6		95			
	104.31									
2	1.95	***Sand*** Sand, some silt, brown, varved, compact.								
7										
	103.86									
8	2.40	***Sand*** Sand, some silt, dark brown/black, varved, compact.	LAH 454	SS	5		155			
9			S01/S02/S06							
	103.26								▼	
	3.00									

Drilled By: *G.E.T Drilling Ltd.*

Drill Method: *Truck Mount CME 55*

Drill Date: *June 8 2022*

Project Engineer: *Lois-Ann Hayes, P. Eng.*

Project Technician: *Josh Charlton, C. Tech.*

Sheet: 1 of 3

Ainley Group
1-50 Grant Timmins Drive
Kingston, Ontario
K7M 8N3

Log of Borehole: BH1

Project: *Sylvan Glen Bridge*

Project No.: *22549-1*

Client: *Municipality of Port Hope*

Location: *Sylven Glen Bridge*

Ground Elevation (masl): 106.26

Water Elevation (masl): 103.26

Depth to Water (m): 3.00

SUBSURFACE PROFILE			SAMPLE				Head Space Vapour (ppm)			
Depth	Elevation	Description	Number	Type	SPT	SPT Graph (10 20 30 40)	Hexane	PID-VOCs	Groundwater	Symbol Log
10, 11		***Sand*** Sand, trace gravel, brown/grey, coarse, wet, compact.	LAH 455	SS	34		100			
12	102.36									
13, 14, 15, 16	3.90	***Sandy Silt*** Sandy silt, trace of gravel, grey, fine, dense. % Passing LAH456 4.75 mm = 93.0 75 um = 71.0 5 um = 0.00 2 um = 0.00 Moisture Content = 17.1%	LAH 456	SS	36		105			
17, 18, 19	101.16	***Till*** Silty sandy clay, trace cobbles, grey, till, hard, dry.								
	100.26									
	6.00									

Drilled By: *G.E.T Drilling Ltd.*

Drill Method: *Truck Mount CME 55*

Drill Date: *June 8 2022*

Project Engineer: *Lois-Ann Hayes, P. Eng.*

Project Technician: *Josh Charlton, C. Tech.*

Sheet: 2 of 3

Ainley Group
1-50 Grant Timmins Drive
Kingston, Ontario
K7M 8N3

Log of Borehole: BH1

Project: ***Sylvan Glen Bridge***

Project No.: ***22549-1***

Client: ***Municipality of Port Hope***

Location: ***Sylven Glen Bridge***

Ground Elevation (masl): 106.26

Water Elevation (masl): 103.26

Depth to Water (m): 3.00

SUBSURFACE PROFILE			SAMPLE				Head Space Vapour (ppm)			
Depth	Elevation	Description	Number	Type	SPT	SPT Graph (10 20 30 40)	Hexane	PID-VOCs	Groundwater	Symbol Log
20		***Till*** Silty sand, some gravel, trace clay, grey, coarse, dense becoming very dense with depth, dry. Boulders at 6.60 m.	LAH 457	SS	50		110			
21										
22										
23	7									
24										
	98.76 / 7.50	***End of Borehole at 7.50 m below existing site grades.*** Note: Groundwater infiltration encountered at 3.00 m below existing site grades.								
25										
26	8									
27										
28										
29	9									

Drilled By: ***G.E.T Drilling Ltd.***

Drill Method: ***Truck Mount CME 55***

Drill Date: ***June 8 2022***

Project Engineer: ***Lois-Ann Hayes, P. Eng.***

Project Technician: ***Josh Charlton, C. Tech.***

Sheet: 3 of 3

Ainley Group
1-50 Grant Timmins Drive
Kingston, Ontario
K7M 8N3

Log of Borehole: BH2

Project: *Sylvan Glen Bridge*

Project No.: *22549-1*

Client: *Municipality of Port Hope*

Location: *Sylven Glen Bridge*

Ground Elevation (masl): 105.85

Water Elevation (masl): 103.60

Depth to Water (m): 2.25

SUBSURFACE PROFILE			SAMPLE				Head Space Vapour (ppm)			
Depth (ft / m)	Elevation	Description	Number	Type	SPT	SPT Graph (10 20 30 40)	Hexane	PID-VOCs	Groundwater	Symbol Log
0 / 0	105.85	Ground Surface								
	0.00	***Surface Treatment*** 35 mm.								
1 / 2		***Fill*** Sand and gravel, trace cobbles, brown. % Passing LAH458 4.75 mm = 58.6 75 um = 6.10 Moisture Content = 3.5%	LAH 458	GRAB			115			
	104.95									
3 / 1	0.90	***Fill*** Silt and sand, trace gravel, brown, loose. % Passing LAH459 4.75 mm = 97.0 75 um = 41.0 5 um = 0.00 2 um = 0.00 Moisture Content = 20.2%								
4 / 5			LAH 459 S03/S05	SS	4		120			
	104.05									
6 / 2	1.80	***Topsoil*** Topsoil remnant.								
7		***Sand*** Sand, some silt, brown, varved, compact.							▼	
	103.45									
8 / 9	2.40	***Sand*** Sand, trace gravel, grey, coarse, wet, compact.	LAH 460	SS	5		115			

Drilled By: *G.E.T Drilling Ltd.*

Drill Method: *Truck Mount CME 55*

Drill Date: *June 8 2022*

Project Engineer: *Lois-Ann Hayes, P. Eng.*

Project Technician: *Josh Charlton, C. Tech.*

Sheet: 1 of 3

Ainley Group
1-50 Grant Timmins Drive
Kingston, Ontario
K7M 8N3

Log of Borehole: BH2

Project: ***Sylvan Glen Bridge***

Project No.: ***22549-1***

Client: ***Municipality of Port Hope***

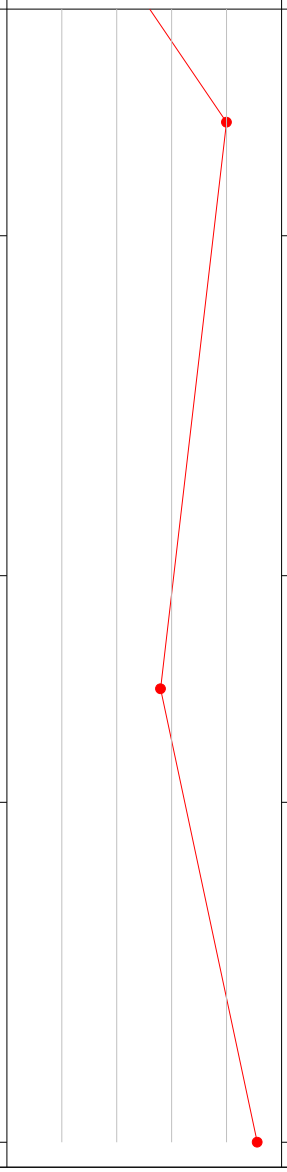
Location: ***Sylven Glen Bridge***

Ground Elevation (masl): 105.85

Water Elevation (masl): 103.60

Depth to Water (m): 2.25

SUBSURFACE PROFILE			SAMPLE				Head Space Vapour (ppm)			
Depth	Elevation	Description	Number	Type	SPT	SPT Graph (10 20 30 40)	Hexane	PID-VOCs	Groundwater	Symbol Log
10										
11			LAH 461	SS	40		100			
12										
13										
14										
15										
16	101.05 4.80	***Till*** Sand with silt, some gravel, grey, fine, dense, dry. % Passing LAH463 4.75 mm = 85.0 75 um = 24.0 5 um = 0.00 2 um = 0.00 Moisture Content = 13.3%	LAH 462	SS	28		95			
17										
18										
19										



Drilled By: ***G.E.T Drilling Ltd.***

Drill Method: ***Truck Mount CME 55***

Drill Date: ***June 8 2022***

Project Engineer: ***Lois-Ann Hayes, P. Eng.***

Project Technician: ***Josh Charlton, C. Tech.***

Sheet: 2 of 3

Ainley Group
1-50 Grant Timmins Drive
Kingston, Ontario
K7M 8N3

Log of Borehole: BH2

Project: *Sylvan Glen Bridge*

Project No.: *22549-1*

Client: *Municipality of Port Hope*

Location: *Sylven Glen Bridge*

Ground Elevation (masl): 105.85

Water Elevation (masl): 103.60

Depth to Water (m): 2.25

SUBSURFACE PROFILE			SAMPLE				Head Space Vapour (ppm)			
Depth	Elevation	Description	Number	Type	SPT	SPT Graph (10 20 30 40)	Hexane	PID-VOCs	Groundwater	Symbol Log
20										
21			LAH 463 S04/S07	SS	50		115			
	99.25 6.60	***Till*** Silty sand, some gravel, trace clay, grey, coarse, very dense, dry. Cobbles at 6.60 m.								
22										
23 – 7										
24										
	98.35 7.50	***End of Borehole at 7.50 m below existing site grades on cobbles/boulders.*** Note: Groundwater infiltration encountered at 2.25 m below existing site grades.								
25										
26 – 8										
27										
28										
29 – 9										

Drilled By: *G.E.T Drilling Ltd.*

Drill Method: *Truck Mount CME 55*

Drill Date: *June 8 2022*

Project Engineer: *Lois-Ann Hayes, P. Eng.*

Project Technician: *Josh Charlton, C. Tech.*

Sheet: 3 of 3

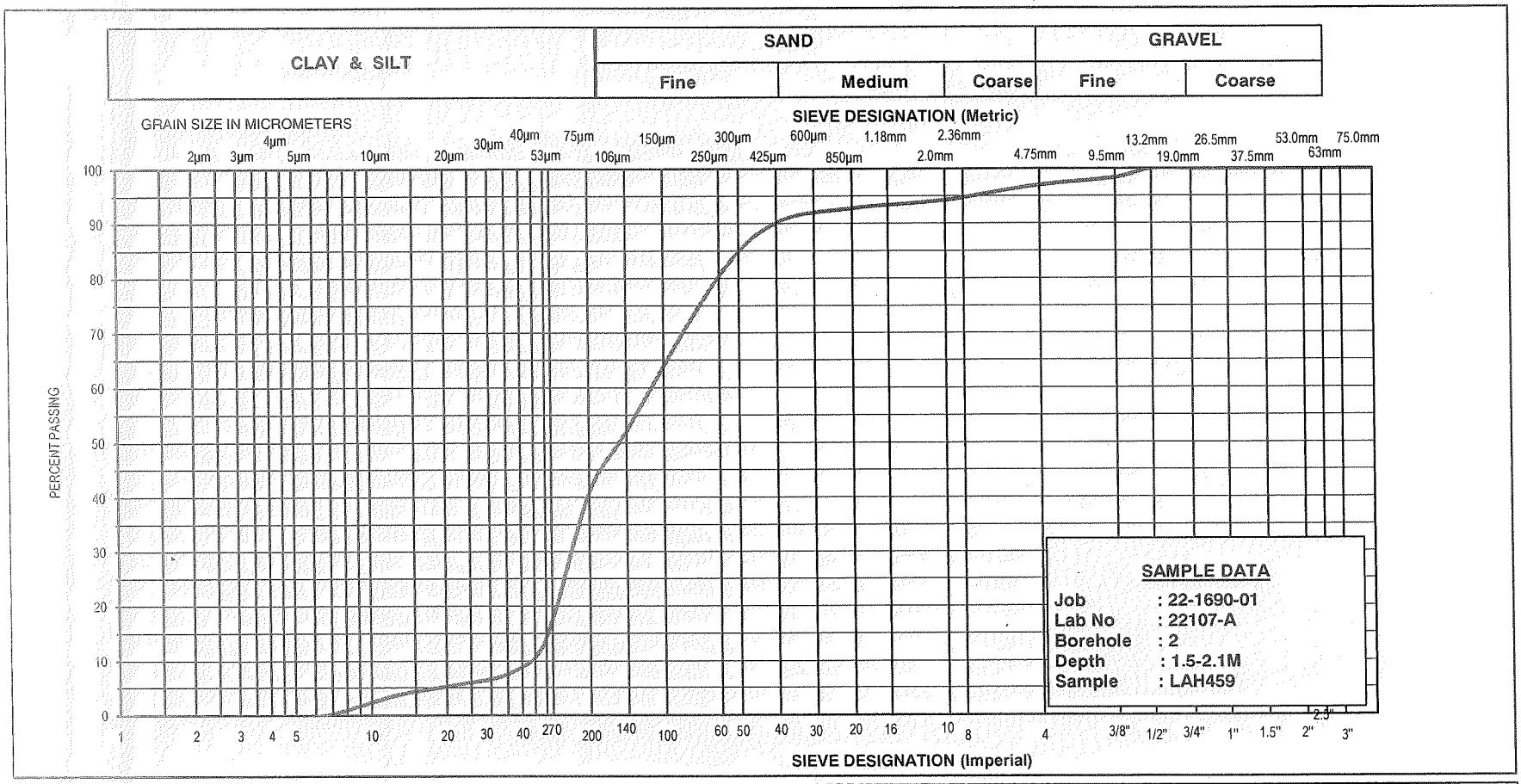
Appendix B
Soil Reports

Ainley 22-1690-01 22546-1 Sylvan Glen Bridge June 7,2022-Lab#22107

SAMPLE INFORMATION	SAMPLE	MASS OF SAMPLE WET & TARE (g)	MASS OF SAMPLE DRY & TARE (g)	MASS OF WATER (g)	MASS OF DRY SOIL (g)	MASS OF TARE (g)	MOISTURE CONTENT (%)
LAH459	A	397.1	352.3	44.8	221.7	130.6	20.2
LAH458	B	647.5	630.8	16.7	482.1	148.7	3.5
LAH453	C	444.8	391.9	52.9	260.2	131.7	20.3
LAH463	D	539.6	490.9	48.7	365.1	125.8	13.3
LAH456	E	597.6	529.8	67.8	397.1	132.7	17.1

SNC-LAVALIN

UNIFIED SOIL CLASSIFICATION SYSTEM



% +3"	% Gravel		% Sand			% Fines	
	Course	Fine	Course	Medium	Fine	Silt	Clay
	0	3	3	4	49	41	0

SNC-LAVALIN 1164 Clyde Court Kingston, Ontario K7P 2E4	GRAIN SIZE DISTRIBUTION	Client: Ainley	
		Project: 22-1690-01	
	SILT SAND	19571-5 Highway #401 (Kingston East)	
	Trace Gravel	Date:May 10, 2022	Moisture Content is 20.2%

SNC·LAVALIN

SNC-Lavalin GEM Ontario Inc.
1164 Clyde Court
Kingston, Ontario K7P 2E4
(613) 389-1781 (613) 389-4204

Grain Size Analysis Test Report

Project No.: 22-1690-01 Project Description: Ainley 2022 Lab Testing Date: Jun 23, 2022

Project Location: Contract No.:

SAMPLE DATA

Material: Granular
Date Sampled: Jun 07, 2022
Time Sampled:
Sample Type: Borehole
Sample Location: LAH458,BH#2,0-0.9M, 22549-1 Sylvan Glen Bridge
Lot: Sublot:
Source: Ainley
Sampled By: Client

LAB DATA

Lab No.: 22107-B Date Tested: Jun 23, 2022
Specification: OPSS1010, Granular B Type I

PARTICLE ANALYSIS		
TEST	Sample	Specification
Percent Crushed:		
% Asphalt Coated:		30
% Flat and Elongated		

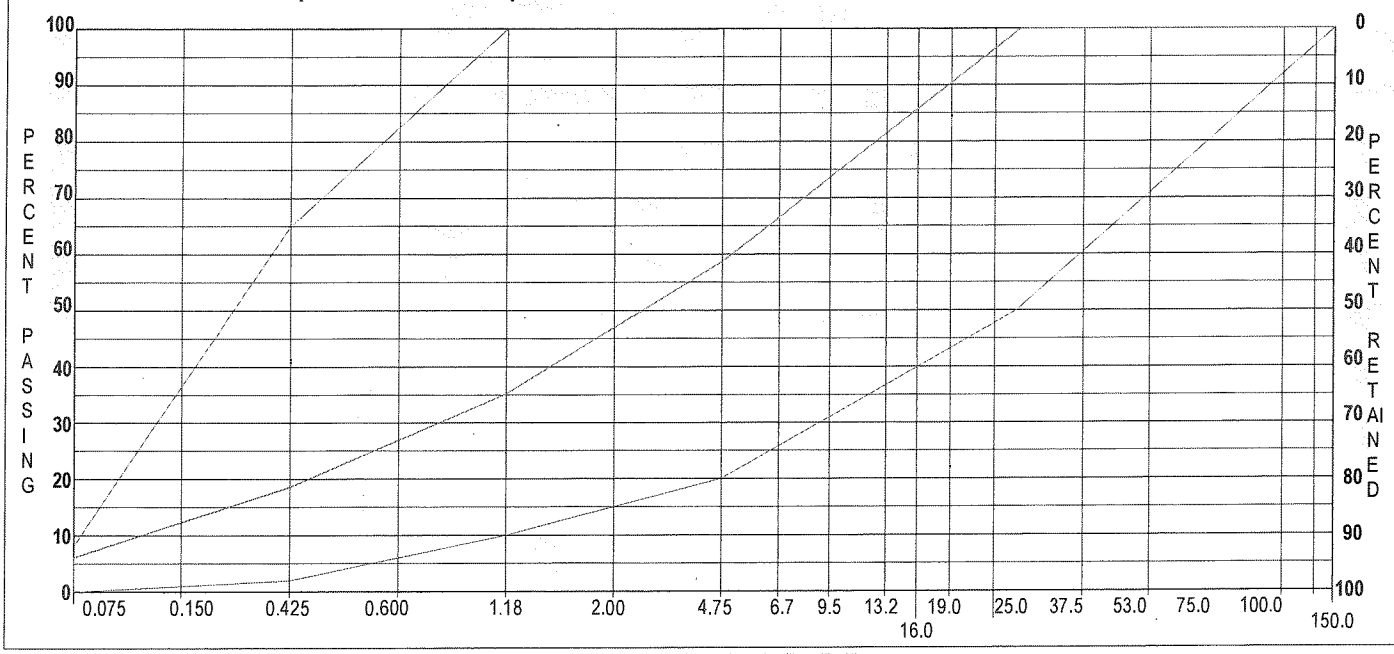
WASH PASS 0.075mm		
TEST	Sample	Specs
Wash Pass 0.075 mm:		
FINENESS MODULUS	1.88	

Comments: Moisture Content is 3.5%

Grain Size Analysis		
Sieve Sizes (mm)	Percent Passing	
	Sample	Specification
150.0	100	100 - 100
100.0		-
75.0		-
53.0		-
50.0		-
37.5		-
26.5	100	50 - 100
25.0		-
19.0		-
16.0		-
13.2		-
9.5		-
6.7		-
4.75	58.6	20 - 100
2.36		-
2.00		-
1.18	35.2	10 - 100
0.600		-
0.425		-
0.300	18.6	2 - 65
0.150		-
0.075	6.1	0 - 8

* Indicates Out of Specification

Sample: ..... Specs: .....



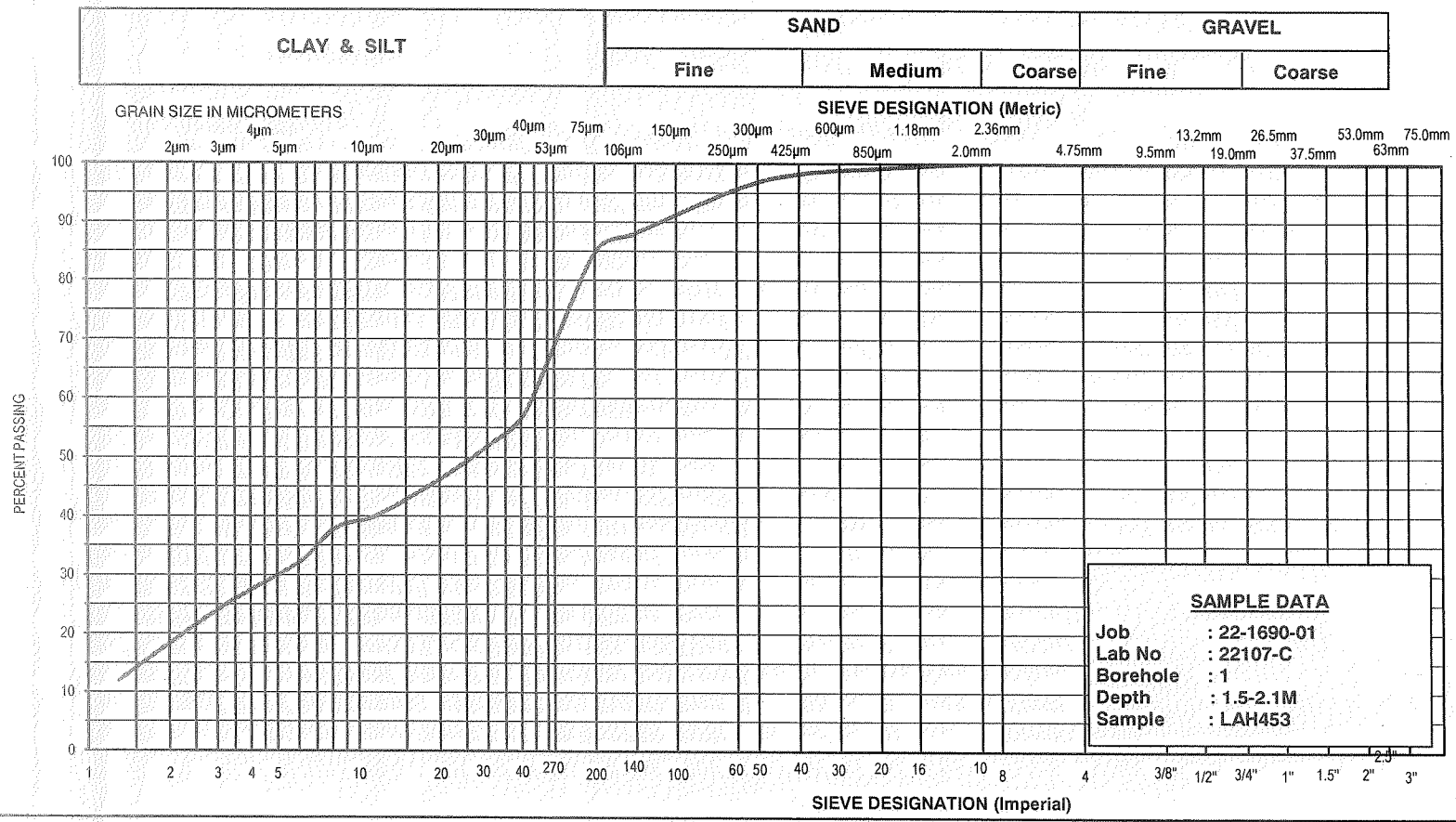
Data presented hereon is for the sole use of the stipulated client. SNCL is not responsible, nor can be held liable, for use made of this report by any other party, with or without the knowledge of SNCL.The testing services reported herein have been performed by a SNCL technician to recognized industry standards, unless otherwise noted. No other warranty is made. This data does not include or represent any interpretation or opinion of specification compliance or material suitability. Should engineering interpretation be required, SNCL will provide it upon written request.

Project Manager: Mark McClelland, C.E.T

Infrastructure

SNC-LAVALIN

UNIFIED SOIL CLASSIFICATION SYSTEM

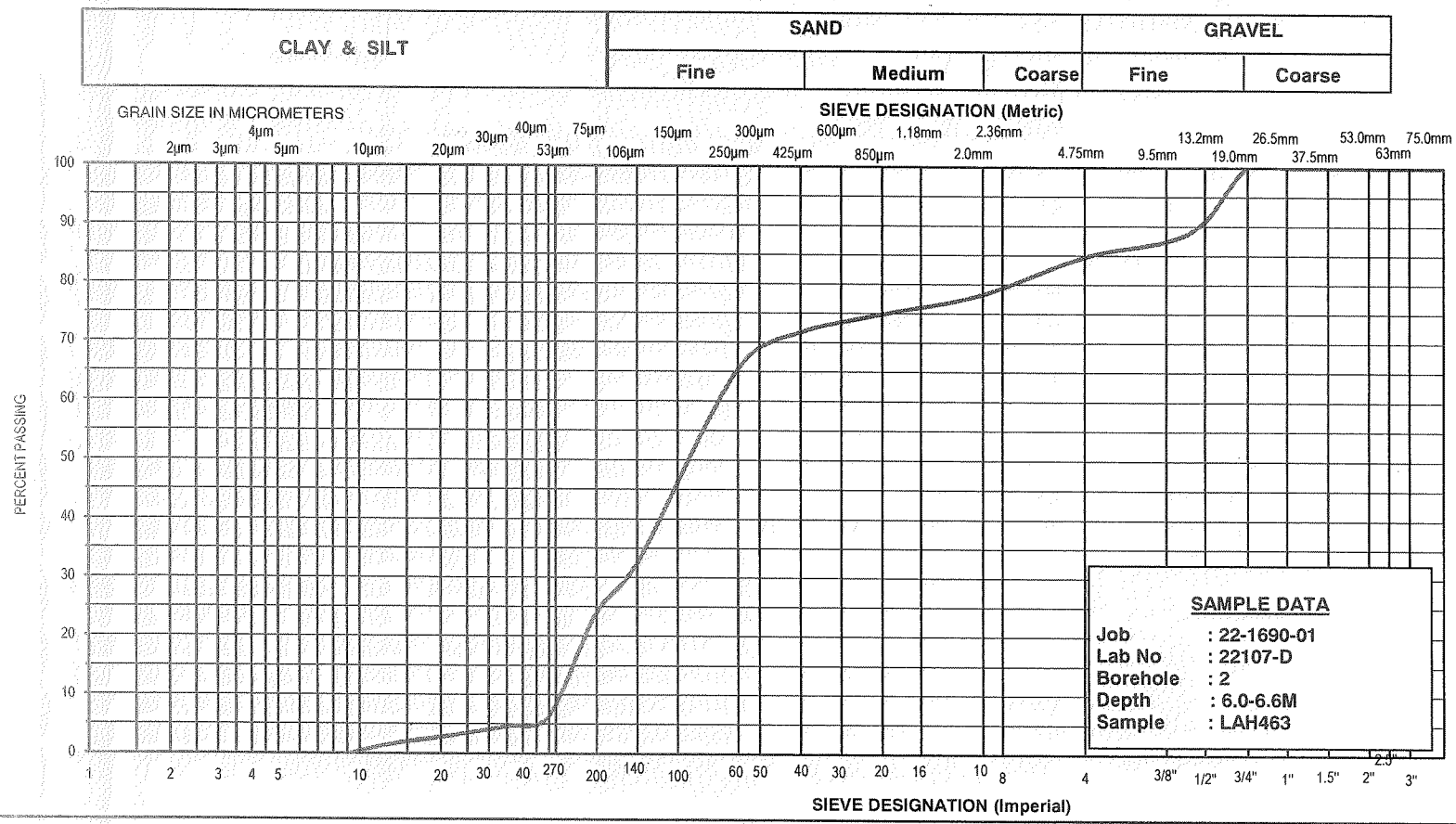


% +3"	% Gravel		% Sand			% Fines	
	Course	Fine	Course	Medium	Fine	Silt	Clay
	0	0	0	2	14	67	18

SNC-LAVALIN 1164 Clyde Court Kingston, Ontario K7P 2E4	GRAIN SIZE DISTRIBUTION	Client: Ainley	
		Project: 22-1690-01	
	SILT	19571-5 Highway #401 (Kingston East)	
	Some Clay,Some Sand	Date:May 10, 2022	Moisture Content is 20.3%

SNC-LAVALIN

UNIFIED SOIL CLASSIFICATION SYSTEM



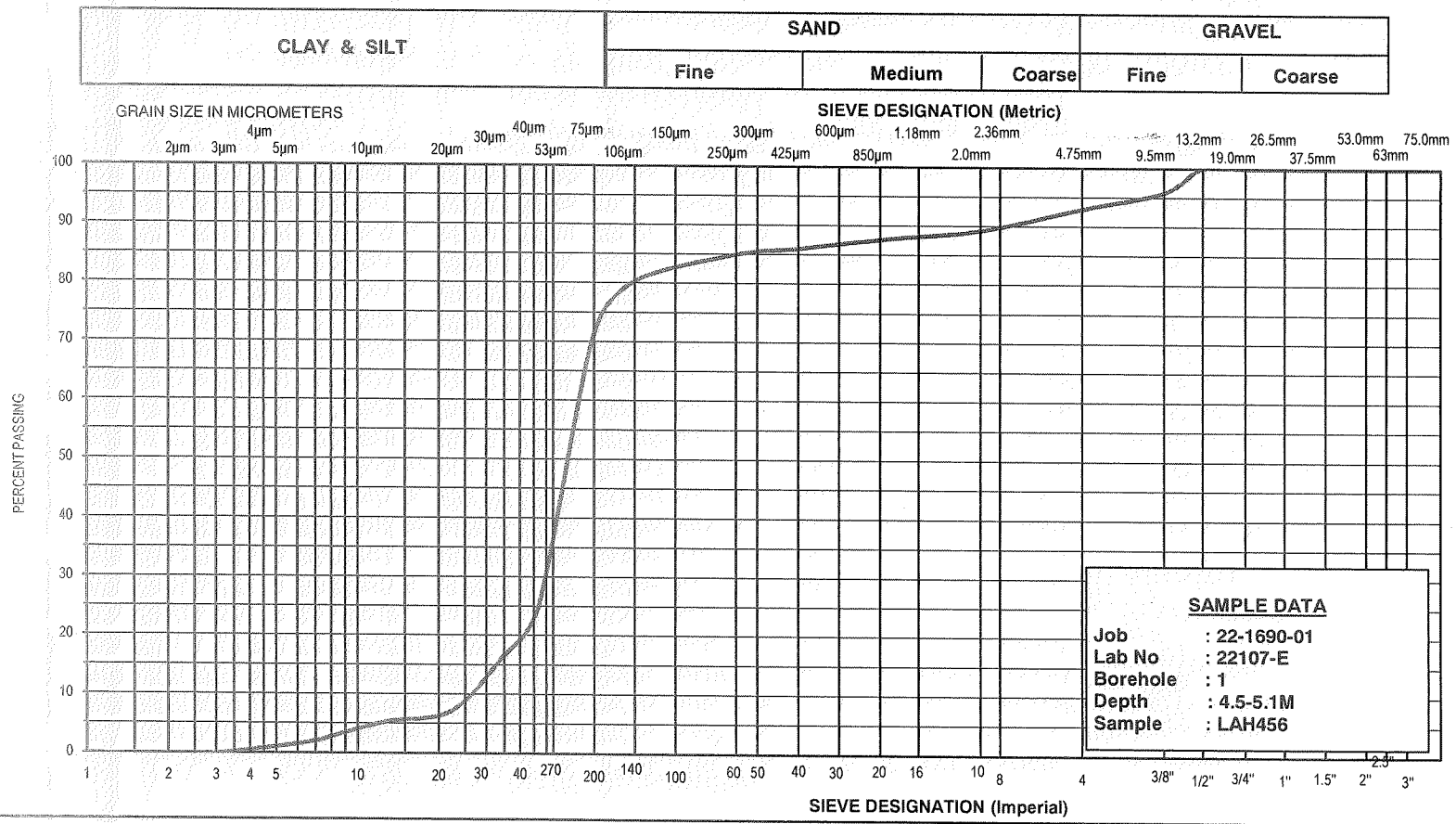
% +3"	% Gravel		% Sand			% Fines	
	Course	Fine	Course	Medium	Fine	Silt	Clay
	0	15	6	7	48	24	0

SNC-LAVALIN
1164 Clyde Court
Kingston, Ontario K7P 2E4

GRAIN SIZE DISTRIBUTION	Client: Ainley	
	Project: 22-1690-01	
SILT SAND	19571-5 Highway #401 (Kingston East)	
Some Gravel	Date:May 10, 2022	Moisture Content is 13.3%

SNC-LAVALIN

UNIFIED SOIL CLASSIFICATION SYSTEM



% +3"	% Gravel		% Sand			% Fines	
	Course	Fine	Course	Medium	Fine	Silt	Clay
	0	7	4	3	15	71	0

SNC-LAVALIN
1164 Clyde Court
Kingston, Ontario K7P 2E4

GRAIN SIZE DISTRIBUTION

SANDY SILT

Trace Gravel

Client: Ainley

Project: 22-1690-01

19571-5 Highway #401 (Kingston East)

Date:May 10, 2022

Moisture Content is 17.1%

SYLVAN GLEN BRIDGE

Assessment of Past Uses Report

Prepared For:

The Municipality of Port Hope

April 2023

ASSESSMENT OF PAST USES REPORT

for

Sylvan Glen Bridge Replacement

The Municipality of Port Hope

Prepared by Ainley Group

April 2023

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1.0 INTRODUCTION

Ainley Group has been retained by the Municipality of Port Hope to undertake an Assessment of Past Uses Report associated with the replacement of the Sylvan Glen Bridge. It is understood the proposed bridge replacement is due to the poor condition of the existing bridge. This Assessment of Past Uses Report was completed as a requirement of *Ontario Regulation O.Reg. 406/19 (On-Site and Excess Soil Management)*, which regulates excess soils that may be generated as a result of the replacement of the Sylvan Glen Bridge.

2.0 PROPERTY INFORMATION

Sylvan Glen Bridge is a one and a half lane (5.6 m), two span concrete T beam structure located on Sylvan Glen Road approximately 0.7 km south of 4th Line Road at the Ganaraska River, in the Municipality of Port Hope. The original 12.2 metre bridge span, constructed in 1921 has reinforced concrete T beams supported on concrete abutments and piers. A 7.3 metre span was added later with the same concrete T-beam type according to the following historical drawings. The existing deck of Sylvan Glen bridge is 22.1 m long. An OSIM inspection of Sylvan Glen Bridge was performed on September 23, 2020 and concluded the Bridge Condition Index (BCI) value of 45. The bridge is in poor condition and must be replaced considering the low value of BCI. A regional location plan of the site is attached as **Figure 1**.

3.0 SCOPE OF WORK AND METHODOLOGY

The purpose of this Assessment of Past Uses is to identify, to the extent practicable, any current or potential environmental contamination and liabilities associated with the past and present use of the subject land identified above. The site was assessed generally in accordance with the *O.Reg. 406/19, in* an effort to document the baseline site conditions at the property. It is understood that the subject land use will remain as a bridge.

The scope of this Assessment of Past Uses has included:

- Historical and current land use cataloguing via aerial photographs, other government mapping sources, and a historical review of past and present buildings, structures, etc., on the subject land.
- Site investigation and documentation, including visual observation of the property facilities (as available), and neighboring properties that may have the potential to present environmental concerns and/or liabilities at the site.

The methodologies for each of the above activities and the results of the on-site assessment are provided in the following sections. The activities detailed below were conducted in order to obtain the necessary and pertinent information regarding the known past and present environmental status of the subject land.

3.1 PROPERTY OWNERSHIP AND PHYSICAL SITE CONDITIONS

A historical title search of the subject land title was not conducted because the subject property has always acted as a bridge for Sylvan Glen Road. Therefore; as it is described in **Section 4.1.4** the records of site ownership of the subject land are not considered to contribute to the Assessment of Past Uses Report.

3.2 HISTORICAL SITE LAND USE

A detailed evaluation of the historical land use of the subject land was completed. The evaluation included, but was not limited to, the following:

- Review of chronologically dated aerial photographs of the site.
- Review of environmental records / reports.
- Review of historical and current structures and facilities using aerial photographs.

3.3 INTERVIEWS

A detailed interview was conducted with a local representative possessing historic knowledge of the site, adjacent properties, and the general study area. During the interview, verbal information was collected regarding historical and current operations on the subject lands, and any known historical environmental issues pertaining to the site. An interview was conducted with the following individual:

Mr. Warren Coulter – Engineering Project Coordinator, Municipality of Port Hope. The interview with Mr. Coulter was conducted on December 13, 2022.

3.4 ASSESSMENT OF ENVIRONMENTAL STATUS OF THE SUBJECT LAND

The results of the historical land use assessment, the interviews, and non-intrusive site investigations were assessed in accordance with relevant industrial and government standards to determine whether further investigation is required.

As part of the assessment of environmental status of the subject land, several agencies were contacted for relevant information detailing reported historical contamination, licensing and registration of fuel tanks, and land use mapping and zoning information. The agencies are specified in the following sections.

3.5 TECHNICAL STANDARDS AND SAFETY ASSOCIATION

The Technical Standards and Safety Association (TSSA) was contacted regarding information pertaining to fuel related issues on the subject land including licensing, registration and reporting of aboveground storage tanks (AST) as well as underground storage tanks (UST) and records of spills, contamination, incident reports, etc., filed with TSSA by past and present site owners. Through discussions with TSSA it was determined that TSSA records are for individual lots or

addresses only and that TSSA has no records for roadways such as Sylvan Glen Road.

3.6 AERIAL PHOTOGRAPHY / TOPOGRAPHIC INFORMATION

Aerial photographs of the subject land were obtained through ECOLOG ERIS. The Ministry of Natural Resources and Forestry (MNRF) digital data from the Land Information Ontario (LIO) warehouse was also reviewed for land use and topographic features.

3.7 ONTARIO MINISTRY OF ENVIRONMENT, CONSERVATION AND PARKS (MECP)

A Freedom of Information and Protection of Privacy Act (FOI) request was submitted to the MECP on November 25, 2022 regarding any information they might have pertaining to environmental concerns (general correspondence, occurrence reports, abatement), orders, and / or spills related to the subject land (**Appendix A**).

Available digital information from the MECP was reviewed including historic and current Certificates of Approval (C of A's), and MECP Water Well Records on, and adjacent to, the subject land.

The letter of record indicates that two (2) incident reports were logged for the Sylvan Glen Bridge study area (release of nitrogen – compressed gas), neither of which had any environmental implications.

3.8 ECOLOG ENVIRONMENTAL RISK INFORMATION SERVICES (ERIS)

ECOLOG Environmental Risk Information Services (ERIS) conducted a comprehensive search of over sixty (60) registered databases for the subject land, and all properties located within a 250-meter (m) radius of the site, for any environmental claims and records listed against the subject and adjacent properties. The ECOLOG ERIS report is provided in **Appendix B**.

3.9 FIRE INSURANCE RECORDS

Fire insurance records were requested as part of the ECOLOG ERIS reporting for the subject lands.

No fire insurance mapping records for the study area are included in **Appendix B**.

3.10 SITE INVESTIGATION

A non-intrusive site reconnaissance (site walkthrough) was carried out on the subject land on June 14 and September 1, 2022, by Ainley Group personnel. The objective of the site review was to obtain a detailed understanding of property use (past and present), adjacent properties, and visual observation of any maintenance or storage of potentially hazardous materials or fuels that may indicate or contribute to the possibility of, or occurrence of, environmental contamination or liability at the site.

4.0 RECORDS REVIEW

The following sections present the environmental site records review for the subject land. The records review was conducted to evaluate the potential for any areas of potential concern (APCs).

4.1 GENERAL

4.1.1 Study Area Determination

The study area for the Assessment of Past Uses included the subject land and all areas within a 250 m radius. Any properties falling partially within the 250 m radius were reviewed for potential impacts, and if areas identified as being potential areas of environmental concern were identified, then the remainder of the property (beyond 250 m) was reviewed to further characterize potential impacts.

4.1.2 First Developed Use Determination

Historical land use is based on findings from a review of available air photos (1928 and 1981) provided to Ainley Group by ERIS (2022), and recent imagery provided through MNRF Make-a-Map.

Based on the available imagery, the 1928 air photo is of lower quality; however, appears to show the subject land as bridge. Sylvan Glen Bridge, as it currently sits is visible within the 1981 air photo.

4.1.3 Fire Insurance Plans

As part of the ECOLOG ERIS request, local Fire Insurance Records were requested for the subject land. No insurance mapping records were available for the subject lands and/or study area (**Appendix B**).

4.1.4 Records of Title

With regard to records of title for the subject property, O.Reg. 153/04 notes the following:

Prepare an up-to-date chronological chain of title that shows the owners' names and dates of ownership for the phase one property based on a search of the title of the phase one property that goes back to the date of the first developed use of the phase one property, unless other information from the records review satisfies the objectives of the records review and a title search back to the date of the first developed use would not contribute to obtaining information about the environmental condition of the phase one property.

Since it is known that the subject property has always acted as a bridge for Sylvan Glen Road, a review of land ownership title is not considered to contribute to the Assessment of Past Uses Report.

4.2 ENVIRONMENTAL SOURCE INFORMATION

The following sections provide a summary of the environmental source information reviewed as part of the Assessment of Past Uses. The majority of the following source information has been provided by ECOLOG ERIS. ERIS conducted a comprehensive search of over sixty (60) registered databases for the subject land and all properties located within a 250 m radius of the site for any environmental claims and records listed against the subject and adjacent properties current to the publication date of each respective database. A copy of the ERIS report is included in **Appendix B**.

4.2.1 National Pollutant Release Inventory

A search of records from the National Pollutant Release Inventory (NPRI) was completed by ERIS. The NPRI is identified as a federal government initiative to collect comprehensive national data regarding the release of over 300 substances to air, water, or land (ERIS, 2022).

There were no reported NPRI records for the subject land, adjacent property, or within the 250 m radius of the subject land.

4.2.2 National PCB Inventory and Inventory of PCB Storage Sites

A search of records from the National PCB Inventory (NPCB) and the Inventory of PCB Storage Sites (OPCB) was completed by ERIS. The NPCB is identified as Canada's National PCB Inventory which includes information on in-use PCB containing equipment in Canada from federal, provincial, and private facilities (ERIS, 2022). The OPCB is identified as the provincial database for PCB storage equipment and / or disposal sites of PCB waste within Ontario.

There were no reported NPCB and OPCB records for the subject land, adjacent property, or within the 250 m radius of the subject land.

4.2.3 Ministry of Environmental, Conservation and Parks Approvals and Sector Registry

A search of Provincial records (including MECP) was completed by ERIS for items such as the Pesticide Registry (PES), Environmental Activity and Sector Registry (EASR), Environmental Registry (EBR), Certificates of Approvals (CA), Environmental Compliance Approvals (ECA), Permits to Take Water (PTTW), and Certificates of Property Use (CPU) (ERIS, 2022).

No PES records were identified for the subject lands or within the 250 m study area.

No EASR records were identified for the subject lands or within the 250 m study area.

No EBR records were identified for the subject lands or within the 250 m study area.

No CA records were identified for the subject lands or within the 250 m study area.

No ECA records were identified or the subject lands or within the 250 m study area.

No PTTW or CPU records were identified for the subject lands or within the 250 m study area.

4.2.4 Inventory of Coal Gasification Plants

A search of records from the Inventory of Coal Gasification Plants (COAL) was completed by ERIS. The inventory searched by ERIS (2022) included 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, 1998).

There were no reported inventory records for the subject land, adjacent property, or within the 250 m radius of the subject land.

4.2.5 Records of Environmental Incidents, Orders, Offences, Spills, and Discharge of Contaminants

The records of environmental incidents, orders, offences, spills, and discharge of contaminants were based on ERIS (2022) reporting for the following databases:

- Compliance and Convictions (CONV)
- Environmental Issues Inventory System (EIIS)
- Federal Convictions (FCON)
- Contaminated Sites on Federal Land (FCS)
- Technical Standards and Safety Association Incidents (INC)
- Technical Standards and Safety Association Historic Incidents (HINC)
- Pipeline Incidents (PINC)
- Non-Compliance Reports (NCPL)
- National Defense and Canadian Forces Spills (NDSP)
- Orders (ORD)
- Ontario Spills (SPL)

Based on the records review, there were no reported environmental incidents, order, offences, spills, or discharge of contaminants records for the subject property, adjacent property, or within the 250 m radius of the subject property.

4.2.6 Waste Generator and Management Records

No waste generator (GEN) records were identified for the subject land or 250 m study area.

4.2.7 Reports Submitted to the Ministry and Records of Site Condition

Based on a review of historical reports prepared for the site, and the review of the Record of Site Condition (RSC) submissions to MECP database in the ERIS report (2022), there are no reported records of reports submitted to the MECP or Records of Site Condition for the subject land or within the 250 m study area.

4.2.8 Retail Fuel Storage Tank Information

The Technical Standards and Safety Authority (TSSA) was consulted regarding the subject land. TSSA records are for individual lots or addresses only. TSSA has no records for roadways such as Sylvan Glen Road.

A review of fuel storage tanks and tank facilities was also included in the ERIS report (2022), and identified the following:

- Delisted Fuel Tanks (DTNK)
- List of Expired Fuels Safety Facilities (EXP)
- Fuel Storage Tanks (FST)
- Fuel Storage Tanks – Historic (FSTH)
- Private and Retail Fuel Storage Tanks (PRT)
- Retail Fuel Storage Tank (RST)

Based on the records review, there were no reported retail fuel storage tank records for the subject property, adjacent property, or within the 250 m radius of the subject property.

4.2.9 Significant Natural Heritage Features

The MNRF Natural Heritage Information Centre database and Land Information Ontario (LIO) data was reviewed for areas of natural significance including Areas of Natural and Scientific Interest (ANSI), Provincially Significant Wetlands (PSW), Significant Wildlife Habitat, and any other significant features reported by the MNRF.

No significant natural heritage features were identified on the subject land or within 250 m of the subject land.

4.2.10 Waste Disposal Site Information

A records review for waste disposal site information was completed as part of the ERIS (2022) database search from the MECP Certificate of Approval Inventory for Waste Disposal Sites (WDS) and the 1991 Historical Approval Inventory (WDSH).

Based on the records review, there were no reported waste disposal site records for the subject property, adjacent property, or within the 250 m radius of the subject property.

4.2.11 Scott's Manufacturing Directory

A review of available manufacturing records was completed as part of the ERIS (2022) reporting through the Scott's Manufacturing database search. The Scott's Manufacturing Directory is a database containing information on over 200,000 manufacturers across Canada.

Based on the records review, no Scott's Manufacturing records were identified for the subject property, adjacent property, or within the 250 m radius of the subject property.

4.2.12 Mineral Occurrences

A review of available mineral occurrence records (MNR) was completed as part of the ERIS (2022) database search.

Based on the records review, there were no reported mineral occurrences identified for the subject land or within the 250 m radius of the subject land.

4.3 PHYSICAL SETTING SOURCES

The subject land is owned by the Municipality of Port Hope. The subject land was developed as a roadway.

The subject land is accessed via Sylvan Glen Road. The subject land currently has an asphalt roadway. The subject land is surrounded by the Ganaraska River and vacant lands on the west and east, Sylvan Glen Conservation and few residential properties on the south, and vacant lands on the north.

4.3.1 Aerial Photographs

A review of chronological aerial photographs was completed as part of the Assessment of Past Uses for the subject land. Aerial photographs from 1928 and 1981 were available through ERIS (**Appendix C**). An additional aerial photograph from present time (circa 2021, from ESRI) is provided in **Figure 2**. An overview of activities on the subject land, adjacent property and within the 250 m radius of the subject land from 1928 to present is provided below.

On-site:

In 1928, 1981, and 2021 air photos, the subject land appears to have been used as a bridge.

Off-site:

In 1928 air photo, the study area appears to have been predominantly used for agricultural purposes and is covered with vegetation.

In the 1981 air photo, the study area appears to have been used for agricultural purposes; however, some residential houses are developed.

4.3.2 Topography, Hydrology, Geology

The subject land falls within the Iroquois Plains physiographic region (Chapman and Putnam, 1984). Within the area spanning from Newcastle to Trenton, the Iroquois Plains a group of drumlinized uplands serve to interrupt the continuity of the plain (1 m thick) aeolian sand deposits underlain by glacial till (Chapman and Putnam, 1984).

Surficial geology in the study area consists of modern alluvial deposits of clay, silt, sand, and gravel that may contain organic remains (Ontario Geological Survey, 2010). Bedrock geology in the study area consists of limestone, dolostone, shale, arkose, and sandstone of the Ottawa and Simcoe Groups, Shadow Lake Formation (Lumbers, 1976).

The topography of the study area is characterized by a valley type feature associated with the Ganaraska River.

Flow within the Ganaraska River at the project site is generally from northwest to southeast, ultimately conveying water to Lake Ontario approximately 5.9 km southeast of the project site.

Well records for the 250 m radius around the subject land (**Appendix D**) indicate the study are overburden is dominated by fine material (i.e., clay) which overlay limestone bedrock.

4.3.3 Water Bodies

Ganaraska River flows under the Sylvan Glen Bridge and Lake Ontario is located approximately 5.9 km south-east of the subject land.

4.3.4 Well Records

The interactive MECP wells database was reviewed for the presence of wells on the subject land, and within the limits of the study area. The database identified one (1) well records within 250 m of the subject land. None of the records indicate any of the wells to be located on the subject land. Well records for the entire study area are included in **Appendix D**.

Well record information for the water wells indicates a stratigraphy of clay overlying limestone. Bedrock depth was reported to be approximately 24 m below ground surface (bgs).

4.3.5 Site Operating Records

No site operating records were made available for the subject land.

5.0 SITE RECONNAISSANCE

5.1 GENERAL REQUIREMENTS

A non-intrusive site review of the subject land was carried out on June 14 and September 1, 2022 by Ainley Group personnel to document and record current environmental conditions and potential liabilities associated with the property. Weather conditions during the June 14, 2022 site visit were 20°C with sun and clear sky. During the September 1, 2022 site visit weather conditions were 18°C with sun and clear sky.

A photographic log of the subject property is provided in **Appendix E**.

5.2 SPECIFIC OBSERVATIONS AT THE PHASE I PROPERTY

5.2.1 On-Site Structures

One (1) structure was observed on the subject property. It was noted to be Environment Canada Monitoring Station (water level monitoring station) which is located on northeast side of the bridge.

5.2.2 Aboveground and Underground Storage Tanks

No aboveground storage tanks were observed to be present on the subject land.

No underground storage tanks were observed to be present on the subject land.

5.2.3 Potable or Non-Potable Water Sources

No municipal water services extend through the project limits.

5.2.4 Wells and On-Site Septic System

No wells or on-site septic systems were observed on the subject land.

5.2.5 Utilities

Utilities on the subject land include one (1) utility pole located at the northeast corner of the bridge. This pole provides electrical services to the Environment Canada Monitoring Station.

5.2.6 Existing and Former Heating Sources

No existing heating sources were observed on the subject land, and no former heating sources are understood to have existed on the subject land.

5.2.7 Existing and Former Cooling Sources

No existing cooling sources were observed on the subject land, and no former cooling sources are understood to have existed on the subject land.

5.2.8 Fill Material

No fill piles were observed during the June and September 2022 Ainley Group Site review.

It should be noted that any excess soils removed from the site as part of roadway construction should be subject to environmental testing in accordance with *O.Reg. 406/19*.

5.2.9 Drains, Pits, Sumps, and Staining

No signs of drains, pits, sumps, or staining were observed on the subject land during the Ainley Group field investigation in June and September 2022.

5.2.10 Unidentified Substances

There were no unidentified substances observed on the subject land during the June and September 2022 Ainley Group site reviews.

6.0 SITE INTERVIEWS

A detailed interview was conducted on December 13, 2022 with Mr. Warren Coulter, Engineering Project Coordinator, Municipality of Port Hope.

Mr. Coulter noted that the current Sylvan Glen Bridge was constructed in 1921 with some modifications occurring in 1946. He noted that there were likely local crossings, such as farm crossings, prior to this period; however, there was no formal record of this.

Mr. Coulter noted that there was some work completed in the Sylvan Glen Conservation Area which included the construction of the existing parking lot; however, the exact date of which he was uncertain (believes the construction occurred in the mid-1990s). For the construction of the parking lot, some grading was performed and aggregates were placed. As the parking lot is located within the Ganaraska River floodplain and owned by the Conservation Authority, the Conservation Authority directly supervised all activities.

Mr. Coulter highlighted that there are no utility services on the site other than the hydro services for the water level gauge located at the bridge's northeast corner.

7.0 EVALUATION OF INFORMATION

Based on the historical information and records collected, interviews, and the site investigation for the subject lands, there are no APCs on the subject lands due to on-site or adjacent property uses.

7.1 WRITTEN DESCRIPTION OF REVIEW

In addition to the limits of the subject lands, a review of the areas within 250 m of the subject lands has been included in the overall study.

Investigations were carried out using available aerial photography and visual observations to identify, locate and document any potentially contaminating activities not within a building or other structure.

During the completion of the review, there were no areas of potential concern (APC) identified.

7.2 CONCEPTUAL SITE MODEL

The conceptual site model for the subject property is represented on the attached **Figure 2**. The figure depicts topographic features, waterbodies and land use, and information for the subject lands and study area.

The results of this assessment suggest that there are no APCs within the study area.

Site specific geology is interpreted to consist of modern alluvial deposits of clay, silt, sand, and gravel that may contain organic remains overlying limestone, dolostone, shale, arkose, and sandstone.

The availability of information for this Assessment of Past Uses was generally extensive; however, relies in part on information provided within historical records. It is assumed that the information presented in these historical records is accurate and reliable.

8.0 CONCLUSIONS AND RECOMMENDATIONS

8.1 CONCLUSIONS

Based on the results of the Assessment of Past Uses, the following conclusions are provided.

- Per a review of the chronological aerial photographs, and information provided through records review, prior to its development as a Sylvan Glen Bridge in 1921 the subject land appears to have been used as local crossing path.
- No areas of potential concern were identified on the subject lands
- Visual observations did not identify any evidence of hazardous waste material deposition during the site walkthrough.

8.2 RECOMMENDATIONS

Based on the results of the Assessment of Past Uses, the following recommendations are provided:

- Should any contaminants be encountered during future bridge replacement that were beyond the scope of this report, then appropriate investigative and remedial measures should occur to adequately address the encountered constituent.

9.0 SIGNATURES

We trust that the above report is satisfactory to meet the requirements of the Assessment of Past Uses for the purposes of an excess soils review on the subject property. If you have any questions, please do not hesitate to contact the undersigned.

Sincerely,

AINLEY GRAHAM & ASSOCIATES LIMITED

Ramina Rashtchi

Lois-Ann L. Hayes

Ramina Rashtchi, MASc, EIT
Engineering Intern
Ainley Group

Lois-Ann Hayes, P. Eng.
Vice President and Branch Manager
Ainley Group

10.0 REFERENCES

Canadian Standards Association, 2001. *Z768-01: Phase I Environmental Site Assessment, Environmental Technology.*

Chapman, L.J. and Putnam, D.F. 1984. The Physiography of Southern Ontario. Ontario Ministry of Natural Resources.

Lumbers, S.B. 1976. *Ontario Geological Survey Map 2392*. Ontario Geological Survey, Geological Branch.

Ministry of Natural Resources, 2019. Natural Heritage Information Centre-Make a Map. [Online]. Available at: http://www.gisapplication.lrc.gov.on.ca/mamnh/Index.html?site=MNR_NHLUPS_NaturalHeritage&viewer=NaturalHeritage&locale=en-US

Ontario Geological Survey. 2010. Surficial Geology of Southern Ontario. Ontario Geological Survey, Miscellaneous Release – Data 128-REV.

LIMITATIONS OF REPORT

The conclusions and recommendations given in this report are based on information obtained at the time of preparation and during the Assessment of Past uses activities described in the report. This site assessment was carried out for the purposes of an *Ontario Regulation O.Reg. 406/19 (On-Site and Excess Soil Management)*. Sampling or testing for potential contaminants including PCB's, radon gas, or airborne pollutants, and any subsurface contamination was not completed as part of this assessment. It remains possible that unreported incidences at the site have resulted in undetected environmental impairment of the site, and as such conditions may differ from those presented in the report which is based on the best available information at the time of preparation.

The comments made in this report are intended only for the guidance of the client / reviewer. The information presented may not be sufficient to determine all factors that may affect environmental liabilities on the subject and/or adjacent lands. Future property owners or designers utilizing this report or bidding on this works associated with this project should therefore make their own interpretation of the factual information presented and draw their own conclusions as to how the conditions may affect their work.

This report has been prepared for the sole use of the Municipality of North Grenville. Any use, which a Third Party makes of this report or any reliance or decisions to be made based on it, are the responsibilities of said Third Parties. Ainley Group accepts no responsibility for damages if any, suffered by any Third Party as a result of decisions made or actions based on this report.

FIGURES:

Legend

250m STUDY AREA

BRIDGE LOCATION

METRIC

DIMENSIONS ARE IN METRES AND/OR MILLIMETERS UNLESS OTHERWISE SHOWN

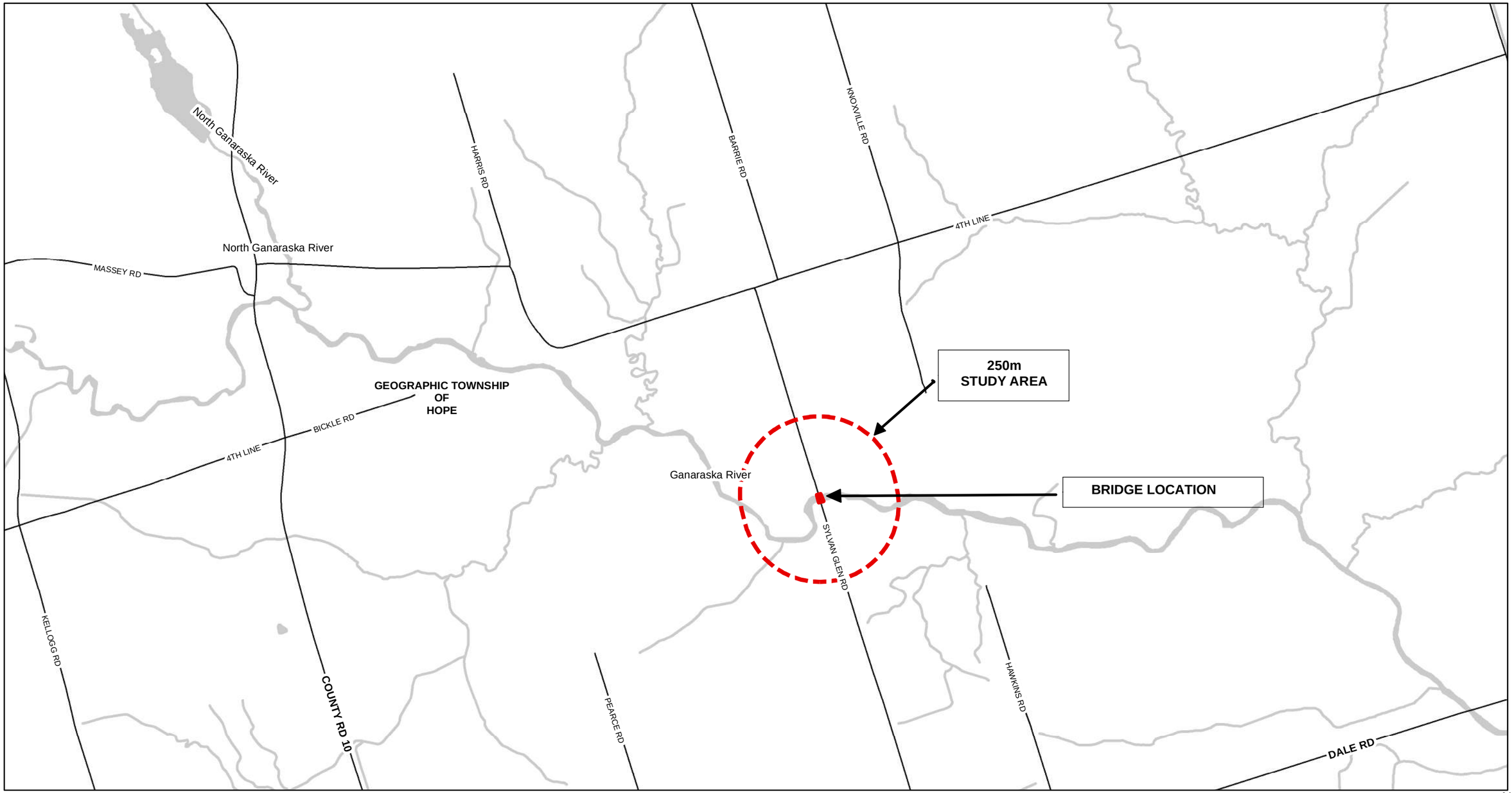
SYLVAN GLEN BRIDGE

N

Ainley GROUP CONSULTING ENGINEERS PLANNERS

FIGURE 1

REGIONAL LOCATION PLAN



SOURCE: LAND INFORMATION ONTARIO (MNRF)

N.T.S

Legend

SUBJECT LAND

STUDY AREA - 250 m

METRIC

DIMENSIONS ARE IN METRES
AND/OR MILLIMETERS
UNLESS OTHERWISE SHOWN

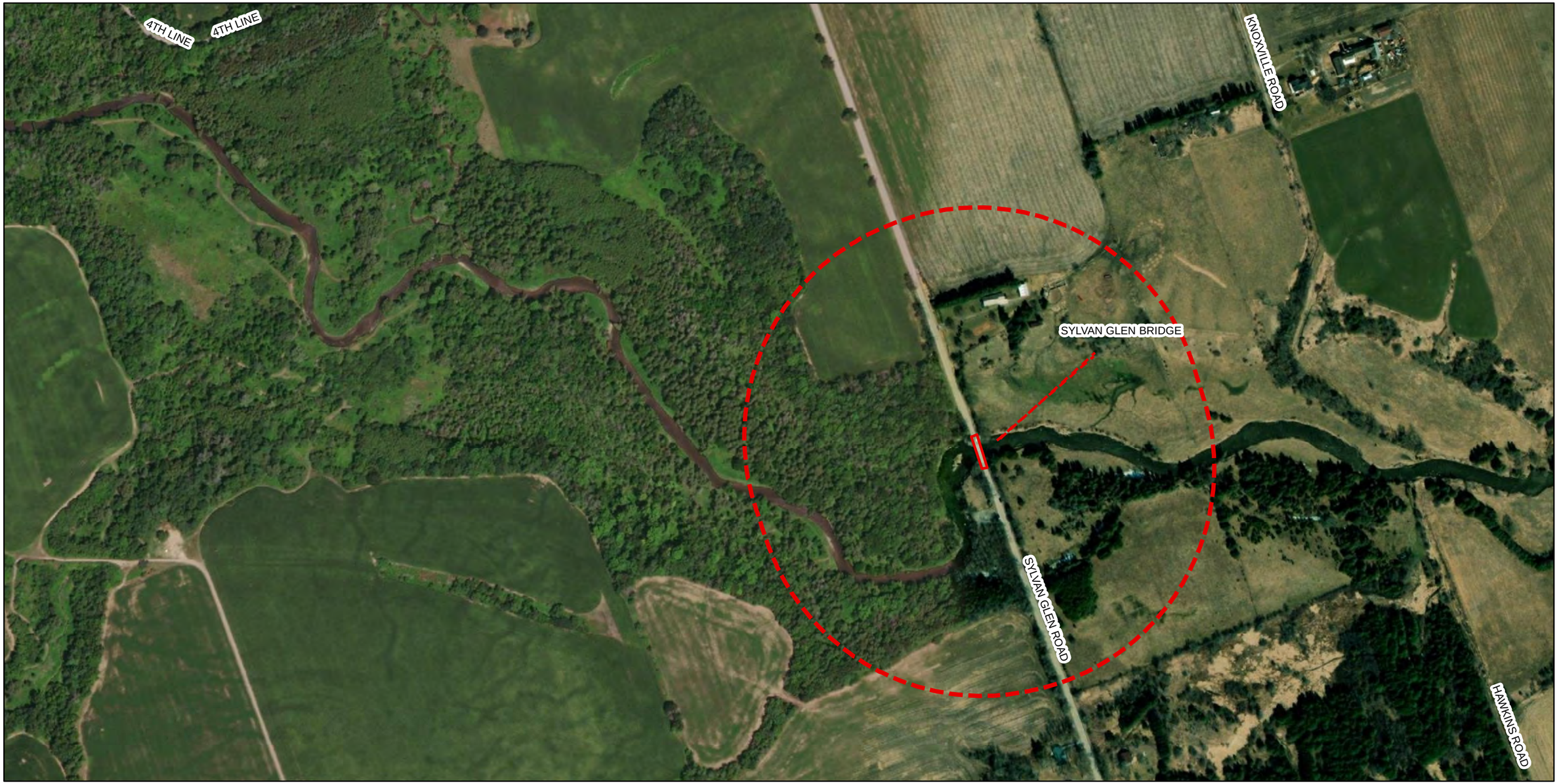
SYLVAN GLEN BRIDGE

N

Ainley GROUP CONSULTING ENGINEERS PLANNERS

FIGURE 2

SUBJECT PROPERTY & STUDY AREA



Service Layer Credits: Source: Esri, Maxar, Earthstar Geographics, and the GIS User Community
Source: Land Information Ontario (MNRF)

N.T.S

APPENDIX A:

MECP FOI Report

Ontario

Ministry of the Environment, Conservation and Parks

Freedom of Information Request for Property Information

Instructions

Use this form to:

- submit and pay for a new FOI request for access to records/information about a property
- pay for a deposit or a final fee on an existing FOI request

Fields marked with an asterisk (*) are mandatory.

Are you: *

☑ Submitting a new FOI Request for Property Information

☐ Paying a deposit or final fee for an existing FOI Request for Property Information

Section 1 – Description of Records Requested

Time Period for Records Requested

From (yyyy/mm/dd) * 1900/01/01

To (yyyy/mm/dd) * 2022/11/25

Type of Record(s) *

☑ All environmental records relating to the identified property/site exclusive of Environmental Approvals and Registrations

☐ Environmental Approvals and Registrations (e.g. Environmental Compliance Approvals; Certificate of Approval; Renewable Energy Approvals; Environmental Activity and Sector Registry Registrations)

Select only if you are seeking access to an Approval or Registration that is not publicly available or if you are also seeking supporting documents relating to the Approval or Registration.

Operator and vendor Pesticide Licenses from September 4, 2018, final Approvals and Registrations are publicly available on the Access Environment website at:
https://www.accessenvironment.ene.gov.on.ca/AEWeb/ae/GoSearch.action?search=basic&lang=en.

Records of Site Condition (RSC) records are publicly available on the Brownfields Environmental Site Registry (BSER).

- RSC records between 2004 to June 30, 2011 are available at:
  https://www.lrcsde.lrc.gov.on.ca/besrWebPublic/generalSearch
- RSC records filed after July 2011 are available at:
  https://www.lrcsde.lrc.gov.on.ca/BFISWebPublic/pub/earchFiledRsc_search?request_locale=en

☐ Other Specific Document(s)

List any record(s) that should be excluded from the scope of your request (e.g. email correspondences; records originating from your organization/business; records already in your possession, prior year(s) annual reports for approvals)

 © King's Printer for Ontario, 2022

Please provide any additional relevant information relating to your request. For example, does your request relate to any other ministry business? Please note that this information is being requested only in order to provide contextual information to the Access and Privacy Office and will not in any way affect or expedite the status of any related ministry business identified.

Request is being submitted in support of an assessment of past uses (Phase I ESA) to support the design and replacement of Sylvan Glen Bridge, Port Hope , Ontario.

Section 2 – Requester Information

Last Name *: Rashtchi

First Name *: Ramina

Middle Initial:

Business/Organization Name (if applicable or indicate "N/A") *: Ainley Group

Project/Reference Number (if applicable): 22549-1

Are you submitting this request on behalf of a client? *

☐ Yes ☑ No

Mailing Address

Unit Number:

Street Number *: 2724

Street Name *: Fenton Road

PO Box:

City/Town *: Ottawa

Province *: ON

Postal Code *: K1T 3T7

Telephone Number *: 613-822-1052 ext. 223

Email Address *: ramina.rashtchi@ainleygroup.com

Is there an alternate contact (e.g. office admin)? *

☐ Yes ☑ No

Section 3 – Current Property Address Information

Is the property a:

☐ Park ☐ Lake ☐ First Nation Band ☐ Wind Farm ☐ Federal Land ☐ Island ☐ Unsurveyed Land

Are you requesting information about multiple addresses? *

☐ Yes ☑ No

Property Address

Unit Number:

Street Number:

Street Name: Sylvan Glen Road

Full Lot Number: Between 8&9

Concession: 3

Geographic Township: Hope

City/Town/Village *: Port Hope

Closest Intersection

Sylvanglen Road - 4th Line

Section 4 – Previous Property Address Information

Do you want the ministry to search all prior historical addresses for this property/site for the time period of the records requested? *

☐ Yes ☑ No

Section 5 – Supporting Documents

Please upload any documents (e.g. Maps) that are relevant to your FOI request.

The total size of all attachments must not be more than 8 MB.

1. File Name

   Sylvan Glen Bridge Key Map.jpg

   Total File Size

   0.43 MB

Payment confirmation number: 24824056

Ontario

Ministry of the Environment
Ministère de l'Environnement

INCIDENT REPORT

Reference Number:	6444-9KSR3G	File Storage Number:	SI-NO-PH-100 3258 SYLVAN GLEN ROAD - (ENBRIDGE PIPELINE)
Module:	Incident Reporting	Module Type:	Condition of Operation
Cross Reference:	(doc link)	Task Link:	2451-9KSRVL
Originating Document:		Created by:	David Fisher
Incident Report Reference Number:		6444-9KSR3G	
Date Created:	2014/06/05	Date Completed:	2015/01/14
Bring Forward Date:		Bring Forward Reason:	
Status:	Closed		
Program	Air	Activity:	Spills

Is this an air emission (measured or modelled) or wastewater (sewage) discharge exceedance that will become part of the Environmental Compliance Report?

(legislation, certificate of approval, order, or guideline)

○ Yes ● No ○ To be determined *Click here for Guidance*

Caller or PO Information

Reported By:		Name of Company:	
First Name Michael	Last Name Zimmel	Enbridge Pipelines	
Contact Mailing Address			
Civic Address:			Unit Identifier:
Delivery Designator:			Delivery Identifier:
Municipality: Port Hope	Postal Station:	Province/State: Ontario	Postal Code:
Telephone Number: (780)969-6036	Extension:	Other Number: Fax	Email Address:

Reported By:

MOE Information

Date & Time Reported to MOE:	2014/06/04 16:00		
Office Receiving Incident Report:	Peterborough District Office		
Incident Info Received By:	David Fisher		
MOE Response:	No Field Response	Site Region:	Eastern
Date & Time of MOE Arrival at Scene:			

Code:

Environmental Impact: Confirmed

Nature of Impact:

Incident Event:

Incident Reason:

Damaged Party: No

Contaminants Table

Contaminant Name	Code	UN#	Limit	Quantity	[units]	[freq]
NITROGEN (COMPRESSED GAS)	36	1066		7144	m^3	

Controller of Material:

Owner of Material:

Estimated Clean Up Cost:

Who Cleaned Up:

% Clean Up: %

MOE/Other Agencies Involved:

Voluntary / Mandatory Abatement

Is there Voluntary Abatement Activity?	○ Yes	● No	○ To be determined

Voluntary / Mandatory Compliance Items

Type	Parent RefNo	Work Summary (may be truncated)	Date	AttainList

Offence(s)

Suspected Violation(s)/Offence(s):

Act - Regulation - Section,
Description
{General Offence}

Provincial Officer:

Name: David Fisher

Badge No:

Work Unit:

District/Area Office: Peterborough District Office

Date: 2014/06/09

Signature:

District/Area Supervisor:

Name: Jim Martherus

Work Unit:

Ontario

Ministry of the Environment and Climate Change
Ministère de l'Environnement et de l'Action en matière de changement climatique

INCIDENT REPORT

Reference Number:	2720-9XLK5H	**Module Type:**	Pollution Incident Report (PIR)
Status:	Closed	**File Storage Number:**	SI NO PH (100)
Program:	Air	**Activity:**	Pollution Incident Reports

Caller or PO Reporting/Receiving Information

s.21

Date Reported to MOE:	2015/06/18	**Time Reported to MOE:**	10:30
Date of Incident: **Incident Date Confirmation:**	2015/06/18 Actual	**Time of Incident:**	10:00

Client(s)

Client Details

Were there samples collected / analyzed at any time?	No
Health / Environmental Consequences at the Time of Incident	
Health / Environmental Consequences:	0 - No Impact

Has a Water Body been impacted?	
Receiving Environment:	
Incident Event:	
Incident Reason:	
MOE/Other Agencies Involved:	
Was there a discharge / emission / spill of a contaminant to the environment?	
No	

Environmental Compliance Reporting (ECR)

Is this an air emission (measured or modelled) or wastewater (sewage) discharge exceedance that will become part of the Environmental Compliance Report? (legislation, certificate of approval, order, or guideline)
No

Voluntary / Mandatory Abatement

Was there Non-Compliance/Non-Conformance Identified?	○ Yes ● No

Voluntary / Mandatory Abatement Items
Not Available

Waste / EGR Information

Waste / EGR Information entries:
Not Available

Document Related Information

Cross Reference:	(doc link)	Task Link:	0221-9XLKJL
Originating Document:		Created by:	Jim Martherus
Date Created:	2015/06/18	Date Completed:	2015/06/18
Office Receiving Incident Report:	Peterborough District Office	Incident Info Received By:	Jim Martherus

Ministry of the Environment and Climate Change
Eastern Region
Technical Support Section
Water Resources
1259 Gardiners Rd, PO Box 22032
Kingston, ON
K7P 3J6
Tel: (613) 549-4000

Ministère de l'Environnement et de l'Action en matière de changement climatique
Direction régionale de l'Est
Section du Soutien Technique
Ressource en eau
1259 Chemin Gardiners, CP 22032
Kingston, ON
K7P 3J6
Tél:(613) 549-4000

Ontario

August 25, 2015

Enbridge Pipelines Inc.
10130 103 Street NW
Edmonton, Alberta
T5J 3N9

Dear Mr. DeMontigny;

RE: Permit To Take Water For Line 9B Within GRCA
Roseberry Hill
Lot: 28, Concession: 3, Township of
Port Hope, County of Northumberland
Valve 17
Lot: 23, Concession: 3, Township of
Port Hope, County of Northumberland
Valve 17a
Lot: 8, Concession: 3, Township of
Port Hope, County of Northumberland
Valve 18
Lot: 23, Concession: 2, Township of
Hamilton, County of Northumberland
Valve 18a
Lot: 16, Concession: 2, Township of
Hamilton, County of Northumberland
Reference Number 8622-9YLVHE

Please find attached Permit To Take Water 7623-9YURR9 which authorizes the withdrawal of water in accordance with the application for this Permit To Take Water, dated July 14, 2015 and signed by Dallas DeMontigny.

Please note the attached Permit expires on December 31, 2015.

Ontario Regulation 387/04 (Water Taking and Transfer) requires all water takers to report daily water taking amounts to the Water Taking Reporting System (WTRS) electronic database

51-NO-PH-220

OCT 2015

Ontario

Ministry of the Environment and Climate Change
Ministère de l'Environnement et de l'Action en matière de changement climatique

PERMIT TO TAKE WATER
Surface and Ground Water
NUMBER 7623-9YURR9

Pursuant to Section 34.1 of the Ontario Water Resources Act, R.S.O. 1990 this Permit To Take Water is hereby issued to:

Enbridge Pipelines Inc.
10130 103 Street NW
Edmonton, Alberta, T5J 3N9
Canada

For the water taking from: Roseberry Hill, Valve 17, Valve 17A, Valve 18, Valve 18A Excavations

Located at: Lot 28, Concession 3, Geographic Township of Hope
Port Hope, County of Northumberland

Lot 23, Concession 3, Geographic Township of Hope
Port Hope, County of Northumberland

Lot 8, Concession 3, Geographic Township of Hope
Port Hope, County of Northumberland

Lot 23, Concession 2, Geographic Township of Hamilton
Hamilton, County of Northumberland

Lot 16, Concession 2, Geographic Township of Hamilton
Hamilton, County of Northumberland

For the purposes of this Permit, and the terms and conditions specified below, the following definitions apply:

DEFINITIONS

(a) "Director" means any person appointed in writing as a Director pursuant to section 5 of the OWRA for the purposes of section 34.1, OWRA.

(b) "Provincial Officer" means any person designated in writing by the Minister as a Provincial

property shall cause this Permit to be cancelled.

2. General Conditions and Interpretation

2.1 Inspections

The Permit Holder must forthwith, upon presentation of credentials, permit a Provincial Officer to carry out any and all inspections authorized by the OWRA, the *Environmental Protection Act* , R.S.O. 1990, the *Pesticides Act* , R.S.O. 1990, or the *Safe Drinking Water Act,* S. O. 2002.

2.2 Other Approvals

The issuance of, and compliance with this Permit, does not:

(a) relieve the Permit Holder or any other person from any obligation to comply with any other applicable legal requirements, including the provisions of the *Ontario Water Resources Act* , and the *Environmental Protection Act* , and any regulations made thereunder; or

(b) limit in any way any authority of the Ministry, a Director, or a Provincial Officer, including the authority to require certain steps be taken or to require the Permit Holder to furnish any further information related to this Permit.

2.3 Information

The receipt of any information by the Ministry, the failure of the Ministry to take any action or require any person to take any action in relation to the information, or the failure of a Provincial Officer to prosecute any person in relation to the information, shall not be construed as:

(a) an approval, waiver or justification by the Ministry of any act or omission of any person that contravenes this Permit or other legal requirement; or

(b) acceptance by the Ministry of the information's completeness or accuracy.

2.4 Rights of Action

The issuance of, and compliance with this Permit shall not be construed as precluding or limiting any legal claims or rights of action that any person, including the Crown in right of Ontario or any agency thereof, has or may have against the Permit Holder, its officers, employees, agents, and contractors.

2.5 Severability

The requirements of this Permit are severable. If any requirements of this Permit, or the application of any requirements of this Permit to any circumstance, is held invalid or unenforceable, the application of such requirements to other circumstances and the remainder of this Permit shall not be affected thereby.

2.6 Conflicts

Where there is a conflict between a provision of any submitted document referred to in this Permit, including its Schedules, and the conditions of this Permit, the conditions in this Permit shall take precedence.

appropriate contact information for the Permit Holder regarding construction concerns and the well monitoring program.

4.3 Contingent upon obtaining the consent of the well owner(s) and safe access to the well(s), the Permit Holder will carry out a private well monitoring program of wells located within 140 metres of the proposed excavation limits to document pre-construction and post-construction groundwater conditions.

5. Impacts of the Water Taking

5.1 Notification

The Permit Holder shall immediately notify the local District Office of any complaint arising from the taking of water authorized under this Permit and shall report any action which has been taken or is proposed with regard to such complaint. The Permit Holder shall immediately notify the local District Office if the taking of water is observed to have any significant impact on the surrounding waters. After hours, calls shall be directed to the Ministry's Spills Action Centre at 1-800-268-6060.

5.2 For Surface-Water Takings

The taking of water (including the taking of water into storage and the subsequent or simultaneous withdrawal from storage) shall be carried out in such a manner that streamflow is not stopped and is not reduced to a rate that will cause interference with downstream uses of water or with the natural functions of the stream.

For Groundwater Takings

If the taking of water is observed to cause any negative impact to other water supplies obtained from any adequate sources that were in use prior to initial issuance of a Permit for this water taking, the Permit Holder shall take such action necessary to make available to those affected, a supply of water equivalent in quantity and quality to their normal takings, or shall compensate such persons for their reasonable costs of so doing, or shall reduce the rate and amount of taking to prevent or alleviate the observed negative impact. Pending permanent restoration of the affected supplies, the Permit Holder shall provide, to those affected, temporary water supplies adequate to meet their normal requirements, or shall compensate such persons for their reasonable costs of doing so.

If permanent interference is caused by the water taking, the Permit Holder shall restore the water supplies of those permanently affected.

5.3 Prevention of Adverse Effects:

The Permit Holder shall ensure the taking of water under authority of this Permit does not result in an adverse effect on area waters.

5.4 Prevention of Structural Adverse Effects:

The Permit Holder shall take all measures necessary to prevent damage to buildings, bridges, structures, roads and/or railway lines that may be impacted either directly or indirectly by this

Schedule A

This Schedule "A" forms part of Permit To Take Water 7623-9YURR9, dated August 25, 2015.

Ontario
Ministry of the Environment

OCT 13 2015

Application for Permit to Take Water

Ce formulaire est disponible en français

For Office Use Only			
Reference Number	Payment Received	Date (y/m/d)	Initials
3622-9YLVHE	$2000.00	2015/07/20	BE

General Information and Instructions

General:

Information requested in this form is collected under the authority of the *Ontario Water Resources Act,* R.S.O. 1990 (OWRA) and the *Environmental Bill of Rights*, C. 28, Statutes of Ontario, 1993, (EBR) and will be used to evaluate applications for a Permit to Take Water as required by Section 34 (OWRA).

Instructions:

1. **Applicants are responsible for ensuring that they complete the most recent application form.** When completing this form, please refer to the "Guide to Permit to Take Water Application Form" (referred to as the Guide). Application forms and supporting documentation are available from your local Regional or District Office of the Ministry of the Environment, and in the "Publications" section of the Ministry of the Environment website at http://www.ene.gov.on.ca/envision/gp/index.htm.

2. Questions regarding completion and submission of this application should be directed to local Regional Office of the Ministry of the Environment. Contact information for these offices is available in the Guide or on the Ministry of the Environment website at http://www.ene.gov.on.ca/envision/org/op.htm

3. This form must be completed with respect to all the requirements of the Guide for it to be considered an application for approval. **Incomplete applications will be returned to the applicant.**

4. A complete application consists of:

   (1) a completed, signed application form
   (2) all required supporting information identified in this form and the Guide, and
   (3) a certified cheque or money order, in Canadian funds, made payable to the ***Ontario Minister of Finance*** for the application fee when required. Payment may also be made by Visa, MasterCard or American Express,

   The Ministry may require additional information during the technical review of any application initially accepted as complete.

5. The original application, along with supporting information and the application fee should be sent to:

   Ministry of the Environment,
   Attention: Permit to Take Water Director
   Director, Environmental Assessment and Approvals Branch,
   2 St. Clair Avenue West, Floor 12A
   Toronto, Ontario, M4V 1L5

6. Information contained in this application form is not considered confidential and will be made available to the public upon request. Information submitted as supporting information may be claimed as confidential but will be subject to the *Freedom of Information and Protection of Privacy Act* (FOIPPA) and the *EBR*. If you do not claim confidentiality at the time of submitting the information, the Ministry of the Environment may make the information available to the public without further notice to you. If you are identifying confidential material, please indicate why you believe the information is confidential.

RECEIVED
JUL 16 2015
MINISTRY OF THE ENVIRONMENT
ENVIRONMENTAL APPROVALS ACCESS & SERVICE INTEGRATION BRANCH
ENVIRONMENTAL APPROVALS BRANCH

1. Permit Administration

Please indicate if this is an application for a:

- [x] New Permit
- [ ] Amendment to Permit (attach a photocopy of permit)
- [ ] Renewal of Permit (attach a photocopy of permit)

2. Classification

Classification	Fee Required	No Fee Required
[ ] Category 1	[ ] $750	[ ] Reason _____
[ ] Category 2	[ ] $750	[ ] Reason _____
[x] Category 3	[x] $3,000	[ ] Reason _____

7. Source Information – *Note: Source Information must be provided separately for each source. Please complete and submit multiple copies of this Source Information section (pages 3 and 4 of this form) if your application includes more than one source.*

Number of Water Taking Sources Included in this Application *(do not include domestic uses that do not require a permit)*

Total Number of Wells	Total Number of Lake Intakes	Total Number of Ponds	Total Number of Watercourse Intakes
0	0	1 - Roseberry Hill	0

Source Location Information *(if multiple sources are included in application, provide information for each source)*

Civic Address - Street information *(street number/name/type/direction/unit/suite/emergency 911 location number and street)*

n/a

Lot	Concession	Part	Reference Plan
28	3		

Municipality/Unorganised Township	County/District	Original Geographic Township
Port Hope and Hope	Northumberland	

Geographic (GPS) Coordinates *(to be provided in Datum NAD83)*

Method of Collection	Accuracy Estimate	UTM Zone	Easting	Northing
GPS	+/- 50 m	17	706335	4871806

Is the Applicant the owner of the site where water taking will occur?

☐ Yes

☒ No **If no, attach the owner's name, address and a signed letter granting consent for the applicant to access the water taking location**

Is the site where water taking will occur located in an area of development control as defined by the *Niagara Escarpment Planning & Development Act*?

☐ Yes ☒ No

Is the site where water taking will occur located on the Oak Ridges Moraine Conservation Area as defined by the Oak Ridges Moraine Conservation Plan (a regulation made under the *Oak Ridges Moraine Conservation Act*)?

☐ Yes ☒ No

Are you aware of any complaints or impacts resulting from water takings at the site?

☐ Yes **If yes, please describe:** _____

☒ No

Will water from the site be packaged in a container (bottled water, tanks)?

☐ Yes **If yes, what size of containers?** ☐ greater than 20 litres ☐ 20 litres or less

☒ No

Are wells located within 500 m of the site where water taking will occur?

☒ Yes

☐ No **If no, what is the distance to the nearest well?** _____

Is municipal water available to all dwellings within 500m of the site where water taking will occur?

☐ Yes ☒ No ☐ Unknown

Estimated start date of water taking	Water taking to extend for a period of:
August 2015	42 ☒ days ☐ weeks ☐ months ☐ years ☐ indefinite

Is activity subject to the *Environmental Assessment Act*?

☐ Yes **If yes, please attach approval or Notice of Completion**

☒ No

If yes, did the project receive any Part II Orders / Bump-Up requests?

☐ Yes **If yes, what was the date of the Minister's Decision?** _____ ☐ Decision pending

☒ No

List any public consultation/notification that has occurred related to the proposed water taking (i.e., public hearings, notification of First Nations, etc.)

☐ **Watercourse** - *please complete this table if applying to take water from a watercourse (i.e., stream, municipal ditch, open drain, etc.)*

Watercourse Name	Tributary to

Does flow in the watercourse stop at any time during the year?

☐ Yes **If yes, during which months?** _____ For what period of time? _____

☐ No

Do you move/relocate the water intake (pump)?

☐ Yes **If yes, please provide primary and secondary locations on attached map**

☐ No

7. Source Information – *Note: Source Information must be provided separately for each source. Please complete and submit multiple copies of this Source Information section (pages 3 and 4 of this form) if your application includes more than one source.*

Number of Water Taking Sources Included in this Application *(do not include domestic uses that do not require a permit)*

Total Number of Wells	Total Number of Lake Intakes	Total Number of Ponds	Total Number of Watercourse Intakes
0	0	1 - Valve 17	0

Source Location Information *(if multiple sources are included in application, provide information for each source)*

Civic Address - Street information *(street number/name/type/direction/unit/suite/emergency 911 location number and street)*

n/a

Lot	Concession	Part	Reference Plan
23	3		

Municipality/Unorganised Township	County/District	Original Geographic Township
Port Hope and Hope	Northumberland	

Geographic (GPS) Coordinates *(to be provided in Datum NAD83)*

Method of Collection	Accuracy Estimate	UTM Zone	Easting	Northing
GPS	+/- 50 m	17	708641	4872413

Is the Applicant the owner of the site where water taking will occur?

☐ Yes

☒ No **If no, attach the owner's name, address and a signed letter granting consent for the applicant to access the water taking location**

Is the site where water taking will occur located in an area of development control as defined by the *Niagara Escarpment Planning & Development Act*?

☐ Yes ☒ No

Is the site where water taking will occur located on the Oak Ridges Moraine Conservation Area as defined by the Oak Ridges Moraine Conservation Plan (a regulation made under the *Oak Ridges Moraine Conservation Act*)?

☐ Yes ☒ No

Are you aware of any complaints or impacts resulting from water takings at the site?

☐ Yes **If yes, please describe:** _____

☒ No

Will water from the site be packaged in a container (bottled water, tanks)?

☐ Yes **If yes, what size of containers?** ☐ greater than 20 litres ☐ 20 litres or less

☒ No

Are wells located within 500 m of the site where water taking will occur?

☒ Yes

☐ No **If no, what is the distance to the nearest well?** _____

Is municipal water available to all dwellings within 500m of the site where water taking will occur?

☐ Yes ☒ No ☐ Unknown

Estimated start date of water taking	Water taking to extend for a period of:
August 2015	42 ☒ days ☐ weeks ☐ months ☐ years ☐ indefinite

Is activity subject to the *Environmental Assessment Act*?

☐ Yes **If yes, please attach approval or Notice of Completion**

☒ No

If yes, did the project receive any Part II Orders / Bump-Up requests?

☐ Yes **If yes, what was the date of the Minister's Decision?** _____ ☐ Decision pending

☒ No

List any public consultation/notification that has occurred related to the proposed water taking (i.e., public hearings, notification of First Nations, etc.)

☐ **Watercourse** - *please complete this table if applying to take water from a watercourse (i.e., stream, municipal ditch, open drain, etc.)*

Watercourse Name	Tributary to

Does flow in the watercourse stop at any time during the year?

☐ Yes **If yes, during which months?** _____ For what period of time? _____

☐ No

Do you move/relocate the water intake (pump)?

☐ Yes **If yes, please provide primary and secondary locations on attached map**

☐ No

7. Source Information – *Note: Source Information must be provided separately for each source. Please complete and submit multiple copies of this Source Information section (pages 3 and 4 of this form) if your application includes more than one source.*

Number of Water Taking Sources Included in this Application *(do not include domestic uses that do not require a permit)*

Total Number of Wells	Total Number of Lake Intakes	Total Number of Ponds	Total Number of Watercourse Intakes
0	0	1 - Valve 17A	0

Source Location Information *(if multiple sources are included in application, provide information for each source)*

Civic Address - Street information *(street number/name/type/direction/unit/suite/emergency 911 location number and street)*
n/a

Lot	Concession	Part	Reference Plan
8	3		

Municipality/Unorganised Township	County/District	Original Geographic Township
Port Hope and Hope	Northumberland	

Geographic (GPS) Coordinates *(to be provided in Datum NAD83)*

Method of Collection	Accuracy Estimate	UTM Zone	Easting	Northing
GPS	+/- 50 m	17	714508	4873745

Is the Applicant the owner of the site where water taking will occur?
- ☐ Yes
- ☒ No **If no, attach the owner's name, address and a signed letter granting consent for the applicant to access the water taking location**

Is the site where water taking will occur located in an area of development control as defined by the *Niagara Escarpment Planning & Development Act*?
☐ Yes ☒ No

Is the site where water taking will occur located on the Oak Ridges Moraine Conservation Area as defined by the Oak Ridges Moraine Conservation Plan (a regulation made under the *Oak Ridges Moraine Conservation Act*)?
☐ Yes ☒ No

Are you aware of any complaints or impacts resulting from water takings at the site?
- ☐ Yes **If yes, please describe:** _____
- ☒ No

Will water from the site be packaged in a container (bottled water, tanks)?
- ☐ Yes **If yes, what size of containers?** ☐ greater than 20 litres ☐ 20 litres or less
- ☒ No

Are wells located within 500 m of the site where water taking will occur?
- ☒ Yes
- ☐ No **If no, what is the distance to the nearest well?** _____

Is municipal water available to all dwellings within 500m of the site where water taking will occur?
☐ Yes ☒ No ☐ Unknown

Estimated start date of water taking	Water taking to extend for a period of:
August 2015	42 ☒ days ☐ weeks ☐ months ☐ years ☐ indefinite

Is activity subject to the *Environmental Assessment Act*?
- ☐ Yes **If yes, please attach approval or Notice of Completion**
- ☒ No

If yes, did the project receive any Part II Orders / Bump-Up requests?
- ☐ Yes **If yes, what was the date of the Minister's Decision?** _____ ☐ Decision pending
- ☒ No

List any public consultation/notification that has occurred related to the proposed water taking (i.e., public hearings, notification of First Nations, etc.)

☐ **Watercourse** - *please complete this table if applying to take water from a watercourse (i.e., stream, municipal ditch, open drain, etc.)*

Watercourse Name	Tributary to

Does flow in the watercourse stop at any time during the year?
- ☐ Yes **If yes, during which months?** _____ For what period of time? _____
- ☐ No

Do you move/relocate the water intake (pump)?
- ☐ Yes **If yes, please provide primary and secondary locations on attached map**
- ☐ No

7. Source Information – *Note: Source Information must be provided separately for each source. Please complete and submit multiple copies of this Source Information section (pages 3 and 4 of this form) if your application includes more than one source.*

Number of Water Taking Sources Included in this Application *(do not include domestic uses that do not require a permit)*

Total Number of Wells	Total Number of Lake Intakes	Total Number of Ponds	Total Number of Watercourse Intakes
0	0	1 - Valve 18	0

Source Location Information *(if multiple sources are included in application, provide information for each source)*

Civic Address - Street information *(street number/name/type/direction/unit/suite/emergency 911 location number and street)*

n/a

Lot	Concession	Part	Reference Plan
23	2		

Municipality/Unorganised Township	County/District	Original Geographic Township
Township of Hamilton	Northumberland	

Geographic (GPS) Coordinates *(to be provided in Datum NAD83)*

Method of Collection	Accuracy Estimate	UTM Zone	Easting	Northing
GPS	+/- 50 m	17	722889	4875848

Is the Applicant the owner of the site where water taking will occur?

☐ Yes

☒ No **If no, attach the owner's name, address and a signed letter granting consent for the applicant to access the water taking location**

Is the site where water taking will occur located in an area of development control as defined by the *Niagara Escarpment Planning & Development Act*?

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☐ Yes **If yes, please describe:** _____

☒ No

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Is municipal water available to all dwellings within 500m of the site where water taking will occur?

☐ Yes ☒ No ☐ Unknown

Estimated start date of water taking	Water taking to extend for a period of:
August 2015	42 ☒ days ☐ weeks ☐ months ☐ years ☐ indefinite

Is activity subject to the *Environmental Assessment Act*?

☐ Yes **If yes, please attach approval or Notice of Completion**

☒ No

If yes, did the project receive any Part II Orders / Bump-Up requests?

☐ Yes **If yes, what was the date of the Minister's Decision?** _____ ☐ Decision pending

☒ No

List any public consultation/notification that has occurred related to the proposed water taking (i.e., public hearings, notification of First Nations, etc.)

☐ **Watercourse** - *please complete this table if applying to take water from a watercourse (i.e., stream, municipal ditch, open drain, etc.)*

Watercourse Name	Tributary to

Does flow in the watercourse stop at any time during the year?

☐ Yes **If yes, during which months?** _____ For what period of time? _____

☐ No

Do you move/relocate the water intake (pump)?

☐ Yes **If yes, please provide primary and secondary locations on attached map**

☐ No

7. Source Information – *Note: Source Information must be provided separately for each source. Please complete and submit multiple copies of this Source Information section (pages 3 and 4 of this form) if your application includes more than one source.*

Number of Water Taking Sources Included in this Application *(do not include domestic uses that do not require a permit)*

Total Number of Wells	Total Number of Lake Intakes	Total Number of Ponds	Total Number of Watercourse Intakes
0	0	1 - Valve 18A	0

Source Location Information *(if multiple sources are included in application, provide information for each source)*

Civic Address - Street information *(street number/name/type/direction/unit/suite/emergency 911 location number and street)*

n/a

Lot	Concession	Part	Reference Plan
16	2		

Municipality/Unorganised Township	County/District	Original Geographic Township
Township of Hamilton	Northumberland	

Geographic (GPS) Coordinates *(to be provided in Datum NAD83)*

Method of Collection	Accuracy Estimate	UTM Zone	Easting	Northing
GPS	+/- 50 m	17	725432	4876629

Is the Applicant the owner of the site where water taking will occur?

☐ Yes

☒ No **If no, attach the owner's name, address and a signed letter granting consent for the applicant to access the water taking location**

Is the site where water taking will occur located in an area of development control as defined by the *Niagara Escarpment Planning & Development Act*?

☐ Yes ☒ No

Is the site where water taking will occur located on the Oak Ridges Moraine Conservation Area as defined by the Oak Ridges Moraine Conservation Plan (a regulation made under the *Oak Ridges Moraine Conservation Act*)?

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☐ Yes **If yes, what size of containers?** ☐ greater than 20 litres ☐ 20 litres or less

☒ No

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☐ No **If no, what is the distance to the nearest well?** _____

Is municipal water available to all dwellings within 500m of the site where water taking will occur?

☐ Yes ☒ No ☐ Unknown

Estimated start date of water taking	Water taking to extend for a period of:
August 2015	42 ☒ days ☐ weeks ☐ months ☐ years ☐ Indefinite

Is activity subject to the *Environmental Assessment Act*?

☐ Yes **If yes, please attach approval or Notice of Completion**

☒ No

If yes, did the project receive any Part II Orders / Bump-Up requests?

☐ Yes **If yes, what was the date of the Minister's Decision?** _____ ☐ Decision pending

☒ No

List any public consultation/notification that has occurred related to the proposed water taking (i.e., public hearings, notification of First Nations, etc.)

☐ **Watercourse** - *please complete this table if applying to take water from a watercourse (i.e., stream, municipal ditch, open drain, etc.)*

Watercourse Name	Tributary to

Does flow in the watercourse stop at any time during the year?

☐ Yes **If yes, during which months?** _____ For what period of time? _____

☐ No

Do you move/relocate the water intake (pump)?

☐ Yes **If yes, please provide primary and secondary locations on attached map**

☐ No

8. Public Consultation / Environmental Bill of Rights (EBR) Requirements

Is this application for water taking to extend for a period of less than one year?

☒ Yes ☐ No If no, this application may be subject to posting and/or public consultation requirements under the Environmental Bill of Rights. For more information, please refer to the Guide.

Is this application for agricultural use or aquaculture?

☐ Yes ☒ No If no, this application may be subject to posting and/or public consultation requirements under the Environmental Bill of Rights. For more information, please refer to the Guide.

9. Water Taking Volumes

Purpose Options for Water Taking

	Purpose
Agriculture	irrigation of (includes frost protection): field and pasture crops; fruit orchard; market garden/flowers; nursery; sod farm; tender fruits; tobacco, other (must specify)
Commercial	aquaculture, bottled water, golf course irrigation, mall/business; snowmaking, other (must specify)
Construction	Dredging, road building, other (must specify)
Dewatering	pits and quarries; construction; other (must specify)
Industrial	aggregate washing, brewing/soft drinks, cooling water, food processing, manufacturing; pipeline testing; power generation; other (must specify)
Institutional	school, hospital, other (must specify)
Recreation	aesthetic, fish pond, wetland, other (must specify)
Remediation	groundwater; other (must specify)
Water Supply	campground, communal, municipal, other (must specify)
Miscellaneous	dam/reservoir, heat pump, wildlife conservation, pumping test, other (must specify)

Water Source Information – Table A (Units in Litres)

Source Name	Purpose (select from "purpose" column in table above)	Maximum rate per minute	Maximum number of hours of taking a day	Maximum volume per day	Typical volume per day	Maximum number of days of taking in a year	Earliest calendar date of taking (mm/dd)	Latest calendar date of taking (mm/dd)
Roseberry Hill	Construction	1,600	24	300,000	< 50,000	42	01/01	12/31
	Dewatering							
Valve 17	Construction	2,000	24	1,000,000	300,000	42	01/01	12/31
	Dewatering							
Valve 17A	Construction	1,600	24	200,000	< 50,000	42	01/01	12/31
	Dewatering							
Valve 18	Construction	1,600	24	300,000	< 50,000	42	01/01	12/31
	Dewatering							
Valve 18A	Construction	1,600	24	200,000	< 50,000	42	01/01	12/31
	Dewatering							

APPENDIX E

Schedule for Water Conservation Measures

Schedule 1 – Implementation of Water Conservation in accordance with Best Management Practices and Standards for the Relevant Sector

General Information and Instructions

Section 1: General Information

Information on this Schedule is collected under the authority of the *Ontario Water Resources Act, R.S.O. 1990* (OWRA), and the new *Environmental Bill of Rights, C.* 28. Statutes of Ontario, 1993, and will be used to evaluate applications for a Permit to Take Water as required by Section 34 (OWRA).

Instructions:

1. This Schedule forms part of the Permit to Take Water application form and is subject to all provisions and instructions where applicable.
2. All questions of Section 2 of this Schedule must be answered for this Schedule to be considered complete.

Purpose:
The purpose of this Schedule is to allow persons applying for a permit required by the Ministry to document in the application all water conservation measures and practices that are currently being undertaken or that is anticipated to be undertaken for the duration of the permit.
Persons applying for a permit are encouraged to take all reasonable and practical measures to conserve water and to be up to date with sector-specific best management practices and standards for water conservation (i.e. whether you are currently implementing or anticipate implementing water conservation best water management standards and practices relevant to your sector).
Various sector associations publish information on best practices that may be useful in determining practices and standards for water conservation. Examples of these sector-specifc assocations include the following:

- **Municipal Sector** – Ontario Water Works Association
- **Agricultural Sector** – Ontario Ministry of Agriculture (Fact Sheets and Guides on Best Management Practices containing information on efficient irrigation systems, staggering irrigation schedules and preparing Environmental Farm Plans)
- **Other Sectors** – For information on up-to-date best management practices and measures for water conservation, contact your relevant sector association.

Section 2: Water Conservation Best Management Practices and Standards

Use this section of the Schedule to indicate what conservation measures and practices you are currently implementing or anticipate implementing. Where relevant, additional information can be attached as an appendix to this Schedule.

State your goals for reducing the use, loss or waste of water or for increasing the efficiency of water use (e.g., litres per day per unit of production <u>or</u> litres per day per capita for the residential sector).

The dewatering system will be pumping as required for construction. The requested duration and rate on the PTTW are interpreted to account for any unforeseen circumstances.

Ontario

Enbridge Pipelines Inc. - Ganaraska Region - Line 9B Hydr

Legend

- Village/Hamlet
- Town
- Large Town
- City

ACTIVE

- Yes
- No
- Water Wells
- Provincial Groundwater Monitoring Network
- Wellhead Protection Areas
- HWIN - Hazardous Waste Information Network
- Surface_Water_Intakes
- Municipal Waste Water (MISA)
- OHN_Rivers
- Rivers, Creeks and Streams
- Former_Townships_ER
- Lot & Concession
- National Pollutant Release Inventory
- TSSA Underground Storage Tanks by Parcel 2008
- Sewage_Treatment_Plants
- Waste Disposal Site
- brownfields
- Railway
- First_Nations_Communities
- First_Nation_Reserves
- Earth Science
- Life Science
- Candidate - Earth Science
- Candidate - Life Science
- Wetland_Unit
- Lakes, Ponds, and Rivers

UTM Zone 18 (NAD 1983)
Information Provided by: Ministry of Natural Resources, Ministry of the Environment, Ministry of Municipal Affairs and Housing and DMTI Spatial 2010.
Imagery Provided by DRAPE

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Ontario

Enbridge Pipelines Inc. - Ganaraska Region - Line 9B Hydr

Legend

- Village/Hamlet
- Town
- Large Town
- City

ACTIVE

- Yes
- No
- Water Wells
- Provincial Groundwater Monitoring Network
- Wellhead Protection Areas
- HWIN - Hazardous Waste Information Network
- Surface_Water_Intakes
- Municipal Waste Water (MISA)
- OHN_Rivers
- Rivers, Creeks and Streams
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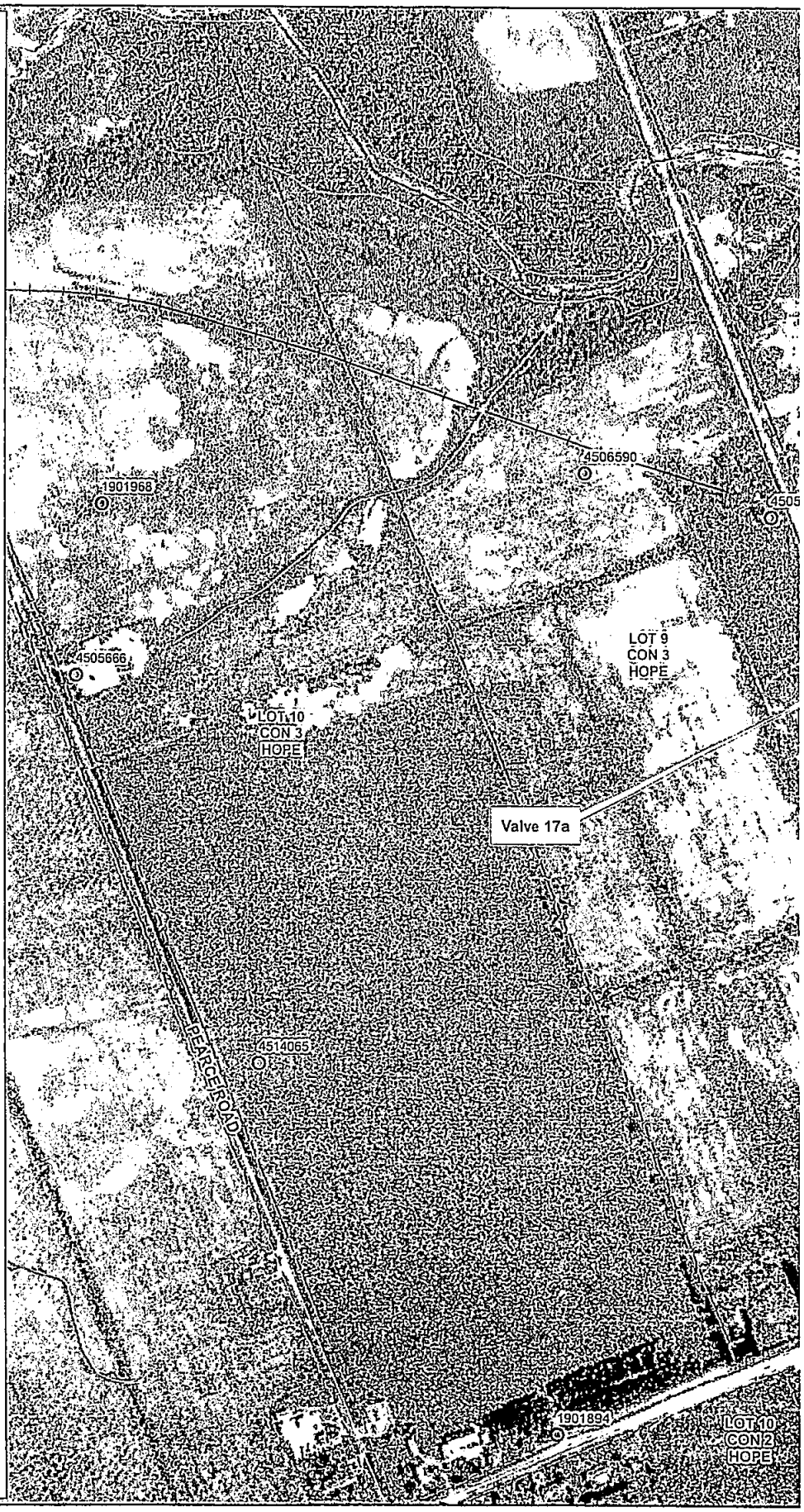
- First_Nation_Reserves
- Earth Science
- Life Science
- Candidate - Earth Science
- Candidate - Life Science
- Wetland_Unit
- Lakes, Ponds, and Rivers



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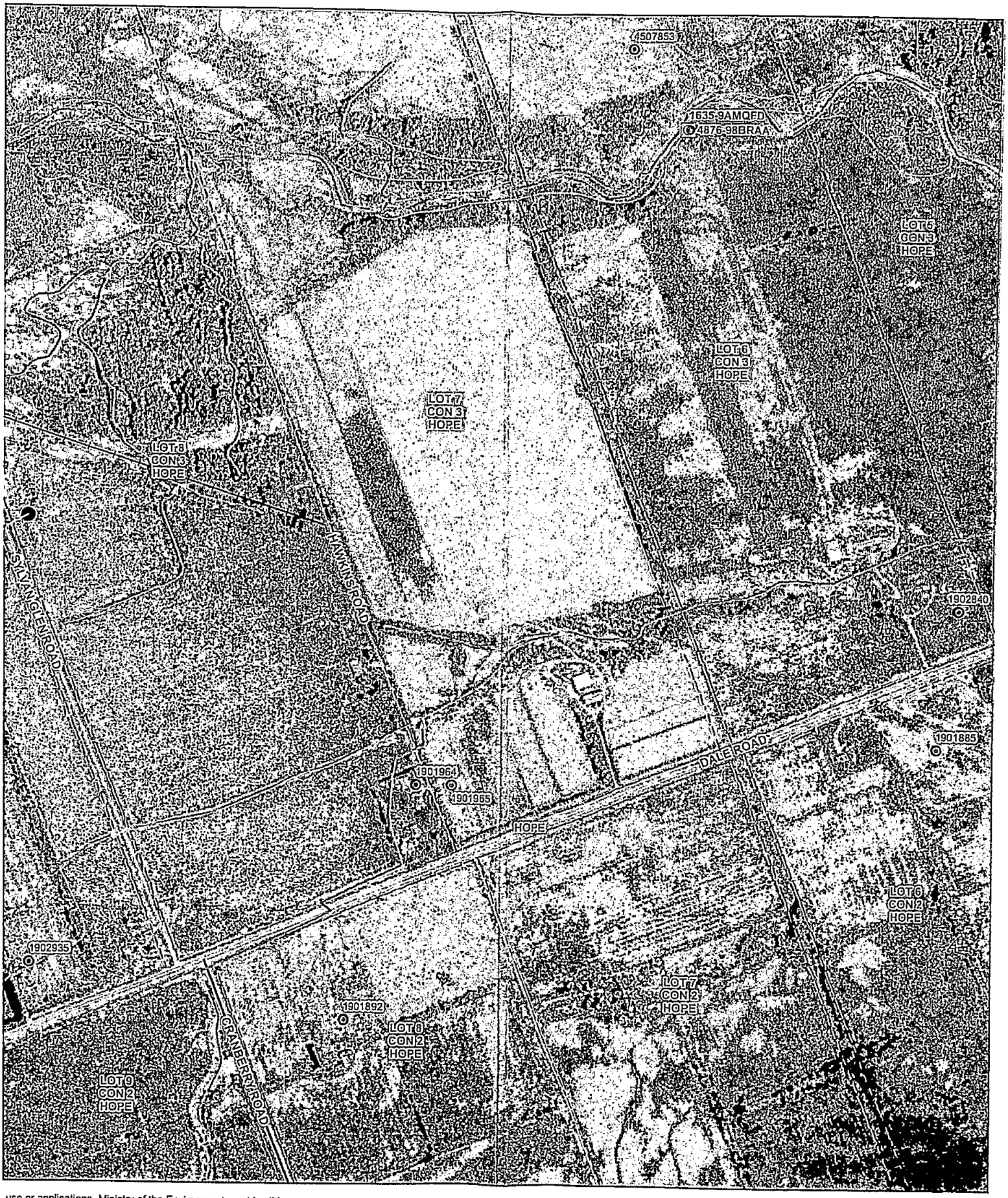
Ministry of the
Environment



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Enbridge Pipelines Inc. - Ganaraska Region - Line 9B Hydr

Legend

- Village/Hamlet
- Town
- Large Town
- City

ACTIVE

- Yes
- No
- Water Wells
- Provincial Groundwater Monitoring Network
- Wellhead Protection Areas
- HWIN - Hazardous Waste Information Network
- Surface_Water_Intakes
- Municipal Waste Water (MISA)
- OHN_Rivers
- Rivers, Creeks and Streams
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- Candidate - Earth Science
- Candidate - Life Science
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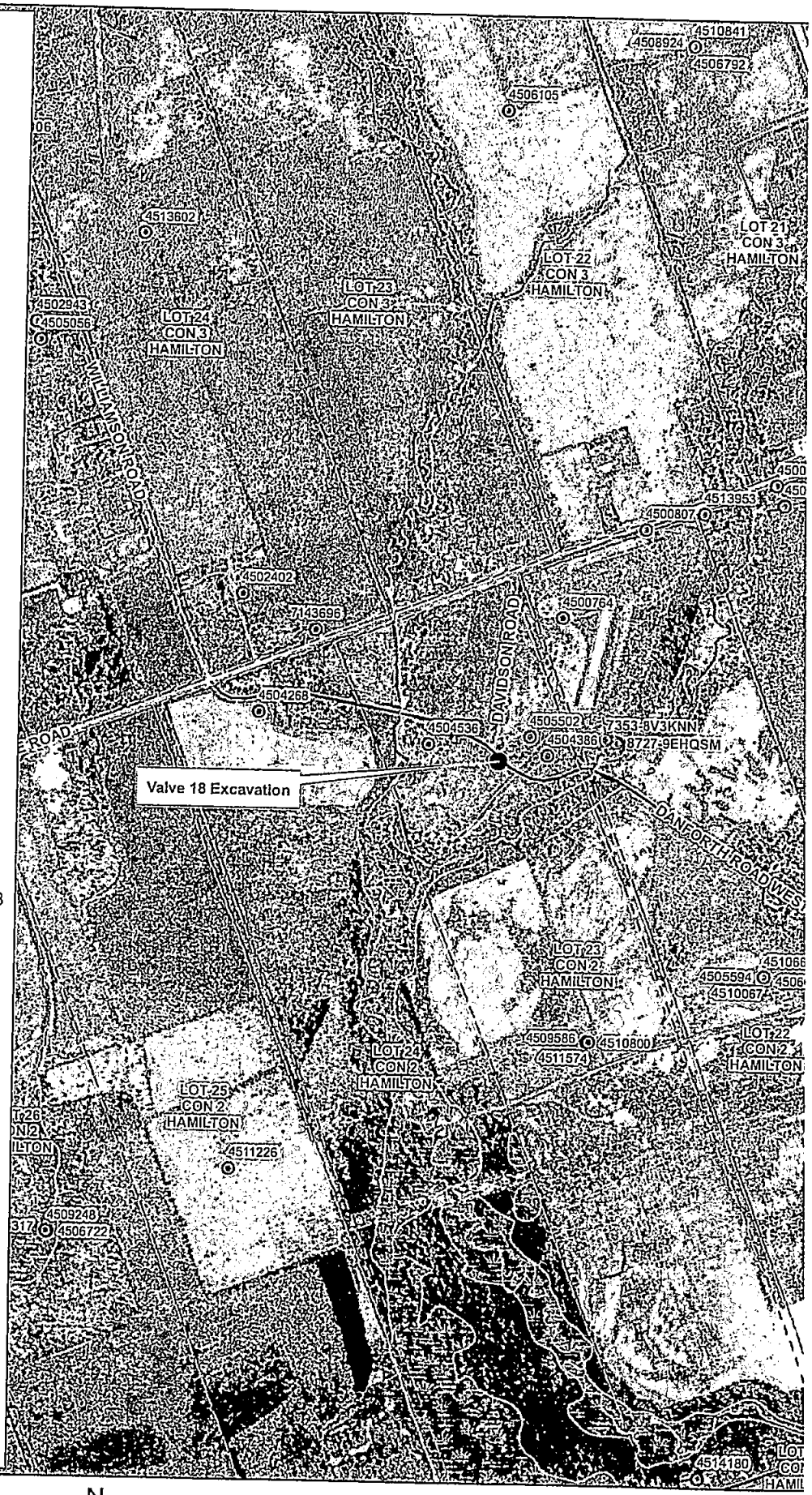

UTM Zone 18 (NAD 1983)
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Ontario

Ministry of the Environment
Ministère de l'Environnement

INCIDENT REPORT

Reference Number:	6444-9KSR3G	File Storage Number:	SI-NO-PH-100 3258 SYLVAN GLEN ROAD - (ENBRIDGE PIPELINE)
Module:	Incident Reporting	Module Type:	Condition of Operation
Cross Reference:	(doc link)	Task Link:	2451-9KSRVL
Originating Document:		Created by:	David Fisher
Incident Report Reference Number:		6444-9KSR3G	
Date Created:	2014/06/05	Date Completed:	2015/01/14
Bring Forward Date:		Bring Forward Reason:	
Status:	Closed		
Program	Air	Activity:	Spills

Is this an air emission (measured or modelled) or wastewater (sewage) discharge exceedance that will become part of the Environmental Compliance Report?

(legislation, certificate of approval, order, or guideline)

○ Yes ● No ○ To be determined *Click here for Guidance*

Caller or PO Information

Reported By:

First Name	Last Name	Name of Company:
Michael	Zimmel	Enbridge Pipelines

Contact Mailing Address

Civic Address: Unit Identifier:

Delivery Designator: Delivery Identifier:

Municipality:	Postal Station:	Province/State:	Postal Code:
Port Hope		Ontario	

Telephone Number:	Extension:	Other Number:	Email Address:
(780)969-6036		Fax	

Reported By:

MOE Information

Date & Time Reported to MOE:	2014/06/04 16:00		
Office Receiving Incident Report:	Peterborough District Office		
Incident Info Received By:	David Fisher		
MOE Response:	No Field Response	Site Region:	Eastern
Date & Time of MOE Arrival at Scene:			

Code:

Environmental Impact: Confirmed

Nature of Impact:

Incident Event:

Incident Reason:

Damaged Party: No

Contaminants Table

Contaminant Name	Code	UN#	Limit	Quantity	[units]	[freq]
NITROGEN (COMPRESSED GAS)	36	1066		7144	m^3	

Controller of Material:

Owner of Material:

Estimated Clean Up Cost:

Who Cleaned Up:

% Clean Up: %

MOE/Other Agencies Involved:

Voluntary / Mandatory Abatement

Is there Voluntary Abatement Activity?	○ Yes	● No	○ To be determined

Voluntary / Mandatory Compliance Items

Type	Parent RefNo	Work Summary (may be truncated)	Date	AttainList

Offence(s)

Suspected Violation(s)/Offence(s):

Act - Regulation - Section,
Description
{General Offence}

Provincial Officer:

Name: David Fisher

Badge No:

Work Unit:

District/Area Office: Peterborough District Office

Date: 2014/06/09

Signature:

District/Area Supervisor:

Name: Jim Martherus

Work Unit:

Ontario

Ministry of the Environment and Climate Change
Ministère de l'Environnement et de l'Action en matière de changement climatique

INCIDENT REPORT

Reference Number:	2720-9XLK5H	**Module Type:**	Pollution Incident Report (PIR)
Status:	Closed	**File Storage Number:**	SI NO PH (100)
Program:	Air	**Activity:**	Pollution Incident Reports

Caller or PO Reporting/Receiving Information

s.21

Date Reported to MOE:	2015/06/18	**Time Reported to MOE:**	10:30
Date of Incident: **Incident Date Confirmation:**	2015/06/18 Actual	**Time of Incident:**	10:00

Client(s)

Client Details

Were there samples collected / analyzed at any time?	No
Health / Environmental Consequences at the Time of Incident	
Health / Environmental Consequences:	0 - No Impact

Has a Water Body been impacted?	
Receiving Environment:	
Incident Event:	
Incident Reason:	
MOE/Other Agencies Involved:	
Was there a discharge / emission / spill of a contaminant to the environment?	
No	

Environmental Compliance Reporting (ECR)

Is this an air emission (measured or modelled) or wastewater (sewage) discharge exceedance that will become part of the Environmental Compliance Report? (legislation, certificate of approval, order, or guideline)
No

Voluntary / Mandatory Abatement

Was there Non-Compliance/Non-Conformance Identified?	○ Yes ● No

Voluntary / Mandatory Abatement Items
Not Available

Waste / EGR Information

Waste / EGR Information entries:
Not Available

Document Related Information

Cross Reference:	(doc link)	Task Link:	0221-9XLKJL
Originating Document:		Created by:	Jim Martherus
Date Created:	2015/06/18	Date Completed:	2015/06/18
Office Receiving Incident Report:	Peterborough District Office	Incident Info Received By:	Jim Martherus

Ministry of the Environment and Climate Change
Eastern Region
Technical Support Section
Water Resources
1259 Gardiners Rd, PO Box 22032
Kingston, ON
K7P 3J6
Tel: (613) 549-4000

Ministère de l'Environnement et de l'Action en matière de changement climatique
Direction régionale de l'Est
Section du Soutien Technique
Ressource en eau
1259 Chemin Gardiners, CP 22032
Kingston, ON
K7P 3J6
Tél:(613) 549-4000

Ontario

August 25, 2015

Enbridge Pipelines Inc.
10130 103 Street NW
Edmonton, Alberta
T5J 3N9

Dear Mr. DeMontigny;

RE: Permit To Take Water For Line 9B Within GRCA
Roseberry Hill
Lot: 28, Concession: 3, Township of
Port Hope, County of Northumberland
Valve 17
Lot: 23, Concession: 3, Township of
Port Hope, County of Northumberland
Valve 17a
Lot: 8, Concession: 3, Township of
Port Hope, County of Northumberland
Valve 18
Lot: 23, Concession: 2, Township of
Hamilton, County of Northumberland
Valve 18a
Lot: 16, Concession: 2, Township of
Hamilton, County of Northumberland
Reference Number 8622-9YLVHE

Please find attached Permit To Take Water 7623-9YURR9 which authorizes the withdrawal of water in accordance with the application for this Permit To Take Water, dated July 14, 2015 and signed by Dallas DeMontigny.

Please note the attached Permit expires on December 31, 2015.

Ontario Regulation 387/04 (Water Taking and Transfer) requires all water takers to report daily water taking amounts to the Water Taking Reporting System (WTRS) electronic database

51-NO-PH-220

OCT 2015

Ontario

Ministry of the Environment and Climate Change
Ministère de l'Environnement et de l'Action en matière de changement climatique

PERMIT TO TAKE WATER
Surface and Ground Water
NUMBER 7623-9YURR9

Pursuant to Section 34.1 of the Ontario Water Resources Act, R.S.O. 1990 this Permit To Take Water is hereby issued to:

Enbridge Pipelines Inc.
10130 103 Street NW
Edmonton, Alberta, T5J 3N9
Canada

For the water taking from: Roseberry Hill, Valve 17, Valve 17A, Valve 18, Valve 18A Excavations

Located at: Lot 28, Concession 3, Geographic Township of Hope
Port Hope, County of Northumberland

Lot 23, Concession 3, Geographic Township of Hope
Port Hope, County of Northumberland

Lot 8, Concession 3, Geographic Township of Hope
Port Hope, County of Northumberland

Lot 23, Concession 2, Geographic Township of Hamilton
Hamilton, County of Northumberland

Lot 16, Concession 2, Geographic Township of Hamilton
Hamilton, County of Northumberland

For the purposes of this Permit, and the terms and conditions specified below, the following definitions apply:

DEFINITIONS

(a) "Director" means any person appointed in writing as a Director pursuant to section 5 of the OWRA for the purposes of section 34.1, OWRA.

(b) "Provincial Officer" means any person designated in writing by the Minister as a Provincial

property shall cause this Permit to be cancelled.

2. General Conditions and Interpretation

2.1 Inspections

The Permit Holder must forthwith, upon presentation of credentials, permit a Provincial Officer to carry out any and all inspections authorized by the OWRA, the *Environmental Protection Act* , R.S.O. 1990, the *Pesticides Act* , R.S.O. 1990, or the *Safe Drinking Water Act,* S. O. 2002.

2.2 Other Approvals

The issuance of, and compliance with this Permit, does not:

(a) relieve the Permit Holder or any other person from any obligation to comply with any other applicable legal requirements, including the provisions of the *Ontario Water Resources Act* , and the *Environmental Protection Act* , and any regulations made thereunder; or

(b) limit in any way any authority of the Ministry, a Director, or a Provincial Officer, including the authority to require certain steps be taken or to require the Permit Holder to furnish any further information related to this Permit.

2.3 Information

The receipt of any information by the Ministry, the failure of the Ministry to take any action or require any person to take any action in relation to the information, or the failure of a Provincial Officer to prosecute any person in relation to the information, shall not be construed as:

(a) an approval, waiver or justification by the Ministry of any act or omission of any person that contravenes this Permit or other legal requirement; or

(b) acceptance by the Ministry of the information's completeness or accuracy.

2.4 Rights of Action

The issuance of, and compliance with this Permit shall not be construed as precluding or limiting any legal claims or rights of action that any person, including the Crown in right of Ontario or any agency thereof, has or may have against the Permit Holder, its officers, employees, agents, and contractors.

2.5 Severability

The requirements of this Permit are severable. If any requirements of this Permit, or the application of any requirements of this Permit to any circumstance, is held invalid or unenforceable, the application of such requirements to other circumstances and the remainder of this Permit shall not be affected thereby.

2.6 Conflicts

Where there is a conflict between a provision of any submitted document referred to in this Permit, including its Schedules, and the conditions of this Permit, the conditions in this Permit shall take precedence.

appropriate contact information for the Permit Holder regarding construction concerns and the well monitoring program.

4.3 Contingent upon obtaining the consent of the well owner(s) and safe access to the well(s), the Permit Holder will carry out a private well monitoring program of wells located within 140 metres of the proposed excavation limits to document pre-construction and post-construction groundwater conditions.

5. Impacts of the Water Taking

5.1 Notification

The Permit Holder shall immediately notify the local District Office of any complaint arising from the taking of water authorized under this Permit and shall report any action which has been taken or is proposed with regard to such complaint. The Permit Holder shall immediately notify the local District Office if the taking of water is observed to have any significant impact on the surrounding waters. After hours, calls shall be directed to the Ministry's Spills Action Centre at 1-800-268-6060.

5.2 For Surface-Water Takings

The taking of water (including the taking of water into storage and the subsequent or simultaneous withdrawal from storage) shall be carried out in such a manner that streamflow is not stopped and is not reduced to a rate that will cause interference with downstream uses of water or with the natural functions of the stream.

For Groundwater Takings

If the taking of water is observed to cause any negative impact to other water supplies obtained from any adequate sources that were in use prior to initial issuance of a Permit for this water taking, the Permit Holder shall take such action necessary to make available to those affected, a supply of water equivalent in quantity and quality to their normal takings, or shall compensate such persons for their reasonable costs of so doing, or shall reduce the rate and amount of taking to prevent or alleviate the observed negative impact. Pending permanent restoration of the affected supplies, the Permit Holder shall provide, to those affected, temporary water supplies adequate to meet their normal requirements, or shall compensate such persons for their reasonable costs of doing so.

If permanent interference is caused by the water taking, the Permit Holder shall restore the water supplies of those permanently affected.

5.3 Prevention of Adverse Effects:

The Permit Holder shall ensure the taking of water under authority of this Permit does not result in an adverse effect on area waters.

5.4 Prevention of Structural Adverse Effects:

The Permit Holder shall take all measures necessary to prevent damage to buildings, bridges, structures, roads and/or railway lines that may be impacted either directly or indirectly by this

Schedule A

This Schedule "A" forms part of Permit To Take Water 7623-9YURR9, dated August 25, 2015.

Ontario
Ministry of the Environment

OCT 13 2015

Application for Permit to Take Water

Ce formulaire est disponible en français

For Office Use Only			
Reference Number	Payment Received	Date (y/m/d)	Initials
3622-9YLVHE	$2000.00	2015/07/20	BE

General Information and Instructions

General:

Information requested in this form is collected under the authority of the *Ontario Water Resources Act,* R.S.O. 1990 (OWRA) and the *Environmental Bill of Rights*, C. 28, Statutes of Ontario, 1993, (EBR) and will be used to evaluate applications for a Permit to Take Water as required by Section 34 (OWRA).

Instructions:

1. **Applicants are responsible for ensuring that they complete the most recent application form.** When completing this form, please refer to the "Guide to Permit to Take Water Application Form" (referred to as the Guide). Application forms and supporting documentation are available from your local Regional or District Office of the Ministry of the Environment, and in the "Publications" section of the Ministry of the Environment website at http://www.ene.gov.on.ca/envision/gp/index.htm.

2. Questions regarding completion and submission of this application should be directed to local Regional Office of the Ministry of the Environment. Contact information for these offices is available in the Guide or on the Ministry of the Environment website at http://www.ene.gov.on.ca/envision/org/op.htm

3. This form must be completed with respect to all the requirements of the Guide for it to be considered an application for approval. **Incomplete applications will be returned to the applicant.**

4. A complete application consists of:

   (1) a completed, signed application form
   (2) all required supporting information identified in this form and the Guide, and
   (3) a certified cheque or money order, in Canadian funds, made payable to the ***Ontario Minister of Finance*** for the application fee when required. Payment may also be made by Visa, MasterCard or American Express,

   The Ministry may require additional information during the technical review of any application initially accepted as complete.

5. The original application, along with supporting information and the application fee should be sent to:

   Ministry of the Environment,
   Attention: Permit to Take Water Director
   Director, Environmental Assessment and Approvals Branch,
   2 St. Clair Avenue West, Floor 12A
   Toronto, Ontario, M4V 1L5

6. Information contained in this application form is not considered confidential and will be made available to the public upon request. Information submitted as supporting information may be claimed as confidential but will be subject to the *Freedom of Information and Protection of Privacy Act* (FOIPPA) and the *EBR*. If you do not claim confidentiality at the time of submitting the information, the Ministry of the Environment may make the information available to the public without further notice to you. If you are identifying confidential material, please indicate why you believe the information is confidential.

RECEIVED
JUL 16 2015
MINISTRY OF THE ENVIRONMENT
ENVIRONMENTAL APPROVALS ACCESS & SERVICE INTEGRATION BRANCH
ENVIRONMENTAL APPROVALS BRANCH

1. Permit Administration

Please indicate if this is an application for a:

- [x] New Permit
- [ ] Amendment to Permit (attach a photocopy of permit)
- [ ] Renewal of Permit (attach a photocopy of permit)

2. Classification

Classification	Fee Required	No Fee Required
[ ] Category 1	[ ] $750	[ ] Reason _____
[ ] Category 2	[ ] $750	[ ] Reason _____
[x] Category 3	[x] $3,000	[ ] Reason _____

7. Source Information – *Note: Source Information must be provided separately for each source. Please complete and submit multiple copies of this Source Information section (pages 3 and 4 of this form) if your application includes more than one source.*

Number of Water Taking Sources Included in this Application *(do not include domestic uses that do not require a permit)*

Total Number of Wells	Total Number of Lake Intakes	Total Number of Ponds	Total Number of Watercourse Intakes
0	0	1 - Roseberry Hill	0

Source Location Information *(if multiple sources are included in application, provide information for each source)*

Civic Address - Street information *(street number/name/type/direction/unit/suite/emergency 911 location number and street)*

n/a

Lot	Concession	Part	Reference Plan
28	3		

Municipality/Unorganised Township	County/District	Original Geographic Township
Port Hope and Hope	Northumberland	

Geographic (GPS) Coordinates *(to be provided in Datum NAD83)*

Method of Collection	Accuracy Estimate	UTM Zone	Easting	Northing
GPS	+/- 50 m	17	706335	4871806

Is the Applicant the owner of the site where water taking will occur?

☐ Yes

☒ No **If no, attach the owner's name, address and a signed letter granting consent for the applicant to access the water taking location**

Is the site where water taking will occur located in an area of development control as defined by the *Niagara Escarpment Planning & Development Act*?

☐ Yes ☒ No

Is the site where water taking will occur located on the Oak Ridges Moraine Conservation Area as defined by the Oak Ridges Moraine Conservation Plan (a regulation made under the *Oak Ridges Moraine Conservation Act*)?

☐ Yes ☒ No

Are you aware of any complaints or impacts resulting from water takings at the site?

☐ Yes **If yes, please describe:** _____

☒ No

Will water from the site be packaged in a container (bottled water, tanks)?

☐ Yes **If yes, what size of containers?** ☐ greater than 20 litres ☐ 20 litres or less

☒ No

Are wells located within 500 m of the site where water taking will occur?

☒ Yes

☐ No **If no, what is the distance to the nearest well?** _____

Is municipal water available to all dwellings within 500m of the site where water taking will occur?

☐ Yes ☒ No ☐ Unknown

Estimated start date of water taking	Water taking to extend for a period of:
August 2015	42 ☒ days ☐ weeks ☐ months ☐ years ☐ indefinite

Is activity subject to the *Environmental Assessment Act*?

☐ Yes **If yes, please attach approval or Notice of Completion**

☒ No

If yes, did the project receive any Part II Orders / Bump-Up requests?

☐ Yes **If yes, what was the date of the Minister's Decision?** _____ ☐ Decision pending

☒ No

List any public consultation/notification that has occurred related to the proposed water taking (i.e., public hearings, notification of First Nations, etc.)

☐ **Watercourse** - *please complete this table if applying to take water from a watercourse (i.e., stream, municipal ditch, open drain, etc.)*

Watercourse Name	Tributary to

Does flow in the watercourse stop at any time during the year?

☐ Yes **If yes, during which months?** _____ For what period of time? _____

☐ No

Do you move/relocate the water intake (pump)?

☐ Yes **If yes, please provide primary and secondary locations on attached map**

☐ No

7. Source Information – *Note: Source Information must be provided separately for each source. Please complete and submit multiple copies of this Source Information section (pages 3 and 4 of this form) if your application includes more than one source.*

Number of Water Taking Sources Included in this Application *(do not include domestic uses that do not require a permit)*

Total Number of Wells	Total Number of Lake Intakes	Total Number of Ponds	Total Number of Watercourse Intakes
0	0	1 - Valve 17	0

Source Location Information *(if multiple sources are included in application, provide information for each source)*

Civic Address - Street information *(street number/name/type/direction/unit/suite/emergency 911 location number and street)*

n/a

Lot	Concession	Part	Reference Plan
23	3		

Municipality/Unorganised Township	County/District	Original Geographic Township
Port Hope and Hope	Northumberland	

Geographic (GPS) Coordinates *(to be provided in Datum NAD83)*

Method of Collection	Accuracy Estimate	UTM Zone	Easting	Northing
GPS	+/- 50 m	17	708641	4872413

Is the Applicant the owner of the site where water taking will occur?

☐ Yes

☒ No **If no, attach the owner's name, address and a signed letter granting consent for the applicant to access the water taking location**

Is the site where water taking will occur located in an area of development control as defined by the *Niagara Escarpment Planning & Development Act*?

☐ Yes ☒ No

Is the site where water taking will occur located on the Oak Ridges Moraine Conservation Area as defined by the Oak Ridges Moraine Conservation Plan (a regulation made under the *Oak Ridges Moraine Conservation Act*)?

☐ Yes ☒ No

Are you aware of any complaints or impacts resulting from water takings at the site?

☐ Yes **If yes, please describe:** _____

☒ No

Will water from the site be packaged in a container (bottled water, tanks)?

☐ Yes **If yes, what size of containers?** ☐ greater than 20 litres ☐ 20 litres or less

☒ No

Are wells located within 500 m of the site where water taking will occur?

☒ Yes

☐ No **If no, what is the distance to the nearest well?** _____

Is municipal water available to all dwellings within 500m of the site where water taking will occur?

☐ Yes ☒ No ☐ Unknown

Estimated start date of water taking	Water taking to extend for a period of:
August 2015	42 ☒ days ☐ weeks ☐ months ☐ years ☐ indefinite

Is activity subject to the *Environmental Assessment Act*?

☐ Yes **If yes, please attach approval or Notice of Completion**

☒ No

If yes, did the project receive any Part II Orders / Bump-Up requests?

☐ Yes **If yes, what was the date of the Minister's Decision?** _____ ☐ Decision pending

☒ No

List any public consultation/notification that has occurred related to the proposed water taking (i.e., public hearings, notification of First Nations, etc.)

☐ **Watercourse** - *please complete this table if applying to take water from a watercourse (i.e., stream, municipal ditch, open drain, etc.)*

Watercourse Name	Tributary to

Does flow in the watercourse stop at any time during the year?

☐ Yes **If yes, during which months?** _____ For what period of time? _____

☐ No

Do you move/relocate the water intake (pump)?

☐ Yes **If yes, please provide primary and secondary locations on attached map**

☐ No

7. Source Information – *Note: Source Information must be provided separately for each source. Please complete and submit multiple copies of this Source Information section (pages 3 and 4 of this form) if your application includes more than one source.*

Number of Water Taking Sources Included in this Application *(do not include domestic uses that do not require a permit)*

Total Number of Wells	Total Number of Lake Intakes	Total Number of Ponds	Total Number of Watercourse Intakes
0	0	1 - Valve 17A	0

Source Location Information *(if multiple sources are included in application, provide information for each source)*

Civic Address - Street information *(street number/name/type/direction/unit/suite/emergency 911 location number and street)*
n/a

Lot	Concession	Part	Reference Plan
8	3		

Municipality/Unorganised Township	County/District	Original Geographic Township
Port Hope and Hope	Northumberland	

Geographic (GPS) Coordinates *(to be provided in Datum NAD83)*

Method of Collection	Accuracy Estimate	UTM Zone	Easting	Northing
GPS	+/- 50 m	17	714508	4873745

Is the Applicant the owner of the site where water taking will occur?
- ☐ Yes
- ☒ No **If no, attach the owner's name, address and a signed letter granting consent for the applicant to access the water taking location**

Is the site where water taking will occur located in an area of development control as defined by the *Niagara Escarpment Planning & Development Act*?
☐ Yes ☒ No

Is the site where water taking will occur located on the Oak Ridges Moraine Conservation Area as defined by the Oak Ridges Moraine Conservation Plan (a regulation made under the *Oak Ridges Moraine Conservation Act*)?
☐ Yes ☒ No

Are you aware of any complaints or impacts resulting from water takings at the site?
- ☐ Yes **If yes, please describe:** _____
- ☒ No

Will water from the site be packaged in a container (bottled water, tanks)?
- ☐ Yes **If yes, what size of containers?** ☐ greater than 20 litres ☐ 20 litres or less
- ☒ No

Are wells located within 500 m of the site where water taking will occur?
- ☒ Yes
- ☐ No **If no, what is the distance to the nearest well?** _____

Is municipal water available to all dwellings within 500m of the site where water taking will occur?
☐ Yes ☒ No ☐ Unknown

Estimated start date of water taking	Water taking to extend for a period of:
August 2015	42 ☒ days ☐ weeks ☐ months ☐ years ☐ indefinite

Is activity subject to the *Environmental Assessment Act*?
- ☐ Yes **If yes, please attach approval or Notice of Completion**
- ☒ No

If yes, did the project receive any Part II Orders / Bump-Up requests?
- ☐ Yes **If yes, what was the date of the Minister's Decision?** _____ ☐ Decision pending
- ☒ No

List any public consultation/notification that has occurred related to the proposed water taking (i.e., public hearings, notification of First Nations, etc.)

☐ **Watercourse** - *please complete this table if applying to take water from a watercourse (i.e., stream, municipal ditch, open drain, etc.)*

Watercourse Name	Tributary to

Does flow in the watercourse stop at any time during the year?
- ☐ Yes **If yes, during which months?** _____ For what period of time? _____
- ☐ No

Do you move/relocate the water intake (pump)?
- ☐ Yes **If yes, please provide primary and secondary locations on attached map**
- ☐ No

7. Source Information – *Note: Source Information must be provided separately for each source. Please complete and submit multiple copies of this Source Information section (pages 3 and 4 of this form) if your application includes more than one source.*

Number of Water Taking Sources Included in this Application *(do not include domestic uses that do not require a permit)*

Total Number of Wells	Total Number of Lake Intakes	Total Number of Ponds	Total Number of Watercourse Intakes
0	0	1 - Valve 18	0

Source Location Information *(if multiple sources are included in application, provide information for each source)*

Civic Address - Street information *(street number/name/type/direction/unit/suite/emergency 911 location number and street)*

n/a

Lot	Concession	Part	Reference Plan
23	2		

Municipality/Unorganised Township	County/District	Original Geographic Township
Township of Hamilton	Northumberland	

Geographic (GPS) Coordinates *(to be provided in Datum NAD83)*

Method of Collection	Accuracy Estimate	UTM Zone	Easting	Northing
GPS	+/- 50 m	17	722889	4875848

Is the Applicant the owner of the site where water taking will occur?

☐ Yes

☒ No **If no, attach the owner's name, address and a signed letter granting consent for the applicant to access the water taking location**

Is the site where water taking will occur located in an area of development control as defined by the *Niagara Escarpment Planning & Development Act*?

☐ Yes ☒ No

Is the site where water taking will occur located on the Oak Ridges Moraine Conservation Area as defined by the Oak Ridges Moraine Conservation Plan (a regulation made under the *Oak Ridges Moraine Conservation Act*)?

☐ Yes ☒ No

Are you aware of any complaints or impacts resulting from water takings at the site?

☐ Yes **If yes, please describe:** _____

☒ No

Will water from the site be packaged in a container (bottled water, tanks)?

☐ Yes **If yes, what size of containers?** ☐ greater than 20 litres ☐ 20 litres or less

☒ No

Are wells located within 500 m of the site where water taking will occur?

☒ Yes

☐ No **If no, what is the distance to the nearest well?** _____

Is municipal water available to all dwellings within 500m of the site where water taking will occur?

☐ Yes ☒ No ☐ Unknown

Estimated start date of water taking	Water taking to extend for a period of:
August 2015	42 ☒ days ☐ weeks ☐ months ☐ years ☐ indefinite

Is activity subject to the *Environmental Assessment Act*?

☐ Yes **If yes, please attach approval or Notice of Completion**

☒ No

If yes, did the project receive any Part II Orders / Bump-Up requests?

☐ Yes **If yes, what was the date of the Minister's Decision?** _____ ☐ Decision pending

☒ No

List any public consultation/notification that has occurred related to the proposed water taking (i.e., public hearings, notification of First Nations, etc.)

☐ **Watercourse** - *please complete this table if applying to take water from a watercourse (i.e., stream, municipal ditch, open drain, etc.)*

Watercourse Name	Tributary to

Does flow in the watercourse stop at any time during the year?

☐ Yes **If yes, during which months?** _____ For what period of time? _____

☐ No

Do you move/relocate the water intake (pump)?

☐ Yes **If yes, please provide primary and secondary locations on attached map**

☐ No

7. Source Information – *Note: Source Information must be provided separately for each source. Please complete and submit multiple copies of this Source Information section (pages 3 and 4 of this form) if your application includes more than one source.*

Number of Water Taking Sources Included in this Application *(do not include domestic uses that do not require a permit)*

Total Number of Wells	Total Number of Lake Intakes	Total Number of Ponds	Total Number of Watercourse Intakes
0	0	1 - Valve 18A	0

Source Location Information *(if multiple sources are included in application, provide information for each source)*

Civic Address - Street information *(street number/name/type/direction/unit/suite/emergency 911 location number and street)*

n/a

Lot	Concession	Part	Reference Plan
16	2		

Municipality/Unorganised Township	County/District	Original Geographic Township
Township of Hamilton	Northumberland	

Geographic (GPS) Coordinates *(to be provided in Datum NAD83)*

Method of Collection	Accuracy Estimate	UTM Zone	Easting	Northing
GPS	+/- 50 m	17	725432	4876629

Is the Applicant the owner of the site where water taking will occur?

☐ Yes

☒ No **If no, attach the owner's name, address and a signed letter granting consent for the applicant to access the water taking location**

Is the site where water taking will occur located in an area of development control as defined by the *Niagara Escarpment Planning & Development Act*?

☐ Yes ☒ No

Is the site where water taking will occur located on the Oak Ridges Moraine Conservation Area as defined by the Oak Ridges Moraine Conservation Plan (a regulation made under the *Oak Ridges Moraine Conservation Act*)?

☐ Yes ☒ No

Are you aware of any complaints or impacts resulting from water takings at the site?

☐ Yes **If yes, please describe:** _____

☒ No

Will water from the site be packaged in a container (bottled water, tanks)?

☐ Yes **If yes, what size of containers?** ☐ greater than 20 litres ☐ 20 litres or less

☒ No

Are wells located within 500 m of the site where water taking will occur?

☒ Yes

☐ No **If no, what is the distance to the nearest well?** _____

Is municipal water available to all dwellings within 500m of the site where water taking will occur?

☐ Yes ☒ No ☐ Unknown

Estimated start date of water taking	Water taking to extend for a period of:
August 2015	42 ☒ days ☐ weeks ☐ months ☐ years ☐ Indefinite

Is activity subject to the *Environmental Assessment Act*?

☐ Yes **If yes, please attach approval or Notice of Completion**

☒ No

If yes, did the project receive any Part II Orders / Bump-Up requests?

☐ Yes **If yes, what was the date of the Minister's Decision?** _____ ☐ Decision pending

☒ No

List any public consultation/notification that has occurred related to the proposed water taking (i.e., public hearings, notification of First Nations, etc.)

☐ **Watercourse** - *please complete this table if applying to take water from a watercourse (i.e., stream, municipal ditch, open drain, etc.)*

Watercourse Name	Tributary to

Does flow in the watercourse stop at any time during the year?

☐ Yes **If yes, during which months?** _____ For what period of time? _____

☐ No

Do you move/relocate the water intake (pump)?

☐ Yes **If yes, please provide primary and secondary locations on attached map**

☐ No

8. Public Consultation / Environmental Bill of Rights (EBR) Requirements

Is this application for water taking to extend for a period of less than one year?

☒ Yes ☐ No If no, this application may be subject to posting and/or public consultation requirements under the Environmental Bill of Rights. For more information, please refer to the Guide.

Is this application for agricultural use or aquaculture?

☐ Yes ☒ No If no, this application may be subject to posting and/or public consultation requirements under the Environmental Bill of Rights. For more information, please refer to the Guide.

9. Water Taking Volumes

Purpose Options for Water Taking

	Purpose
Agriculture	irrigation of (includes frost protection): field and pasture crops; fruit orchard; market garden/flowers; nursery; sod farm; tender fruits; tobacco, other (must specify)
Commercial	aquaculture, bottled water, golf course irrigation, mall/business; snowmaking, other (must specify)
Construction	Dredging, road building, other (must specify)
Dewatering	pits and quarries; construction; other (must specify)
Industrial	aggregate washing, brewing/soft drinks, cooling water, food processing, manufacturing; pipeline testing; power generation; other (must specify)
Institutional	school, hospital, other (must specify)
Recreation	aesthetic, fish pond, wetland, other (must specify)
Remediation	groundwater; other (must specify)
Water Supply	campground, communal, municipal, other (must specify)
Miscellaneous	dam/reservoir, heat pump, wildlife conservation, pumping test, other (must specify)

Water Source Information – Table A (Units in Litres)

Source Name	Purpose (select from "purpose" column in table above)	Maximum rate per minute	Maximum number of hours of taking a day	Maximum volume per day	Typical volume per day	Maximum number of days of taking in a year	Earliest calendar date of taking (mm/dd)	Latest calendar date of taking (mm/dd)
Roseberry Hill	Construction	1,600	24	300,000	< 50,000	42	01/01	12/31
	Dewatering							
Valve 17	Construction	2,000	24	1,000,000	300,000	42	01/01	12/31
	Dewatering							
Valve 17A	Construction	1,600	24	200,000	< 50,000	42	01/01	12/31
	Dewatering							
Valve 18	Construction	1,600	24	300,000	< 50,000	42	01/01	12/31
	Dewatering							
Valve 18A	Construction	1,600	24	200,000	< 50,000	42	01/01	12/31
	Dewatering							

APPENDIX E

Schedule for Water Conservation Measures

Schedule 1 – Implementation of Water Conservation in accordance with Best Management Practices and Standards for the Relevant Sector

General Information and Instructions

Section 1: General Information

Information on this Schedule is collected under the authority of the *Ontario Water Resources Act, R.S.O. 1990* (OWRA), and the new *Environmental Bill of Rights, C.* 28. Statutes of Ontario, 1993, and will be used to evaluate applications for a Permit to Take Water as required by Section 34 (OWRA).

Instructions:

1. This Schedule forms part of the Permit to Take Water application form and is subject to all provisions and instructions where applicable.
2. All questions of Section 2 of this Schedule must be answered for this Schedule to be considered complete.

Purpose:
The purpose of this Schedule is to allow persons applying for a permit required by the Ministry to document in the application all water conservation measures and practices that are currently being undertaken or that is anticipated to be undertaken for the duration of the permit.
Persons applying for a permit are encouraged to take all reasonable and practical measures to conserve water and to be up to date with sector-specific best management practices and standards for water conservation (i.e. whether you are currently implementing or anticipate implementing water conservation best water management standards and practices relevant to your sector).
Various sector associations publish information on best practices that may be useful in determining practices and standards for water conservation. Examples of these sector-specifc assocations include the following:

- **Municipal Sector** – Ontario Water Works Association
- **Agricultural Sector** – Ontario Ministry of Agriculture (Fact Sheets and Guides on Best Management Practices containing information on efficient irrigation systems, staggering irrigation schedules and preparing Environmental Farm Plans)
- **Other Sectors** – For information on up-to-date best management practices and measures for water conservation, contact your relevant sector association.

Section 2: Water Conservation Best Management Practices and Standards

Use this section of the Schedule to indicate what conservation measures and practices you are currently implementing or anticipate implementing. Where relevant, additional information can be attached as an appendix to this Schedule.

State your goals for reducing the use, loss or waste of water or for increasing the efficiency of water use (e.g., litres per day per unit of production <u>or</u> litres per day per capita for the residential sector).

The dewatering system will be pumping as required for construction. The requested duration and rate on the PTTW are interpreted to account for any unforeseen circumstances.

Ontario

Enbridge Pipelines Inc. - Ganaraska Region - Line 9B Hydr

Legend

- Village/Hamlet
- Town
- Large Town
- City

ACTIVE

- Yes
- No
- Water Wells
- Provincial Groundwater Monitoring Network
- Wellhead Protection Areas
- HWIN - Hazardous Waste Information Network
- Surface_Water_Intakes
- Municipal Waste Water (MISA)
- OHN_Rivers
- Rivers, Creeks and Streams
- Former_Townships_ER
- Lot & Concession
- National Pollutant Release Inventory
- TSSA Underground Storage Tanks by Parcel 2008
- Sewage_Treatment_Plants
- Waste Disposal Site
- brownfields
- Railway
- First_Nations_Communities
- First_Nation_Reserves
- Earth Science
- Life Science
- Candidate - Earth Science
- Candidate - Life Science
- Wetland_Unit
- Lakes, Ponds, and Rivers

UTM Zone 18 (NAD 1983)
Information Provided by: Ministry of Natural Resources, Ministry of the Environment, Ministry of Municipal Affairs and Housing and DMTI Spatial 2010.
Imagery Provided by DRAPE

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:atic Testing - PTTW Ref. #8622-9YLVHE - Map 1 of 3

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Meters

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000044

Ontario

Enbridge Pipelines Inc. - Ganaraska Region - Line 9B Hydr

Legend

- Village/Hamlet
- Town
- Large Town
- City

ACTIVE

- Yes
- No
- Water Wells
- Provincial Groundwater Monitoring Network
- Wellhead Protection Areas
- HWIN - Hazardous Waste Information Network
- Surface_Water_Intakes
- Municipal Waste Water (MISA)
- OHN_Rivers
- Rivers, Creeks and Streams
- Former_Townships_ER
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- Waste Disposal Site
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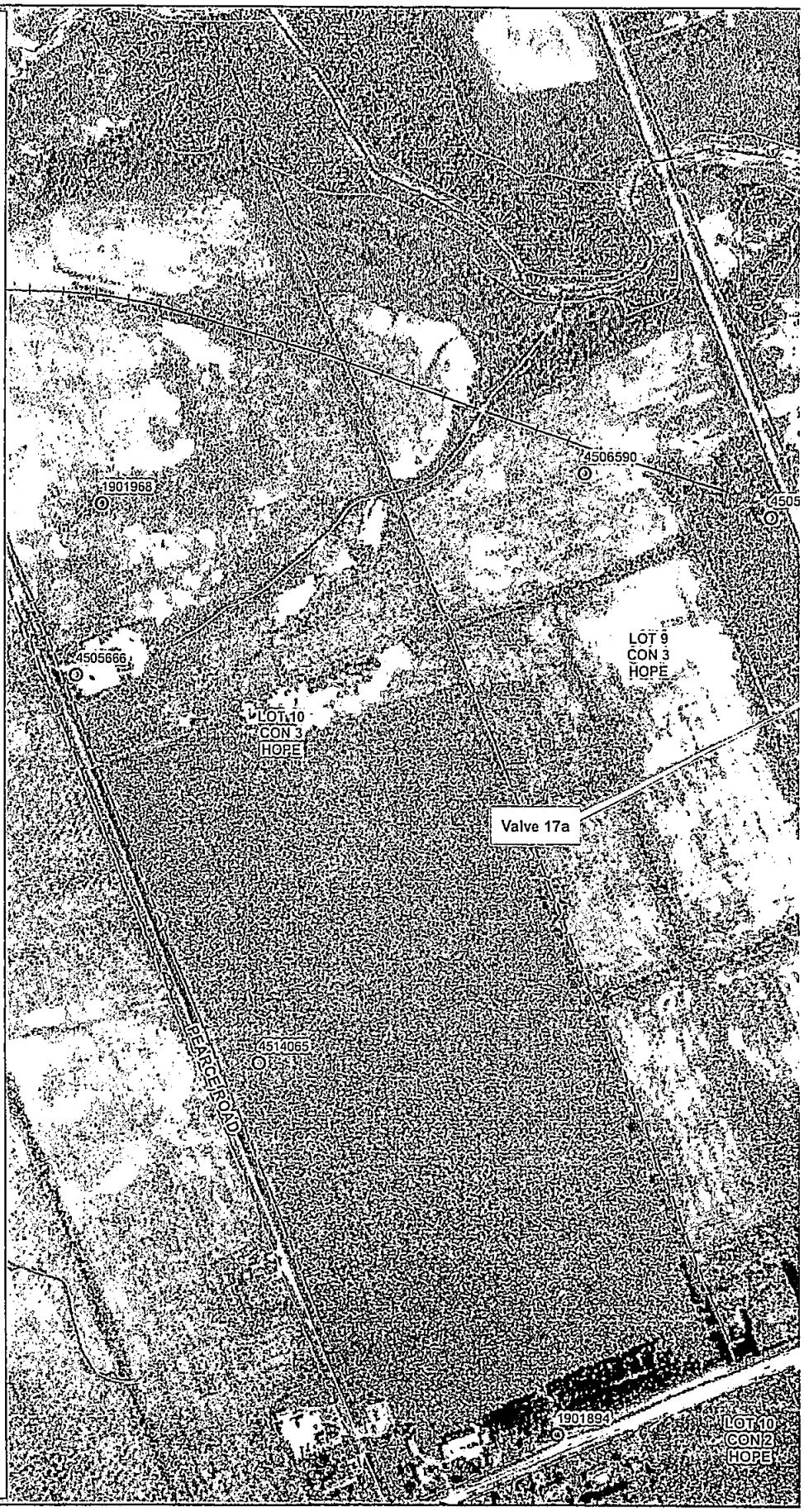
- Earth Science
- Life Science
- Candidate - Earth Science
- Candidate - Life Science
- Wetland_Unit
- Lakes, Ponds, and Rivers



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Imagery Provided by DRAPE

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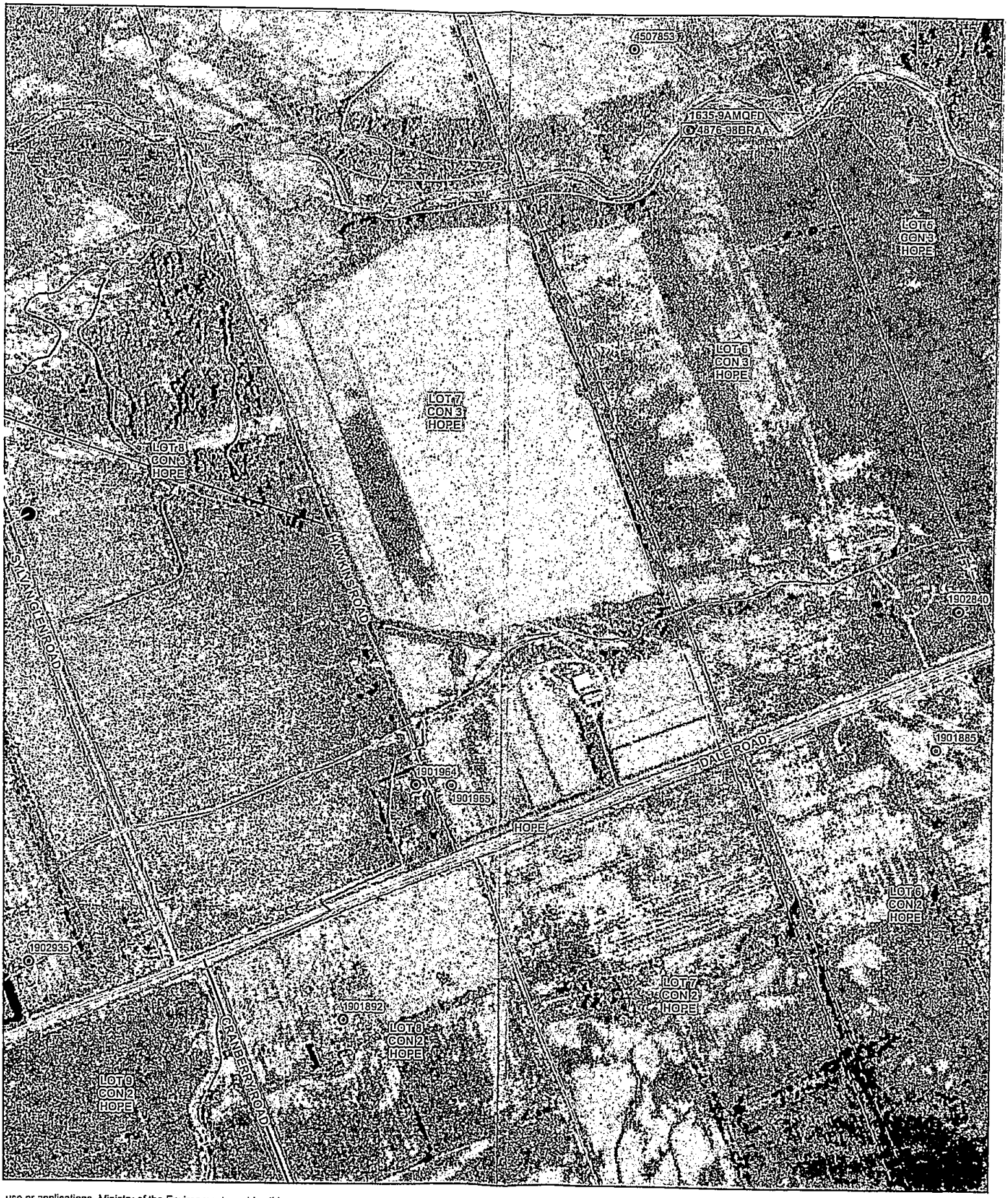

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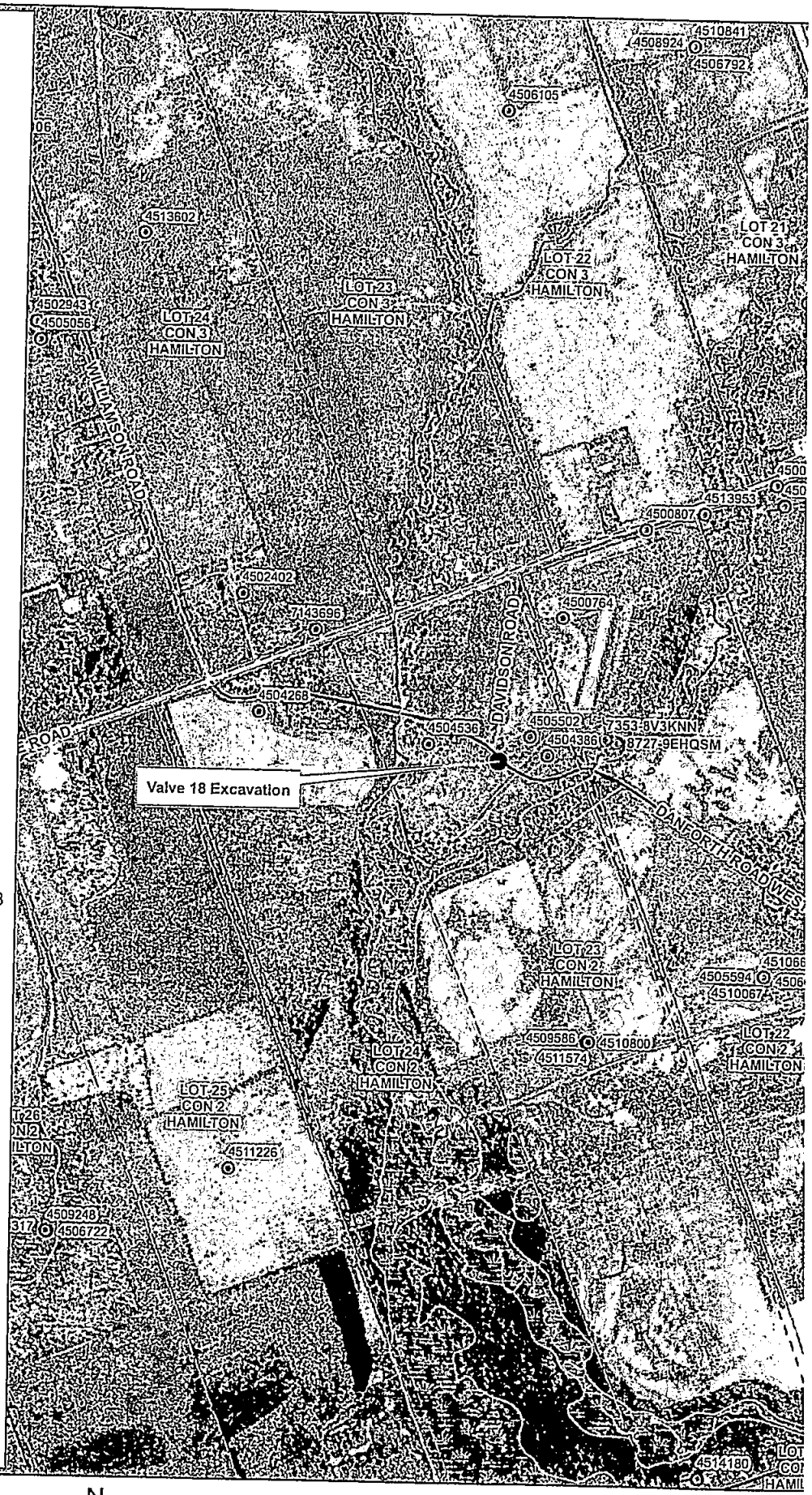
Enbridge Pipelines Inc. - Ganaraska Region - Line 9B Hydr

Legend

- Village/Hamlet
- Town
- Large Town
- City

ACTIVE

- Yes
- No
- Water Wells
- Provincial Groundwater Monitoring Network
- Wellhead Protection Areas
- HWIN - Hazardous Waste Information Network
- Surface_Water_Intakes
- Municipal Waste Water (MISA)
- OHN_Rivers
- Rivers, Creeks and Streams
- Former_Townships_ER
- Lot & Concession
- National Pollutant Release Inventory
- TSSA Underground Storage Tanks by Parcel 2008
- Sewage_Treatment_Plants
- Waste Disposal Site
- brownfields
- Railway
- First_Nations_Communities
- First_Nation_Reserves
- Earth Science
- Life Science
- Candidate - Earth Science
- Candidate - Life Science
- Wetland_Unit
- Lakes, Ponds, and Rivers



UTM Zone 18 (NAD 1983)
Information Provided by: Ministry of Natural Resources, Ministry of the Environment, Ministry of Municipal Affairs and Housing and DMTI Spatial 2010.
Imagery Provided by DRAPE

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APPENDIX B:

ECOLOG ERIS Report and Fire Insurance Products (2022)

DATABASE REPORT

Project Property:	*22549-1 Sylvan Glen Bridge* *Sylvanglen Road* *Port Hope ON L0A*
Project No:	*ramina.rashtchi@ainleygroup.com;david.davison@ainl*
Report Type:	*Quote - Custom-Build Your Own Report*
Order No:	*22112500144*
Requested by:	*Ainley Group*
Date Completed:	*December 6, 2022*

Environmental Risk Information Services
A division of Glacier Media Inc.
1.866.517.5204 | info@erisinfo.com | erisinfo.com

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Executive Summary

Property Information:

Project Property:	*22549-1 Sylvan Glen Bridge* *Sylvanglen Road Port Hope ON L0A*
Project No:	*ramina.rashtchi@ainleygroup.com;david.davison@ainl*

Order Information:

Order No:	*22112500144*
Date Requested:	*November 25, 2022*
Requested by:	*Ainley Group*
Report Type:	*Quote - Custom-Build Your Own Report*

Historical/Products:

Aerial Photographs	*Aerials - National Collection*
ERIS Xplorer	*ERIS Xplorer*
Insurance Products	*Fire Insurance Maps/Inspection Reports/Site Plans*

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	Y	0	0	0
ANDR	Anderson's Waste Disposal Sites	Y	0	0	0
AST	Aboveground Storage Tanks	Y	0	0	0
AUWR	Automobile Wrecking & Supplies	Y	0	0	0
BORE	Borehole	Y	0	0	0
CA	Certificates of Approval	Y	0	0	0
CDRY	Dry Cleaning Facilities	Y	0	0	0
CFOT	Commercial Fuel Oil Tanks	Y	0	0	0
CHEM	Chemical Manufacturers and Distributors	Y	0	0	0
CHM	Chemical Register	Y	0	0	0
CNG	Compressed Natural Gas Stations	Y	0	0	0
COAL	Inventory of Coal Gasification Plants and Coal Tar Sites	Y	0	0	0
CONV	Compliance and Convictions	Y	0	0	0
CPU	Certificates of Property Use	Y	0	0	0
DRL	Drill Hole Database	Y	0	0	0
DTNK	Delisted Fuel Tanks	Y	0	0	0
EASR	Environmental Activity and Sector Registry	Y	0	0	0
EBR	Environmental Registry	Y	0	0	0
ECA	Environmental Compliance Approval	Y	0	0	0
EEM	Environmental Effects Monitoring	Y	0	0	0
EHS	ERIS Historical Searches	Y	0	0	0
EIIS	Environmental Issues Inventory System	Y	0	0	0
EMHE	Emergency Management Historical Event	Y	0	0	0
EPAR	Environmental Penalty Annual Report	Y	0	0	0
EXP	List of Expired Fuels Safety Facilities	Y	0	0	0
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
FRST	Federal Identification Registry for Storage Tank Systems (FIRSTS)	Y	0	0	0
FST	Fuel Storage Tank	Y	0	0	0
FSTH	Fuel Storage Tank - Historic	Y	0	0	0
GEN	Ontario Regulation 347 Waste Generators Summary	Y	0	0	0
GHG	Greenhouse Gas Emissions from Large Facilities	Y	0	0	0
HINC	TSSA Historic Incidents	Y	0	0	0

Database	Name	Searched	Project Property	Boundary to 0.25km	Total
IAFT	Indian & Northern Affairs Fuel Tanks	Y	0	0	0
INC	Fuel Oil Spills and Leaks	Y	0	0	0
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 (NATES)	Y	0	0	0
NCPL	Non-Compliance Reports	Y	0	0	0
NDFT	National Defense & Canadian Forces Fuel Tanks	Y	0	0	0
NDSP	National Defense & Canadian Forces Spills	Y	0	0	0
NDWD	National Defence & Canadian Forces Waste Disposal Sites	Y	0	0	0
NEBI	National Energy Board Pipeline Incidents	Y	0	0	0
NEBP	National Energy Board Wells	Y	0	0	0
NEES	National Environmental Emergencies System (NEES)	Y	0	0	0
NPCB	National PCB Inventory	Y	0	0	0
NPRI	National Pollutant Release Inventory	Y	0	0	0
OGWE	Oil and Gas Wells	Y	0	0	0
OOGW	Ontario Oil and Gas Wells	Y	0	0	0
OPCB	Inventory of PCB Storage Sites	Y	0	0	0
ORD	Orders	Y	0	0	0
PAP	Canadian Pulp and Paper	Y	0	0	0
PCFT	Parks Canada Fuel Storage Tanks	Y	0	0	0
PES	Pesticide Register	Y	0	0	0
PINC	Pipeline Incidents	Y	0	0	0
PRT	Private and Retail Fuel Storage Tanks	Y	0	0	0
PTTW	Permit to Take Water	Y	0	0	0
REC	Ontario Regulation 347 Waste Receivers Summary	Y	0	0	0
RSC	Record of Site Condition	Y	0	0	0
RST	Retail Fuel Storage Tanks	Y	0	0	0
SCT	Scott's Manufacturing Directory	Y	0	0	0
SPL	Ontario Spills	Y	0	0	0
SRDS	Wastewater Discharger Registration Database	Y	0	0	0
TANK	Anderson's Storage Tanks	Y	0	0	0
TCFT	Transport Canada Fuel Storage Tanks	Y	0	0	0
VAR	Variances for Abandonment of Underground Storage Tanks	Y	0	0	0
WDS	Waste Disposal Sites - MOE CA Inventory	Y	0	0	0
WDSH	Waste Disposal Sites - MOE 1991 Historical Approval Inventory	Y	0	0	0
WWIS	Water Well Information System	Y	0	1	1
		Total:	0	1	1

Executive Summary: Site Report Summary - Project Property

Map Key	DB	Company/Site Name	Address	Dir/Dist (m)	Elev diff (m)	Page Number

No records found in the selected databases for the project property.

Executive Summary: Site Report Summary - Surrounding Properties

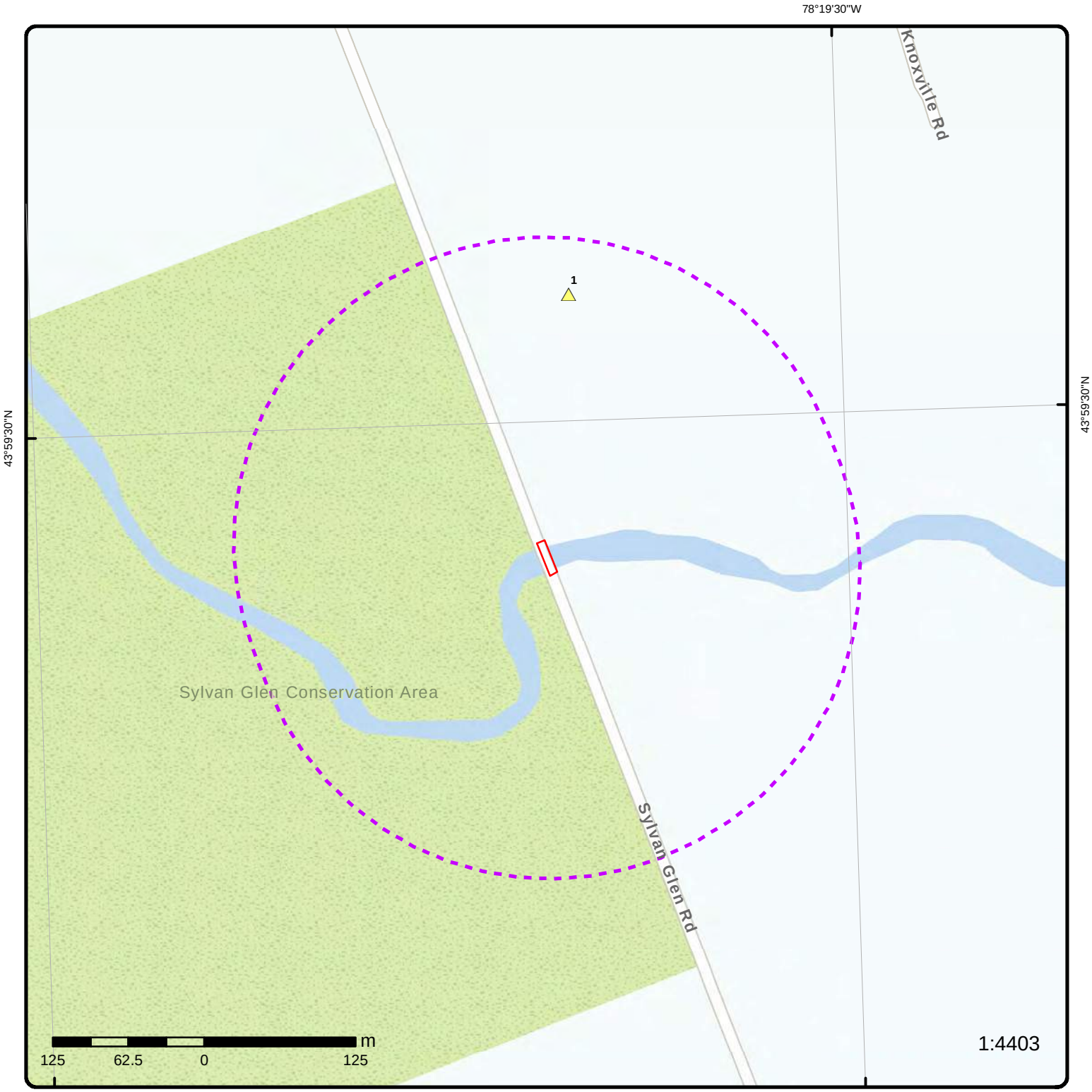
Map Key	DB	Company/Site Name	Address	Dir/Dist (m)	Elev Diff (m)	Page Number
1	WWIS		lot 8 con 3 ON **Well ID:** 1901966	N/203.5	16.31	12

Executive Summary: Summary By Data Source

WWIS - Water Well Information System

A search of the WWIS database, dated Jun 30 2022 has found that there are 1 WWIS site(s) within approximately 0.25 kilometers of the project property.

Site	Address	Distance (m)	Map Key
	lot 8 con 3 ON ***Well ID:*** 1901966	203.5	1



Map: 0.25 Kilometer Radius

Order Number: 22112500144
Address: Sylvanglen Road, Port Hope, ON

Project Property
Buffer Outline
Eris Sites with Higher Elevation
Eris Sites with Same Elevation
Eris Sites with Lower Elevation
Eris Sites with Unknown Elevation

Freeways; Highways
Traffic Circle; Ramp
Major Arterial; Minor Arterial
Local Road
Service Road; Traffic Circle; Ramp
Rail

Beach
Airport
Industrial Area
Military Base
Aircraft Roads
Native Reservation
Hospital

Shopping & Sports Area
University/College
Cemetery; Golf Course
Parkt (National)
Park (City/County)

Source: © 2021 ESRI StreetMap Premium.
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Aerial

Year: 2021

Order Number: 22112500144

Address: Sylvanglen Road, Port Hope, ON

Source: ESRI World Imagery

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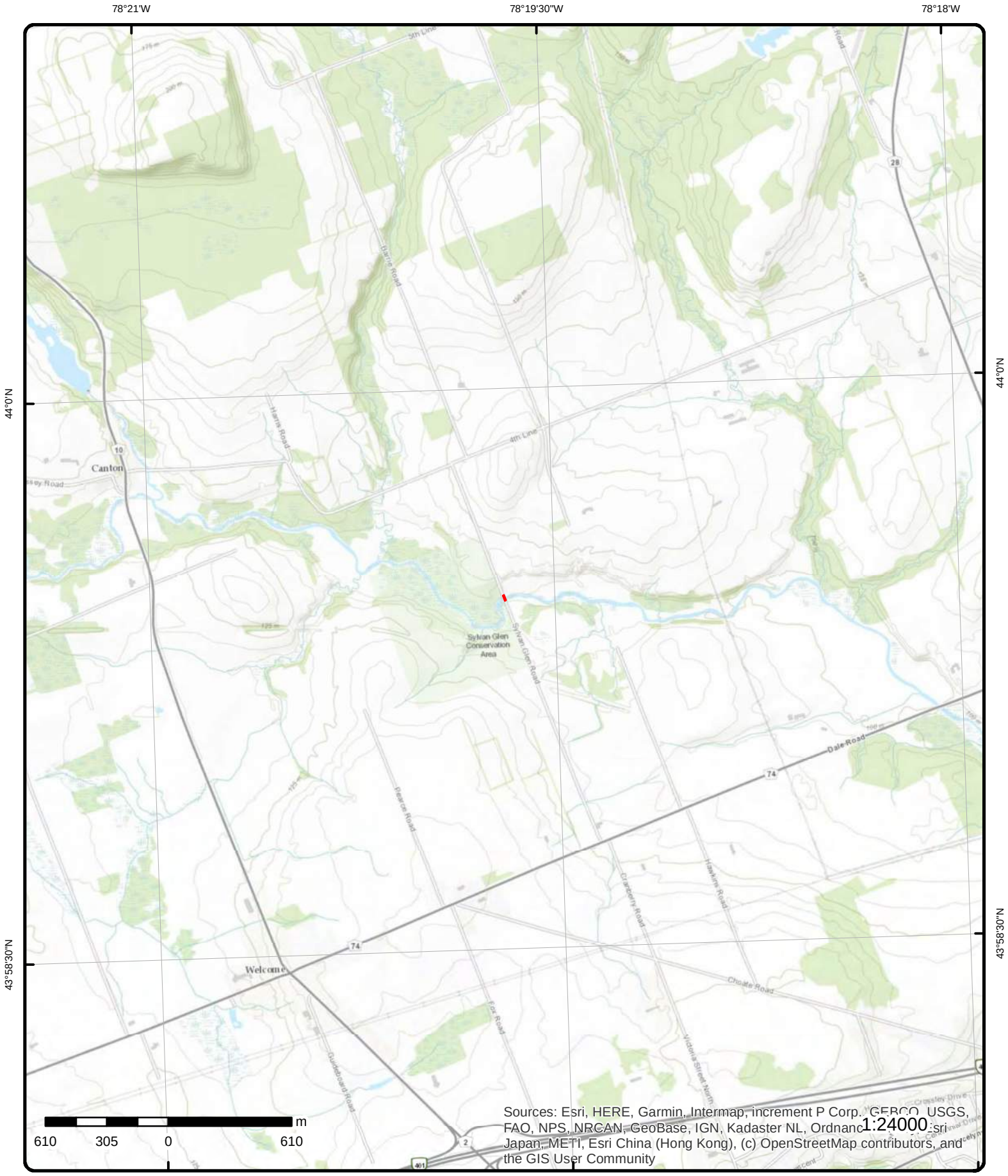

Topographic Map

Order Number: 22112500144

Address: Sylvanglen Road, ON

Source: ESRI World Topographic Map

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Detail Report

Map Key	Number of Records	Direction/ Distance (m)	Elev/Diff (m)	Site	DB
1	1 of 1	N/203.5	120.6 / 16.31	lot 8 con 3 ON	WWIS

Well ID:	1901966	**Flowing (Y/N):**	
Construction Date:		**Flow Rate:**	
Use 1st:	Livestock	**Data Entry Status:**	
Use 2nd:	Domestic	**Data Src:**	1
Final Well Status:	Water Supply	**Date Received:**	08-Jan-1963 00:00:00
Water Type:		**Selected Flag:**	TRUE
Casing Material:		**Abandonment Rec:**	
Audit No:		**Contractor:**	1904
Tag:		**Form Version:**	1
Constructn Method:		**Owner:**	
Elevation (m):		**County:**	NORTHUMBERLAND
Elevatn Reliabilty:		**Lot:**	008
Depth to Bedrock:		**Concession:**	03
Well Depth:		**Concession Name:**	CON
Overburden/Bedrock:		**Easting NAD83:**	
Pump Rate:		**Northing NAD83:**	
Static Water Level:		**Zone:**	
Clear/Cloudy:		**UTM Reliability:**	
Municipality:	HOPE TOWNSHIP		
Site Info:			

PDF URL (Map): https://d2khazk8e83rdv.cloudfront.net/moe_mapping/downloads/2Water/Wells_pdfs/190\1901966.pdf

Additional Detail(s) (Map)

Well Completed Date:	1962/11/06
Year Completed:	1962
Depth (m):	24.384
Latitude:	43.9926040332837
Longitude:	-78.3278687900445
Path:	190\1901966.pdf

Bore Hole Information

Bore Hole ID:	10071029	**Elevation:**	
DP2BR:		**Elevrc:**	
Spatial Status:		**Zone:**	17
Code OB:		**East83:**	714265.20
Code OB Desc:		**North83:**	4874523.00
Open Hole:		**Org CS:**	
Cluster Kind:		**UTMRC:**	5
Date Completed:	06-Nov-1962 00:00:00	**UTMRC Desc:**	margin of error : 100 m - 300 m
Remarks:		**Location Method:**	p5
Loc Method Desc:	Original Pre1985 UTM Rel Code 5: margin of error : 100 m - 300 m		
Elevrc Desc:			
Location Source Date:			
Improvement Location Source:			
Improvement Location Method:			
Source Revision Comment:			
Supplier Comment:			

Overburden and Bedrock Materials Interval

Formation ID:	931143547
Layer:	1
Color:	
General Color:	
Mat1:	05
Most Common Material:	CLAY
Mat2:	
Mat2 Desc:	
Mat3:	
Mat3 Desc:	
Formation Top Depth:	0.0
Formation End Depth:	72.0
Formation End Depth UOM:	ft

Overburden and Bedrock Materials Interval

Formation ID:	931143548
Layer:	2
Color:	
General Color:	
Mat1:	15
Most Common Material:	LIMESTONE
Mat2:	
Mat2 Desc:	
Mat3:	
Mat3 Desc:	
Formation Top Depth:	72.0
Formation End Depth:	80.0
Formation End Depth UOM:	ft

Method of Construction & Well Use

Method Construction ID:	961901966
Method Construction Code:	1
Method Construction:	Cable Tool
Other Method Construction:	

Pipe Information

Pipe ID:	10619599
Casing No:	1
Comment:	
Alt Name:	

Construction Record - Casing

Casing ID:	930128458
Layer:	2
Material:	4
Open Hole or Material:	OPEN HOLE
Depth From:	
Depth To:	80.0
Casing Diameter:	6.0
Casing Diameter UOM:	inch
Casing Depth UOM:	ft

Construction Record - Casing

Casing ID:	930128457
Layer:	1
Material:	1
Open Hole or Material:	STEEL
Depth From:	
Depth To:	72.0
Casing Diameter:	6.0
Casing Diameter UOM:	inch
Casing Depth UOM:	ft

Results of Well Yield Testing

Pumping Test Method Desc:	PUMP
Pump Test ID:	991901966
Pump Set At:	
Static Level:	26.0
Final Level After Pumping:	65.0
Recommended Pump Depth:	70.0
Pumping Rate:	4.0
Flowing Rate:	
Recommended Pump Rate:	4.0
Levels UOM:	ft
Rate UOM:	GPM
Water State After Test Code:	1
Water State After Test:	CLEAR
Pumping Test Method:	1
Pumping Duration HR:	1
Pumping Duration MIN:	0
Flowing:	No

Water Details

Water ID:	933512521
Layer:	1
Kind Code:	1
Kind:	FRESH
Water Found Depth:	72.0
Water Found Depth UOM:	ft

Links

Bore Hole ID:	10071029	***Tag No:***	
Depth M:	24.384	***Contractor:***	1904
Year Completed:	1962	***Path:***	190\1901966.pdf
Well Completed Dt:	1962/11/06	***Latitude:***	43.9926040332837
Audit No:		***Longitude:***	-78.3278687900445

Unplottable Summary

Total: 2 Unplottable sites

DB	Company Name/Site Name	Address	City	Postal
GEN	Enbridge Pipelines Inc.	Lot 8, Concession 3	Port Hope ON	Unknown
GEN	Enbridge Pipelines Inc.	Lot 8, Concession 3	Port Hope ON	K8P 4V2

Unplottable Report

Site: ***Enbridge Pipelines Inc.***
Lot 8, Concession 3 Port Hope ON Unknown

Database: ***GEN***

Generator No:	ON5449684
SIC Code:	486110
SIC Description:	PIPELINE TRANSPORTATION OF CRUDE OIL
Approval Years:	2015
PO Box No:	
Country:	Canada
Status:	
Co Admin:	
Choice of Contact:	CO_OFFICIAL
Phone No Admin:	
Contaminated Facility:	No
MHSW Facility:	No

Detail(s)

Waste Class:	251
Waste Class Name:	OIL SKIMMINGS & SLUDGES

Site: ***Enbridge Pipelines Inc.***
Lot 8, Concession 3 Port Hope ON K8P 4V2

Database: ***GEN***

Generator No:	ON5449684
SIC Code:	486110
SIC Description:	PIPELINE TRANSPORTATION OF CRUDE OIL
Approval Years:	2014
PO Box No:	
Country:	Canada
Status:	
Co Admin:	
Choice of Contact:	CO_OFFICIAL
Phone No Admin:	
Contaminated Facility:	No
MHSW Facility:	No

Detail(s)

Waste Class:	251
Waste Class Name:	OIL SKIMMINGS & SLUDGES

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 Nov 2021

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-Mar 2022

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

Aboveground Storage Tanks: Provincial AST

Historical listing of aboveground storage tanks made available by the Department of Natural Resources and Forestry. Includes tanks used to hold water or petroleum. This dataset has been retired as of September 25, 2014 and will no longer be updated.

Government Publication Date: May 31, 2014

Automobile Wrecking & Supplies: Private AUWR

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: 1999-May 31, 2022

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 2018

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*

Dry Cleaning Facilities: Federal CDRY

List of dry cleaning facilities made available by Environment and Climate Change Canada. Environment and Climate Change Canada's Tetrachloroethylene (Use in Dry Cleaning and Reporting Requirements) Regulations (SOR/2003-79) are intended to reduce releases of tetrachloroethylene to the environment from dry cleaning facilities.

Government Publication Date: Jan 2004-Dec 2020

Commercial Fuel Oil Tanks: Provincial CFOT

Locations of commercial underground fuel oil tanks. This is not a comprehensive or complete inventory of commercial fuel tanks in the province; this listing is a copy of records of registered commercial underground fuel oil tanks obtained under Access to Public Information.
Note that the following types of tanks do not require registration: waste oil tanks in apartments, office buildings, residences, etc.; aboveground gas or diesel tanks. Records are not verified for accuracy or completeness.

Government Publication Date: Feb 28, 2022

Chemical Manufacturers and Distributors: 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: 1999-Jan 31, 2020

Chemical Register: Private CHM

This database includes a listing of locations of facilities within the Province or Territory that either manufacture and/or distributes chemicals.

Government Publication Date: 1999-May 31, 2022

Compressed Natural Gas Stations: Private CNG

Canada has a network of public access compressed natural gas (CNG) refuelling stations. These stations dispense natural gas in compressed form at 3,000 pounds per square inch (psi), the pressure which is allowed within the current Canadian codes and standards. The majority of natural gas refuelling is located at existing retail gasoline that have a separate refuelling island for natural gas. This list of stations is made available by the Canadian Natural Gas Vehicle Alliance.

Government Publication Date: Dec 2012 -Sep 2022

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 CONV

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-Sep 2022

Certificates of Property Use: Provincial CPU

This is a subset taken from Ontario's Environmental Registry (EBR) database. It will include CPU's on the registry such as (EPA s. 168.6) - Certificate of Property Use.

Government Publication Date: 1994 - Oct 31, 2022

Drill Hole Database: Provincial DRL

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 - Oct 2022

Delisted Fuel Tanks: Provincial DTNK

List of fuel storage tank sites that were once found in - and have since been removed from - the list of fuel storage tanks made available by the regulatory agency under Access to Public Information.

Government Publication Date: Feb 28, 2022

Environmental Activity and Sector Registry: Provincial EASR

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: Oct 2011- Sep 30, 2022

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 - Oct 31, 2022

Environmental Compliance Approval: Provincial ECA

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: Oct 2011- Sep 30, 2022

Environmental Effects Monitoring: Federal EEM

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-Jul 31, 2022

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

List of locations of historical occurrences of emergency events, including 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. EMHE record details are reproduced by ERIS under License with the Ontario Ministry of Natural Resources © Queen's Printer for Ontario, 2017.

Government Publication Date: Apr 30, 2022

Environmental Penalty Annual Report: Provincial EPAR

This database contains data from Ontario's annual environmental penalty report published by the Ministry of the Environment and Climate Change. These reports provide information on environmental penalties for land or water violations issued to companies in one of the nine industrial sectors covered by the Municipal Industrial Strategy for Abatement (MISA) regulations.

Government Publication Date: Jan 1, 2011 - Dec 31, 2021

List of Expired Fuels Safety Facilities: Provincial EXP

List of facilities and tanks for which there was once a fuel registration. This is not a comprehensive or complete inventory of expired tanks/tank facilities in the province; this listing is a copy of previously registered tanks and facilities obtained under Access to Public Information. Includes private fuel outlets, bulk plants, fuel oil tanks, gasoline stations, marinas, propane filling stations, liquid fuel tanks, piping systems, etc; includes tanks which have been removed from the ground.
Notes: registration was not required for private fuel underground/aboveground storage tanks prior to January 1990, nor for furnace oil tanks prior to May 1, 2002; registration is not required for waste oil tanks in apartments, office buildings, residences, etc., or aboveground gas or diesel tanks. Records are not verified for accuracy or completeness.

Government Publication Date: Feb 28, 2022

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. Includes fire training sites and sites at which Per- and Polyfluoroalkyl Substances (PFAS) are a concern.

Government Publication Date: Jun 2000-Sep 2022

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-Sep 2019

Federal Identification Registry for Storage Tank Systems (FIRSTS): Federal FRST

A list of federally regulated Storage tanks from the Federal Identification Registry for Storage Tank Systems (FIRSTS). FIRSTS is Environment and Climate Change Canada's database of storage tank systems subject to the Storage Tank for Petroleum Products and Allied Petroleum Products Regulations. The main objective of the Regulations is to prevent soil and groundwater contamination from storage tank systems located on federal and aboriginal lands. Storage tank systems that do not have a valid identification number displayed in a readily visible location on or near the storage tank system may be refused product delivery.

Government Publication Date: May 31, 2018

Fuel Storage Tank: Provincial FST

List of registered private and retail fuel storage tanks. This is not a comprehensive or complete inventory of private and retail fuel storage tanks in the province; this listing is a copy of registered private and retail fuel storage tanks, obtained under Access to Public Information.
Notes: registration was not required for private fuel underground/aboveground storage tanks prior to January 1990, nor for furnace oil tanks prior to May 1, 2002; registration is not required for waste oil tanks in apartments, office buildings, residences, etc., or aboveground gas or diesel tanks. Records are not verified for accuracy or completeness.

Government Publication Date: Feb 28, 2022

Fuel Storage Tank - Historic: Provincial FSTH

The Fuels Safety Branch of the Ontario Ministry of Consumer and Commercial Relations maintained a database of all registered private fuel storage tanks. Public records of private fuel storage tanks are only available since the registration became effective in September 1989. This information is now collected by the Technical Standards and Safety Authority.

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-Oct 31, 2022

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: 2013-Dec 2019

TSSA Historic Incidents: Provincial HINC

List of historic incidences of spills and leaks of diesel, fuel oil, gasoline, natural gas, propane, and hydrogen recorded by the TSSA in their previous incident tracking system. The 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, the TSSA regulates fuel suppliers, storage facilities, transport trucks, pipelines, contractors and equipment or appliances that use fuels. Records are not verified for accuracy or completeness. This is not a comprehensive or complete inventory of historical fuel spills and leaks in the province. This listing is a copy of the data captured at one moment in time and is hence limited by the record date provided here.

Government Publication Date: 2006-June 2009*

Indian & Northern Affairs Fuel Tanks: Federal IAFT

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*

Fuel Oil Spills and Leaks: Provincial INC

Listing of spills and leaks of diesel, fuel oil, gasoline, natural gas, propane, and hydrogen reported to the Spills Action Centre (SAC). This is not a comprehensive or complete inventory of fuel-related leaks, spills, and incidents in the province; this listing in a copy of incidents reported to the SAC, obtained under Access to Public Information. Includes incidents from fuel-related hazards such as spills, fires, and explosions. Records are not verified for accuracy or completeness.

Government Publication Date: Feb 28, 2022

Landfill Inventory Management Ontario: Provincial LIMO

The Landfill Inventory Management Ontario (LIMO) database is updated every year, as the Ministry of the Environment, Conservation and Parks compiles new and updated information. Includes small and large landfills currently operating as well as those which are closed and historic. Operators of larger landfills provide landfill information for the previous operating year to the ministry for LIMO including: 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 include information such as site owner, site location and certificate of approval # and status.

Government Publication Date: Mar 21, 2022

Canadian Mine Locations: 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-Feb 2022

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: Dec 31, 2020

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-Apr 2018

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 Pipeline Incidents: Federal NEBI

Locations of pipeline incidents from 2008 to present, made available by the Canada Energy Regulator (CER) - previously the National Energy Board (NEB). Includes incidents reported under the Onshore Pipeline Regulations and the Processing Plant Regulations related to pipelines under federal jurisdiction, does not include incident data related to pipelines under provincial or territorial jurisdiction.

Government Publication Date: 2008-Jun 30, 2021

National Energy Board Wells: Federal NEBP

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 date.

Government Publication Date: 1920-Feb 2003*

National Environmental Emergencies System (NEES): Federal NEES

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: 1993-May 2017

Oil and Gas Wells: Private OGWE

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-Aug 31, 2022

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 2021

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 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 - Oct 31, 2022

Canadian Pulp and Paper: Private PAP

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, 2009-2014

Parks Canada Fuel Storage Tanks: Federal PCFT

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 the Environment and Climate Change maintains a database of licensed operators and vendors of registered pesticides.

Government Publication Date: Oct 2011- Sep 30, 2022

Pipeline Incidents: Provincial PINC

List of pipeline incidents (strikes, leaks, spills). This is not a comprehensive or complete inventory of pipeline incidents in the province; this listing in an historical copy of records previously obtained under Access to Public Information. Records are not verified for accuracy or completeness.

Government Publication Date: Feb 28, 2021

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 PTTW's on the registry such as OWRA s. 34 - Permit to take water.

Government Publication Date: 1994 - Oct 31, 2022

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: 1986-1990, 1992-2019

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-Sep 2022

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-May 31, 2022

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

List of spills and incidents made available the Ministry of the Environment, Conservation and Parks. 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. The Ministry of the Environment, Conservation and Parks cites the coronavirus pandemic as an explanation for delays in releasing data pursuant to requests.

Government Publication Date: 1988-Sep 2020; Dec 2020-Mar 2021

Wastewater Discharger Registration Database: Provincial SRDS

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-Dec 31, 2020

Anderson's Storage Tanks: Private TANK

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 TCFT

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 - Dec 2020

Variances for Abandonment of Underground Storage Tanks: Provincial VAR

Listing of variances granted for storage tank abandonment. This is not a comprehensive or complete inventory of tank abandonment variances in the province; this listing is a copy of tank abandonment variance records previously obtained under Access to Public Information. In Ontario, registered underground storage tanks must be removed within two years of disuse; if removal of a tank is not feasible, an application may be sought for a variance from this code requirement.
Records are not verified for accuracy or completeness.

Government Publication Date: Feb 28, 2022

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: Oct 2011- Sep 30, 2022

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

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: Jun 30 2022

Definitions

Database Descriptions: This section provides a detailed explanation for each database including: source, information available, time coverage, and acronyms used. They are listed in alphabetic order.

Detail Report: 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.

Distance: The distance value is the distance between plotted points, not necessarily the distance between the sites' boundaries. All values are an approximation.

Direction: 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.

Map Key: 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.'

Unplottables: 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.

opta
INFORMATION INTELLIGENCE

enviroscan

An SCM Company

175 Commerce Valley Drive W
Markham, Ontario L3T 7Z3

T: 905-882-6300
W: www.optaintel.ca

Report Completed By:

Midori

Site Address:

Sylvanglen Road, Port Hope, ON

Project No:

22112500144

Opta Order ID:

120407

Requested by:

Eleanor Goolab
ERIS

Date Completed:

12/1/2022 8:02:42 AM

Project Name: 225491 Sylvan Glen Bridge

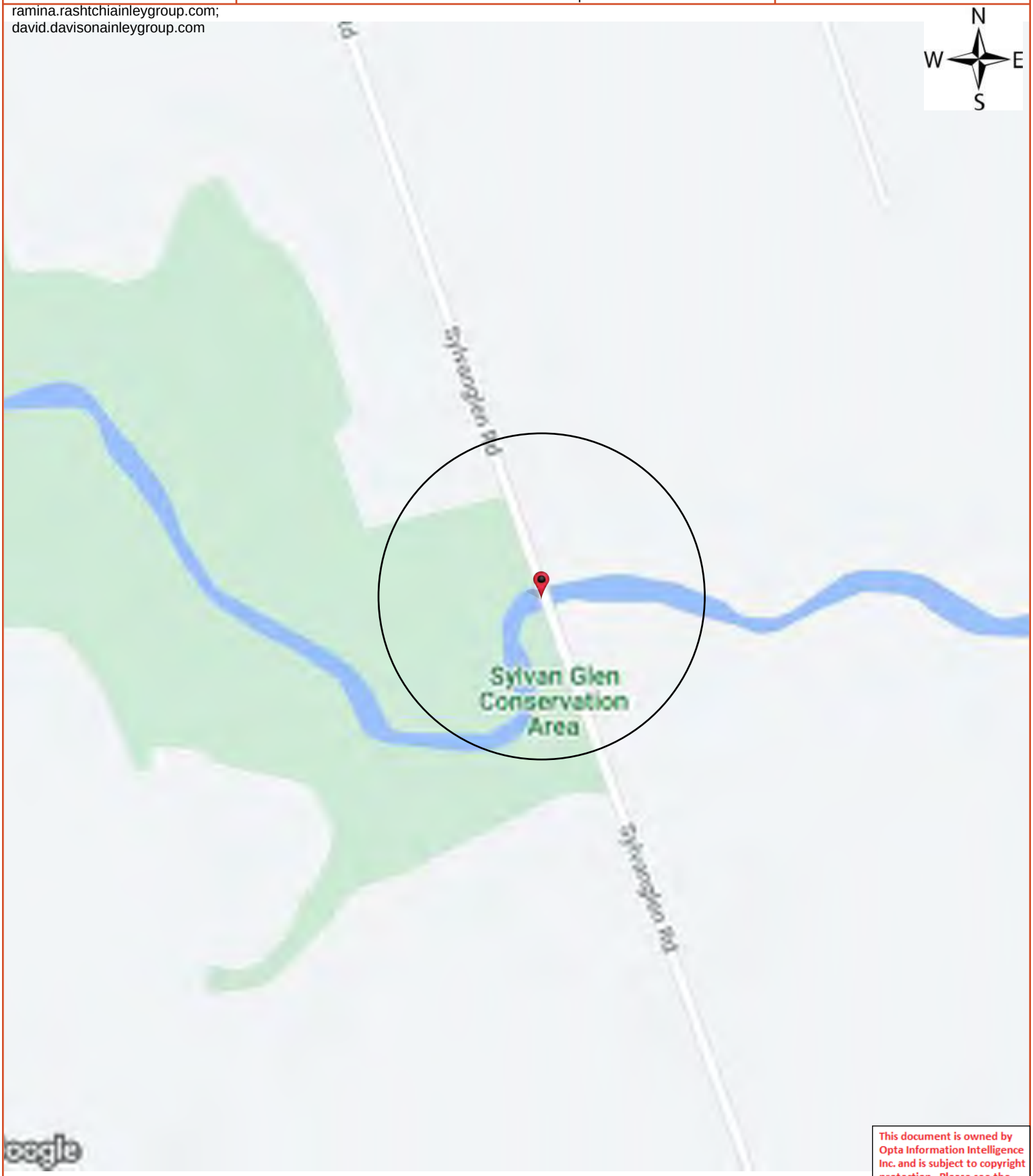
Project #: 22112500144
P.O. #:
ramina.rashtchiainleygroup.com;
david.davisonainleygroup.com

ENVIROSCAN Report

Search Area: Sylvanglen Road, Port Hope, ON

Requested by:
Eleanor Goolab
Date Completed: 12/01/2022 08:02:42

OPTA INFORMATION INTELLIGENCE



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Governing Document

In the event of any conflicts or inconsistencies between the provisions hereof and the Reports, the rights and obligations of the parties shall be deemed to be governed by the request form, which shall be the paramount document.

Law

This agreement shall be governed by and construed in accordance with the laws of the Province of Ontario and the laws of Canada applicable therein.

Project Name: 225491 Sylvan Glen Bridge

Project #: 22112500144
P.O. #:
ramina.rashtchiainleygroup.com; david.davisonainleygroup.com

ENVIROSCAN Report

No Records Found

Requested by:
Eleanor Goolab
Date Completed: 12/01/2022 08:02:42

OPTA INFORMATION INTELLIGENCE

No Records Found

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S

APPENDIX C:

Aerial Photographs

HISTORICAL AERIALS

Project Property:	22549-1 Sylvan Glen Bridge Sylvanglen Road Port Hope ON L0A
Project No:	ramina.rashtchi@ainleygroup.com;david.davison@ainl
Requested By:	Ainley Group
Order No:	22112500144
Date Completed:	January 20, 2023

Environmental Risk Information Services
A division of Glacier Media Inc.
1.866.517.5204 | info@erisinfo.com | erisinfo.com

Decade	Year	Image Scale	Source
1920	1928	20000	NAPL
1940	Not Available		
1960	Not Available		
1980	1981	50000	NAPL
2000	Not Available		

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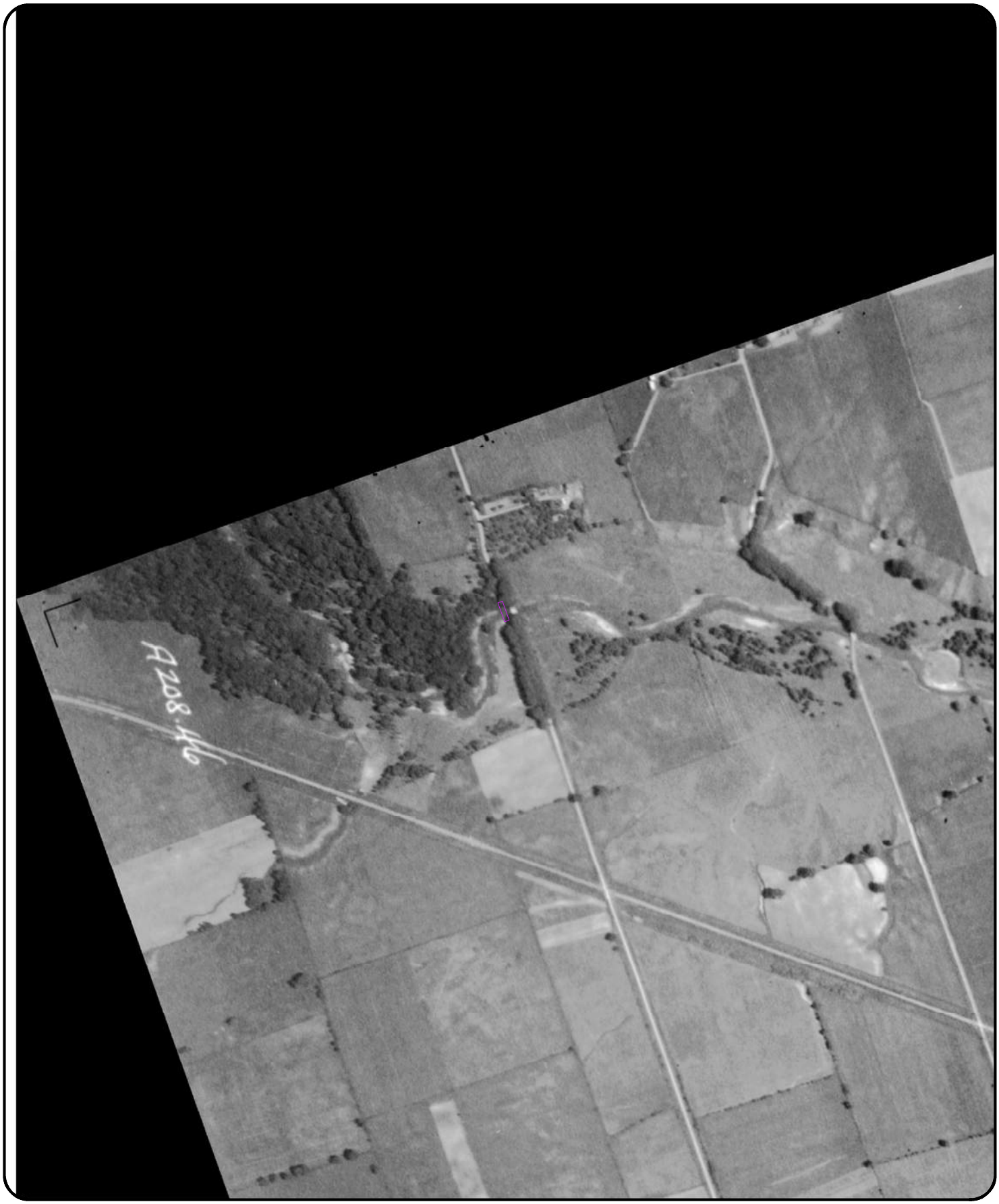


0 0.125 0.25 0.5 Kilometers

Order Number: 22112500144

Year: 1928
Source: NAPL
Map Scale: 1: 10000
Comments: Adjacent Frame Unavailable

0 0.125 0.25 0.5 Kilometers

Order Number: 22112500144

Year: 1981
Source: NAPL
Map Scale: 1: 10000
Comments:

APPENDIX D:

MECP Well Records for Wells within the Study Area

UTM Z E

5 R N

Elev. 5 R 083615

Basin 74

19 № 1966

The Ontario Water Resources Commission Act

WATER WELL RECORD

County or District Durham

Township, Village, Town or City Hope

Con 3 Lot 8

Date completed Nov. 6, 1962 (day month year)

[redacted] ess Port Hope, Ont.

Casing and Screen Record

Inside diameter of casing 6¼"

Total length of casing 72'

Type of screen None

Length of screen None

Depth to top of screen None

Diameter of finished hole 6¼"

Pumping Test

Static level 26'

Test-pumping rate 3½ G.P.M.

Pumping level 65'

Duration of test pumping 1 hr

Water clear or cloudy at end of test

Recommended pumping rate 3½ G.P.M.

with pump setting of 70' feet below ground surface

Well Log

Overburden and Bedrock Record	From ft.	To ft.	Water Record: Depth(s) at which water(s) found	Water Record: Kind of water (fresh, salty, sulphur)
clay	0	72		
limestone	72	80	72-80	Fresh

For what purpose(s) is the water to be used? FARM

Is well on upland, in valley, or on hillside?

Drilling or Boring Firm Russell Elvidge Welldriller

Address 813 Cameron St., Peterborough, Ont.

Licence Number 683

Name of Driller or Borer Anton Urban

Address R.R.9, Peterborough, Ont.

Date Dec. 6, 1962

R. Elvidge

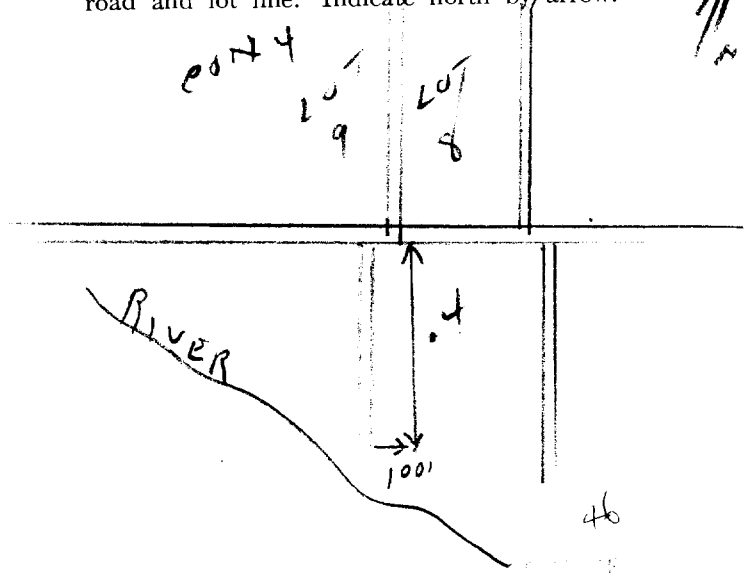
(Signature of Licensed Drilling or Boring Contractor)

Form 7 10M-62-1152

OWRC COPY

Location of Well

In diagram below show distances of well from road and lot line. Indicate north by arrow.



APPENDIX E:

Photographic Inventory

Photograph 1 – Sylvan Glen Bridge – Facing North – June 14, 2022

Photograph 2 – Ganaraska River – Facing Northeast – June 14, 2022

Photograph 3 – Ganaraska River – Facing west – June 14, 2022

Photograph 4 – Environment Canada Monitoring Station and single utility pole located northeast of the Bridge - September 1, 2022

Photograph 5 – Sylvan Glen Bridge – Facing South – September 1, 2022

Photograph 6 – Sylvan Glen Bridge pillar southwest side of the bridge – June 14, 2022

Photograph 7 – Sylvan Glen Bridge looking northeast – June 14, 2022

Photograph 8 – Sylvan Glen Bridge span looking southwest – June 14, 2022